УНИВЕРЗИТЕТ У БЕОГРАДУ
ИНСТИТУТ ЗА ФИЗИКУ | БЕОГРАД
ИНСТИТУТ ОД НАЦИОНАЛНОГ ЗНАЧАЈА ЗА РЕПУБЛИКУ СРБИЈУ
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Број 0801-1644/1

Датум 30.09.2025

Научном већу Института за физику у Београду

Београд, 29.09.2025.

ПРЕДМЕТ:

Молба за покретање поступка за стицање звања научни саветник

Молим Научно веће Института за физику да, у складу са Правилником стицању истраживачких и научних звања, покрене поступак за мој избор у звање научни саветник.

У прилогу достављам:

- Мишљење руководиоца пројекта са предлогом чланова комисије за избор у звање;
- Попуњен образац Материјал уз захтев за избор;
- Додатне прилоге (решења о претходном избору у звање, међународна научна сарадња, руковођење пројектима, предавања по позиву, рецензије, образовање научних кадрова, награде, радови, подаци о цитираности).

С поштовањем,

Др Бојана Вишић

виши научни сарадник,

Институт за физику у Београду

Научном већу Института за физику у Београду

У Београду, 30. 09. 2025. године.

Предмет: Мишљење руководиоца лабораторије за избор др Бојане Вишић у звање научни саветник

Др Бојана Вишић је запослена на Институту за физику у Београду од 01.12.2018. и ангажована је у Центру за физику чврстог стања и нове материјале, чији сам руководилац. Њена научна активност се базира на проучавању и карактеризацији наноматеријала.

С обзиром на то испуњава све захтеве прописане Правилником о стицању научних звања и Законом о науци и истраживањима, сагласан сам са покретањем поступка за избор др Бојане Вишић у звање научни саветник.

За чланове комисије за избор др Бојане Вишић у звање виши научни сарадник предлажем:

1. др Ненад Лазаревић, научни саветник, Институт за физику у Београду
2. др Зорица Константиновић, научни саветник, Институт за физику у Београду
3. др Татјана Вуковић, редовни професор, Физички факултет, Универзитет у Београду
4. академик Зоран В. Поповић, научни саветник, Српска академија наука и уметности

Руководилац Центра за физику чврстог стања и нове материјале

др Ненад Лазаревић, научни саветник, Институт за физику у Београду

Материјал уз захтев за избор др Бојане Вишић у научно звање научни саветник

1. ПОДАЦИ О КАНДИДАТУ/КАНДИДАТКИЊИ

Име и презиме: Бојана Вишић
Година рођења: 1983.
Радни статус: запослена
Назив институције у којој је запослена: Институт за физику у Београду
Претходна запослења: Физички факултет, Београд; Институт Јожеф Стефан, Словенија; Вајцман Институт, Израел

Образовање
Основне академске студије: 2002-2007, Физички факултет, Универзитет у Београду
Одбрањен мастер или магистарски рад: 2008, Физички факултет, Универзитет у Београду
Одбрањена докторска дисертација: 2013, Факултет за математику и физику, Универзитет у Љубљани, Словенија

Постојеће научно звање: виши научни сарадник
Научно звање које се тражи: научни саветник

Датуми избора у стечена научна звања (укључујући и постојеће)
научни сарадник: 15.11.2016.
виши научни сарадник: 31.05.2021.

Област науке у којој се тражи звање: природно-математичке науке
Грана науке у којој се тражи звање: физика
Научна дисциплина у којој се тражи звање: Физика кондензоване материје и физика материјала
Назив матичног научног одбора којем се захтев упућује: МНО за физику

Стручна биографија

Бојана Вишић је рођена 23. 02. 1983. године у Ваљеву. Основне студије на Физичком факултету Универзитета у Београду, смер Теоријска и експериментална физика, је уписала 2002. године. Дипломирала је 2007. године, у Лабораторији за квантну и математичку физику под руководством проф. Милана Дамњановића. Ту је наставила мастер студије, које је завршила 2008. године, уз истовремено запослење као истраживач приправник на EU пројекту NanoLabFor.
Докторске студије је уписала 2009. године на катедри за Физику чврстог стања Факултета за математику и физику у Љубљани, Словенија, под менторством проф. Маје Ремшкар. Докторску дисертацију под називом "Physical properties of nanoflakes produced by exfoliation of MoS_2 nanotubes and their respective polymer nanocomposites" је одбранила 2013. год. У том периоду радила је на Институту Јожеф Стефан, на одсеку за Физику чврстог стања у Лабораторији за синтезу неорганских нанотуба.
Од 2013. до 2017. била је на постдокторским студијама на Weizmann институту у Израелу, као Marie Curie истраживач у оквиру EU пројекта MoWSeS, под менторством проф. Reshef Tenne-a. Потом се враћа у Институт Јожеф Стефан (2017–2018) на постдокторске студије.
Од децембра 2018. је запослена на Институту за физику у Београду, у Центру за физику чврстог стања и нове материјале.
Била је руководилац билатералног пројекта са Словенијом (2023-2025) и ко-координатор је ERA Chair пројекта HIP-2D-QM. Добитница је Годишње награде Института за физику за 2023. годину. У претходне две године је имала предавање по позиву на престижним конференцијама Graphene Week (пленарно предавање) и Flatlands beyond graphene, уз још два предавања по позиву у истом периоду.

2. ПРЕГЛЕД НАУЧНЕ АКТИВНОСТИ

Научно-истраживачки рад Б. В. је превасходно у области Физике кондензоване материје и физике материјала. Главни истраживачки правци кандидаткиње су следећи:

2.1 Неорганске нанотубе и наночестице: Примарна истраживачка активност кандидаткиње је у области Ван дер Ваалсових нанотуба и наночестица, где је посебно била активна у објашњавању ligh-matter интеракције у таквим системима, коришћењем разних оптичких техника попут фемтосекундне спектроскопије. Показано је да се у нанотубама и наночестицама на бази WS_2 јављају ексцитон-поларони у амбијенталним условима, услед јаког спрезања ексцитонских резонанци са оптичком шупљином. Такође је синтетисала висококристалне нанотубе $Mo_xW_{1-x}S_2$.

2.2 Субоксиди на бази волфрама: Субоксиди на бази волфрама, WO_{3-x}, су врло разноврсна породица материјала. Различите стехиометрије се могу јавити у разноврсним морфологијама, попут наночестица сферног облика, наножица и дискова. Кандидаткиња је успешно синтетисала четири типа ових наноматеријала реакцијом транспорта паре. Показала је да квази-2Д материјали (W_nO_{3n-1}) поседују две апсорпционе области услед дефеката, док наножице (W_5O_{14}, $W_{18}O_{49}$) имају ниже енергетске процепе због више слободних носилаца наелектрисања. Док се у наножицама јављају плазмонске резонанце, код квази-2Д структуре су примарне ексцитације екцитонског типа. Сви материјали емитују у УВ региону. Кандидаткиња је анализирала је како кристална структура, ваканције и облик наноматеријала утичу на оптичка својства, омогућавајући њихово фино подешавање.

2.3 Наноматеријали и њихова биолошка активност: Као трећи правац, Б. В. ј почела да проучава биоактивност наноматеријала, како самих, тако и у полимерним филмовима. Контактне површине погодују ширењу микроба, што захтева велику употребу биоцида. Овај проблем може се решити антимикробним нанокомпозитним премазима. Испитивала је PVDF-HFP/PVP композит са MoO_3 наножицама, који показује снажно антимикробно дејство у присуству воде док су биокомпатибилни и биоразградиви PLLA са пиезоелектричним структурама погодни за медицину. Побољшана хидрофилност утиче на место разградње (на површини или у унутрашњости). Разградња је постепена, уз очување механичких и пиезоелектричних својстава.

3. ПРИКАЗ НАЈЗНАЧАЈНИЈИХ РЕЗУЛТАТА

1. L. Pirker, R. Ławrowski, R. Schreiner, M. Remškar and **B. Višić.**
$Mo_xW_{x-1}S_2$ nanotubes for advanced field emission application.
Advanced Functional Materials, *33*(15), p.2213869 (2023). DOI: 10.1002/adfm.202213869 (8 страна, IF 19,924; M21a+)

Б. В. је водила истраживање (конципирала идеју, осмислила експерименте и написала рад) у оквиру којег је тим научника из Словеније и Немачке међу првима у свету синтетисао и карактерисао мешане $Mo_xW_{1-x}S_2$ нанотубе. У последњих неколико година, дихалкогениди прелазних метала (MoS_2, WS_2 и др.) су изазвали велико интересовање због својих изузетних особина, јер показују велики потенцијал за примену као транзистори, сензори, катализатори и слично. Поред тога, отворили су нову грану истраживања у области уређаја за емисију електрона у електричном пољу. Због своје слојевите структуре и присуства танких ивица, ови материјали могу значајно повећати локално електрично поље, што игра кључну улогу у процесу емисије електрона. У објављеном чланку, истраживачи су синтетисали нанотубе од два различита метала, чиме се додатно могу побољшати материјалска својства ради веће ефикасности емисионих уређаја. Од појединачних нанотуба направљени су уређаји за емисију електрона, који показују охрабрујуће резултате и могли би у будућности утрти пут ка новој генерацији уређаја за емисију електрона у електричном пољу.

2. L. Pirker[+], **B. Višić**[+], J. Kovač, S.D. Škapin, and M. Remškar.
Synthesis and characterization of tungsten suboxide W_nO_{3n-1} nanotiles.
Nanomaterials, *11*(8), p.1985. (2021). DOI: 10.3390/nano11081985 (12 страна, IF 5.719, M21a)

(Рад је изабран као Editor's Choice)

Вишестоехиометријске наноплочице су синтетисане методом CVT (хемијски транспорт у пари). Оне расту дуж [010] кристалографске осе, са дебљином у распону од неколико десетина до неколико стотина нанометара, и бочним димензијама до неколико микрометара. Током раста се јављају изражени површински набори дубине до неколико десетина нанометара.. Формирање {102}r CS (cristalographic shear) равни указује на то да се унутар наноплочица развијају искључиво WnO_{3n-1} фазе. Из HRTEM микроскопије идентификоване су три нове стехиометрије: $W_{13}O_{38}$ ($WO_{2.923}$), $W_{12}O_{35}$ ($WO_{2.917}$) и $W_{11}O_{32}$ ($WO_{2.909}$). Измерени параметри јединичне ћелије добро су се слагали са израчунатим вредностима. Спектар валентне зоне показао је ненулту густину стања на Фермијевој енергији, што указује на благо метално понашање материјала. Добијени Раман спектри показали су више пикова, што представља директан доказ анизотропије материјала. Повећање снаге ласера током Раман спектроскопије убрзало је оксидацију плочица у м-WO_3. Б. В. је corresponding аутор и дели прво коауторство са Л.П., где се колега првенствено бавио синтезом добијеног материјала а Б. В. је била водећа у карактеризацији, електронској микроскопији и анализи добијеног материјала

3. **B. Višić**, L. Pirker, M. Opačić, A. Milosavljević, N. Lazarević, B. Majaron and M. Remškar.
Influence of crystal structure and oxygen vacancies on optical properties of nanostructured multi-stoichiometric tungsten suboxides.
Nanotechnology, *33*(27), p.275705. (2022). DOI: 10.1088/1361-6528/ac6316/meta (11 страна, IF 3.953, M21)

У овом раду, представљена су структурна и оптичка својства четири различите WO_{3-x} наноструктуре са различитом морфологијом и/или стехиометријом. Док два квази-2Д материјала показују поликристалност, наножице имају уједначен састав ,W_5O_{14} и $W_{18}O_{49}$. Раманова спектроскопија открива да мање оксидоване стехиометрије W_xO_{3x-1} имају већи број W–O веза са добро дефинисаним дужинама, док више редуковани субоксиди волфрама имају већи број W–O–W веза са прецизно дефинисаним угловима. Спектри екстинкције показују појаву егзитонских стања код мање редукованих стехиометрија W_xO_{3x-1} и два индиректна енергетска прага, добијена из Tauc-ових дијаграма. Обе вредности се налазе у горњем опсегу пријављених за субоксиде, што се објашњава присуством кисеоничких ваканција. Спектри екстинкције више редукованих субоксида волфрама показују присуство локализованих површинских плазмонских резонанци (LSPR) у блиском инфрацрвеном подручју. Њихови енергетски прагови су нижи због већег броја слободних носилаца наелектрисања, што је потврђено појавом LSPR-врхова. Спектри фотолуминисценције показују два различита емисиона пика у УВ опсегу, присутна код све четири наноструктуре. Они се приписују рекомбинацији електрона и шупљине, при чему шупљина потиче из валентног појаса, а електрон из једног од резонантних стања унутар проводног појаса. Детаљно се разматрају и ефекти стехиометрије и кристалних равни (CS) у контексту разумевања оптичких својстава. Кандидаткиња је била водећи аутор у овом раду, као истраживач који је увидео везу између ваканција, структуре и оптичких особина. Конципирала је експерименте и анализирала их, и написала рад.

4. J. Lazarević, **B. Višić**.
2D materials: Advances in regenerative medicine and human health sensing
2D materials, 12(4), p.042001 (2025). DOI: 10.1088/2053-1583/adf5d4 (32 стране, ИФ 4.5, M21)

Потенцијал 2Д материјала превазилази примену у електроници, проширујући се на регенеративну медицину и неинвазивну сензорику. Захваљујући изузетним својствима као што су велика специфична површина, електрична проводљивост и прилагодљива хемијска структура, ови материјали показују велики потенцијал у тим областима. Ипак, суочавају се са бројним изазовима, попут биокомпатибилности, дугорочне безбедности, поновљиве производње у великом обиму, као и недостатка стандардизације и клиничких протокола. Овај прегледни рад пружа свеобухватан увид у њихову примену у регенеративној медицини и интеракције са различитим биолошким системима. Разматра се утицај њихових уређених, али подесивих својстава на биолошки одговор. Хемијски састав и степен ексфолијације имају кључну улогу у биоактивности ових материјала. Висока осетљивост 2Д материјала на влагу представља велики потенцијал за развој сензора. Комбинацијом са полимерним матрицама побољшава се флексибилност и ефикасност сензора, што их чини погодним за ношење на телу и праћење животне средине. Међутим, изазови и даље постоје у потрази за најбољим сензорским карактеристикама, који се могу превазићи функционализацијом и комбинацијом са алтернативним материјалима као што су наножице металних оксида. Критички су размотрени кључни изазови

(биолошке интеракције, ризици изложености, промене у животној средини и могућност производње у великом) уз процену њиховог потенцијала за одрживе технологије. Кандидаткиња је добила позив да напише прегледни рад, где се фокусирала на секције о сензорима, док се колегиница Ј.Л. фокусирала на регенеративну медицину.

5. **B. Višić**.
Van der Waals nanotubes – optical properties and light-matter interactions.
Graphene Week 2024: 19th Edition of Europe's Leading Graphene and 2D Materials Conference: Prague, 14-18. 10. 2024
Кандидаткиња је добила предавање по позиву на најпознатијој и највећој конференцији посвећеној 2Д материјалима, Graphene Week, где је у оквиру пленарне сесије предавала о свом раду у области неорганских нанотуба.

4. ПОКАЗАТЕЉИ УСПЕХА У НАУЧНОИСТРАЖИВАЧКОМ РАДУ

4.1. Утицајност

Према бази *Scopus* (на датум 30. 09. 2025.), радови кандидаткиње су цитирани укупно 560 пута (525 без аутоцитата) уз вредност **h**-индекса 13.

Прилог:
о Подаци о цитираности кандидата према бази Scopus

Према правилнику о стицању истраживачких и научних звања који се примењује од 1. јуна 2025., кандидаткиња овим испуњенава квалитативни услов **А4** (Хиршов индекс најмање 13), и квалитативни услов **Б1** (најмање 200 цитата)

4.2. Међународна научна сарадња

Др. Вишић је провела 10 година у иностранству (од јануара 2009. до децембра 2018), и то као:
-докторанд и млади истраживач, Jozef Stefan Institute (Slovenia), Condensed Matter Physics department, Laboratory for synthesis of inorganic nanotubes, 2009-2013,
-постдокторски истраживач, Weizmann Institute of Science (Israel), Department of Materials and Interfaces, где је била финансирана од стране Marie Curie Research Training Network under MoWSeS project EU ITN 317451 (2013-2017).
-постдокторски истраживач, Jozef Stefan Institute (Slovenia), Condensed Matter Physics department, Laboratory for synthesis of inorganic nanotubes, (2017-2019).

Током првих постдипломских студија у Израелу, самостално је започела сарадњу са групом у Милану, осмислила релевантна мерења и модификовала постојеће моделе за анализу ЛМИ, и тиме започела фемтосекундна оптичка мерења у својој тадашњој групи. У оквиру ове сарадње су објављена два рада, код којих је Б. В. и водећи и corresponding аутор.
Током других постдипломских студија у Љубљани, Б. В. је започела бављење новом тематиком (синтеза и карактеризација хетероструктурних нанотуба, рад М21а+, где је последњи и corresponding аутор), и предводила отварање нове активности групе у оквиру детекције наночестица у ваздуху. Из те тематике се изродио индустријски пројекат чији је била вођа у току 2018-2019.

Током свог десетогодишњег боравка у иностранству, тј. за време докторских студија и два постдокторска ангажмана, остварила је бројне међународне сарадње. Најзначајнији су наставци сарадње са њеним претходним групама (Словенија, Израел), јер омогућавају коришћење како њихове опреме (поготово електронске микроскопије), тако и синтетисаних наноматеријала за тренутне и будуће активности Центра. Б. В. је руководила билатералним пројектом са Словенијом, са детаљима у секцији 4.3.

Од осталих сарадњи, наводе се најбитније: на одсеку за физику у оквиру Politecnico di Milano, сарађује са Giulio Cerullo-м, где је провела месец дана користећи њихову фемтосекундну апаратуру за проучавање оптичких особина и времена живота носилаца наелектрисања код метал дисулфидних наноструктура. На факултету Faculty of Applied Natural Sciences and Cultural Studies, у Регенсбургу, Немачка, сарађује са проф. Rupet Schreine на field-emission експериментима. На институту Ultrafast Laser Micro and Nano-Laboratory of the Foundation for Research and Technology, Крит, Грчка, сарађивала је са групом Emmanuel-Stratakis-a, на синтези MS_2 анноструктура путем ласерске аблације, и карактерише добијене материјале TEM микроскопијом.

У оцењиваном периоду, објавила је све сем рада [3] из листе радова у колаборацији са колегама из иностранства.

Кандидаткиња је такође била у организационом одбору научних скупова:

-Advances in Solid State Physics and New Materials 2025, Београд, Србија (ко-председавајућа)
-The 21st Symposium on Condensed Matter Physics – SFKM, 2023 Београд, Србија.

Прилог:

- Диплома и нострификација дипломе
- Уговори о раду
- Одговарајуће копије и изводи књига апстраката и публикација са наведеним саставима научних и организационих одбора

Према правилнику о стицању истраживачких и научних звања који се примењује од 1. јуна 2025., стручно усавршавање у иностранству или учешће на међународним пројектима (каријерни приказ), и заједнички радови са ауторима из иностранства (оцењивани период) је квалитативни **Б2** услов.

4.3. Руковођење пројектима и потпројектима (радним пакетима)

Кандидаткиња је ко-координатор међународног пројекта HIP-2D-QM, у оквиру Horizon Europe - HORIZON-WIDERA-2023-TALENTS-01-01 програма; који је активан од 01.11.2024.-01.11.2029. Укупан буџет пројекта је 2 499 855 ЕУР.

Кандидаткиња је руководилац билатералног пројекта са Словенијом, „Синтеза и карактеризација тернарних Van der Waals $Mo_xW_{x-1}S_2$ нанотуба за апликације у field-emission процесима“, који је реализован у периоду 01.07.2023.- 01.07.2025.

Кандидаткиња је руководила индустријским пројектом између Института Јожеф Стефан и компаније „Hyla“ од 2018-2019.

Кандидаткиња је на Weizmann Institute of Science, Izrael финансирана преко Marie Curie пројекта MoWSeS, 2013-2017.

Прилози:

- ERA –ЕУ портал
- Анекс1- доказ о добијеном билатералном пројекту
- Копија уговора између института и компаније
- Копија уговора Marie Curie INT

Према правилнику о стицању истраживачких и научних звања који се примењује од 1. јуна 2025., кандидаткиња руководи пројектом из категорије 2 (Horizon Europe), те стога испуњава услов 1 са листе **А+**, као и услов **А1,** чиме су аутоматски испуњени квалитативни услови за избор у звање.

4.4. Уређивање научних публикација

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4.5. Предавања по позиву (осим на конференцијама)

У септембру 2024. је одржала семинар „ Van der Waals materials: from semiconducting transition-metal dichalcogenides to magnetic trichalcogenides“ на департману за хемију Универзитета Бен Гурион, Израел, као и предавање „$Mo_xW_{(1-x)}S_2$ nanotubes for field emission applications“ на симпозијуму „A multi-dimensional journey through layered materials“ одржаног на Weizmann Institute of Science, Израел.

Прилози:

- Позивна писма и најаве семинара

Према Правилнику о стицању научних и научних звања који се примењује од 1. јуна 2025., предавање по позиву (осим на конференцијама) (за оцењивани период) је квалитативни **Б4** услов.

4.6. Рецензирање пројеката и научних резултата

Кандидаткиња је рецензирала научни пројекат за The Israel Science Foundation у 2022.

Ккадидаткиња је била рецензент за следеће часописе: Advanced Materials (M21a+); Chemical Engineering Journal (2x) (M21a+); Angewandte chemie (M21a); Journal of the American Chemical Society (M21a); Journal of Alloys and Compounds (M21a); Nanoscale (M21a); ACS Applied Materials and Interfaces (M21a); Materials Science and Engineering A (M21a); ACS Applied Nano Materials (M21); Chemical Physics Letters (M21); Surface innovation (2x) (M21); Air quality, Atmosphere and Health (M22); Applied nanoscience (M22); Israel journal of chemistry (M22); Materials Letters (M22); Optics (M22); Photonics (M22); Nanomaterials and Energy (M23)

Према Правилнику о стицању научних и научних звања који се примењује од 1. јуна 2025., Рецензирање међународних и националних научноистраживачких пројеката за избор у звање научног саветника је квалитативни **Б6** услов.

Прилози:

- Захвалница о обављеној рецензији
- Сертификати издавача за урађене рецензције научних радова

4.7. Образовање научних кадрова

Кандидаткиња је била коментор једног мастер рада:
-Бланка Ђукић. „Биокомпатибилност волфрам- и молибден- дисулфидних наноматеријала и њихова антибактеријска активност“, који је одбрањен 14.06.2024. на Биолошком Факултету Универзитета у Београду.

Прилог:

- Одлука Научно-наставног већа Биолошког факултета Универзитета у Београду о одређивању ментора Бланке Ђукић
- Записник са одбране мастер рада

4.8. Награде и признања

Кандидаткиња је добитница годишње награде за научни рад Института за Физику за 2023. годину.

Прилог:

- Награда

4.9. Допринос развоју одговарајућег научног правца

Кандидаткиња је дала значајан допринос проучавању light-matter интеракције у нанотубама и наночестицама на бази WS_2. У главним радовима у том пољу је први (бр. у библиографији 9, 14, 17, 23) или други (8, 19) аутор, уз значајан допринос радовима 11 и 20, без учешћа менторке Маје Ремшкар.
За нанотубе на бази дихалкогенида прелазних метала се дуго сматрало да имају исте оптичке особине као и балк, тј. да су полупроводници са два ексцитона. Кандидаткиња је показала да нанотубе делују као квази једнодимензионални поларитонски нано-системи и поседују и ексцитонске прелазе и модове шупљине у опсегу видљивог и блиског инфрацрвеног зрачења. Ова способност да се светлост ограничи на димензије мање од таласне дужине у амбијенталним условима проистиче из дугоживећих, добро везаних ексцитона и високог индекса преламања WS_2. У најбитнијем раду у овој области (17) , Б. В. је прва направила временски зависан PCO (phenomenological coupled oscillator) модел, којим је анализирала спектре добијене фемтосекундном спектроскопијом на бази екстинкције. Овај модел спрегнутих осцилатора омогућава да издвојимо основну неравнотежну електронску динамику. Показала је да се резонанце екситона и триона померају услед вишечестичних (many-body) ефеката фото-генерисаних носилаца наелектрисања и њихове динамике популације на фемто- и пикосекундној временској скали. Овај резултат показује да је овај временски-зависан феноменолошки модел квантитативно репродукује неравнотежни оптички одговор снажно спрегнутих система и може да се користи и за друге системе, што је касније објављено у раду 8, као и у радовима који га цитирају.
Према Правилнику о стицању научних и научних звања који се примењује од 1. јуна 2025., допринос развоју одговарајућег научног правца (каријерни приказ) је квалитативни **Б9** услов.

5. БИБЛИОГРАФИЈА КАНДИДАТА

Публикације су разврстане по М категоријама у обрнутом хронолошком редоследу.

Радови објављени у научним часописима међународног значаја М20 након избора у претходно звање ([1] -[8]):

Рад у водећем међународном часопису категорије М21а+ (20 поена)

[1] L. Pirker, R. Ławrowski, R. Schreiner, M. Remškar and **B. Višić.**
$Mo_xW_{x-1}S_2$ nanotubes for advanced field emission application.
Advanced Functional Materials, *33*(15), p.2213869 (2023). DOI: 10.1002/adfm.202213869 (8 страна, IF 19.924; M21a+)

Рад у водећем међународном часопису категорије М21а (12 поена)

[2] L. Gazvoda, **B. Višić**, M. Spreitzer and M.Vukomanović.
Hydrophilicity affecting the enzyme-driven degradation of piezoelectric poly-l-lactide films.
Polymers, *13*(11), p.1719. (2021). DOI: 10.3390/polym13111719 (14 страна, IF 4.967, M21a)

Рад у водећем међународном часопису категорије М21 (8 поена)

[3] J. Lazarević, **B. Višić**.
2D materials: Advances in regenerative medicine and human health sensing
2D materials, 12(4), p.042001 (2025). DOI: 10.1088/2053-1583/adf5d4 (32 стране, ИФ 4.5, M21)

[4] **B. Višić**, L. Pirker, M. Opačić, A. Milosavljević, N. Lazarević, B. Majaron and M. Remškar.
Influence of crystal structure and oxygen vacancies on optical properties of nanostructured multi-stoichiometric tungsten suboxides.
Nanotechnology, *33*(27), p.275705. (2022). DOI: 10.1088/1361-6528/ac6316/meta (11 страна, IF 3.953, M21)

[5] L. Pirker+, **B. Višić**+, Kovač, J., Škapin, S.D. and M. Remškar.

Synthesis and characterization of tungsten suboxide W_nO_{3n-1} nanotiles.
Nanomaterials, *11*(8), p.1985. (2021). DOI: 10.3390/nano11081985 (12 страна, IF 5.719, M21)
(Рад је изабран као Editor's Choice, доказ у прилогу)

[6] U. Gradišar Centa, M. Sterniša, **B. Višić**, Ž. Federl, S. S. Možina, and M. Remškar.
Novel nanostructured and antimicrobial PVDF-HFP/PVP/MoO3 composite.
Surface Innovations, *9*(5), pp.256-266 (2021). DOI: 10.1680/jsuin.20.00073 (11 страна, IF 2.845, M21)
(Рад је изабран као Feature Atricle, доказ у прилогу)

Рад у међународном часопису категорије М22 (5 поена)

[7] L. Pirker and **B. Višić**.
Recent progress in the synthesis and potential applications of two-dimensional tungsten (Sub) oxides.
Israel Journal of Chemistry, *62*(3-4) (2022) DOI: 10.1002/ijch.202100074 (11 страна, IF 3.357, M22)

[8] S.S.Sinha, **B. Višić**, A. Byregowda and L. Yadgarov.
Dynamical Nature of Exciton-Polariton Coupling in WS_2 Nanoparticles.
Israel journal of chemistry, *62*(3-4). (2022) DOI: 10.1002/ijch.202100128 (10 страна, IF 3.357, M22)

Радови објављени у научним часописима међународног значаја М20 пре избора у звање ([9] - [29]):

Рад у водећем међународном часопису категорије М21a+

[9] **B. Višić**, L.S. Panchakarla, R. Tenne.
Inorganic Nanotubes and Fullerene-like Nanoparticles at the Crossroads between Solid-State Chemistry and Nanotechnology.
Journal of the American Chemical Society, 139, 12865-12878 (2017).
(Рад је изабран као Editor's Spotlight)

Рад у водећем међународном часопису категорије М21a

[10] L. Pirker, **B. Višić**, S. D. Skapin, G. Dražić, J. Kovač, M. Remškar.
Multistoichiometric quasi-two-dimensional W_nO_{3n-1} tungsten oxides.
Nanoscale 12(28), 15102-15114 (2020).

[11] 3. S. J. Huang, W. Y. Peng, **B. Višić**, A. Zak.
Al alloy metal matrix composites reinforced by WS_2 inorganic nanomaterials.
Materials Science and Engineering:A, 709, 290-300 (2018).

[12] M. Remskar, I. Iskra, J. Jelenc, S. D. Skapin, **B. Višić**, A. Varlec, A. Krzan.
A novel structure of polyvinylidene fluoride (PVDF) stabilized by MoS_2 nanotubes.
Soft Matter, 9, 8647-8653 (2013).

Рад у водећем међународном часопису категорије М21

[13] A. Milosavljević, A. Šolajić, **B. Višić**, M. Opačić, J. Pešić, L. Yu, C. Petrovic, ZV Popović, N. Lazarević.
Vacancies and spin_phonon coupling in $CrSi_{0.8}Ge_{0.1}Te_3$.
Journal of Raman Spectroscopy, 51, 2153-2160 (2020).

[14] A. Sedova+, **B. Višić+**, V. Vega-Mayoral, D. Vella, C. Gadermaier, H. Dodiuk, S. Kenig, R. Tenne, R. Gvishi, G. Bar.
Silica aerogels as hosting matrices for WS_2 nanotubes and their optical characterization.
Journal of Materials Science, 55, 7612-7623 (2020).

[15] L. Pirker, A. Gradišek, **B. Višić**, M. Remškar.
Nanoparticle exposure due to pyrotechnics during a football match.
Atmospheric Environment, 233, 117567 (2020).

[16] L. Drinovec, J. Sciare, I. Stavroulas, S. Bezantakos, M. Pikridas, F. Unga, C. Savvides, **B. Višić**, M. Remškar, G. Močnik.
A new optical-based technique for real-time measurements of mineral dust concentration in PM10 using a virtual impactor.
Atmospheric Measurement Techniques, 13(7), 3799-3813 (2020).

[17] **B. Višić** , L. Yadgarov, EAA Pogna, S. Dal Conte, V. Vega-Mayoral, D. Vella, R. Tenne, G. Cerullo, and C. Gadermaier.
Ultrafast nonequilibrium dynamics of strongly coupled resonances in the intrinsic cavity of WS_2 nanotubes.
Physical Review Research, 1(3), 033046 (2019)

[18] A. Milosavljević, A. Šolajić, S. Djurdjić-Mijin, J. Pešić, **B. Višić**, Y. Liu, C. Petrovic, N. Lazarević, ZV Popović.
Lattice dynamics and phase transitions in $Fe_{3-x}GeTe_2$.
Physical Review B, 99(21), 214304 (2019).

[19] L. Yadgarov, **B. Višić**, T. Abir, R. Tenne, AY Polyakov, R. Levi, T. Dolgova, V. Zubyuk, A. Fedyanin, E. Goodilin, D. Oron.
Strong light-matter interaction in tungsten disulfide nanotubes.
Physical Chemistry Chemical Physics, 20(32), 20812-20820 (2018).

[20] P. Ranjan, S. Shankar, R. Popovitz-Biro, S.R. Cohen, I. Kaplan-Ashiri, T. Dadosh, L.J.W. Shimon, **B. Višić**, R. Tenne, M. Lahav, M.E. van der Boom.
Decoration of Inorganic Nanostructures by Metallic Nanoparticles to Induce Fluorescence, Enhance Solubility, and Tune Band Gap.
The Journal of Physical Chemistry C, 122, 6748-6759 (2018).

[21] R. Rosentsveig, L. Yadgarov, Y. Feldman, S. Shilstein, R. Popovitz-Biro **B. Višić** , A. Sedova, S. R. Cohen, Y. Li, A. Frenkel.
Doping of Fullerene-Like MoS_2 Nanoparticles with Minute Amounts of Niobium.
Particle and Particle Systems Characterization, 35(3), 1700165 (2018).
(Рад је изабран за Inside Cover Page, DOI: 10.1002/ppsc.201870009)

[22] **B. Višić**, E. Kranjc, L. Pirker, U. Bacnik, G. Tavcar, S. Skapin, and M. Remskar.
Incense powder and particle emission characteristics during and after burning incense in an unventilated room setting.
Air Quality, Atmosphere and Health, 11(6), 649-63 (2018).

[23] **B. Višić**, H. Cohen, R. Popovitz-Biro, R. Tenne, V. I. Sokolov, N. V. Abramova, A. G. Buyanovskaya, S. L. Dzvonkovskii, O. L. Lependina.
Direct Synthesis of Palladium Catalyst on Supporting WS_2 Nanotubes and its Reactivity in Cross-Coupling Reactions.
Chemistry-An Asian Journal, 10, 2234-2239 (2015).

[24] **B. Višić**, M.K. Gunde, J. Kovac, I. Iskra, J. Jelenc, M. Remskar.
MoS_2 nanotube exfoliation as new synthesis pathway to molybdenum blue.
Materials Research Bulletin, 48, 802-806 (2013).

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https://peru-walrus-102732.hostingersite.com/wp-content/uploads/2025/08/AbstractsOrals.pdf
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(**предавање по позиву, пленарна сиесија, писмо у прилогу**)

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7. **B. Višić**, L. Pirker, R. R. Ławrowski Schreiner, M. Remškar.
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9. A. Milosavljević, …, **B. Višić**, …N. Lazarević. (4. од 12 коаутора)
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Lubricative Coatings Based on PEEK -MoS_2 Nanotubes Composites.
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The MoS2 Nanotubes and Products of their Exfoliation.
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КВАНТИФИКАЦИЈА НАУЧНИХ РЕЗУЛТАТА КАНДИДАТА

Врста резултата	Вредност резултата (Прилог 2)	Укупан број резултата (укупан број резултата који подлежу нормирању)	Укупан број бодова (укупан број бодова након нормирања)
M21a+	20	1 (0)	20
M21a	12	1 (0)	12
M21	8	4 (0)	32
M22	5	2 (0)	10
M34	0,5	14 (4)	7 (6,172)
M64	0,5	2 (0)	1
УКУПНО			**82 (81.172)**

Поређење са минималним квантитативним условима за избор у тражено научно звање

Диференцијални услов за оцењивани период за избор у научно звање: **научни саветник**	Неопходно	**Остварени нормирани број бодова**
Укупно	70	**81.672**
Обавезни: M11+M12+M21+M22+M91+M92+M93	40	**74**

ПРИЛОГ

Претходни избор у звање

РепубликаСрбија
МИНИСТАРСТВО ПРОСВЕТЕ, НАУКЕ И ТЕХНОЛОШКОГ РАЗВОЈА
Комисија за стицање научних звања

Број: 660-01-00001/1784
31.05.2021. године
Б е о г р а д

На основу члана 24. став 2. и члана 76. став 6. Закона о науци и истраживањима ("Службени гласник Републике Србије", број 49/19), члана 3. ст. 1. и 3. и члана 40. Правилника о поступку, начину вредновања и квантитативном исказивању научноистраживачких резултата истраживача ("Службени гласник Републике Србије", број 24/16, 21/17 и 38/17) и захтева који је поднео

Институт за физику у Београду

Комисија за стицање научних звања на седници одржаној 31.05.2021. године, донела је

ОДЛУКУ
О СТИЦАЊУ НАУЧНОГ ЗВАЊА

Др Бојана Вишић

стиче научно звање

Виши научни сарадник

у области природно-математичких наука - физика

О Б Р А З Л О Ж Е Њ Е

Институт за физику у Београду

утврдио је предлог број 153/1 од 24.02.2021. године на седници Научног већа Института и поднео захтев Комисији за стицање научних звања број 160/1 од 25.02.2021. године за доношење одлуке о испуњености услова за стицање научног звања ***Виши научни сарадник***.

Комисија за стицање научних звања је по претходно прибављеном позитивном мишљењу Матичног научног одбора за физику на седници одржаној 31.05.2021. године разматрала захтев и утврдила да именована испуњава услове из члана 76. став 6. Закона о науци и истраживањима ("Службени гласник Републике Србије", број 49/19), члана 3. ст. 1. и 3. и члана 40. Правилника о поступку, начину вредновања и квантитативном исказивању научноистраживачких резултата истраживача ("Службени гласник Републике Србије", број 24/16, 21/17 и 38/17) за стицање научног звања ***Виши научни сарадник,*** па је одлучила као у изреци ове одлуке.

Доношењем ове одлуке именована стиче сва права која јој на основу ње по закону припадају.

Одлуку доставити подносиоцу захтева, именованој и архиви Министарства просвете, науке и технолошког развоја у Београду.

ПРЕДСЕДНИК КОМИСИЈЕ

Др Ђурђица Јововић,
научни саветник

ПРВИ ПОТПРЕДСЕДНИК ВЛАДЕ И МИНИСТАР

Бранко Ружић

ПРИЛОГ

3. Приказ најзначајнијих резултата-додаци

Cite this article
Drelich J, Boinovich L and Sun Z (2021)
Editorial. *Surface Innovations* **9(5)**: 254–255,
https://doi.org/10.1680/jsuin.2021.9.5.254

Surface Innovations

ice Publishing

Editorial

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Department of Materials Science and Engineering, Michigan Technological University, Houghton, MI, USA

Ludmila Boinovich
A.N. Frumkin Institute of Physical Chemistry and Electrochemistry, Russian Academy of Sciences, Russia

Ziqi Sun
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We are delighted to report another increase in the journal impact factor for *Surface Innovations*, which rose from 2.845 in 2020 to 3.016 this year. This is the fourth year in a row that the journal has experienced an increase in its impact factor as demonstrated in Figure 1.

The top three most-cited papers that contributed to this year impact factor include:

1. M.R. Derakhshandeh, M.J. Eshraghi, M.M. Hadavi, M. Javaheri, S. Khamseh, M.G. Sari, P. Zarrintaj, M.R. Saeb, and M. Mozafari, Diamond-like carbon thin films prepared by pulsed-DC PE-CVD for biomedical applications, *Surface Innovations* **6(3)**, 2018, 167–175.
2. M.R. Derakhshandeh, M.J. Eshraghi, M. Javaheri, S. Khamseh, M.G. Sari, P. Zarrintaj, M.R. Saeb, and M. Mozafari, Diamond-like carbon-deposited films: a new class of biocorrosion protective coatings, *Surface Innovations* **6(4-5)**, 2018, 266–276.
3. M. Sadeghi-Kiakhani, S. Khamseh, A. Rafie, S.M.F. Takieh, P. Zarrintaj, and M.R. Saeb, Thermally stable antibacterial wool fabrics surface-decorated by TiON and TiON/Cu thin films, *Surface Innovations* **6(4-5)**, 2018, 258–265.

We would like to take this opportunity to express our appreciation to Professors Masoud Mozafari, and Mohammad Reza Saeb for submitting the above-listed quality leading contributions on cutting-edge research to *Surface Innovations*. These papers serve as examples of quality that the journal seeks in every new submission.

We also thank all other contributors who submitted manuscripts to *Surface Innovations*, to external reviewers for their hard voluntary work and their valuable comments, and to everyone who reads and cites the *Surface Innovations* papers.

The number of submissions continues to rise, allowing us to be more selective in choosing contributions that are more appealing to innovators. Additionally, as a result of the impact of the growing pool of submissions, the publisher has decided to expand the content of the journal from 5 to 6 issues in 2022. We hope to fill the additional issue with interesting reports on surface and interfacial innovations and discoveries.

In this closing issue of 2021 we offer seven original research reports on antimicrobial coating, magnetic membranes, photocatalytic nanoparticles, the use of iron phosphide as an energy-storage material, low-reflectivity coating for surgical instrumentation, inhibitor of corrosion, and the use of expired medication in lithium-based batteries.

In the first contribution, selected as the feature article for this issue, Centa *et al*. (2021) describe a novel active nanostructured antimicrobial composite coating made of poly(vinylidene fluoride-co-hexafluoropropylene) and polyvinylpyrrolidone as a matrix and molybdenum trioxide nanowire as a filler. The antimicrobial activity of the coating is demonstrated against Gram-positive and Gram-negative bacteria, yeasts, and molds. This novel nanocomposite coating is especially appealing for contact surfaces as it is activated by moisture, preventing colonization of the surface by microorganisms.

Polymeric magnetic membranes are used in cell culture studies to mediate and investigate the behavior of cells. In a new contribution, the research team from Turkey demonstrates fabrication of magnetic polydimethylsiloxane membranes with uniformly distributed embedded magnetite particles. Superparamagnetic magnetite particles with a diameter of 6–10 nm were synthesized using iron (II) chloride tetrahydrate and iron (III) chloride hexahydrate, and then homogenized uniformly into a silicone elastomer with its curing agent. Such fabricated chemical agent-free membranes were successfully tested for osteoblast cell proliferation and morphology studies.

Silver chloride surface doped with silver (Ag@AgCl) is a plasmonic photocatalyst that acts within the visible-light range and can be used to degrade hazardous organics from water and wastewater. A team of researchers from China invented a novel simple method of synthesizing Ag@AgCl nanoparticles with dimensions of 40–100 nm using silver nitrate and lithium chloride solutions and additions of dimethylacetamide and polyvinylpyrroloidone. The photocatalytic activity of synthesized nanoparticles is exhibited through degradation tests of methyl orange.

Sodium ion-batteries are considered a high specific energy, low cost and high safety alternative to current lithium ion-batteries, if the large diffusion resistance of the sodium ions between the cathode and the anode is significantly reduced. Therefore, current research in the field of sodium ion batteries concentrates heavily on development of new electrode materials such as transition metal phosphides. The research team from Zhengzhou University

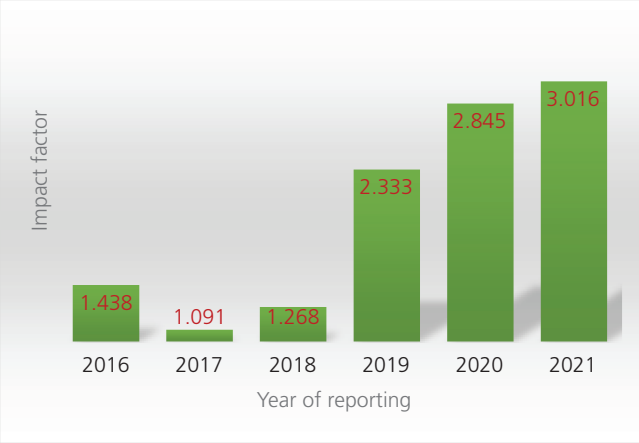

Figure 1. Impact factor for *Surface Innovations*

in China describes a unique composite electrode made of a hollow sea-urchin-like iron phosphide on a carbon substrate (FeP@C). This novel electrode material, with high integrity and cycling performance, effectively alleviates volume expansion during sodium ion intercalation and demonstrates high electrical conductivity.

High surface reflectivity of surgical instrumentation that reduces the surgeons' field of vision during interventional procedures is a common problem in the medical field and dentistry. In a new paper, researchers from Colombia tackle this challenge by depositing a low-reflectivity titanium aluminum nitride (TiAlN) coating on stainless steel using the direct-current magnetron sputtering technique. The study demonstrates that the columnar grain morphology of a TiAlN coating not only reduces reflectivity of the surface but also improves the corrosion resistance of stainless steel used for manufacturing surgical and dental instruments.

In the next contribution, an international China-USA team describes the corrosion inhibition performance of an imidazoline quaternary ammonium salt (IM) and octylphenol polyoxyethene ether (OP) to combat carbon dioxide corrosion of pipeline steel in a sodium chloride solution. The study shows that the mixture of IM and OP molecules promote the formation of a thick, compact adsorption inhibitor layer, which performs significantly better than when each material is applied separately, revealing synergistic inhibition performance. Fundamental studies also revealed that the IM-OP mixture enhanced interactions between inhibitor molecules and the metal surface, with OP promoting electrons to the metal and IM molecules accepting electrons from the metal surface.

In the last contribution to this issue, the research team led by Prof. Hou from Kunming University of Science and Technology describes their newest invention in their program of utilization of medical waste materials. They converted expired aminocaproic acid, commonly used in the treatment of acute bleeding due to elevated fibrinolytic activity, to zinc aminocaproate with mint-leaf-like flower morphology structures. Fabricated electrodes decorated with these zinc aminocaproate flowers exhibit high electrochemical lithium-storage performance with significant reversible discharge specific capacities.

We are looking forward to your feedback on the content of this issue, as well as other issues of *Surface Innovations*, and we encourage you to submit your exciting new reports on discoveries and innovations.

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We wish you all the best in your research and look forward to further collaboration. Please feel free to contact us with any questions.

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ПРИЛОГ

4.1 Утицајност

-Подаци о цитираности кандидата Scopus

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29	560	13
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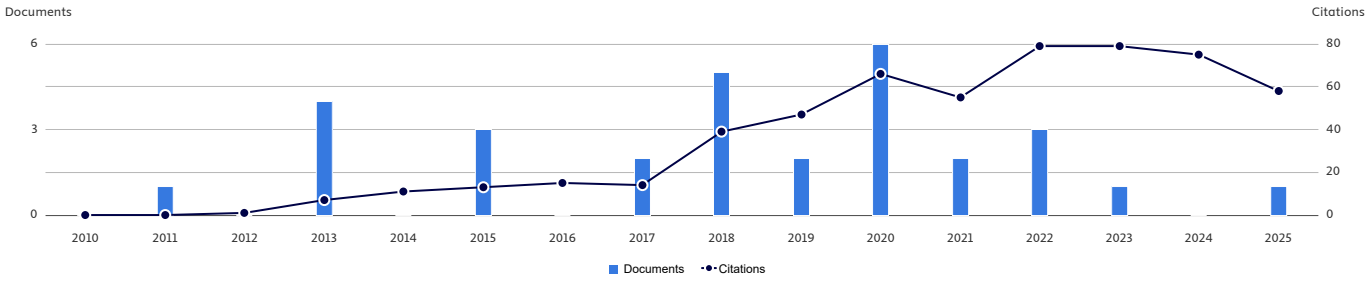

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	Total		**0**	**0**	**0**	**1**	**7**	**11**	**13**	**15**	**14**	**39**	**47**	**66**	**55**	**79**	**79**	**75**	**58**	**559**	**1**	**560**
1	Optical properties of exfoliated MoS 2 coax...	2011	0	0	0	1	4	8	5	10	8	9	9	11	6	4	5	5	2	87	0	87
2	Inorganic Nanotubes and Fullerene-like N...	2017	0	0	0	0	0	0	0	0	0	10	9	11	8	8	6	6	3	61	0	61
3	Strong light-matter interaction in tungsten...	2018	0	0	0	0	0	0	0	0	0	1	9	10	6	8	9	7	5	55	0	55
4	A novel structure of polyvinylidene fluoride...	2013	0	0	0	0	1	2	3	1	3	3	6	4	2	5	3	7	5	45	0	45
5	Al alloy metal matrix composites reinforce...	2018	0	0	0	0	0	0	0	0	0	4	5	6	2	3	8	3	9	40	0	40
6	Incense powder and particle emission char...	2018	0	0	0	0	0	0	0	0	0	0	2	4	5	1	7	5	2	26	0	26
7	Lattice dynamics and phase transitions in ...	2019	0	0	0	0	0	0	0	0	0	0	0	5	3	4	4	4	4	24	0	24
8	Hydrophilicity affecting the enzyme-driven...	2021	0	0	0	0	0	0	0	0	0	0	0	0	1	4	8	5	2	20	1	21
9	A new optical-based technique for real-tim...	2020	0	0	0	0	0	0	0	0	0	0	0	0	4	4	2	7	1	18	0	18
10	Multi-stoichiometric quasi-two-dimension...	2020	0	0	0	0	0	0	0	0	0	0	0	0	4	5	3	0	3	15	0	15
11	Nanoparticle exposure due to pyrotechnics...	2020	0	0	0	0	0	0	0	0	0	0	0	0	1	7	4	1	1	14	0	14
12	Novel nanostructured and antimicrobial P...	2020	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4	3	2	13	0	13
13	Ultrafast nonequilibrium dynamics of stro...	2019	0	0	0	0	0	0	0	0	0	0	0	3	1	3	2	1	3	13	0	13
14	Short Pulse Laser Synthesis of Transition-M...	2017	0	0	0	0	0	0	0	0	1	2	3	1	2	3	0	1	0	13	0	13
15	Recent Progress in the Synthesis and Poten...	2022	0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	4	3	12	0	12
16	Friction properties of polyvinylidene fluori...	2013	0	0	0	0	1	0	0	0	1	1	2	3	1	0	0	1	0	10	0	10
17	MoxWx–1S2 Nanotubes for Advanced Field ...	2023	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	3	9	0	9
18	Dynamical Nature of Exciton-Polariton Co...	2022	0	0	0	0	0	0	0	0	0	0	0	0	0	2	3	2	2	9	0	9
19	Silica aerogels as hosting matrices for WS2...	2020	0	0	0	0	0	0	0	0	0	0	0	0	3	2	1	2	1	9	0	9
20	Decoration of Inorganic Nanostructures by...	2018	0	0	0	0	0	0	0	0	0	2	0	2	1	2	1	1	0	9	0	9
21	Direct Synthesis of Palladium Catalyst on S...	2015	0	0	0	0	0	0	0	2	0	4	0	0	1	1	1	0	0	9	0	9
22	MoS2 nanotube exfoliation as new synthes...	2013	0	0	0	0	0	1	3	1	0	0	1	1	0	2	0	0	0	9	0	9
23	Optical properties of multilayer films of na...	2015	0	0	0	0	0	0	0	0	0	3	0	2	1	1	0	1	0	8	0	8
24	Properties of two-dimensional graphene-li...	2015	0	0	0	0	0	0	1	0	1	0	0	2	3	0	0	1	0	8	0	8
25	Synthesis and characterization of tungsten...	2021	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	2	2	7	0	7
26	Influence of crystal structure and oxygen v...	2022	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4	0	4

27	Vacancies and spin–phonon coupling in Cr...	2020	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	1	1	4	0	4
28	Doping of Fullerene-Like MoS2 Nanoparticl...	2018	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	2	1	4	0	4
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4.2 Међународна научна сарадња

-Диплома и нострификација дипломе
-Уговори о раду
-Одговарајуће копије и изводи књига апстраката и публикација са наведеним саставима научних и организационих одбора

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Mentorica dr. Maja Remškar, *izredna profesorica s področja fizike*

Univerza *v Ljubljani*
ji ob končanem doktorskem študiju podeljuje znanstveni naslov
s področja fizike.

DOKTORICA ZNANOSTI

Številka: 9362/14

V Ljubljani, dne sedemindvajsetega marca dva tisoč štirinajst.

Prof. dr. Anton Ramšak
dekan Fakultete za matematiko in fiziko

Prof. dr. Ivan Svetlik
rektor Univerze v Ljubljani

УНИВЕРЗИТЕТ У БЕОГРАДУ

Адреса: Студентски трг 1, 11000 Београд, Република Србија
Тел.: 011 3207400; Факс: 011 2638818; E-mail: officebu@rect.bg.ac.rs

Београд, 13. јуни 2015. године
Број: 06-61302-1434/3-15
МЧБ

На основу чл. 104. и 105. Закона о високом образовању ("Службени гласник РС", бр. 76/05, 100/07-аутентично тумачење, 97/08, 44/10, 93/12, 89/13 и 99/14), члана 11. Правилника о признавању страних високошколских исправа ("Гласник Универзитета у Београду" бр. 129/06 и 145/08) и одлуке Комисије Универзитета за признавање страних високошколских исправа бр. 06-61302-1434/2-15, од 23. априла 2015. године, доносим

Р Е Ш Е Њ Е

ПРИЗНАЈЕ СЕ високошколска исправа **Универзитета у Љубљани – Факултет за математику и физику, Љубљана, Република Словенија**, бр. 9362/14 од 27.03.2014. године, на којем је **Бојана (Љубисав) Вишић** стекла образовање, као **диплома докторских академских студија (180 ЕСПБ)**, са стручним називом **доктор науке – физичке науке.**

О б р а з л о ж е њ е

Универзитету у Београду, преко Физичког факултета, обратила се Бојана (Љубисав) Вишић, рођена 23.02.1983. године у Ваљеву, Република Србија, захтевом за признавање дипломе Универзитета у Љубљани – Факултет за математику и физику, Љубљана, Република Словенија, на којем је именована, након окончаних докторских академских студија стекла звање докторица знаности. Претходни степен образовања: мастер академске студије, Универзитет у Београду – Физички факултет, 2008. године.

Стручни органи Факултета размотрили су све списе предмета и предложили Комисији Универзитета доношење одлуке којом се предметна диплома признаје као диплома докторских академских студија са стручним називом доктор науке – физичке науке. Комисија Универзитета у Београду, узимајући у обзир став стручних органа Факултета и утврђена правила о признавању јавних исправа, донела је одлуку као у диспозитиву.

УПУТСТВО О ПРАВНОМ СРЕДСТВУ:

Ово решење је коначно у управном поступку, па се против њега може покренути управни спор код Управног суда, у року од 30 дана од дана пријема решења.

Р Е К Т О Р

Проф. др Владимир Бумбаширевић

Marie Curie Initial Training Network

Personal Agreement # 7-015 (under Grant Agreement No. 317451)

between

Weizmann Institute of Science

and

Bojana Visic

(hereinafter called the "*Researcher*")

Whereas within the Seventh Framework Program of the European Union, the *Weizmann Institute of Science* has acceded as a *beneficiary* to a contract for a Marie Curie Initial Training Network (*No. 317451*) (hereinafter called the "*Grant Agreement*") which was executed between the Research Executive Agency (the "REA") – acting under powers delegated by the European Commission and Ecole Polytechnique Fédérale de Lausanne (the "*Coordinator*") for research in the field of "Nanoelectronics based on two-dimensional dichalcogenides" (hereinafter called "the *Project*"); The *Grant Agreement* and its annexes have been formally incorporated into this *agreement* as Annex A; and

Whereas, the European Union (the "*Union*") has decided to grant financial contribution for the implementation of the *Project* within the framework of the SP3- People and under the conditions laid down in the *Grant Agreement;*

It is hereby agreed that:

a. The parties shall be bound *mutatis mutandis* by the terms and conditions of the *Grant Agreement* including Annex I (Description of Work), Annex II (General conditions, Marie Curie Actions Multi-Beneficiary), Annex III (Specific Provisions – Marie Curie Initial Training Network Multi-Beneficiary) and any special conditions which may be agreed as a separate annex thereto, which form part of the *Grant Agreement*.

b. In accordance with the above-mentioned *Grant Agreement*, it is agreed that:

   1) Words in italics shall have the same meaning as in the *Grant Agreement*.

   2) Prof. Reshef Tenne is the scientist (hereinafter called "the *Scientist*") in charge of supervising the *Researcher's initial training activities* indicated in Annex I of the *Grant Agreement*.

   3) The *initial training activities* will take place at: Materials and Interfaces Dept. /Weizmann Institute of Science .

   4) The *Researcher* declares that a *Personal Career Development Plan,* attached herein as Annex B, has been established with the *Scientist*, if applicable. If no *Personal Career Development Plan* has been established, Annex B attached herein contains a description (abstract) of the *initial training activities*.

   5) This *agreement* shall be effective between 1 September 2013 and 28 February 2017. The *Researcher* declares that within the aforementioned duration, the *Researcher* will spend at the *Weizmann Institute of Science* a cumulative period

of 12 months[1]. The *Researcher* is appointed as a Visiting Scientist at the *Weizmann Institute of Science* for the duration of the period during which the *Researcher* is at the *Weizmann Institute of Science* in the framework of this *agreement*.

6) The amounts that the *Weizmann Institute of Science* is entitled to receive from the *Union* (through the Coordinator) pursuant to the *Grant Agreement*: € [redacted] for living allowance for the *Researcher* and € [redacted] for mobility allowance. Monthly payments due to the *Researcher* will be made according to the schedule applicable for all *Weizmann Institute of Science's* researchers. Amounts deductible subject to legal justifications shall be deducted from the above-mentioned sums[2].

7) The gross sums received from the *Union* (through the Coordinator) shall be subject to deductions of tax and/or any other mandatory deduction which the *Weizmann Institute of Science* is obligated to deduct by law, including but not limited to, social contributions by the employer, social contributions by the employee, Senior Employees' Insurance and convalescence pay. All such payments shall be deducted from the gross sums received from the *Union* (through the Coordinator).

8) The conversion rate used when payments are made in national currency will be the effective rate for conversion of EURO to NIS (New Israeli Shekels), as determined by the Bank of Israel on the date of receipt of each payment from the Coordinator. The present exchange rate of 4.789 NIS/EURO will serve as the provisional conversion rate to be used for payments prior to this reference date.

9) The *Researcher,* for the activities carried out in the frame of the *Project,* shall not be allowed to receive other incomes than those received from the *Weizmann Institute of Science* pursuant to the *Grant Agreement* and this *agreement*.

10) The *Researcher* is required to have a relevant, valid visa and a work permit at all times during the whole duration of this *agreement*. In case the *Researcher* does not have a relevant valid visa and a work permit, the *Researcher* will be required to leave the State of Israel.

    Therefore, it is the responsibility of the *Researcher* to obtain and hold a relevant, valid visa and a work permit at all times during the whole duration of this *agreement*.

    Without derogating from the foregoing, it is the responsibility of the *Researcher* to apply for renewal/extension of his/her visa and work permit, as will be required, and to receive a renewed/extended visa and work permit in due time.

11) To avoid any doubts, it is hereby clarified that further to national regulations, receipt of the above mentioned payments is **conditional on the *Researcher* a *priori* being granted a work permit** for the duration of staying at the *Weizmann Institute of Science*. The application procedure to obtain the visa and work permit is likely to take several months. To obtain the visa and work permit, the *Researcher* will have to go in person to the nearest Israeli Embassy or Consulate in his/her country of residence.

[1] No less than 3 cumulative months, and no more than 36 cumulative months (for Early-Stage Researchers, ESRs) or 24 cumulative months (for Experienced Researchers, ERs), during the entire period of the Grant Agreement. (Annex III, Part A.III.3.3.a of the Grant Agreement).

[2] Reference to sums relate to gross sums payable by the Union to the *Weizmann Institute of Science* and subject to deductibles.

Ms. Dana Dvash, head of the *Weizmann Institute of Science's* Visiting Scientist and Housing Directorate (E-mail dana.dvash@weizmann.ac.il), will be in touch with the *Researcher* in due course and will instruct the *Researcher* regarding the documents required for her office to apply to the Israeli Ministry of Interior for the issue of a work permit for the *Researcher's* stay.

12) An allocation is made for Health Insurance. However, as a non-Israeli Visiting Scientist, the *Researcher* is not covered under the medical insurance applicable to residents of the State of Israel, and therefore, we require that the *Researcher* and the *Researcher's* family members insure themselves under adequate medical insurance, via an insurance company in Israel, covering any medical expenses that may be required during the *Researcher*'s stay at the *Weizmann Institute of Science*. Ms. Dana Dvash (E-mail: dana.dvash@weizmann.ac.il) will refer you to an insurance company for obtaining the required insurance.

    The above mentioned medical insurance does not cover certain ailments and/or medical treatments, in respect of which it is recommended to take out additional insurance.

13) During the performance of the *Project*, the *Researcher* will be insured with Senior Employees' Insurance. A monthly amount equal to 5% of the allocation the Researcher is entitled to receive for monthly living allowance (after deduction of taxes as mentioned in section 7 above) shall be contributed by each party to cover such insurance. For the avoidance of doubt, *Weizmann Institute of Science's* contribution shall be deducted from the amounts allocated by the *Union* (through the Coordinator) as described above.

14) In addition, the *Researcher* will have disability insurance coverage at a cost of no more than 2.5% of the allocation the *Researcher* is entitled to receive for monthly living allowance (after deduction of taxes as mentioned in section 7 above).

15) 8.33% of the allocation the *Researcher* is entitled to receive for monthly living allowance (after deduction of taxes as mentioned in section 7 above), together with provisions for linkage and profits, will be in lieu of paying the severance pay that will be due to the *Researcher*.

16) By signing this *agreement*, the *Weizmann Institute of Science* and *the Researcher* agree that the 8.33% contribution shall be completely in lieu of the *Weizmann Institute of Science's* obligation to pay severance pay to the *Researcher*, and this is according to the General Approval under section 14 of the Severance Pay Law, 5723-1963 and the general permit that was published by the Minister of Labor.

17) The amount of the contributions stipulated above will be subject to the directives of the competent authorities and/or provisions of any law.

18) Upon signature of this *agreement*, the *Weizmann Institute of Science* will provide the *Researcher* with contact details of a relevant insurance company for the purpose of acquiring Senior Employees' Insurance for the duration of the *Project*, the cost of which will be deducted on a monthly basis, as detailed above, and shall be transferred by the *Weizmann Institute of Science* to the insurance company recommended by it or to any other insurance company requested in writing by the *Researcher*.

19) After the end of the *Researcher's* work at the *Weizmann Institute of Science*, the *Researcher* will be responsible for obtaining the remaining funds from the insurance company in accordance with its procedures. The *Weizmann Institute of*

Science shall provide all required documentation in this regard in order to assist the *Researcher* in obtaining these funds.

20) According to the Israeli legislation, the *Researcher* will be entitled at the end of his/her first full work year and once every full working year thereafter at the *Weizmann Institute of Science,* to payment of convalescence pay. The number of convalescence days for each year and the rate for each convalescence day will be in accordance with the applicable law. The payment of the convalescence days shall be deducted from the amounts allocated by the *Union* (through the Coordinator) as described above.

21) The law of the State of Israel is applicable to this *agreement.*

22) The *Researcher* is covered under the social security scheme that is applied to foreign employed workers with a valid visa and work permit for the State of Israel in conformity with Article III.2.2.c of Annex III of the *Grant Agreement.*

23) According to internal rules of the *Weizmann Institute of Science* the *Researcher* is entitled to 22 days annual leave and 26 days annual sickness leave, which can only be utilized throughout the duration of this *agreement.*

24) The *Researcher* must devote him/herself full-time to his/her *initial training activities*, unless there are duly justified reasons connected to personal or family circumstances.

25) The *Researcher* declares that during his/her work at the *Weizmann Institute of Science,* the *Researcher* is aware that he/she is not on tenure track (staff scientists/scientific personnel and/or any other track), and the *Researcher* will not be entitled to rights to which an employee included in these tracks is entitled. The *Researcher* also declares that he/she is aware and agrees that collective agreements which apply to the employees of the *Weizmann Institute of Science* at any level and/or any other general and/or special collective agreement, including a scientific personnel and/or staff scientist's agreement, do not apply to him/her. Notwithstanding the foregoing, the requirements set forth in Article III.2.2.c and III.2.2.d as well as Article III.8.1 of the *Grant Agreement* shall be respected and the working conditions shall be comparable to those awarded to local researchers holding a similar position.

26) The *Researcher* shall inform the *Weizmann Institute of Science* as soon as possible of circumstances likely to have an effect on the performance of the *Project* or this *agreement*, such as:

   i) where applicable, any significant modification relating to the *Personal Career Development Plan*;

   ii) A pregnancy or a sickness that may directly have an effect on the implementation of the *Project* or the *agreement*;

27) The *Researcher* has read the rules relating to intellectual property rights, in particular the access to *background*, the use of *foreground*, publicity and confidentiality as stated in Articles II.9, II.12, II.25 – II.33 of Annex II and Articles III.6, III.7, III.9 and III.10 of Annex III to the *Grant Agreement.*

28) The *Researcher* has signed the *Weizmann Institute of Science's* intellectual property agreement form for Visiting Scientists.

29) The *Researcher* is committed to complete, sign and transmit to the *Weizmann Institute of Science* the evaluation and follow-up questionnaires referred to in Article III.2.2.k and III.2.2.l of Annex III to the *Grant Agreement.*

30) The *Researcher* shall keep the *Weizmann Institute of Science* informed for two years following the end of the *Project* of any change in the *Researcher's* contact details.

31) The *Researcher* will acknowledge the support of the *Union* under a *Marie Curie Initial Training Network* in any related publications or other media in accordance with Article III.7 of Annex III to the *Grant Agreement*.

32) The *Researcher* acknowledges that he/she has been made aware of the eligibility criteria he/she has to fulfill at the time of recruitment in order to be eligible under the *Project*.

33) The *Researcher* will observe the rules, regulations, and standard practices for Visiting Scientists at the *Weizmann Institute of Science*.

34) The *Researcher* will have no further financial claims to the *Weizmann Institute of Science* beyond the amounts to be allocated to the *Researcher* by virtue of the *Grant Agreement* and this *agreement*.

35) The payment arrangements referred to in Article 6 of this *agreement* shall be based on the principle of monthly payments in arrears unless contrary to the applicable law mentioned in Article 21of this *agreement*.

36) The *Weizmann Institute of Science* will provide for payments to the *Researcher* from the beginning of the *Researcher's* appointment as well as for payment of the full amounts allocated for the benefit of the *Researcher* at the latest at the end of the *project*.

For the Weizmann Institute of Science,

Dr. Doron Amit, Head Research Grants and Projects Office Weizmann Institute of Science Rehovot 76100, Israel

Digitally signed by Amit Doron ID_032061368 Date: 2013.08.25 17:19:22 +03'00'

Dr. Doron Amit		
Name (in print)	Signature	Date

David Dines Projects Branch Manager Finance Division Weizmann Institute of Science

Digitally signed by Dines David ID_028040145 Date: 2013.08.26 09:05:56 +03'00'

Mr. David Dines		
Name (in print)	Signature	Date

The Researcher,

BOJANA VIŠIĆ		2.9.2013.
Name (in print)	Signature	Date

Št.: U2-TG-13/0438, 3660
RD DC T H Z 17

Ljubljana, januar 2017

Institut "Jožef Stefan", Jamova cesta 39, Ljubljana, ki ga zastopa direktor prof. dr. Jadran Lenarčič, kot delodajalec, v nadaljnjem besedilu "institut"

in

sodelavka **dr. BOJANA VIŠIĆ**, rojena 23.02.1983, z začasnim bivališčem [redacted] davčna številka: [redacted] v nadaljnjem besedilu "delavka"

se dogovorita in na osnovi 17. člena in 4. alinee prvega odstavka 54. člena Zakona o delovnih razmerjih (ZDR-1), Zakona o tujcih (ZTUJ-2), določb Zakona o sistemu plač v javnem sektorju ter Zakona za uravnoteženje javnih financ skleneta naslednjo

POGODBO O ZAPOSLITVI

1. člen
(predmet pogodbe)

S to pogodbo se Institut in delavka dogovorita o obveznostih in pravicah ter posebnostih, ki se nanašajo na opravljanje dela, za katerega delavka sklepa delovno razmerje.

2. člen
(delovno razmerje)

S to pogodbo pogodbeni stranki skleneta delovno razmerje za **določen čas s polnim delovnim časom, to je 40 ur na teden, od 01.02.2017 do 31.12.2017 zaradi:**

- **priprave oziroma izvedbe dela, ki je programsko ali projektno organizirano**

Delavka bo opravljala raziskovalna in izobraževalna ter druga dela na delovnem mestu **H019001_2 ASISTENT Z DOKTORATOM v organizacijski enoti F5 - Odsek za fiziko trdne snovi.**

Opis dela na delovnem mestu je podrobneje določen v Pravilniku o sistemizaciji delovnih mest na Institutu "Jožef Stefan", ter podrobneje glede na navodila vodje enote.

Delo bo delavka opravljala v prostorih na naslovu Jamova cesta 39, Ljubljana in po potrebi na drugih lokacijah, kjer delodajalec stalno opravlja svojo dejavnost.

Delavka bo nastopila delo dne 01.02.2017.

Delavka in delodajalec se lahko dogovorita z aneksom k tej pogodbi o suspenzu te pogodbe o zaposlitvi za določen čas zaradi podoktorskega usposabljanja.

14. člen
(disciplinska in odškodninska varnost)

Delavka je za kršitve obveznosti iz delovnega razmerja disciplinsko odgovorna po določilih zakona, kolektivne pogodbe in pravil instituta, ki urejajo delovno disciplino in disciplinsko odgovornost delavcev.

Delavka se je v času zaposlitve dolžna vzdržati vseh ravnanj, ki bi lahko imela za posledico materialno ali moralno škodo, ali bi lahko kakorkoli škodovala strokovnemu ugledu in poslovnim interesom instituta. V primeru kršitev je delavka odškodninsko odgovorna institutu.

15. člen
(prenehanje pogodbe o zaposlitvi)

Pogodba o zaposlitvi preneha s potekom časa za katerega je bila sklenjena, oziroma, ko je dogovorjeno delo opravljeno, ali s prenehanjem razloga, zaradi katerega je bila sklenjena.

V času izvajanja pogodbe lahko pogodba preneha le na način, kot je to določeno z zakonom.

Pri odpovedi pogodbe o zaposlitvi se upoštevajo odpovedni roki, določeni z zakonom in kolektivno pogodbo.

16. člen
(prehodne in končne določbe)

Za vsa medsebojna razmerja, ki niso posebej opredeljena s to pogodbo, se neposredno uporabljajo Zakon o delovnih razmerjih (ZDR-1), Zakon o tujcih (ZTUJ-2), Zakon o sistemu plač v javnem sektorju, Zakon za uravnoteženje javnih financ, Kolektivna pogodba za negospodarske dejavnosti, Kolektivna pogodba za javni sektor, Kolektivna pogodba za raziskovalno dejavnost in Aneks h Kolektivni pogodbi za raziskovalno dejavnost ter drugi podzakonski predpisi in pravila instituta, ki so veljavni v času veljavnosti te pogodbe o zaposlitvi.

Morebitne spore iz te pogodbe bosta pogodbeni stranki reševali sporazumno.
V primeru, da to ne bo mogoče, je za reševanje teh sporov pristojno sodišče v Ljubljani.

Pogodba o zaposlitvi velja z dnem, ko jo podpišeta obe pogodbeni stranki, uporablja pa se od 01.02.2017 dalje.

Pogodba je napisana v štirih, vsebinsko enakih izvodih, od katerih prejme en izvod delavka, tri izvode pa institut.

Ljubljana, dne 1/2/17

Delavka:

dr. BOJANA VIŠIĆ

.....
(podpis)

Ljubljana, dne 31.1.2017

Institut "Jožef Stefan"

Direktor:

prof. dr. Jadran Lenarčič

Št.: U2-RO-17/0574, 3660
RD DC T H Z 17

Ljubljana, oktober 2017

Institut "Jožef Stefan", Jamova cesta 39, Ljubljana, ki ga zastopa direktor prof. dr. Jadran Lenarčič, kot delodajalec, v nadaljnjem besedilu "institut"

in

sodelavka **dr. BOJANA VIŠIĆ**, rojena 23.02.1983, s stalnim bivališčem [redacted] Ljubljana, EMŠO: [redacted] davčna številka: [redacted] v nadaljnjem besedilu "delavka"

se dogovorita in na osnovi 17. člena in 4. alinee prvega odstavka 54. člena Zakona o delovnih razmerjih (ZDR-1), določb Zakona o sistemu plač v javnem sektorju ter Zakona za uravnoteženje javnih financ skleneta naslednjo

POGODBO O ZAPOSLITVI

1. člen
(predmet pogodbe)

S to pogodbo se Institut in delavka dogovorita o obveznostih in pravicah ter posebnostih, ki se nanašajo na opravljanje dela, za katerega delavka sklepa delovno razmerje.

2. člen
(delovno razmerje)

S to pogodbo pogodbeni stranki skleneta delovno razmerje za **določen čas s polnim delovnim časom, to je 40 ur na teden, od 01.01.2018 do 30.06.2018 zaradi:**

- **podoktorskega usposabljanja doktorja znanosti**
- **priprave oziroma izvedbe dela, ki je programsko ali projektno organizirano**

oziroma za čas veljavnosti delovnega dovoljenja, izdanega na vlogo delodajalca.

Delavka bo opravljala raziskovalna in izobraževalna ter druga dela na delovnem mestu **H019001_2 ASISTENT Z DOKTORATOM v organizacijski enoti F5 - Odsek za fiziko trdne snovi.**

Opis dela na delovnem mestu je podrobneje določen v Pravilniku o sistemizaciji delovnih mest na Institutu "Jožef Stefan", ter podrobneje glede na navodila vodje enote.

Delo bo delavka opravljala v prostorih na naslovu Reaktorski center, Brinje 40, Dol pri Ljubljani in po potrebi na drugih lokacijah, kjer delodajalec stalno opravlja svojo dejavnost.

Delavka bo nastopila delo dne 01.01.2018.

Delavka in delodajalec se lahko dogovorita z aneksom k tej pogodbi o suspenzu te pogodbe o zaposlitvi za določen čas zaradi podoktorskega usposabljanja.

3. člen
(obveznost pri opravljanju dela)

14. člen
(disciplinska in odškodninska varnost)

Delavka je za kršitve obveznosti iz delovnega razmerja disciplinsko odgovorna po določilih zakona, kolektivne pogodbe in pravil instituta, ki urejajo delovno disciplino in disciplinsko odgovornost delavcev.

Delavka se je v času zaposlitve dolžna vzdržati vseh ravnanj, ki bi lahko imela za posledico materialno ali moralno škodo, ali bi lahko kakorkoli škodovala strokovnemu ugledu in poslovnim interesom instituta. V primeru kršitev je delavka odškodninsko odgovorna institutu.

15. člen
(prenehanje pogodbe o zaposlitvi)

Pogodba o zaposlitvi preneha s potekom časa za katerega je bila sklenjena, oziroma, ko je dogovorjeno delo opravljeno, ali s prenehanjem razloga, zaradi katerega je bila sklenjena.

V času izvajanja pogodbe lahko pogodba preneha le na način, kot je to določeno z zakonom.

Pri odpovedi pogodbe o zaposlitvi se upoštevajo odpovedni roki, določeni z zakonom in kolektivno pogodbo.

16. člen
(prehodne in končne določbe)

Za vsa medsebojna razmerja, ki niso posebej opredeljena s to pogodbo, se neposredno uporabljajo Zakon o delovnih razmerjih (ZDR-1), Zakon o sistemu plač v javnem sektorju, Zakon za uravnoteženje javnih financ, Kolektivna pogodba za negospodarske dejavnosti, Kolektivna pogodba za javni sektor, Kolektivna pogodba za raziskovalno dejavnost in Aneks h Kolektivni pogodbi za raziskovalno dejavnost ter drugi podzakonski predpisi in pravila instituta, ki so veljavni v času veljavnosti te pogodbe o zaposlitvi.

Morebitne spore iz te pogodbe bosta pogodbeni stranki reševali sporazumno.
V primeru, da to ne bo mogoče, je za reševanje teh sporov pristojno sodišče v Ljubljani.

Pogodba o zaposlitvi velja z dnem, ko jo podpišeta obe pogodbeni stranki, uporablja pa se od 01.01.2018 dalje.

Pogodba je napisana v treh, vsebinsko enakih izvodih, od katerih prejme en izvod delavka, dva izvoda pa institut.

Ljubljana, dne 27/11/17

Delavka:

dr. BOJANA VIŠIĆ

.....
(podpis)

Institut "Jožef Stefan" Ljubljana, Slovenija 20

Ljubljana, dne 27 -10- 2017

Institut "Jožef Stefan"

Direktor:

prof. dr. Jadran Lenarčič

Št.: U2-RO-18/0296, 3660
RD DC T H Z 17

Ljubljana, maj 2018

Institut "Jožef Stefan", Jamova cesta 39, Ljubljana, ki ga zastopa direktor prof. dr. Jadran Lenarčič, kot delodajalec, v nadaljnjem besedilu "institut"

in

sodelavka **dr. BOJANA VIŠIĆ**, rojena 23.02.1983, s stalnim bivališčem [redacted] Ljubljana, EMŠO: [redacted] davčna številka: [redacted] v nadaljnjem besedilu "delavka"

se dogovorita in na osnovi 17. člena in 4. alinee prvega odstavka 54. člena Zakona o delovnih razmerjih (ZDR-1), Zakona o tujcih (ZTUJ-2), določb Zakona o sistemu plač v javnem sektorju ter Zakona za uravnoteženje javnih financ skleneta naslednjo

POGODBO O ZAPOSLITVI

1. člen
(predmet pogodbe)

S to pogodbo se Institut in delavka dogovorita o obveznostih in pravicah ter posebnostih, ki se nanašajo na opravljanje dela, za katerega delavka sklepa delovno razmerje.

2. člen
(delovno razmerje)

S to pogodbo pogodbeni stranki skleneta delovno razmerje za **določen čas s polnim delovnim časom, to je 40 ur na teden, od 01.07.2018 do 31.12.2018 zaradi:**
- **podoktorskega usposabljanja doktorja znanosti**

oziroma za čas veljavnosti delovnega dovoljenja, izdanega na vlogo delodajalca.

Delavka bo opravljala raziskovalna in izobraževalna ter druga dela na delovnem mestu **H019001_2 ASISTENT Z DOKTORATOM v organizacijski enoti F5 - Odsek za fiziko trdne snovi.**

Opis dela na delovnem mestu je podrobneje določen v Pravilniku o sistemizaciji delovnih mest na Institutu "Jožef Stefan", ter podrobneje glede na navodila vodje enote.

Delo bo delavka opravljala v prostorih na naslovu Reaktorski center, Brinje 40, Dol pri Ljubljani in po potrebi na drugih lokacijah, kjer delodajalec stalno opravlja svojo dejavnost.

Delavka bo nastopila delo dne 01.07.2018.

Delavka in delodajalec se lahko dogovorita z aneksom k tej pogodbi o suspenzu te pogodbe o zaposlitvi za določen čas zaradi podoktorskega usposabljanja.

14. člen
(disciplinska in odškodninska varnost)

Delavka je za kršitve obveznosti iz delovnega razmerja disciplinsko odgovorna po določilih zakona, kolektivne pogodbe in pravil instituta, ki urejajo delovno disciplino in disciplinsko odgovornost delavcev.

Delavka se je v času zaposlitve dolžna vzdržati vseh ravnanj, ki bi lahko imela za posledico materialno ali moralno škodo, ali bi lahko kakorkoli škodovala strokovnemu ugledu in poslovnim interesom instituta. V primeru kršitev je delavka odškodninsko odgovorna institutu.

15. člen
(prenehanje pogodbe o zaposlitvi)

Pogodba o zaposlitvi preneha s potekom časa za katerega je bila sklenjena, oziroma, ko je dogovorjeno delo opravljeno, ali s prenehanjem razloga, zaradi katerega je bila sklenjena.

V času izvajanja pogodbe lahko pogodba preneha le na način, kot je to določeno z zakonom.

Pri odpovedi pogodbe o zaposlitvi se upoštevajo odpovedni roki, določeni z zakonom in kolektivno pogodbo.

16. člen
(prehodne in končne določbe)

Za vsa medsebojna razmerja, ki niso posebej opredeljena s to pogodbo, se neposredno uporabljajo Zakon o delovnih razmerjih (ZDR-1), Zakon o tujcih (ZTUJ-2), Zakon o sistemu plač v javnem sektorju, Zakon za uravnoteženje javnih financ, Kolektivna pogodba za negospodarske dejavnosti, Kolektivna pogodba za javni sektor, Kolektivna pogodba za raziskovalno dejavnost in Aneks h Kolektivni pogodbi za raziskovalno dejavnost ter drugi podzakonski predpisi in pravila instituta, ki so veljavni v času veljavnosti te pogodbe o zaposlitvi.

Morebitne spore iz te pogodbe bosta pogodbeni stranki reševali sporazumno.
V primeru, da to ne bo mogoče, je za reševanje teh sporov pristojno sodišče v Ljubljani.

Pogodba o zaposlitvi velja z dnem, ko jo podpišeta obe pogodbeni stranki, uporablja pa se od 01.07.2018 dalje.

Pogodba je napisana v treh, vsebinsko enakih izvodih, od katerih prejme en izvod delavka, dva izvoda pa institut.

Ljubljana, dne 14/5/2018

Delavka:

dr. BOJANA VIŠIĆ

.....
(podpis)

Institut "Jožef Stefan" Ljubljana, Slovenija

Ljubljana, dne 14-05-2018

Institut "Jožef Stefan"

Direktor:

prof. dr. Jadran Lenarčič

Št.: U2-RP-18/0735, 3660
RD DC T H Z 17

Ljubljana, november 2018

Institut "Jožef Stefan", Jamova cesta 39, Ljubljana, ki ga zastopa direktor prof. dr. Jadran Lenarčič, kot delodajalec, v nadaljnjem besedilu "institut"

in

sodelavka **dr. BOJANA VIŠIĆ**, rojena 23.02.1983, z začasnim bivališčem [redacted] Ljubljana, EMŠO: [redacted] davčna številka: [redacted] v nadaljnjem besedilu "delavka"

se dogovorita in na osnovi 17. člena in 4. alinee prvega odstavka 54. člena Zakona o delovnih razmerjih (ZDR-1), Zakona o tujcih (ZTUJ-2), določb Zakona o sistemu plač v javnem sektorju ter Zakona za uravnoteženje javnih financ skleneta naslednjo

POGODBO O ZAPOSLITVI ZA DELO NA DOMU

1. člen
(predmet pogodbe)

S to pogodbo se Institut in delavka dogovorita o obveznostih in pravicah ter posebnostih, ki se nanašajo na opravljanje dela, za katerega delavka sklepa delovno razmerje.

2. člen
(delovno razmerje)

S to pogodbo pogodbeni stranki skleneta delovno razmerje za **določen čas s krajšim delovnim časom, to je 8 ur na teden, od 01.12.2018 do 30.06.2019 zaradi:**

- **podoktorskega usposabljanja doktorja znanosti**
- **priprave oziroma izvedbe dela, ki je programsko ali projektno organizirano.**

Delavka bo opravljala raziskovalna in izobraževalna ter druga dela na delovnem mestu **H019001_2 ASISTENT Z DOKTORATOM v organizacijski enoti F5 - Odsek za fiziko trdne snovi.**

Opis dela na delovnem mestu je podrobneje določen v Pravilniku o sistemizaciji delovnih mest na Institutu "Jožef Stefan", ter podrobneje glede na navodila vodje enote.

Dr. Višić dela na karakterizaciji nanomaterialov z Ramansko spektroskopijo in elektronsko mikroskopijo, sodeluje pri urejanju nanožičk v polimerih, meritvah nanodelcev v ozračju, samostojno pa raziskuje novo fazo volframovih oksidov, ki smo jih nedavno odkrili, pri katerih je našla prisotnost reverzibilne fluorescence. Sodelovala bo tudi v okviru našega dosedanjega industrijskega projekta za podjetje Hyla.

Delo na domu oz. na daljavo poteka na naslovu: [redacted] Srbija.

Delo na domu oz. na daljavo bo opravljala od 01.12.2018 do 30.06.2019.

Delavka in delodajalec se lahko dogovorita z aneksom k tej pogodbi o suspenzu te pogodbe o zaposlitvi za določen čas zaradi podoktorskega usposabljanja.

14. člen
(disciplinska in odškodninska varnost)

Delavka je za kršitve obveznosti iz delovnega razmerja disciplinsko odgovorna po določilih zakona, kolektivne pogodbe in pravil instituta, ki urejajo delovno disciplino in disciplinsko odgovornost delavcev.

Delavka se je v času zaposlitve dolžna vzdržati vseh ravnanj, ki bi lahko imela za posledico materialno ali moralno škodo, ali bi lahko kakorkoli škodovala strokovnemu ugledu in poslovnim interesom instituta. V primeru kršitev je delavka odškodninsko odgovorna institutu.

15. člen
(prenehanje pogodbe o zaposlitvi)

Pogodba o zaposlitvi preneha s potekom časa za katerega je bila sklenjena, oziroma, ko je dogovorjeno delo opravljeno, ali s prenehanjem razloga, zaradi katerega je bila sklenjena.

V času izvajanja pogodbe lahko pogodba preneha le na način, kot je to določeno z zakonom.

Pri odpovedi pogodbe o zaposlitvi se upoštevajo odpovedni roki, določeni z zakonom in kolektivno pogodbo.

16. člen
(prehodne in končne določbe)

Za vsa medsebojna razmerja, ki niso posebej opredeljena s to pogodbo, se neposredno uporabljajo Zakon o delovnih razmerjih (ZDR-1), Zakon o tujcih (ZTUJ-2), Zakon o sistemu plač v javnem sektorju, Zakon za uravnoteženje javnih financ, Kolektivna pogodba za negospodarske dejavnosti, Kolektivna pogodba za javni sektor, Kolektivna pogodba za raziskovalno dejavnost in Aneks h Kolektivni pogodbi za raziskovalno dejavnost ter drugi podzakonski predpisi in pravila instituta, ki so veljavni v času veljavnosti te pogodbe o zaposlitvi.

Morebitne spore iz te pogodbe bosta pogodbeni stranki reševali sporazumno. V primeru, da to ne bo mogoče, je za reševanje teh sporov pristojno sodišče v Ljubljani.

Pogodba o zaposlitvi velja pod pogojem, da delavec ob predložitvi zdravniškega spričevala izpolnjuje posebne zdravstvene zahteve za delovno mesto navedeno v 2. členu te pogodbe o zaposlitvi

Pogodba o zaposlitvi velja z dnem, ko jo podpišeta obe pogodbeni stranki, uporablja pa se od 01.12.2018 dalje, ko prenehajo veljati vse prejšnje že sklenjene pogodbe in aneksi.

Pogodba je napisana v treh, vsebinsko enakih izvodih, od katerih prejme en izvod delavka, dva izvoda pa institut.

Ljubljana, dne 21/11/2018

Delavka:

dr. BOJANA VIŠIĆ

.....
(podpis)

Institut "Jožef Stefan" 23
Ljubljana, Slovenija

Ljubljana, dne 20 -11- 2018

Institut "Jožef Stefan"

Direktor:

prof. dr. Jadran Lenarčič

21. СИМПОЗИЈУМ ФИЗИКЕ КОНДЕНЗОВАНЕ МАТЕРИЈЕ

THE 21st SYMPOSIUM ON CONDENSED MATTER PHYSICS

26 - 30 June 2023, Belgrade, Serbia

https://www.sfkm2023.ipb.ac.rs/

Institute of Physics Belgrade

Vinca Institute of Nuclear Sciences

University of Belgrade, Faculty of Physics

Serbian Academy of Sciences and Arts

Ministry of Science, Technological Development and Innovation

Conference Chairs

Vladimir Dobrosavljević, *Florida State University, USA*

Zorica Konstantinović, *Institute of Physics Belgrade*

Željko Šljivančanin, *Vinča Institute of Nuclear Sciences*

Organizing Committee

Jelena Pešić, *Institute of Physics Belgrade*- chair

Andrijana Šolajić, *Institute of Physics Belgrade*

Ivana Milošević, *Institute of Physics Belgrade*

Tijana Tomašević-Ilić, *Institute of Physics Belgrade*

Jelena Mitrić, *Institute of Physics Belgrade*

Bojana Višić, *Institute of Physics Belgrade*

Jovan Blagojević, *Institute of Physics Belgrade*

Marko Orozović, *Vinča Institute of Nuclear Sciences*

Mitra Stepić, *Vinča Institute of Nuclear Sciences*

Igor Popov, *Institute for Multidisciplinary Research, Belgrade*

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Vladimir Dobrosavljević, *Florida State University, USA*

Milan Damnjanović, *Faculty of Physics, University of Belgrade, Serbia*

Vladimir Djoković, *Vinča Institute, University of Belgrade, Serbia*

Gyula Eres, *Oak Ridge National Laboratory, USA*

Laszló Forró, *University of Notre Dame, USA*

BOOK OF ABSTRACTS

ADVANCES
IN SOLID STATE PHYSICS
AND NEW MATERIALS

ДОСТИГНУЋА У ФИЗИЦИ ЧВРСТОГ СТАЊА И НОВИХ МАТЕРИЈАЛА

30 година Центра за физику чврстог стања и нове материјале Института за физику у Београду

ADVANCES IN SOLID STATE PHYSICS AND NEW MATERIALS

30 years of the Center for Solid State Physics and New Materials at the Institute of Physics Belgrade

19 - 23 May 2025
Belgrade, Serbia

Conference Chairs

Nenad Lazarević, *Institute of Physics Belgrade, Serbia*

Emil S. Božin, *Institute of Physics Belgrade, Serbia*

Rudi Hackl, *IFW Dresden, Germany*

Zoran V. Popović, *Serbian Academy of Sciences and Arts (SANU), Serbia* – honorary chair

Organizing Committee

Jelena Pešić - chair

Bojana Višić – chair

Ana Kanjevac

Ana Milosavljević

Andrijana Šolajić

Barbara Bekić

Bojan Stojadinović

Branka Hadžić

Ivana Milošević

Jasmina Lazarević

Jelena Mitrić

Jelena Trajković

Jovan Blagojević

Lenka Filipović

Marko Opačić

Milica Petrović

Nataša Tomić

Novica Paunović

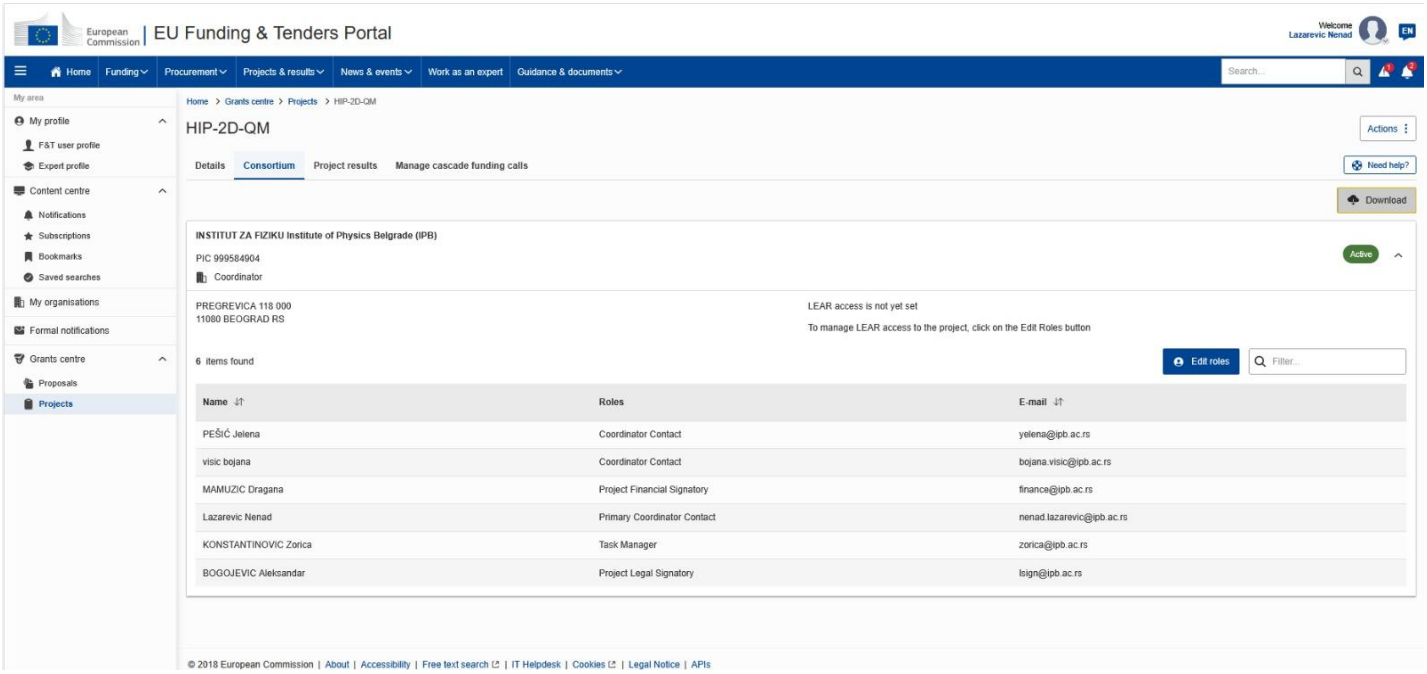
Tea Belojica

Tijana Tomašević Ilić

ПРИЛОГ

4.3 Руковођење пројектима и потпројектима (радним пакетима)

-ERA chair HIP-2D-QM уговор
-Анекс1- доказ о добијеном билатералном пројекту
-Копија уговора између института и компаније
-Копија уговора Marie Curie INT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6 items found
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PEŠIĆ Jelena
Coordinator Contact
yelena@ipb.ac.rs
visic bojana
Coordinator Contact
bojana.visic@ipb.ac.rs
MAMUZIC Dragana
Project Financial Signatory
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Lazarevic Nenad
Primary Coordinator Contact
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KONSTANTINOVIC Zorica
Task Manager
zorica@ipb.ac.rs
BOGOJEVIC Aleksandar
Project Legal Signatory
lsign@ipb.ac.rs
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Annex 1

Slovenia - Serbia joint projects for period 1. 7. 2023 - 30. 6. 2025

No.	Name of Slovene Researcher	Institution in Slovenia	Name of Serbian Researcher	Institution in Serbia	Project Title	Financing in Slovenia and Serbia for 1st year (EUR)	Financing in Slovenia and Serbia for 2nd year (EUR)	Financing for Serbian young researchers in Slovenia for period 2023-2025 (EUR)
1	*Teo Delić*	University of Ljubljana, University of Ljubljana, Biotechnical Faculty	*Dalibor Stojanović*	University of Belgrade-Faculty of Biology, Institute of Zoology, Studentski Trg 16, Belgrade	Combining approaches to reveal hidden diversity in hidden habitats: the case of cave Lithobiidae centipedes in the Western Balkans	1.000,00	1.000,00	1.500,00
2	*Luka Pirker*	Jožef Stefan Institute, Solid state physics department	*Bojana Višić*	Institute of Physics, University of Belgrade, Pregrevica 118, 11080 Belgrade	Synthesis and characterization of ternary Van der Waals MoxWx-1S2 nanotubes for advanced field emission application	1.000,00	1.000,00	
3	*Jelena Tošović*	University of Maribor, Faculty of Chemistry and Chemical Engineering	*Jelena Đorović Jovanović*	Institut za informacijske tehnologije, Jovana Cvijića bb, Kragujevac	Elucidation of antioxidative and inhibitory activities of tannins using combined experimental and computational approach	1.000,00	1.000,00	
4	*Vojč Kocman*	National Institute of Chemistry	*Goran Vukotić*	Faculty of Biology, University of Belgrade, Studentski trg 16, Beograd	Solving the structure of broad host range bacteriocin Lactolisterin BU and its mutant variants	1.000,00	1.000,00	
5	*David Bajec*	National Institute of Chemistry, Department of Catalysis and Chemical Reaction Engineering	*Jasmina Dostanić*	Institute of Chemistry, Technology and Metallurgy (ICHTM) National Institute University of Belgrade, Njegoševa 12, 11000 Beograd	Band structure engineering design for construction of heterojunction semiconductors for enhanced photocatalytic activity. Theoretical and experimental study.	1.000,00	1.000,00	1.500,00
6	*Armin Paravlić*	University of Ljubljana, Faculty of sport (Institute of kinesiology)	*Zoran Milanović*	Fakultet sporta i fizičnog vaspitanje, Čarnojevićeva 10a, 18000 Niš	Validation of the electromechanical index through talent identification program	1.000,00	1.000,00	
7	*Majda Golob*	Institute of microbiology and parasitology, Veterinary faculty, University of Ljubljana	*Snežana Bulajić*	Faculty of Veterinary Medicine, University of Belgrade, Bulevar oslobođenja 18, 11000 Belgrade	Raw milk as a potential source of multidrug resistant bacteria and resistance genes	1.000,00	1.000,00	
8	*Zala Kolenc*	University of Ljubljana, Biotechnical faculty	*Dragana Šunjka*	University of Novi Sad, Faculty of Agriculture, Trg Dositeja Obradovića 8, 21000 Novi Sad	Resveratrol content in grapes of autochthonous grapevine varieties from three different systems of production	1.000,00	1.000,00	1.500,00
9	*Katarina Pavšič Vrtač*	University of Ljubljana, Veterinary Faculty	*Radmila Marković*	Faculty of Veterinary Medicine, University of Belgrade, Department of Nutrition and botany, Bulevar o slobođenja 18, , 11000 Belgrade	Presence of heavy metals in fish meat and tissues depending on their diet - monitoring from the source to the mouth of the Sava river	1.000,00	1.000,00	
10	*Saša Pišot*	Science and Reasearch Centre of Koper, Institute for kineziology research	*Ivana Milovanović*	University of Novi Sad, Faculty of Sport and Physical Education, Lovćenska 16, Novi Sad	"Youth sport in the grip of the COVID-19 epidemic" - drop out and its consequences	1.000,00	1.000,00	1.500,00
11	*Miha Zobec*	Research Centre of the Slovenian Academy of Sciences and Arts, Slovenian Migration Institute	*Vasna Đikanović*	Institut za noviju istoriju Srbije, Trg Nikole Pašića 11, Beograd	The State and Diaspora in the First and in the Second Yugoslavia	1.000,00	1.000,00	
12	*Maja Lukanc*	Institute of Contemporary History, Ljubljana	*Ana Kolarić*	Faculty of Philology, University of Belgrade, Studentski trg 3, 11000 Beograd, Serbia	Gender and Intellectual History in Serbian and Slovenian Periodical Press in the 20th Century	1.000,00	1.000,00	
13	*Ingrid Milošev*	Jožef Stefan Institute, Department of Physical and Organic Chemsitry	*Ana Janković*	Innovation Centre, Faculty of Technology and Metallurgy, University of Belgrade, Karnegijeva 4, Belgrade, Republic of Serbia	Electrochemical production of composite biomaterials for medical hard tissue implants	1.000,00	1.000,00	1.500,00
14	*Gregor Kramberger*	Jožef Stefan Institute, Experimental Particle Physics	*Milija Sarajlic*	Institut za hemiju, tehnologiju i metalurgiju, Univerzitet u Beogradu, Njegoševa 12, 11000 Beograd	Development and cherachterization of PIN dosimeters	1.000,00	1.000,00	
15	*Franc Perdih*	University of Ljubljana, Faculty of Chemistry and Chemical Technology	*Marko Rodić*	University of Novi Sad, Faculty of Sciences, Trg Dositeja Obradovica 3, Novi Sad	Design of transition metal complexes with anti-diabetic and anti-cancer activity	1.000,00	1.000,00	
16	*Žiga Jakopin*	University of Ljubljana, Faculty of Pharmacy	*Brankica Filipič*	University of Belgrade-Faculty of Pharmacy, Vojvode stepe 450, Belgrade	Confronting multidrug-resistant Acinetobacter baumanii infection by DNA gyrase and topoisomerase inhibitors	1.000,00	1.000,00	1.500,00

Annex 1

Slovenia - Serbia joint projects for period 1. 7. 2023 - 30. 6. 2025

17	***Marija Bešter Rogač***	University of Ljubljana, Faculty of Chemistry and Chemical Technology	***Slobodan Gadžurić***	University of Novi Sad Faculty of SciencesDepartment of Chemistry, Biochemistry and Environmental P, Trg Dositeja Obradovića 3, 21000 Novi Sad	Development of nanofiber materials for transdermal application based on new pharmaceutically active ionic liquids	1.000,00	1.000,00	1.500,00
18	***Samo Kreft***	University of Ljubljana, Faculty of pharmacy	***Vladimir Mihailović***	Faculty of science, University of Kragujevac, Radoja Domanovića 12, Kragujevac	The use of active cosmetic ingredients from botanical origin for lowering the synthetic preserves in cosmetic products	1.000,00	1.000,00	
19	***Iztok Turel***	University of Ljubljana, Faculty of Chemistry and Chemical Technology	***Biljana Glišić***	University of Kragujevac, Faculty of Science , R. Domanovića 12, , 34000 Kragujevac, Serbia	Development of metal-azole based therapeutics for the treatment of fungal infections	1.000,00	1.000,00	1.500,00
20	***Janez Konc***	National Institute of Chemistry	***Dejan Milenković***	Institute for Information Technologies Kragujevac, University of Kragujevac , Jovana Cvijića bb , Kragujevac	Development of a computational protocol to evaluate 4-hydroxycoumarin-neurotransmitter derivatives in the treatment of Alzheimer's disease	1.000,00	1.000,00	1.500,00
21	***Peter Rodič***	Jožef Stefan Institute	***Bojan Božič***	University of Belgrade, Faculty of Biology, Studentski trg 16, , Belgrade, Serbia	Plant extracts as sustainable and green corrosion inhibitors of aluminum and its alloys.	1.000,00	1.000,00	1.500,00
22	***Marijan Nečemer***	Jožef Stefan Institute	***Jelena Ajtić***	Faculty of Veterinary Medicine, University of Belgrade , Bulevar oslobođenja 18 , 11000 Belgrade	COMparing Radioactivity in the Air DEtected in Serbia and Slovenia (COMRADESS)	1.000,00	1.000,00	
23	***Simon Špacapan***	Institute of Mathematics, Physics and Mechanics	***Bojana Borovićanin***	Faculty of Science, University of Kragujevac, Radoja Domanovića 12, 34000 Kragujevac, Serbia	Topological indices of graphs and digraphs	1.000,00	1.000,00	
24	***Janez Kovač***	Jozef Stefan Institute	***Dubravka Milovanović***	Institute of General and Physical Chemistry, Studentski trg 12/V , Belgrade, Republic of Serbia	Synthesis and characterization of catalytic materials with interactive supports based on doped titanium dioxide nanoparticles of various shapes for fuel cells application	1.000,00	1.000,00	1.500,00
25	***Matjaž Finšgar***	University of Maribor, Faculty of Chemistry and Chemical Engineering	***Zorana Trivunović***	Faculty of Technology Novi Sad, University of Novi Sad, Bulevar cara Lazara 1 , 21102 Novi Sad, Srbija	Comparative study on the potential of biofuels industry effluents utilization for the production of biopolymer of microbial origin	1.000,00	1.000,00	1.500,00
26	***Rebeka Rudolf***	University of Maribor, Faculty of Mechanical Engineering	***Đendi Vaštag (Gyöngyi Vastag)***	University of Novi Sad, Faculty of Sciences, Trg Dositeja Obradovića 3, Novi Sad	Monitoring the electro-chemical and corrosion properties of new Au-Ge alloy in different working conditions	1.000,00	1.000,00	
27	***Marjan Mernik***	University of Maribor , Faculty of Electrical Engineering and Computer Science	***Ivan Luković***	University of Belgrade, Faculty of Organizational Sciences, Jove Ilića 154, 11000 Belgrade, Serbia	Programming Environments with Simultaneous Multiple Representations in Support of Early Programming Education	1.000,00	1.000,00	
28	***Matjaž Spreitzer***	Jožef Stefan Institute	***Zoran Jovanović***	Vinca Institute of Nuclear Sciences - National Institute of the Republic of Serbia, Mike Petrovića Alasa 12-14, 11351 Vinča, Belgrade, Serbia	Photoelectrochemical Hydrogen Evolution from Epitaxial Silicon-Oxide Heterostructures, H2EPI	1.000,00	1.000,00	1.500,00
29	***Hana Uršič Nemevšek***	Jozef Stefan Institute , Electronic Ceramics Department	***Katarina Vojisavljević***	Institute for Multidisciplinary Research, University of Belgrade, Kneza Višeslava 1, 11030 Beograd	Piezoelectric biopolymer-based composites for biomedical application	1.000,00	1.000,00	1.500,00
30	***Slavko Kralj***	Jožef Stefan Institute, Department for Materials Synthesis	***Lazar Kopanja***	Alfa BK University, Palmira Toljatija, Belgrade	The anisotropic iron oxide nanoparticles for medical applications: magneto-mechanical effect and hyperthermia	1.000,00	1.000,00	1.500,00
31	***Sebastijan Kovačič***	National Institute of Chemistry	***Milan Bjelica***	Univerza v Beogradu - Fakulteta za elektrotehniko , , Beograd	Doped highly porous carbonaceous foams	1.000,00	1.000,00	
32	***Marija Vukomanović***	Jozef Stefan Institute, Advanced Materials Department	***Simonida Tomić***	Tehnološko-metalurški fakultet, Univerztet u Beogradu, Karnegijeva 4, Beograd	Multilayer hybrid scaffolds with antimicrobial, anti-inflammatory, proanglogenic and piezoelectric properties as personalized wound dressings	1.000,00	1.000,00	
33	***Tina Kosjek***	Jožef Stefan Institute	***Daniela Šojić Merkulov***	University of Novi Sad Faculty of Sciences, Department of Chemistry, Biochemistry and Environmental , Trg Dositeja Obradovića 3, 21000 , Novi sad	Fabrication of two-dimensional nanomaterial films for treatment of emerging contaminants utilizing heterogeneous sustainable photocatalysis	1.000,00	1.000,00	
34	***Borut Kosec***	University of Ljubljana, Faculty of Natural Sciences and Engineering	***Milica Vlahović***	Univerza v Beogradu, Inštitut za kemijo, tehnologijo in metalurgijo(IHTM), Njegoševa 12, 11000 Beograd	Cavitation erosion testing of creep resistant martensitic steels foradvanced application	1.000,00	1.000,00	
35	***Mateja Primožič***	University of Maribor, Faculty of Chemistry and Chemical Engineering	***Ana Milivojević***	University of Belgrade, Innovation Centre of Faculty of Technology and Metallurgy, Karnegijeva 4 , 11000 Beograd, Srbija	Enzyme-assisted isolation of bioactive compounds from plantsfor cosmetic industry	1.000,00	1.000,00	

Annex 1
Slovenia - Serbia joint projects for period 1. 7. 2023 - 30. 6. 2025

36	***Mateja Erdani Kreft***	University of Ljubljana, Faculty of Medicine	***Ivana Oklić Đorđević***	Institute for medical research, University of Belgrade, Dr. Subotića 4, Belgrade	Development of mucoadhesive films with amniotic membrane homogenate for the potential application in oral tissue regeneration	**1.000,00**	**1.000,00**	**1.500,00**
37	***Boris Rogelj***	Jozef Stefan Institute	***Pavle Andjus***	Faculty of Biology, University of Belgrade, Studentski trg 16, Beograd	Molecular mechanisms of immunoglobulin G action in amyotrophic lateral sclerosis.	**1.000,00**	**1.000,00**	**1.500,00**
38	***Irina Milisav***	University of Ljubljana, Faculty of Medicine	***Ivanka Marković***	School of Medicine, University of Belgrade, Pasterova 2, 11000 Belgrade, Serbia	Blood biomarkers for evaluation of mitochondrial function in hereditary and acquired mitochondrial diseases affecting visual function	**1.000,00**	**1.000,00**	**1.500,00**
39	***Zala Jenko Pražnikar***	University of Primorska Faculty of Health Sciences	***Alena Stupar***	INSTITUTE OF FOOD TECHNOLOGY NOVI SAD, Bulevar cara Lazara 1 , 21000 Novi Sad, Serbia	Sustainable food for healthy future	**1.000,00**	**1.000,00**	**1.500,00**
40	***Maja Mikulič Petkovšek***	University of Ljubljana, Biotechnical faculty	***Zoran Bešlić***	University of Belgrade, Faculty of Agriculture, Nemanjina 6, Zemun	Characterization and introduction of resistant grapevine varieties to increase biological grape production	**1.000,00**	**1.000,00**	**1.500,00**
41	***Stanislav Trdan***	University of Ljubljana, Biotechnical Faculty	***Željko Tomanović***	Univerzitet u Beogradu, Biološki fakultet, Studentski trg 16, 11000 Beograd	Chronology, present state and perspectives of biological control in Slovenia and Serbia	**1.000,00**	**1.000,00**	**1.500,00**
42	***Lovro Sinkovič***	Agricultural Institute of Slovenia	***Nevena Nagl***	Institute of Field and Vegetable Crops, Maksima Gorkog 30, Novi Sad	Trypsin inhibitors' activity in grain legumes	**1.000,00**	**1.000,00**	
43	***Maks Merela***	University of Ljubljana , Biotechnical Faculty	***Milan Gavrilović***	University of Belgrade - Faculty of Biology, Studentski trg 16, Belgrade	Identification of wood in cultural heritage objects from Serbia and Slovenia for the management and implementation of restoration and conservation measures	**1.000,00**	**1.000,00**	**1.500,00**
44	***Milica Perišić Nanut***	Jožef Stefan Institute, Department of Biotechnology	***Jasmina Đuretić***	Belgrade University Faculty of Pharmacy , Vojvode Stepe 450, Belgrade	Evaluation of the effects of cystatin F inhibition in experimental autoimmune encephalomyelitis: Potential therapeutic approach for multiple sclerosis (TARGET-CYSF-MS)	**1.000,00**	**1.000,00**	
45	***Matija Klopčič***	University of Ljubljana, Biotechnical Faculty	***Snežana Štrbac***	Institute of Chemistry, Technology and Metallurgy University of Belgrade, Njegoševa 12, Belgrade	Investigation of the influence of soil properties on growth and regeneration of sessile oak (Quercus petraea)	**1.000,00**	**1.000,00**	
46	***Matej Vidrih***	University of Ljubljana, Biotechnical Faculty	***Sonja Gvozdenac***	Institute of Field and Vegetable Crops, Maksima Gorkog 30, 21 000 Novi Sad	Invasive plants as potential bioinsecticides for controlling storage pests	**1.000,00**	**1.000,00**	
47	***Tanja Dreo***	National Institute of Biology	***Ivan Nikolić***	University of Belgrade - Faculty of Biology, Studentski trg 16, Belgrade	Building capacity for plant pathogen surveillance: Developing qPCR assays for detecting P. syringae pv. aptata pathogenic on sugar beet	**1.000,00**	**1.000,00**	**1.500,00**
48	***Marina Štukelj***	University of Ljubljana, Veterinary faculty	***Jasna Prodanov-Radulović***	Scientific Veterinary Institute "Novi Sad", Rumenacki put 20, 21000 Novi Sad	STOP AFRICAN SWINE FEVER - evaluation and development of solutions for biosecurity measures in domestic pig production	**1.000,00**	**1.000,00**	
49	***Vojko Potočan***	University of Maribor, Faculty of economics and business	***Marko Slavković***	Faculty of Economics University of Kragujevac, Liceja Kneževine Srbije 3, Kragujevac	Generation Z Career Management: Strategy to Prevent Human Capital to Flight Out of Motherland	**1.000,00**	**1.000,00**	**1.500,00**
50	***Aleksander Aristovnik***	University of Ljubljana, Faculty of Public Administration	***Jadranka Đurović Todorović***	University of Niš, Faculty of Economics, Trg kralja Aleksandra Ujedinitelja 11, 18105 Niš	The impact of R&D investment on sustainable economic growth: A comparison between European Union and Western Balkan countries	**1.000,00**	**1.000,00**	
51	***Polona Šprajc***	University of Maribor, Faculty of Organizational Sciences	***Marina Jovanović***	Marina Jovanović, Studentski trg 12/V, Beograd, Srbija	Utilization and management of edible by-products created at home by hobby craftsmen, in the HoReCa sector and micro-enterprises	**1.000,00**	**1.000,00**	
52	***Mirko Markič***	University of Primorska, Faculty of Management	***Snežana Živković***	University of Niš - Faculty of Occupational Safety, Čarnojevića 10a, Niš	Investigating the Occupational Health and Safety Practices in Slovenia and Serbia: Strengthening the OHS in Organizations and Enhancing the Well-being of Employees	**1.000,00**	**1.000,00**	
53	***Vesna Žegarac Leskovar***	University of Maribor, Faculty of Civil Engineering, Transportation Engineering and Architecture	***Nataša Ćuković Ignjatović***	University of Belgrade - Faculty of Architecture, Bulevar kralja Aleksandra 73/II, Belgrade	COMPARATIVE VALIDATION OF SLOVENE AND SERBIAN NATIONAL STANDARDS TO ENABLE DEVELOPMENT OF RECOMMENDATIONS FOR SUSTAINABLE AND RESILIENT ARCHITECTURAL DESIGN OF NURSING HOMES	**1.000,00**	**1.000,00**	
54	***Nadja Furlan Štanta***	Science and research centre Koper,	***Aleksandra Djurić Milovanović***	Institute for Balkan Studies Serbian Academy of Sciences and Arts, Knez Mihailova 35/4, 11000 Belgrade	Religious Policies and Freedom of Conscience in the Interwar and socialist Yugoslavia: The Contexts of Change	**1.000,00**	**1.000,00**	**1.500,00**
55	***Darja Kerec***	University of Ljubljana, Faculty of Education	***Aleksandar Životić***	Filozofska fakulteta, Univerza v Beogradu, Čika Ljubina 18-20, 11000 Beograd	Humanitarianism in Serbian-Slovenian relations in the 20th Century	**1.000,00**	**1.000,00**	
56	***SAŠA ČAVAL***	RESEARCH CENTRE OF THE SLOVENIAN ACADEMY OF SCIENCES AND ARTS	***MONIKA MILOSAVLJEVIĆ***	University of Belgrade-Faculty of Philosophy, Department of Archaeology, Čika Ljubina 18-20, 11000 Belgrade	Land of stećci: multiculturality in the medieval Herzegovina	**1.000,00**	**1.000,00**	

U3-DN-F5-40/18

HYLA d.o.o., Brnčičeva ulica 47, SI-1231 Ljubljana-Črnuče, ki ga zastopa direktor, inž. Janez Pogačar, v nadaljevanju naročnik

in

Institut »Jožef Stefan« , Jamova cesta 39, 1000 Ljubljana, ki ga zastopa direktor, prof. dr. Jadran Lenarčič, v nadaljevanju izvajalec,

skleneta

POGODBO O SODELOVANJU št. 2018-1

1. Predmet pogodbe

Predmet pogodbe predstavljajo dela pri raziskavah učinkovitosti vodnih sesalcev Hyla za odstranjevanje nanodelcev iz zraka v notranjih prostorih. Dela so razdeljena v dva sklopa: 1. ugotavljanje stopnje sproščanja delcev prahu iz sesalnika (resuspenzija) in 2. meritve učinkovitosti izločanja trdnih delcev iz toka zraka (po standardu SIST EN 60312-1).

2. Izvajanje del

Dela se bodo izvajala v prostorih izvajalca na napravah »Scanning Mobility Particles Sizer« (SMPS), s katerim bo izmerjena številčna koncentracija nanodelcev, in z Low-Presure Impactor Dekati, s katerim bo določena masna koncentracija delcev z mikronsko velikostjo. Za morfološke in osnovne kemijske analize bo uporabljen vrstični elektronski mikroskop. Za drugi sklop meritev bo uporabljen komercialni generator nanodelcev.

3. Zaupnost informacij in intelektualne pravice

Dogovor o nerazkrivanju zaupnih podatkov med pogodbenima stranema je bil podpisan 8.5. 2017. Pogodbeni strani soglašata, do bodo doseženi rezultati, ki bodo objavljivi kot znanstveni ali strokovni članki, predstavljeni v soavtorstvu obeh pogodbenih strank. Če bo pri delih po tej pogodbi prišlo do inovacij, avtorji inovacij obdržijo moralne pravice, medtem ko ima materialne pravice iz inovacij naročnik, razen če bi prišlo na pobudo naročnika do drugačnega dogovora, kar se uredi z aneksom k tej pogodbi.

4. Predstavniki pogodbenih strank

Odgovorni predstavniki po pogodbi:

- za naročnika: inž. Janez Pogačar (splošne usmeritve) in mag.inž.str. Metod Čebašek (sodelovanje pri načrtovanju preizkusov)
- za izvajalca: prof.dr. Maja Remškar (koordinacija dela)
- vodja projekta: dr. Bojana Višić.

5. Dinamika izvedbe del in poročanje

- maj in junij 2018: Preliminarne meritve za določitev in vzpostavitev pogojev testiranja
- september-december 2018: Meritve resuspenzije in učinkovitosti izločanja delcev.

Podrobnosti in zasnove posameznih meritev bodo določene na rednih sestankih pogodbenih strank enkrat na mesec oz. po dogovoru.

Izvajalec bo poročal o doseženih rezultatih do 30.6. 2018 (preliminarne meritve) in do 20.12. 2018 (meritve po obeh sklopih).

6. Pogodbena vrednost in dinamika plačevanja

Pogodbeni stranki se dogovorita, da znaša vrednost po tej pogodbi 8.000 Eur. Pogodbena cena je fiksna, v ceni davek na dodano vrednost ni vračunan. Osnova za izstavitev računa so s strani naročnika potrjena dela za posamezno fazo. Če bi v teku meritev prišlo s strani naročnika do povečanja količine del, se to uredi z aneksom k tej pogodbi.

Dinamika plačil: julij 2018: 2.000 Eur
december 2018: 6.000 Eur.

7. Končne določbe

Vse spremembe in dopolnitve te pogodbe bosta pogodbeni stranki določili po doseženem predhodnem sporazumu z aneksi k tej pogodbi.

Morebitna nesoglasja pri izvajanju te pogodbe bosta pogodbeni stranki reševali sporazumno. V primeru spora, ki ga pogodbeni stranki ne bi mogli razrešiti sporazumno, je pristojno sodišče v Ljubljani.

Pogodba velja z dnem, ko jo podpišeta obe pogodbeni stranki.

Pogodba je sestavljena v štirih enakih izvodih, od katerih vsaka pogodbena stranka prejme dva izvoda.

Ljubljana, 16 -05- 2018

Izvajalec
Institut »Jožef Stefan«
Direktor:

Institut "Jožef Stefan" Ljubljana, Slovenija 3

prof. dr. Jadran Lenarčič

Ljubljana, 16.05.2018

Naročnik
Hyla d.o.o.
Direktor:

HYLA PROIZVODNA, RAZVOJNA IN TRGOVINSKA D.O.O. LJUBLJANA

inž Janez Pogačar

HYLA d.o.o., Brnčičeva ulica 47, 1231 Ljubljana-Črnuče, ki ga zastopa direktor inž. Janez Pogačar, v nadaljevanju »naročnik«

in

Institut »Jožef Stefan«, Jamova cesta 39, 1000 Ljubljana, ki ga zastopa direktor prof. dr. Jadran Lenarčič, v nadaljevanju »izvajalec«

Skleneta

ANEKS št. 1
K POGODBI O SODELOVANJU ŠT. 2018-1

1. člen

Pogodbeni stranki uvodoma ugotavljata, da:

- sta dne 16.5.2018 sklenili pogodbo o sodelovanju št. 2018-1, katere predmet je izvedba raziskav učinkovitosti vodnih sesalcev Hyla za odstranjevanje nanodelcev iz zraka v notranjih prostorih (v nadaljnjem besedilu »pogodba«);
- zaradi objektivnih okoliščin dela niso bila izvedena v skladu s časovno dinamiko, določeno v pogodbi,
- želita ustrezno spremeniti dinamiko izvedbe del in dinamiko plačevanja, kot sta določeni s pogodbo.

2. člen

Pogodbeni stranki soglašata, da se 5. člen pogodbe spremeni tako, da se glasi:

» - maj in junij 2018: Preliminarne meritve za določitev in vzpostavitev pogojev testiranja
- september 2018 - maj 2019: Meritve resuspenzije in učinkovitosti izločanja delcev.

Podrobnosti in zasnove posameznih meritev bodo določene na rednih sestankih pogodbenih strank enkrat na mesec oz. po dogovoru.

Izvajalec bo poročal o doseženih rezultatih do 30.6.2018 (preliminarne meritve) in do 31.5.2019 (meritve po obeh sklopih).«

3. člen

Pogodbeni stranki soglašata, da se 6. člen pogodbe spremeni tako, da se glasi:

»Pogodbeni stranki se dogovorita, da znaša vrednost po tej pogodbi 8.000 Eur. Pogodbena cena je fiksna, v ceni davek na dodano vrednost ni vračunan. Osnova za izstavitev računa so s strani naročnika potrjena dela za posamezno fazo. Če bi v teku meritev prišlo s strani naročnika do povečanja količine del, se to uredi z aneksom k tej pogodbi.

Dinamika plačil: julij 2018: 2.000 Eur
december 2018: 2.000 Eur
maj 2019: 4.000 Eur.«

4. člen

Vse ostale določbe pogodbe, ki s tem aneksom niso izrecno spremenjene, ostanejo še naprej v veljavi.

5. člen

Ta aneks začne veljati z dnem, ko ga podpišeta obe pogodbeni stranki.

Ta aneks je sestavljen v štirih enakih izvodih, od katerih prejme vsaka pogodbena stranka po dva izvoda.

V Ljubljani, dne 01-07-2019

Institut »Jožef Stefan«,
prof. dr. Jadran Lenarčič, direktor

Institut "Jožef Stefan" 3
Ljubljana, Slovenija

V Ljubljani, dne 1.2.19

HYLA d.o.o.,
inž. Janez Pogačar, direktor

HYLA
PROIZVODNJA, RAZVOJ IN TRGOVINA, d.o.o., LJUBLJANA

Marie Curie Initial Training Network

Personal Agreement # 7-015 (under Grant Agreement No. 317451)

between

Weizmann Institute of Science

and

Bojana Visic

(hereinafter called the "*Researcher*")

Whereas within the Seventh Framework Program of the European Union, the *Weizmann Institute of Science* has acceded as a *beneficiary* to a contract for a Marie Curie Initial Training Network (*No. 317451*) (hereinafter called the "*Grant Agreement*") which was executed between the Research Executive Agency (the "REA") – acting under powers delegated by the European Commission and Ecole Polytechnique Fédérale de Lausanne (the "*Coordinator*") for research in the field of "Nanoelectronics based on two-dimensional dichalcogenides" (hereinafter called "the *Project*"); The *Grant Agreement* and its annexes have been formally incorporated into this *agreement* as Annex A; and

Whereas, the European Union (the "*Union*") has decided to grant financial contribution for the implementation of the *Project* within the framework of the SP3- People and under the conditions laid down in the *Grant Agreement;*

It is hereby agreed that:

a. The parties shall be bound *mutatis mutandis* by the terms and conditions of the *Grant Agreement* including Annex I (Description of Work), Annex II (General conditions, Marie Curie Actions Multi-Beneficiary), Annex III (Specific Provisions – Marie Curie Initial Training Network Multi-Beneficiary) and any special conditions which may be agreed as a separate annex thereto, which form part of the *Grant Agreement*.

b. In accordance with the above-mentioned *Grant Agreement*, it is agreed that:

   1) Words in italics shall have the same meaning as in the *Grant Agreement*.

   2) Prof. Reshef Tenne is the scientist (hereinafter called "the *Scientist*") in charge of supervising the *Researcher's initial training activities* indicated in Annex I of the *Grant Agreement*.

   3) The *initial training activities* will take place at: Materials and Interfaces Dept. /Weizmann Institute of Science .

   4) The *Researcher* declares that a *Personal Career Development Plan,* attached herein as Annex B, has been established with the *Scientist*, if applicable. If no *Personal Career Development Plan* has been established, Annex B attached herein contains a description (abstract) of the *initial training activities*.

   5) This *agreement* shall be effective between 1 September 2013 and 28 February 2017. The *Researcher* declares that within the aforementioned duration, the *Researcher* will spend at the *Weizmann Institute of Science* a cumulative period

of 12 months[1]. The *Researcher* is appointed as a Visiting Scientist at the *Weizmann Institute of Science* for the duration of the period during which the *Researcher* is at the *Weizmann Institute of Science* in the framework of this *agreement*.

6) The amounts that the *Weizmann Institute of Science* is entitled to receive from the *Union* (through the Coordinator) pursuant to the *Grant Agreement*: € [redacted] for mobility allowance. Monthly payments due to the *Researcher* will be made according to the schedule applicable for all *Weizmann Institute of Science's* researchers. Amounts deductible subject to legal justifications shall be deducted from the above-mentioned sums[2].

7) The gross sums received from the *Union* (through the Coordinator) shall be subject to deductions of tax and/or any other mandatory deduction which the *Weizmann Institute of Science* is obligated to deduct by law, including but not limited to, social contributions by the employer, social contributions by the employee, Senior Employees' Insurance and convalescence pay. All such payments shall be deducted from the gross sums received from the *Union* (through the Coordinator).

8) The conversion rate used when payments are made in national currency will be the effective rate for conversion of EURO to NIS (New Israeli Shekels), as determined by the Bank of Israel on the date of receipt of each payment from the Coordinator. The present exchange rate of 4.789 NIS/EURO will serve as the provisional conversion rate to be used for payments prior to this reference date.

9) The *Researcher,* for the activities carried out in the frame of the *Project,* shall not be allowed to receive other incomes than those received from the *Weizmann Institute of Science* pursuant to the *Grant Agreement* and this *agreement*.

10) The *Researcher* is required to have a relevant, valid visa and a work permit at all times during the whole duration of this *agreement*. In case the *Researcher* does not have a relevant valid visa and a work permit, the *Researcher* will be required to leave the State of Israel.

    Therefore, it is the responsibility of the *Researcher* to obtain and hold a relevant, valid visa and a work permit at all times during the whole duration of this *agreement*.

    Without derogating from the foregoing, it is the responsibility of the *Researcher* to apply for renewal/extension of his/her visa and work permit, as will be required, and to receive a renewed/extended visa and work permit in due time.

11) To avoid any doubts, it is hereby clarified that further to national regulations, receipt of the above mentioned payments is **conditional on the *Researcher* a *priori* being granted a work permit** for the duration of staying at the *Weizmann Institute of Science*. The application procedure to obtain the visa and work permit is likely to take several months. To obtain the visa and work permit, the *Researcher* will have to go in person to the nearest Israeli Embassy or Consulate in his/her country of residence.

[1] No less than 3 cumulative months, and no more than 36 cumulative months (for Early-Stage Researchers, ESRs) or 24 cumulative months (for Experienced Researchers, ERs), during the entire period of the Grant Agreement. (Annex III, Part A.III.3.3.a of the Grant Agreement).

[2] Reference to sums relate to gross sums payable by the Union to the *Weizmann Institute of Science* and subject to deductibles.

Ms. Dana Dvash, head of the *Weizmann Institute of Science's* Visiting Scientist and Housing Directorate (E-mail dana.dvash@weizmann.ac.il), will be in touch with the *Researcher* in due course and will instruct the *Researcher* regarding the documents required for her office to apply to the Israeli Ministry of Interior for the issue of a work permit for the *Researcher's* stay.

12) An allocation is made for Health Insurance. However, as a non-Israeli Visiting Scientist, the *Researcher* is not covered under the medical insurance applicable to residents of the State of Israel, and therefore, we require that the *Researcher* and the *Researcher's* family members insure themselves under adequate medical insurance, via an insurance company in Israel, covering any medical expenses that may be required during the *Researcher*'s stay at the *Weizmann Institute of Science*. Ms. Dana Dvash (E-mail: dana.dvash@weizmann.ac.il) will refer you to an insurance company for obtaining the required insurance.

    The above mentioned medical insurance does not cover certain ailments and/or medical treatments, in respect of which it is recommended to take out additional insurance.

13) During the performance of the *Project*, the *Researcher* will be insured with Senior Employees' Insurance. A monthly amount equal to 5% of the allocation the Researcher is entitled to receive for monthly living allowance (after deduction of taxes as mentioned in section 7 above) shall be contributed by each party to cover such insurance. For the avoidance of doubt, *Weizmann Institute of Science's* contribution shall be deducted from the amounts allocated by the *Union* (through the Coordinator) as described above.

14) In addition, the *Researcher* will have disability insurance coverage at a cost of no more than 2.5% of the allocation the *Researcher* is entitled to receive for monthly living allowance (after deduction of taxes as mentioned in section 7 above).

15) 8.33% of the allocation the *Researcher* is entitled to receive for monthly living allowance (after deduction of taxes as mentioned in section 7 above), together with provisions for linkage and profits, will be in lieu of paying the severance pay that will be due to the *Researcher*.

16) By signing this *agreement*, the *Weizmann Institute of Science* and *the Researcher* agree that the 8.33% contribution shall be completely in lieu of the *Weizmann Institute of Science's* obligation to pay severance pay to the *Researcher*, and this is according to the General Approval under section 14 of the Severance Pay Law, 5723-1963 and the general permit that was published by the Minister of Labor.

17) The amount of the contributions stipulated above will be subject to the directives of the competent authorities and/or provisions of any law.

18) Upon signature of this *agreement*, the *Weizmann Institute of Science* will provide the *Researcher* with contact details of a relevant insurance company for the purpose of acquiring Senior Employees' Insurance for the duration of the *Project*, the cost of which will be deducted on a monthly basis, as detailed above, and shall be transferred by the *Weizmann Institute of Science* to the insurance company recommended by it or to any other insurance company requested in writing by the *Researcher*.

19) After the end of the *Researcher's* work at the *Weizmann Institute of Science*, the *Researcher* will be responsible for obtaining the remaining funds from the insurance company in accordance with its procedures. The *Weizmann Institute of*

Science shall provide all required documentation in this regard in order to assist the *Researcher* in obtaining these funds.

20) According to the Israeli legislation, the *Researcher* will be entitled at the end of his/her first full work year and once every full working year thereafter at the *Weizmann Institute of Science,* to payment of convalescence pay. The number of convalescence days for each year and the rate for each convalescence day will be in accordance with the applicable law. The payment of the convalescence days shall be deducted from the amounts allocated by the *Union* (through the Coordinator) as described above.

21) The law of the State of Israel is applicable to this *agreement.*

22) The *Researcher* is covered under the social security scheme that is applied to foreign employed workers with a valid visa and work permit for the State of Israel in conformity with Article III.2.2.c of Annex III of the *Grant Agreement.*

23) According to internal rules of the *Weizmann Institute of Science* the *Researcher* is entitled to 22 days annual leave and 26 days annual sickness leave, which can only be utilized throughout the duration of this *agreement.*

24) The *Researcher* must devote him/herself full-time to his/her *initial training activities*, unless there are duly justified reasons connected to personal or family circumstances.

25) The *Researcher* declares that during his/her work at the *Weizmann Institute of Science,* the *Researcher* is aware that he/she is not on tenure track (staff scientists/scientific personnel and/or any other track), and the *Researcher* will not be entitled to rights to which an employee included in these tracks is entitled. The *Researcher* also declares that he/she is aware and agrees that collective agreements which apply to the employees of the *Weizmann Institute of Science* at any level and/or any other general and/or special collective agreement, including a scientific personnel and/or staff scientist's agreement, do not apply to him/her. Notwithstanding the foregoing, the requirements set forth in Article III.2.2.c and III.2.2.d as well as Article III.8.1 of the *Grant Agreement* shall be respected and the working conditions shall be comparable to those awarded to local researchers holding a similar position.

26) The *Researcher* shall inform the *Weizmann Institute of Science* as soon as possible of circumstances likely to have an effect on the performance of the *Project* or this *agreement*, such as:

   i) where applicable, any significant modification relating to the *Personal Career Development Plan*;

   ii) A pregnancy or a sickness that may directly have an effect on the implementation of the *Project* or the *agreement*;

27) The *Researcher* has read the rules relating to intellectual property rights, in particular the access to *background*, the use of *foreground*, publicity and confidentiality as stated in Articles II.9, II.12, II.25 – II.33 of Annex II and Articles III.6, III.7, III.9 and III.10 of Annex III to the *Grant Agreement.*

28) The *Researcher* has signed the *Weizmann Institute of Science's* intellectual property agreement form for Visiting Scientists.

29) The *Researcher* is committed to complete, sign and transmit to the *Weizmann Institute of Science* the evaluation and follow-up questionnaires referred to in Article III.2.2.k and III.2.2.l of Annex III to the *Grant Agreement.*

30) The *Researcher* shall keep the *Weizmann Institute of Science* informed for two years following the end of the *Project* of any change in the *Researcher's* contact details.

31) The *Researcher* will acknowledge the support of the *Union* under a *Marie Curie Initial Training Network* in any related publications or other media in accordance with Article III.7 of Annex III to the *Grant Agreement*.

32) The *Researcher* acknowledges that he/she has been made aware of the eligibility criteria he/she has to fulfill at the time of recruitment in order to be eligible under the *Project*.

33) The *Researcher* will observe the rules, regulations, and standard practices for Visiting Scientists at the *Weizmann Institute of Science*.

34) The *Researcher* will have no further financial claims to the *Weizmann Institute of Science* beyond the amounts to be allocated to the *Researcher* by virtue of the *Grant Agreement* and this *agreement*.

35) The payment arrangements referred to in Article 6 of this *agreement* shall be based on the principle of monthly payments in arrears unless contrary to the applicable law mentioned in Article 21of this *agreement*.

36) The *Weizmann Institute of Science* will provide for payments to the *Researcher* from the beginning of the *Researcher's* appointment as well as for payment of the full amounts allocated for the benefit of the *Researcher* at the latest at the end of the *project*.

For the Weizmann Institute of Science,

Dr. Doron Amit, Head Research Grants and Projects Office Weizmann Institute of Science Rehovot 76100, Israel

Digitally signed by Amit Doron ID_032061368 Date: 2013.08.25 17:19:22 +03'00'

Dr. Doron Amit		
Name (in print)	Signature	Date

David Dines Projects Branch Manager Finance Division Weizmann Institute of Science

Digitally signed by Dines David ID_028040145 Date: 2013.08.26 09:05:56 +03'00'

Mr. David Dines		
Name (in print)	Signature	Date

The Researcher,

BOJANA VIŠIĆ		2.9.2013.
Name (in print)	Signature	Date

ПРИЛОГ

4.5. Предавања по позиву (осим на конференцијама)

- Позивна писма и најаве семинара

BEN-GURION UNIVERSITY OF THE NEGEV
DEPARTMENT OF CHEMISTRY
P.O.B. 653 BEER-SHEVA 84105, ISRAEL

אוניברסיטת בן גוריון בנגב
המחלקה לכימיה
ת.ד. 653 באר שבע 84105

הפקולטה למדעי הטבע - המחלקה לכימיה
פרופסור מאיה בר סדן, ראש המחלקה
טלפון:08-6461641/2 פקס: 08-6472925
Email:barsadan@bgu.ac.il

30.5.2024

Dr. Bojana Višić

Center for Solid State Physics and New Materials

Institute of Physics Belgrade, Serbia

Dear Dr. Višić,

I hope this letter finds you well. On behalf of the Department of Chemistry at Ben Gurion University of the Negev, I am honored to extend an invitation for you to visit Israel to participate in a special event marking the 80th birthday of our esteemed colleague, Professor Reshef Tenne.
The celebration will be held on Sept. 3rd, 2024, and we would be delighted if you could join us and contribute to the festivities by presenting a seminar there and at our university. Your expertise and contributions to the field of solid-state physics and new materials are highly regarded, and we believe that your seminar will be a valuable addition to our event.

We understand the importance of your time and commitment, and as such, we are prepared to directly reimburse you for the cost of your flight and provide one night of accommodation.

We look forward to the possibility of welcoming you to Ben Gurion University of the Negev and to celebrating this milestone with you.

Warmest regards,

מאיה בר סדן

Maya

Department of Chemistry | BGU
המחלקה לכימיה | אוניברסיטת בן-גוריון בנגב

Thursday, September 5th 2024

Time 11:00

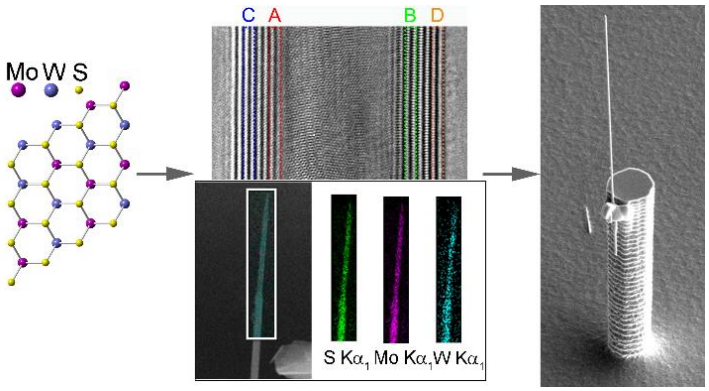
SEMINAR ROOM 015

Van der Waals materials: from semiconducting transition-metal dichalcogenides to magnetic trichalcogenides

Bojana Višić

Institute of Physics Belgrade, University of Belgrade, Pregrevica 118, 11080 Belgrade
Department of Condensed Matter Physics, Jozef Stefan Institute, Jamova cesta 39, 1000, Ljubljana, Slovenia
bojana.visic@ipb.ac.rs

Van der Waals materials envelop a vide variety of materials. While the transition-metal dichalcogenides (TMDC) are almost synonymous with the vdW label, there is a rich physics to be explored in the trichalcogenide (TMT) family as well. Individual multiwalled WS_2 and MoS_2 nanotubes (NTs) are having a resurgence of interest, as interesting optical and electrical properties have been reported in recent years [1, 2]. On the other hand, nanotubes have been vastly neglected as possible alloyed TMDC. Most of the research so far, both theoretically and experimentally, focused on flat, two-dimensional structures, with only a few reports that focused on non-carbon-based alloyed NTs. Additionally, TMDCs have opened a new frontier in the area of field emission devices, due to their layered structure and the presence of thin and sharp edges with high aspect ratios which enhance the local electric field. Highly crystalline multiwalled $Mo_{1-x}W_xS_2$ NTs were grown via the chemical vapour transport method [4]. Energy-dispersive X-ray spectroscopy, Raman spectroscopy, and X-ray diffraction indicate that the molybdenum and tungsten atoms are randomly distributed within the crystal structure and that the material is highly crystalline. High resolution TEM and electron diffraction (ED) patterns further corroborate these findings. A detailed analysis of the ED patterns from an eight-layer nanotube revealed that they grow in the 2H structure, with each shell consisting of one bilayer. The work function of the NTs is comparable than that of pure MoS_2 and lower of pure WS_2 NTs, making them ideal candidates for field emission applications. On the other hand, the TMT materials, such as ferromagnetic $Fe_{3-x}GeTe_2$ and $CrSi_{0.8}Ge_{0.1}Te_3$, can be studied via temperature-resolved Raman spectroscopy, in order to pinpoint their phase transitions and possible spin-phonon interactions. By introducing symmetry-breaking strain, we can open up possiblities for strain-engineering through tuning the lattice fluctuations.



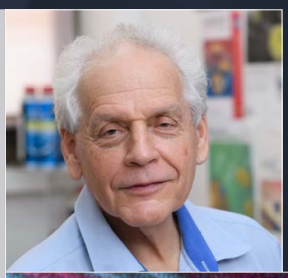
WEIZMANN INSTITUTE OF SCIENCE

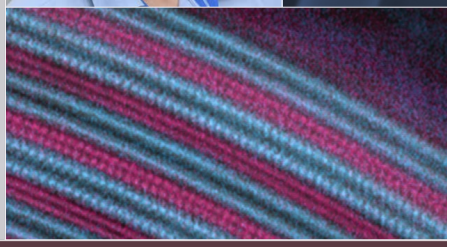
מכון ויצמן למדע

September 3rd , 2024

A Symposium Honoring
Prof. Reshef Tenne's 80th Birthday

A Multi-Dimensional Journey Through Layered Materials





The David Lopatie Conference Centre, Weizmann Institute of Science

Program

12:00 Gathering and Lunch

13:00 Welcome and Greetings

13:20 **Moshe Haratz**
Ben Gurion University
Features of non-uniform strain in transition-metal dichalcogenides monolayers

13:45 **Sivan Refaely-Abramson**
Weizmann Institute of Science
Computational advances and adventures in 2D semiconductors

14:10 Coffee Break

14:35 **Moshe Ben Shalom**
Tel Aviv University
Electric switching of vdW polytypes for multi-ferroic SlideTronics

15:00 **Bojana Višić**
Institute of Physics Belgrade
$Mo_xW_{(1-x)}S_2$ nanotubes for field emission applications

15:25 **Hadar Steinberg**
The Hebrew University of Jerusalem
High-precision sensing using stacked devices of two-dimensional materials

15:50 Coffee Break

16:15 **Gilbert Daniel Nessim**
Bar-Ilan University
One-step synthesis of single atom catalysts (SACs) on nanocarbons using thermal delamination: a new paradigm for high performance, binder-free, electrodes for water splitting

16:40 **Assaf Ya'akobovitz**
Ben Gurion University
Phosphorescence of 2D materials

17:05 **Lena Yadgarov**
Ariel University
Exploring exciton-and trion polaritons: Towards tailored light-matter interactions

17:30 Summary

Organizing Committee

Maya Bar-Sadan
Ben Gurion University

Olga Brontvein
Weizmann Institute of Science

Gitti Frey
Technion

Ehud Galun
DD&R [MAFAT], Ministry of Defense

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Faculty of Chemistry

The Chorafas Institute for Scientific Exchange

Conference Coordinator & Accessibility Issues

Talia Suissa | talia.suissa@weizmann.ac.il

ПРИЛОГ

4.6. Рецензирање пројеката и научних резултата

-Захвалница о обављеној рецензији
-Сертификати издавача за урађене рецензције научних радова

הקרן הלאומית למדע
المؤسّسة الإسرائيلية للعلوم
Israel Science Foundation

March 28, 2022
Application [redacted]

Prof. Bojana Visic
Center for Solid State Physics and New Materials
University of Belgrade

Dear **Prof. Bojana Visic**

We gratefully acknowledge receipt of your evaluation of the research proposal submitted to The Israel Science Foundation, on the Personal Research Grants.

Your review will play a major role in our decision making process and contribute to the advancement of scientific research in Israel.

Lists of the new grantees can be found on our web-site from October:
http://www.isf.org.il/#/

Sincerely yours,

Daniel Zajfman
Chairperson

כיכר אלברט איינשטיין, רחוב ז'בוטינסקי 43, ת.ד. 4040, ירושלים 91040
Albert Einstein Square, 43 Jabotinsky Street Jerusalem 91040, Israel
E.mail israkeren@isf.org.il Fax 972-2-5635 782 פקס Tel 972-2-5885 400 טל.
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Completed Reviewer Assignments for Bojana Visic

Page: 1 of 1 (2 total assignments)

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View Review Comments View Decision Letter Send E-mail	1		Research Paper		28 Jan 2015	29 Jan 2015	19 Feb 2015	02 Feb 2015	4		
View Review Comments View Decision Letter Send E-mail	1		Review Article		18 Aug 2014	18 Aug 2014	08 Sep 2014	18 Aug 2014	0		

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From: "Advanced Materials" <advmat@wiley-vch.de>
Date: 25/08/2013, 20:54
To: "Bojana Visic" <bojana.visic@ijs.si>

Dear Ms. Visic,

Thank you for your feedback on the manuscript [redacted]. We are grateful for your time and expertise, which help to maintain the high standards of Advanced Materials.

With kind regards,

Peter Gregory, Dr.

--
Dr. Peter Gregory, Editor
Advanced Materials
E-mail: advmat@wiley-vch.de
Tel: +49(0)6201-606-581/235

http://advmat.de/

Subject: CPLETT-20-1816 - Review Completed
From: CPLETT <eesserver@eesmail.elsevier.com>
Date: 8/25/2020, 1:43 PM
To: bojanav@ipb.ac.rs

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Ms. No.: CPLETT-[redacted]
Title: [redacted]
Corresponding Author: [redacted]
Authors: [redacted]

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Kind regards,

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E-mail: cplett@elsevier.com

Subject: Thank you for the review of MSEA-[redacted]
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Date: 7/15/2020, 1:44 PM
To: bojana.visic@ipb.ac.rs

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Title: [redacted]
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Thank you again for sharing your time and knowledge.

Yours sincerely,

Marco Jan Starink, PhD
Editor
Materials Science & Engineering A

****
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Subject: Thank you for the review of [redacted]

From: "Nanomaterials and Energy" <em@editorialmanager.com>
Date: 2/6/2020, 3:32 PM
To: "Bojana Visic" <bojana.visic@ipb.ac.rs>

Ref.: Ms. No. NME-[redacted]
[redacted]
Nanomaterials and Energy

Dear Dr. Visic,

Thank you very much for sending us your reviewer report for the above article. It is greatly appreciated and will be sent to the Editorial Assessment Panel when all reports are received. The comments you have given are essential to the success of the journal and your input is highly valued.

A list of all the referees for this calendar year will be published in the first issue of Nanomaterials and Energy. Unless we hear from you, we will include you in this list.

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Date: 3/20/2019, 12:21 PM
To: "Bojana Visic" <bojana.visic@ipb.ac.rs>

Ref.: Ms. No. NME-[redacted]
[redacted]
Nanomaterials and Energy

Dear Dr. Visic,

Thank you very much for sending us your reviewer report for the above article. It is greatly appreciated and will be sent to the Editorial Assessment Panel when all reports are received. The comments you have given are essential to the success of the journal and your input is highly valued.

A list of all the referees for this calendar year will be published in the first issue of Nanomaterials and Energy. Unless we hear from you, we will include you in this list.

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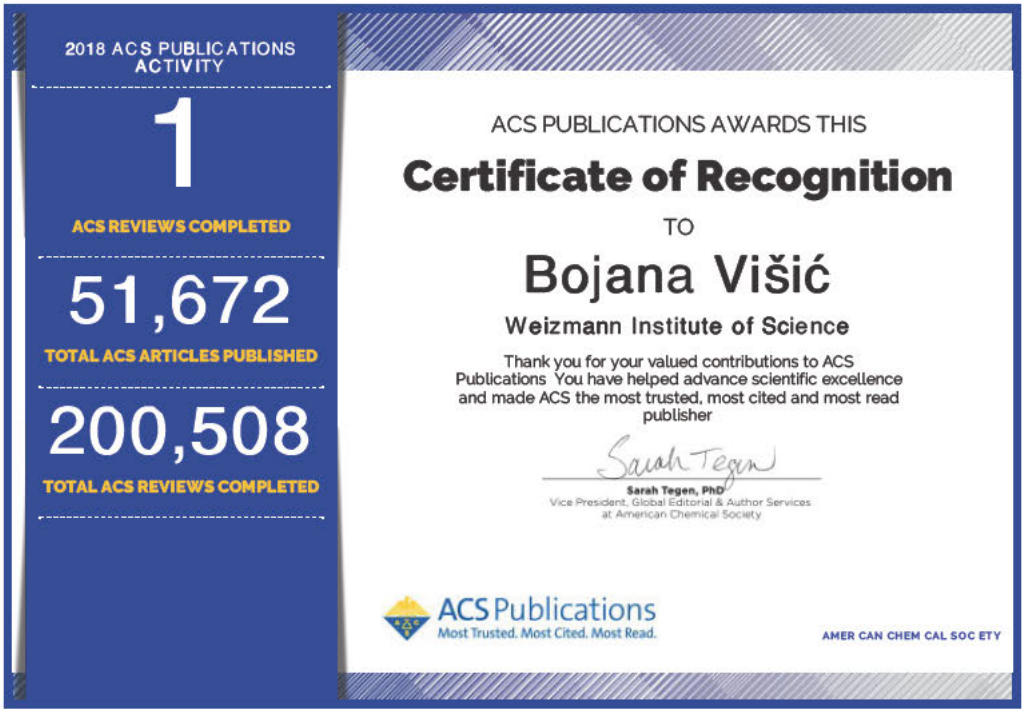
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TOTAL ACS ARTICLES PUBLISHED
200,508
TOTAL ACS REVIEWS COMPLETED
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From: "Air Quality, Atmosphere and Health" <em@editorialmanager.com>
Date: 3/20/2018, 2:30 PM
To: Bojana Višić <bojana.visic@ijs.si>

Dear Dr. Višić

Thank you for your review of the manuscript AIRQ-[redacted] for Air Quality, Atmosphere & Health. We appreciate the time and effort you put into the review which will greatly contribute to the standards of this journal.
A final decision concerning AIRQ-[redacted] will be shared with you once that is available.

Please keep us in mind for future submissions.

With kind regards,

Yong S. Chung, Ph.D
Editor-in-Chief
Air Quality, Atmosphere & Health

Subject: Thank you for submitting your review of [redacted]
From: ACS Applied Materials & Interfaces <onbehalfof+ivanisevic-office+ami.acs.org@manuscriptcentral.com>
Date: 9/6/2017, 11:34 AM
To: bojana.visic@ijs.si, bojana.visic@weizmann.ac.il
CC: ivanisevic-office@ami.acs.org

06-Sep-2017

Journal: ACS Applied Materials & Interfaces
Manuscript ID : [redacted]
Title : "
"
Author(s):

Dear Dr. Višić:

Thank you very much for submitting your review of this manuscript. Your comments will be very helpful as I assess the suitability of the paper for publication in ACS Applied Materials & Interfaces.

We thank you for participating as a referee and we hope that in the future you will consider ACS Applied Materials & Interfaces as a venue for publication of your work in applied materials.

Sincerely,

Prof. Albena Ivanisevic
Associate Editor
ACS Applied Materials & Interfaces
Fax: 12023509587
email: ivanisevic-office@ami.acs.org

ELSEVIER

MATERIALS LETTERS

Certificate of Reviewing

awarded December, 2017 to

BOJANA VISIC

In recognition of the review made for the journal

The Editors of *MATERIALS LETTERS*
Elsevier, Amsterdam, The Netherlands

Subject: Thank you for your review of NR-[redacted]
From: Nanoscale <onbehalfof+nanoscale+rsc.org@manuscriptcentral.com>
Date: 10/2/2017, 10:57 AM
To: bojana.visic@ijs.si

02-Oct-2017

Dear Mrs Visic:

TITLE: [redacted]

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Thank you for your support as a reviewer for the Royal Society of Chemistry. By providing a review for Nanoscale you are part of the world's leading chemistry community.

Best wishes,
Prof. Dirk Guldi
Associate Editor, Nanoscale
dirk.guldi@chemie.uni-erlangen.de
nanoscale@rsc.org
****

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View Review Comments View Decision Letter Send E-mail	1		Review Article	[redacted]	18 Aug 2014	18 Aug 2014	08 Sep 2014	18 Aug 2014	0		[redacted]

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From: "Advanced Materials" <advmat@wiley-vch.de>
Date: 8/25/2013, 8:54 PM
To: "Bojana Visic" <bojana.visic@ijs.si>

Dear Ms. Visic,

Thank you for your feedback on the manuscript "[redacted]" (No. adma.2013[redacted]). We are grateful for your time and expertise, which help to maintain the high standards of Advanced Materials.

With kind regards,

Peter Gregory, Dr.

--
Dr. Peter Gregory, Editor
Advanced Materials
E-mail: advmat@wiley-vch.de
Tel: +49(0)6201-606-581/235

http://advmat.de/

Subject: Thank you for the review of [redacted]
From: MSEA <eesserver@eesmail.elsevier.com>
Date: 15/07/2020, 13:44
To: bojana.visic@ipb.ac.rs

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Title: [redacted]
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Thank you again for sharing your time and knowledge.

Yours sincerely,

Marco Jan Starink, PhD
Editor
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Subject: CPLETT-20-1816 - Review Completed
From: CPLETT <eesserver@eesmail.elsevier.com>
Date: 25/08/2020, 13:43
To: bojanav@ipb.ac.rs

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Ms. No.: [redacted]
Title: [redacted]
Corresponding Author: [redacted]
Authors: [redacted]

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Kind regards,

Chemical Physics Letters, Editorial Office
E-mail: cplett@elsevier.com

Subject: Thank you for the review of [redacted]
From: "Israel Journal of Chemistry" <em@editorialmanager.com>
Date: 13/09/2021, 11:25
To: Bojana Višić <bojana.visic@ipb.ac.rs>

Ref.: Ms. No. ijch.[redacted]
Israel Journal of Chemistry

Dear dr Višić,

We much appreciate your review of this manuscript.

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https://www.editorialmanager.com/ijch/
Your username is: bojanav
If you have forgotten your password, please use the "Send Login Details" option given on the login screen. Help is provided in minutes to your e-mail address.

Yours sincerely,

Prof. Maya Bar Sadan
Associate Prof.
Israel Journal of Chemistry

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Boschstrasse 12 Germany
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Subject: Thank You - [E[redacted]]
From: "Applied Nanoscience (APNA)" <em@editorialmanager.com>
Date: 14/12/2021, 14:20
To: Bojana Višić <bojana.visic@ijs.si>

Dear Dr. Višić,

Thank you very much for your review of manuscript [redacted]".
We greatly appreciate your assistance.

With kind regards,
Journals Editorial Office
Springer

Subject: [redacted] - Višić - Thank you for submitting your review 22-Jun-2022
From: Journal of the American Chemical Society <onbehalfof@manuscriptcentral.com>
Date: 22/06/2022, 14:27
To: bojana.visic@ipb.ac.rs
CC: yang-office@jacs.acs.org

22-Jun-2022

RE: Journal of the American Chemical Society Manuscript Review Submission
Manuscript ID: [redacted]
Manuscript Type: Article
Title: [redacted]
Author(s) [redacted]

Dear Dr. Višić:

Thank you for submitting your review of [redacted]

I appreciate your assistance with the evaluation of this manuscript and hope that we may call upon you again to review future manuscripts for the Journal of the American Chemical Society.

Please note that ACS will deposit credit for your completed review to your ORCID profile after an embargo period. For more information about the ACS Reviewer Credit program see https://publish.acs.org/publish/peer_reviews/reviewer_credit/

Sincerely,

Peidong Yang
Executive Editor
Journal of the American Chemical Society
Email: yang-office@jacs.acs.org

Thank you.

Subject: [Photonics] Manuscript ID: photonics-[redacted] - Acknowledgement - Review Received
From: photonics@mdpi.com
Date: 23/02/2022, 14:38
To: Bojana Višić <bojana.visic@ipb.ac.rs>
CC: Photonics Editorial Office <photonics@mdpi.com>, Zane Lin <zane.lin@mdpi.com>

Dear Dr. Višić,

A short note to thank you very much for your review of the following manuscript:

Manuscript ID: [redacted]
Title: [redacted]
Authors: [redacted]

To help us improve our services, we kindly ask you to fill in our online survey on the peer-review process at
https://www.surveymonkey.com/r/reviewerfeedbackmdpi

We encourage you to register an account on our submission system and bind your ORCID account (https://susy.mdpi.com/user/edit). You are able to deposit the review activity to your ORCID account manually via the below link:
https://susy.mdpi.com/user/reviewer/status/finished

We also invite you to contribute to Encyclopedia (https://encyclopedia.pub), a scholarly platform providing accurate information about the latest research results. You can adapt parts of your paper to provide valuable reference information for others in the field.

Kind regards,
Ms. Zane Lin
Assistant Editor
E-Mail: zane.lin@mdpi.com
Skype: live:.cid.bbf526afecfc25fd

MDPI Branch Office, Beijing
Building 2, Countyard 4, Guanyinan North Street, Tongzhou District,
101101 Beijing, China
Photonics (www.mdpi.com/journal/photonics)
Infrastructures (www.mdpi.com/journal/infrastructures)
EJIHPE (https://www.mdpi.com/journalproposal/sendproposalspecialissue/ejihpe)
Universe (https://www.mdpi.com/journal/universe)

/Photonics/ is recruiting Topical Advisory Panel Members. If you are interested, please submit the application at:
https://www.mdpi.com/journal/photonics/topical_advisory_panel_application

Impact Factor (2020) of */Photonics/*: 2.676, ranking 37/99 (Q2) in the category 'OPTICS'
CiteScore 2020 of */Photonics/*: 3.5

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LinkedIn (https://www.linkedin.com/company/photonics-mdpi/) and
Facebook (https://www.facebook.com/PhotonicsMDPIOA)

Subject: [Optics] Manuscript ID: optics- [redacted] - Acknowledgement - Review Received
From: optics@mdpi.com
Date: 23/06/2022, 13:23
To: Bojana Višić <bojana.visic@ipb.ac.rs>
CC: Optics Editorial Office <optics@mdpi.com>, Hogan Zhang <hogan.zhang@mdpi.com>

Dear Dr. Višić,

A short note to thank you very much for your review of the following manuscript:

Manuscript ID: optics [redacted]
Title: [redacted]
Authors: [redacted]

To help us improve our services, we kindly ask you to fill in our online survey on the peer-review process at
https://www.surveymonkey.com/r/reviewerfeedbackmdpi

We encourage you to register an account on our submission system and bind your ORCID account (https://susy.mdpi.com/user/edit). You are able to deposit the review activity to your ORCID account manually via the below link:
https://susy.mdpi.com/user/reviewer/status/finished

We also invite you to contribute to Encyclopedia (https://encyclopedia.pub), a scholarly platform providing accurate information about the latest research results. You can adapt parts of your paper to provide valuable reference information for others in the field.

Kind regards,
Hogan Zhang
Section Managing Editor
E-Mail: hogan.zhang@mdpi.com
Skype: live:.cid.91e8cd6c478f167c

--
MDPI Branch Office, Beijing
Optics Editorial Office

E-Mail: optics@mdpi.com
http://www.mdpi.com/journal/optics/
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http://www.mdpi.com/

*** This is an automatically generated email ***

Subject: Thank you for submitting your review of [redacted]
From: ACS Applied Nano Materials <onbehalfof@manuscriptcentral.com>
Date: 05/07/2023, 11:26
To: bojana.visic@ipb.ac.rs
CC: cotta-office@anm.acs.org

05-Jul-2023

Journal: ACS Applied Nano Materials
Manuscript ID: [redacted]
Title: [redacted]
Author(s): [redacted]

Dear Dr. Višić:

Thank you for submitting your review of this manuscript. Your comments will help me make a decision regarding its publication in ACS Applied Nano Materials.

We greatly appreciate the voluntary contribution that each reviewer gives to the journal. We thank you for your participation in the online review process.

Please note that ACS will deposit credit for your completed review to your ORCID profile after an embargo period. For more information about the ACS Reviewer Credit program see https://publish.acs.org/publish/peer_reviews/reviewer_credit/

Sincerely,

Dr. Monica Cotta
Executive Editor
ACS Applied Nano Materials
Email: cotta-office@anm.acs.org

Thank you.

Subject: Thank you from Surface Innovations
From: ICE - Review Management System <mails@ice-review.rivervalley.io>
Date: 29/09/2023, 09:58
To: bojana.visic@ipb.ac.rs

ReView

Manuscript [redacted]

Title: [redacted]

Dear Bojana Visic

We would like to thank you for reviewing for *Surface Innovations* and confirm that we have received your report for the above paper. Your review helps us evaluate submissions for quality and potential impact on future policy, supporting our mission to connect government, academia and industry.

Reviewer reward:

Each paper you review counts towards your ICE Continuing Professional Development (CPD). Reference ICE 3006A - Participating in Institution activities such as acting as a reviewer.

We operate an annual reviewer-reward system. During each calendar year, we calculate how many reviews each reviewer has undertaken and, depending on that number, offer promotions and discounts for our products.

Reviewers also gain privileged access to new research in the field. Finally, unless you ask to be omitted, we will thank you in the first issue of the following year.

ICE Publishing peer-review website has a quality mark for trusted reviewers. Reviews submitted to ICE Publishing journals can be rated onscreen by the handling Panel / Board member.

We value the contribution you have made and hope that you will be able to review other papers for ICE journals in the future.

Yours sincerely,

Editorial Office

Surface Innovations

Subject: Thank you from Surface Innovations
From: ICE - Review Management System <mails@ice-review.rivervalley.io>
Date: 29/09/2023, 09:58
To: bojana.visic@ipb.ac.rs

ReView

Manuscript [redacted]

Title: [redacted]

Dear Bojana Visic

We would like to thank you for reviewing for *Surface Innovations* and confirm that we have received your report for the above paper. Your review helps us evaluate submissions for quality and potential impact on future policy, supporting our mission to connect government, academia and industry.

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ICE Publishing peer-review website has a quality mark for trusted reviewers. Reviews submitted to ICE Publishing journals can be rated onscreen by the handling Panel / Board member.

We value the contribution you have made and hope that you will be able to review other papers for ICE journals in the future.

Yours sincerely,

Editorial Office

Surface Innovations

Subject: Thank you for the review of 202318028
From: "Angewandte" <em@editorialmanager.com>
Date: 06/12/2023, 13:16
To: Bojana Višić <bojana.visic@ipb.ac.rs>

Ref.: Ms. [redacted]
Angewandte Chemie

Dear dr Višić,

Thank you for your review of this manuscript.

To access your review comments, as well as those of the other reviewers for the current round of peer review, please go to https://www.editorialmanager.com/anie/ and log in with your username (Your username is: Your username is: bojanav) and password. They can be found under the menu item "Completed Assignments" for the manuscript number under "View Reviewer Comments", and we ask you to treat them as confidential. If you have forgotten your password, please use the "Send Login Details" option given on the login screen.

Please note that your comments may be shared with the other reviewer(s), of course anonymized.

Best regards

Dr. Xin Su
Executive Editor
Angewandte Chemie

Angewandte Chemie, a journal of the Gesellschaft Deutscher Chemiker (German Chemical Society, GDCh),
published by Wiley-VCH: www.wiley-vch.de

phone: +49-6201-606-315
e-mail: angewandte@wiley-vch.de
www.angewandte.com

*****

Trade Register: Mannheim, HRB 736569. Managing Directors: Sabine Haag, Dr. Guido F. Herrmann.
*****

*****

*****
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In compliance with data protection regulations, you may request that we remove your personal registration details at any time. (Use the following URL: https://www.editorialmanager.com/anie/login.asp?a=r). Please contact the publication office if you have any questions.

Subject: Thank you for the review of [redacted]
From: "V. R. Roberto MASTELARO" <em@editorialmanager.com>
Date: 25/06/2025, 13:51
To: Bojana Višić <bojana.visic@ipb.ac.rs>

Ms. Ref. No.: [redacted]
Title: [redacted]

Dear Dr Višić,

Thank you for your review of this manuscript.

You may access your review comments by logging onto the Editorial Manager at https://www.editorialmanager.com/jalcom/. Please login as a Reviewer:

Your username is: bojana.visic

If you need to retrieve password details, please go to: click here to reset your password

As a token of appreciation, we would like to provide you with a review recognition certificate on Elsevier Reviewer Hub (reviewerhub.elsevier.com). Through the Elsevier Reviewer Hub, you can also keep track of all your reviewing activities for this and other Elsevier journals on Editorial Manager.

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Kind regards,

V. R. Roberto MASTELARO
Editor
Journal of Alloys and Compounds

****

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ПРИЛОГ

4.7. Образовање научних кадрова

-Одлука Научно-наставног већа Биолошког факултета Универзитета у Београду о одређивању ментора Бланке Ђукић
-Записник са одбране мастер рада

УНИВЕРЗИТЕТ У БЕОГРАДУ
БИОЛОШКИ ФАКУЛТЕТ

Студентски трг 16
11000 БЕОГРАД
Република СРБИЈА
Тел: +381 11 2186 635
Факс: +381 11 2638 500
Е-пошта: dekanat@bio.bg.ac.rs

15/152-14.06.2024.

Др Биљана Николић, редовни професор, Универзитет у Београду – Биолошки факултет, ментор;

Др Бојана Вишић, виши научни сарадник, Универзитет у Београду – Институт за физику – Институт од националног значаја за Републику Србију – ментор;

Др Стефана Вулетић, научни сарадник, Универзитет у Београду – Биолошки факултет, члан.

Поштовани,

Наставно-научно веће Универзитета у Београду - Биолошког факултета на VIII редовној седници одржаној 14.06.2024. године, прихватило је тему и одредило Вас у Комисију за преглед, оцену и одбрану мастер рада кандидата:

Бланке Ђукић, Б1034/2023, под називом: „Биокомпатибилност волфрам- и молибден- дисулфидних наноматеријала и њихова антибактеријска активност“.

Молимо Вас да се ове дужности прихватите.

РЕПУБЛИКА СРБИЈА * УНИВЕРЗИТЕТ У БЕОГРАДУ - БИОЛОШКИ ФАКУЛТЕТ * БЕОГРАД
П

Декан Биолошког факултета

Проф. др Љубиша Станисављевић

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БИОЛОШКИ ФАКУЛТЕТ

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11000 БЕОГРАД
Република СРБИЈА
Тел: +381 11 2186 635
Факс: +381 11 2638 500
Е-пошта: dekanat@bio.bg.ac.rs

З А П И С Н И К
СА ЈАВНЕ ОДБРАНЕ МАСТЕР РАДА

Студент **Бланка Ђукић**, мастер академског студијског програма: Биологија, модула: Биологија микроорганизама, број индекса: Б1034/2023, бранила је мастер рад у Београду, на Универзитету у Београду, Биолошком факултету, 25.7.2024. године. Комисија за преглед, оцену и одбрану мастер рада именована је одлуком Наставно-научног већа Биолошког факултета, на VIII редовној седници одржаној 14.6.2024. године, у саставу:

1. ментор Биљана Николић
2. ментор Бојана Вишић
3. члан Стефана Вулетић

Пре почетка одбране, Комисија је изабрала за председника Биљану Николић, који је у 12:00 часова отворио јавну одбрану мастер рада кандидата под насловом:

Биокомпатибилност волфрам- и молибден- дисулфидних наноматеријала и њихова антибактеријска активност

Biocompatibility of tungsten and molybdenum disulfide nanomaterials and their antibacterial activity

Председник Комисије је, затим, позвао кандидата да укратко изложи резултате до којих је дошла у свом мастер раду. По завршеном излагању, чланови Комисије су кандидату постављали питања и дали критички осврт на мастер рад. Пошто је кандидат Бланка Ђукић одговорила на постављена питања у вези са мастер радом, Комисија се повукла ради одлучивања.

После одлучивања, председник Комисије је саопштио одлуку да је кандидат Бланка Ђукић ОДБРАНИЛА мастер рад под горе наведеним насловом, са оценом 10 (одличан), чиме је испунила законске услове за стицање академског степена МАСТЕР БИОЛОГ.

Јавна одбрана мастер рада завршена је у 12:40 часова.

Чланови Комисије
Бојана Вишић
Вулетић С.

Председник Комисије
Биљана Николић

ПРИЛОГ

4.8. Награде и признања

-Награда

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ИНСТИТУТ ОД НАЦИОНАЛНОГ ЗНАЧАЈА ЗА РЕПУБЛИКУ СРБИЈУ

Прегревица 118, 11080 Земун - Београд, Република Србија
Телефон: +381 11 3713000, Факс: +381 11 3162190, www.ipb.ac.rs
ПИБ: 100105980, Матични број: 07018029, Текући рачун: 205-66984-23

Научном већу Института за физику у Београду

Пошто смо одлуком донетој на редовној седници Научног већа Института за физику у Београду, одржаној 04.04.2023. године, именовани за чланове Жирија за доделу годишње награде за научни рад и студентске награде Института за физику у Београду, подносимо следећи

ИЗВЕШТАЈ

I) Годишња награда за научни рад

За Годишњу награду за научни рад Института за физику у Београду за 2023. годину благовремено је, закључно са 30.04.2023. године, предложено двоје кандидата:

1. *др Бојана Вишић,* виши научни сарадник, предлагач: др Ненад Лазаревић, научни саветник.

2. *др Бранко Коларић,* научни саветник, предлагач: др Дарко Васиљевић, научни саветник.

Након детаљне квалитативне и квантитативне анализе научног доприноса обоје кандидата током претходне две календарске године, а посебно узимајући у обзир квалитет објављених радова и њихов утицај на научну област, односно проблематику којој припадају, али и друге области науке, као и стваралачки удео кандидата у остварeним резултатима, удео Института у остварeним резултатима, као и број радова и њихове категорије у смислу Правилника о поступку и начину вредновања и квантитативном исказивању научноистраживачких резултата Министарства науке, технолошког развоја и иновација, **жири је донео једногласну одлуку да се Годишња награда за научни рад Института за физику у Београду за 2023. годину додели**

др Бојани Вишић

за њен значајан допринос у области синтезе, карактеризације и спектроскопије неорганских нанотуба и осталих наноматеријала

УНИВЕРЗИТЕТ У БЕОГРАДУ
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ИНСТИТУТ ОД НАЦИОНАЛНОГ ЗНАЧАЈА ЗА РЕПУБЛИКУ СРБИЈУ

Прегревица 118, 11080 Земун - Београд, Република Србија
Телефон: +381 11 3713000, Факс: +381 11 3162190, www.ipb.ac.rs
ПИБ: 100105980, Матични број: 07018029, Текући рачун: 205-66984-23

Образложење

Обоје кандидата имају импресиван научни опус и током претходне две календарске године су објавили нове и значајне резултате у међународним часописима.

Кандидаткиња **др Бојана Вишић** је дала велики научни допринос у области синтезе, карактеризације и спектроскопије неорганских нанотуба и осталих наноматеријала. Најзначајнији резултати кандидаткиње у периоду 2021-2022. године су представљени на Институту за физику у Београду у оквиру The Workshop on Strongly Correlated Electron Systems, као и на семинарима Центра за физику чврстог стања и нове материјале.

У претходне две календарске године највише се истиче рад кандидаткиње на тему синтезе и карактеризације волфрамових субоксида. Ово је класа једињења која се активно изучава, али у вези којих опстаје низ отворених питања и нејасноћа, чак везано за саму стехиометрију. За поуздану карактеризацију удела кисеоника, потребна је комбинација већег броја комплементарних техника. Др Вишић је направила дефинитиван помак у разумевању стехиометрије и оптичких особина чак четири различита система из ове групе. Њен рад је расветлио како ваканције кисеоника и тзв. "клизне равни" утичу на електронска стања, као и фотолуминесценцију плазмона, ексцитона и сл.

У периоду 2021-2022. године, др Вишић је објавила шест научних радова (категорија М21:3, М22:3) укупног импакт фактора 22.961, а највиши ИФ има рад објављен 2021. године у часопису *Nanomaterials* (5,076). Ови радови су већ цитирани 25 пута (база Google Scholar), а два су изабрани и као Editor's choice. Укупно, радови кандидаткиње су током последње две календарске године били цитирани 109 пута (база Scopus). О раду др Вишић писано је и у словеначком часопису *Дело* за који је дала интервју 2022. године у оквиру рубрике „Млади научници мењају свет“. Од 2020. године, кандидаткиња има званичну сарадњу са Институтом Јожеф Стефан (Љубљана), што је било значајно и за друге истраживаче Института за физику у Београду, којима је ова сарадња омогућила приступ техникама електронске микроскопије (СЕМ, ТЕМ).

Кандидат **др Бранко Коларић** је током календарских 2021. и 2022. године дао допринос проучавању интеракција светлости са биофотонским структурама, као и интеракцију умрежених фотона са материјом. Фокусирао се на интерферометријско праћење фазних прелаза и динамике неравнотежних процеса, као и на проучавање

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радиоционе динамике и еволуције ексцитованог стања помоћу линеарне и нелинеарне оптике.

У овом периоду, др Коларић је објавио 10 радова у међународним часописима, а био је активан и у уређивачким одборима при часописима *JOVE*, *Applied Science* i *Symmetry*.

Из веома успешне каријере кандидата, истиче се чланство у британском краљевском друштву хемичара. Кандидат је тренутно и руководилац *EIC-Pathfinder Challenges* пројекта под називом "Molecular materials for on-chip integrated quantum light sources".

Закључак:

На основу наведеног, жири сматра да је допринос обоје кандидата међународном угледу Института за физику у Београду изузетан и на томе им жири честита. Међутим, сматрамо да се, у претходне две календарске године, нарочито истичу научни резултати кандидаткиње др Бојане Вишић, који представљају помак у веома активној области истраживања. Узимајући у обзир квалитет радова, и пре свега лични допринос кандидаткиње овим радовима и њихов утицај како на област истраживања тако и на остале области науке, као и удео Института за физику у Београду у оствареним резултатима, и ценећи целокупну библиографију кандидаткиње, **Годишњу награду за научни рад Института за физику у Београду за 2023. годину додељујемо др Бојани Вишић.**

II) Студентска награда

За Студентску награду Института за физику у Београду за 2022. годину предложена је кандидаткиња

1. ***др Сања Ђурђић Мијин***, научни сарадник, предлагач: др Ненад Лазаревић, виши научни сарадник.

Након детаљне анализе докторске дисертације и научног доприноса кандидаткиње, а посебно узимајући у обзир квалитет дисертације и објављених радова и њихов утицај на научну област, односно проблематику којој припадају, стваралачки удео кандидаткиње у оствареним резултатима, дужину трајања студија, удео Института у оствареним резултатима, као и број радова и њихове категорије у смислу Правилника о поступку и начину вредновања и квантитативном исказивању научноистраживачких резултата Министарства науке, технолошког развоја и иновација, **жири је донео**

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једногласну одлуку да се Студентска награда Института за физику у Београду за 2023. годину додели

др Сањи Ђурђић Мијин

за докторску дисертацију под називом „Нееластично расејање светлости на квази-дводимензионалним материјалима“ (“Inelastic light scattering in Quasi-two-dimensional materials”)

Образложење

Др Ђурђић Мијин је од фебруара 2018. године запослена у Центру за физику чврстог стања и нове материјале Института за физику у Београду. Докторске студије на Физичком факултету Универзитета у Београду уписала је октобра 2018. године, на смеру Физика кондензоване материје и статистичка физика. У периоду 2018-2019. године, учествовала је на пројекту МПНТР „Наноструктурни мултифункционални наноматеријали и нанокомпозити“ (III450018) којим је руководио академик Зоран В. Поповић, а у периоду 2020-2022. године је била ангажована на пројекту Фонда за науку Републике Србије „StrainedFeSC“ (број: 6062656) чији је руководилац био др Ненад Лазаревић. Под менторством др Ненада Лазаревића израдила је докторску дисертацију под насловом „Нееластично расејање светлости на квази-дводимензионалним материјалима“ коју је одбранила на Физичком факултету 10. 03. 2022.

Научно-истраживачки рад др Сање Ђурђић Мијин везан је за област експерименталне физике кондензованог стања материје. Током докторских студија бавила се испитивањем вибрационих особина квази-дводимензионалних материјала методом Раманове спектроскопије. У досадашњој каријери Сања Ђурђић Мијин је публиковала 5 научних радова: 1 из категорије М21а и 4 из катерогије М21 од којих је наведена као први аутор на 4 рада (укупног ИФ 19,998), као и 10 саопштења са међународих скупова штампаних у изводу (М34). Према сервису Google Scholar др Сања Ђурђић Мијин има 80 цитата (јануар 2023). Др Сања Ђурђић Мијин је у значајној мери допринела изради мастер рада Јована Благојевића под називом Неуређеност и електрон-фонон интеракција у 2H-$TaS_{2-x}S_x$ ($0 \leq x \leq 2$) испитивани методом Раманове спектроскопије, која је под менторством др Ненада Лазаревића одбрањена на Физичком факултету септембра 2022.

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Закључак:

На основу наведеног, **жири је одлучио да награду додели др Сањи Ђурђић Мијин**, ценећи квалитет добијених резултата, лични допринос кандидаткиње, квалитет написане докторске дисертације, као и чињеницу да резултати представљени у докторату имају значајан утицај на фундаментална и примењена истраживања.

На крају, пре свега желимо да добитницима честитамо на освојеним наградама, а затим и да изразимо очекивања да ће следеће године конкуренција бити јача, бројнија и разноврснија.

Београд, 9. маја 2023. године

др Јакша Вучичевић,

виши научни сарадник, Институт за физику у Београду

др Игор Франовић,

виши научни сарадник, Институт за физику у Београду

др Бранислав Цветковић,

научни саветник, Институт за физику у Београду

ПРИЛОГ

Публикације категорије М34 и М36 и позивна писма

Subject: Speaker invitation Flatlands beyond Graphene
From: Christoph Gadermaier <christoph.gadermaier@polimi.it>
Date: 23/05/2025, 08:47
To: Bojana Višić <bojanav@ipb.ac.rs>

Dear Prof Bojana Visic,
this is the official invitation to join the conference "Flatlands beyond Graphene 2025", to be held at Politecnico di Milano, from September 1 to 5, as an invited speaker. Your speaker slot will be approximately 30 minutes. For more information about the conference, please have a look at our webpage
https://flatlands2025.org/
Looking forward to your contribution
Christoph Gadermaier on behalf of the organizing committee

Monday	
8:00-8:50	registration
8:50-9:00	opening. Chair: C.Gadermaier
9:00-9:30	Doron Naveh Strain-Phonon Cooling Effect in hBN Quantum Emitters
9:30-10:00	Aleksandar Matkovic Magnetism in Two Dimensional Phyllosilicates
10:00-10:15	Shun Feng Hybrid trion transistor based on a bilayer semiconductor
10:15-10:30	Natalia Zawadzka Unrevealing Cr2Ge2Te6 density of states in electroluminescence of WSe2 light emitting diode
10:30-10:45	Benjamin Mayer Surface acoustic wave-controlled photocurrent in few-layer WSe2
10:45-11:15	coffee break
	Chair: A. Matkovic
11:15-11:45	Ahmad Avsar Gate-Tunable Induced Magnetism in a 2D Semiconductor
11:45-12:15	Tobias Korn Ferroelectric control of (interlayer) excitons
12:15-12:30	Katarzyna Olkowska-Pucko Extremely high excitonic g-factors in 2D crystals by alloy-induced admixing of band states
12:30-12:45	Ilias-Panagiotis Oikonomou Quantum Defects as a Lever for 2D Magnetism beyond monolayer PtSe2
12:45-13:00	Sandip Ghosh Measuring exciton Landé g-factor with low magnetic fields and evidence for an inter-layer B-like exciton in bulk 2H-MoS2
13:00-14:30	lunch
	Chair: M. Reutzel
14:30-15:00	C. Trovatello Ultracompact nonlinear platforms based on van der Waals semiconductors for classical and quantum states of light
15:00-15:15	Yilyu Guo Spin-Selective Charge Flow Drives Ultrafast Magnetic Transitions in Type-II Bipolar Magnetic Heterostructures
15:15-15:30	Maciej Śmiertka Coexistence of magnetic Frenkel and Wannier-Mott excitons in a 2D semiconductor CrSBr
15:30-15:45	Roberto Rosati Exciton trapping and unidirectional drift in 2D lateral heterostructures

15:45-16:00	Charles J. Sayers Coherent Phonon Spectroscopy of Monolayer TMDs and van der Waals Heterostructures
16:00-16:15	Floriana Morabito Dynamics of Methyl-Germanane from Liquid Phase Exfoliation
16:15-16:45	coffee break
	Chair: A. Chernikov
16:45-17:45	shotgun poster presentations
17:45-20:00	poster session I
Tuesday	
	Chair: D. Naveh
9:00-9:30	Efrat Lifschitz Change in Magnetic Order in NiPS3 Single Crystals Induced by a Molecular Intercalation
9:30-10:00	Goki Eda Point-like photovoltaic junctions in doped homobilayer
10:00-10:15	Christian Martella Non-volatile resistive switching in 2D Tellurium
10:15-10:30	Luca Anzi Versatile Plasma Doping Strategy for High-Quality 2D Material Diodes and Circuits
10:30-10:45	Nuria Jiménez Arévalo Optoelectronic memories based on large area exfoliated MoS2 flakes on ITO
10:45-11:15	coffee break
	Chair: B. Visic
11:15-11:45	A. Kuc Computational Guide to Optimize Electric Conductance in MoS2 Films
11:45-12:15	J. Maultzsch Optical spectroscopy of defects in 2D materials
12:15-12:30	Joyce B. Matsoso Mo2TiC2 MXenes for Electrocatalytic NO3-1 Reduction to Ammonia
12:30-12:45	Noya Ruth Itzhak Enantioselective Solid-State Synthesis of Guided Chiral Nanowires
12:45-13:00	Nirman Chakraborty Operando methods towards understanding hybridization routes in oxygen reduction reactions over 2D and 3D surfaces
13:00-14:30	lunch
	Chair: G. Eda
14:30-15:00	S. Mitra (Physical Review Letters) tba

15:00-15:15	Hongde Yu Metal-Free Magnetism in Organic 2D Crystals
15:15-15:30	Igor Antoniazzi Magneto-excitonic characteristics of the anisotropic CrSBr antiferromagnet
15:30-15:45	Andreas Beer Proximity-induced Exchange Interaction And Prolonged Valley Lifetime In MoSe2/CrSBr Van-der-Waals Heterostructure With Orthogonal Spin Texture
15:45-16:00	Shamik Chakraborty Molecular Control of Spin Interactions in Two-Dimensional CrI3 with Surface-Bound N-Heterocyclic Carbenes
16:00-16:15	Konrad Widaj Electron and Hole g-factor Anisotropy in Two-dimensional Layered Perovskites
16:15-16:45	coffee break
	Chair: Y. Xie
16:45-17:45	shotgun poster presentations
17:45-20:00	poster session II
Wednesday	Chair: J. Maultzsch
9:00-9:30	G. Cerullo Ultrafast spin-valley dynamics in single-layer transition metal dichalcogenides
9:30-10:00	A. Chernikov Interacting and mobile excitons in two-dimensional semiconductors
10:00-10:15	Florentine Friedrich Universal And Ultrafast Probe Of Broken Time-Reversal Symmetry via Third Harmonic Kerr Rotation
10:15-10:30	Sebastian Klimmer Signature of Ultrafast Coherent Bandgap Modulation in Nonlinear Optics
10:30-10:45	Alain Dijkstra Ten-valley excitonic complexes in charge-tunable monolayer WSe2
10:45-11:15	coffee break
	Chair: G. Cerullo
11:15-11:45	Paulina Plochocka Excitonic landscape in van der Waals heterostructures
11:45-12:15	Maria Antonietta Loi Low dimensional metal halides: optical ad electronic properties of an emerging 2D semiconductor
12:15-12:30	Mateusz Dyksik Steric Engineering of Exciton Fine Structure in 2D Perovskites

12:30-12:45	Carlo S. Casari 2D Carbon Materials Beyond Graphene: Graphdiyne-Like Networks Via On-Surface Synthesis
12:45-13:00	Tamir Forsht New Family of All-Metal-Core Two-Dimensional Materials
13:00-14:30	lunch
	free time
18:30-20:00	Leonardo da Vinci, Museum of Science and Technology
20:00-23:00	conference dinner
Thursday	
	Chair: C. Trovatello
9:00-9:30	Moshe Ben Shalom Super Lubricant Arrays of Layered Polytypes: Internal Polarization, Elastic Coupling, and Switching Dynamics
9:30-10:00	Ursula Wurstbauer Optical signatures of inhomogeneities and moiré minibands in van der Waals bilayers
10:00-10:15	Thomas Brumme Theoretical insights on localized exciton emission and interfacial spin-orbit coupling in NiPS3/WSe2 heterostructures
10:15-10:30	Tomasz Woźniak Magnetooptical properties of two-dimensional magnetic semiconductors and their heterostructures
10:30-10:45	Chinmay Kumar Mohanty Angular Resolved Raman Scattering in a Layered VOCl Antiferromagnet
10:45-11:15	coffee break
	Chair: A. Kuc
11:15-11:45	Alessandro Molle Atom-by-atom Configuring Two-Dimensional Xenes for Electronic, Optoelectronic, and Optical Devices
11:45-12:15	Bojana Visic Van der Waals nanotubes- from synthesis to applications
12:15-12:30	Sagnik Chatterjee Unrolling Anisotropy: Rolling Transition Metal Dichalcogenides For Polarized Light Control
12:30-12:45	Lena Yadgarov ZIF-8-templated ZnS/MoS_2 hollow heterostructures enabling whispering gallery modes for enhanced energy applications
12:45-13:00	Yarden Danieli 2D or Not 2D? Mixing Dimensions in MoS2 Nanostructures
13:00-14:30	lunch

	Chair: T. Korn
14:30-15:00	Yong Xie Towards Full Autonomous Synthesis and Characterization of Two-dimensional Materials
15:00-15:15	Atikur Rahman Tuning 2D TMDs for Optoelectronics through Defect Engineering
15:15-15:30	Rico Friedrich Next Generation 2D Materials and Their Heterostructures by Data-driven Design
15:30-15:45	Ana Senkić Tungsten-Induced Modulation of Interlayer Coupling in CVD Grown MoS2 Bilayers
15:45-16:00	Esteban Zamora Amo Scalable Fabrication of Anisotropic 2D Materials via Roll-toRoll Exfoliation
16:00-16:15	Ilaria Candio
	ImageS sponsor presentation
16:15-16:45	coffee break
	Chair: A. Genco
16:45-17:15	Alexander Hoegele Exciton, polariton, charge and spin lattices in moiré heterostructures
17:15-17:45	Saptarshi Das AI for 2D Materials and 2D Materials for AI
17:45-18:00	Edoardo Lopriore Electrically-Tunable Enhancement of Interlayer Exciton Dynamics Coupled with Monolithic Microcavities
18:00-18:15	Fang Wang Photodetectors for Weak Signals
18:15-18:30	Oliwia Janikowska Study of the coupling between optical and magnetic properties in the two-dimensional antiferromagnet $CrSBr_{1-x}Cl_x$
18:30-18:45	Andrew Pannone Hardware Acceleration of Reconfigurable Dendritic Computation
Friday	
	Chair: U. Wurstbauer
9:00-9:30	Marcel Reutzel Excitons in space and time – a femtosecond momentum microscopy study
9:30-10:00	Giancarlo Soavi Signatures of broken time reversal symmetry and Berry curvature in the nonlinear optical response of layered materials

10:00-10:15	Grzegorz Krasucki Doping Effect on the Brightening of Dark Excitons and Trions in a WSe_2 Monolayers
10:15-10:30	Lucas Lafeta Tip-enhancement Fourier-space nonlinear images of 2D Materials
10:30-10:45	Yigit Sozen Two-Dimensional Temporary Tattoo Electronics via Roll-to-Roll Exfoliation
	Chair: A. Hoegele
10:45-11:15	coffee break
11:15-11:45	Armando Genco Nonlinear interactions and ultrafast dynamics of hybridized interlayer excitons in semiconducting bilayers
11:45-12:15	Robert Kudrawiec Transition Metal Dichalcogenides on Optical Fibers Tips: Thermal Effects and Light Modulation
12:15-12:30	Sotirios Papadopoulos Van der Waals light sources and photodetectors based on energy transfer between tunneling electrons and excitons
12:30-12:45	Martin Gerlei Tuneable Optoelectronic Response In Flexible PtSe2 Films
12:45-13:00	Sabrine Ayari Pioneering Terahertz Technology with 2D Materials: Extreme Optical Nonlinearities for Far-Infrared Photonics
13:00-13:05	closing
13:00-14:30	lunch

Van der Waals nanotubes- from synthesis to applications

B. Višić [1,2]

[1]*Institute of Physics Belgrade, University of Belgrade, Pregrevica 118, 11000 Belgrade, Serbia*
[2]*Jozef Stefan Institute, Jamova cesta 39, 1000 Ljubljana, Slovenia*

Semiconducting transition metal dichalcogenides (TMDCs) can be synthesized in a wide range of structures and geometries, including closed cage nanostructures, such as nanotubes (NTs) or fullerene-like nanoparticles. Individual multiwalled WS_2 and MoS_2 NTs are having a resurgence of interest, as interesting optical and electrical properties have been reported in recent years [1,2]. They are especially intriguing due to their stability, enhanced light-matter interactions, and ability to sustain exciton-polaritons in ambient conditions, i.e., strong coupling of excitonic resonances to the optical cavity. Namely, these nanotubes act as quasi-1D polaritonic nanosystems and sustain both excitonic features and cavity modes in the visible-near infrared range. This ability to confine light to subwavelength dimensions under ambient conditions is induced by the high refractive index of WS_2.
On the other hand, NTs have been vastly neglected as possible alloyed TMDC. Most of the research so far, both theoretically and experimentally, focused on flat, two-dimensional structures, with only a few reports that focused on non-carbon-based alloyed NTs [3]. Additionally, TMDCs have opened a new frontier in the area of field emission devices, due to their layered structure and the presence of thin and sharp edges with high aspect ratios which enhance the local electric field. We grew highly crystalline multiwalled $Mo_{1-x}W_xS_2$ NTs via the chemical vapour transport method, with the molybdenum and tungsten atoms randomly distributed within the crystal structure [4]. A detailed analysis of the ED patterns from an eight-layer nanotube revealed that they grow in the 2H structure, with each shell consisting of one bilayer. The work function of the NTs is comparable than that of pure MoS_2 and lower of pure WS_2 NTs, making them ideal candidates for field emission applications.
Various TMDC NTs promise a wide spectrum of physical effects beyond the physics of CNTs [2]. They have a high aspect ratio, high specific surface area and excellent mechanical and vibrational/acoustic properties, making them suitable as composite nanofillers as only a small amount can be used for forming a conductive path [5]. Furthermore, MS_2 NTs disperse well in all commonly used solvents, simplifying composite preparation [6].

[1] B. Višić, et al., *Phys. Rev. Res*. **1** 3 (2019).
[2] B. Višić, et al., *JACS* **139** 12865-78 (2017).
[3] M. B. Sreedhara, et al., *J Am Chem Soc* **144** 232 (2022).
[4] L. Pirker, et al., *Adv. Funct. Mater* **33** 15 (2023).
[5] R. Evarestov, et al., *Materials Research Express* **5** 115028 (2018).
[6] L. Yadgarov, et al., *Physical Chemistry Chemical Physics* **20** 20812-20 (2018).

BOOK OF ABSTRACTS

ADVANCES
IN SOLID STATE PHYSICS
AND NEW MATERIALS

ДОСТИГНУЋА У ФИЗИЦИ ЧВРСТОГ СТАЊА И НОВИХ МАТЕРИЈАЛА

30 година Центра за физику чврстог стања и нове материјале Института за физику у Београду

ADVANCES IN SOLID STATE PHYSICS AND NEW MATERIALS

30 years of the Center for Solid State Physics and New Materials at the Institute of Physics Belgrade

19 - 23 May 2025
Belgrade, Serbia

Advances in Solid State Physics and New Materials - May 19–23

Time	Session A – Main Hall	May 20	Session B – Hall 1	Time
12:20–14:15		**Lunch Break**		**12:20–14:15**
Chair	**Marko Kralj**		**Jelena Pešić**	**Chair**
14:15–14:45	**Matthias Opel** (Germany) *"Magnon Spin Transport in Antiferromagnetic Insulators"*		**Radmila Panajotovic** (Serbia) *"Graphene-based Composite Thin Films with Self Assembling Biomolecules as Active Elements in Sensors"*	**14:15–14:45**
			Ivana Milošević (Serbia) *"Tuning the Properties of Liquid-Phase Exfoliated Langmuir-Blodgett Assembled Graphene Films via Chemical Doping"*	**14:45–15:05**
14:45–15:15	**Bojana Višić** (Serbia), *"Inorganic Nanotubes and Nanowires in Polymer Matrices: Potential for Sensing Applications"*		**Nataša Tomić** (Serbia) *"The Morphological And Structural Changes Of V_2O_5 Cathode Film Upon Electrochemical Cycling"*	**15:05–15:25**
15:15–15:45	**Branislav Nikolić** (USA) *"How ultrafast demagnetization drives spin and charge currents and the ensuing THz radiation"*		**Bojan Stojadinović** (Serbia) *"Role of terbium dopant and oxygen vacancies on conductive properties of $BiFeO_3$ thin films"*	**15:25–15:45**
15:45–16:05		**Coffee Break**		**15:45–16:05**
Chair	**Andrijana Šolajić**		**Igor Pašti**	**Chair**
16:05–16:35	**Mazhar Ali** (Netherlands) *"The Josephson Diode Effect with 2D Kagome Mott Insulators Nb_3X_8 (X = Cl, Br, I)" (online)*		**Marko Spasenović** (Serbia) *"Laser-Induced Graphene on Polymer Substrates for Monitoring Physiological Parameters"*	**16:05–16:35**
16:35–17:05	**Nicola Poccia** (Italy and Germany) *"Exploring quantum complexity in artificially twisted superconducting heterostructures" (online)*		**Enrico Di Lucente** (Switzerland) *"Phonon Boltzmann transport equation beyond the semiclassical regime"*	**16:35–17:05**

30-minute talks: 25 min presentation + 5 min Q&A | 20-minute talks: 15 min presentation + 5 min Q&A

Advances in Solid State Physics and New Materials - May 19–23

Time	Session A – Main Hall	May 21	Session B – Hall 1	Time
Chair	**Bojana Višić**		**Vladimir Dobrosavljević**	**Chair**
09:00–09:30	**Reshef Tenne** (Israel) "Inorganic nanotubes: From WS_2 to 'misfit' compounds"		**Gheorghe-Lucian Pascut** (Romania) *"Crystal Structure Predictions in Correlated Materials at Finite Temperatures"*	**09:00–09:30**
09:30–10:00	**Christoph Gadermair** (Italy) *"Modulation of Ultrafast Quasiparticle Dynamics in Two-dimensional Semiconductors"*		**Louissa Reissig** (Germany) *"The use of differential photocurrent in the characterization of novel optically active materials"*	**09:30–10:00**
10:00–10:30	**Zdenek Sofer** (Czech Republic) *"Novel 2D magnets and dielectrics"*		**Ivna Kavre Piltaver** (Croatia) *"Ultra-thin ZnO coatings on microstructured γ-Fe_2O_3 thin films prepared by atomic layer deposition for enhanced photocatalysis"*	**10:00–10:30**
10:30–10:50	**Coffee Break**			**10:30–10:50**
Chair	**Zdenek Sofer**		**Gheorghe-Lucian Pascut**	**Chair**
10:50–11:20	**Andrew Goodwin**, (UK) *"Truchet-tile architectures in materials design"*		**John Evans** (UK) *"Condensed Matter Physics for Hydrogen Production – the Reversible Memory Reactor"*	**10:50–11:20**
			Sanja Djurdjić Mijin (Spain and Serbia) *"Affordable and Precise Method for Creating Single-Photon Emitters in GaSe"*	**11:20–11:40**
11:20–11:50	**Lena Yadgarov** (Israel) *"Optimized Growth and Manipulation of Light-Matter Interaction in Stabilized Halide Perovskite Nanowire Array"*		**Sonja Predin** (Serbia) *"Pairing Instabilities and Critical States in Graphene Quantum Hall Systems" (Contributed talk)*	**11:40-12:00**
11:50–12:20	**Marija Drndić** (USA) *"Controlling Magnetic Textures in Iron Germanium Telluride (Fe_3GeTe_2) Characterized by Low Temperature Lorentz TEM"*		**Mario Novak** (Croatia) *"Unconventional temperature evolution of quantum oscillations in Sn-doped $BiSbTe_2S$ topological insulator" (Contributed talk)*	**12:00–12:20**

30-minute talks: 25 min presentation + 5 min Q&A | 20-minute talks: 15 min presentation + 5 min Q&A

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2. CONTRIBUTED TALKS

3. POSTER SESSION

Anisotropic Strain Response in FeSe

A. Milosavljević[a], J. Blagojević[a], T. Belojica[a], B. Višić[a], S. Djurdjić Mijin[a, b], M. Opačić[a], A. Šolajić[a], J. Pešić[a], A. Wang[c], C. Petrovic[c, d, e], R. Hackl[f, g] and N. Lazarević[a]

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Abstract.

Unconventional superconductivity often arises in materials with complex interactions, where competing ordered states such as magnetism, nematicity, and superconductivity, interact and sometimes overlap, making their nature elusive. Among iron-based superconductors, the isostructural FeSe and FeS may appear similar but they differ significantly in their physical properties. While FeSe undergoes a nematic and structural phase transition, FeS shows no structural transition even at the lowest temperatures, with its critical temperature (T_c) halved compared to FeSe. Interestingly, substituting selenium with sulfur in FeSe suppresses the nematic transition temperature to zero near a quantum critical point (QCP), which coincides with a significant drop in T_c. It has been suggested that while spin-fluctuations dominate below the QCP and significantly affect electron-phonon interactions, nematic fluctuations become prominent above the QCP. Here, we present a detailed Raman scattering study of FeSe under uniaxial strain applied along two high-symmetry crystallographic directions, ⟨110⟩ and ⟨100⟩, to investigate how symmetry-breaking perturbations affect its lattice dynamics. Our results reveal a pronounced anisotropy in the phonon response to strain: orthorhombic distortion along the ⟨110⟩ direction leads to a moderate narrowing of the temperature window over which phonon anomalies occur, while strain along ⟨100⟩ which introduces rhombohedral distortion, results in a significant broadening of the temperature range over which phonon mode splitting, and energy and linewidth anomalies are observed. We find that the fully symmetric A_{1g} phonon mode is particularly sensitive to symmetry-breaking perturbations, while the B_{1g} phonon mode remains largely unaffected.

*This research was supported by the Science Fund of the Republic of Serbia, 10925, Dynamics of CDW transition in strained quasi-1D systems - DYNAMIQS

Inorganic Nanotubes and Nanowires in Polymer Matrices: Potential for Sensing Applications

Andraž Rešetič[a], Luka Pirker[a, b], Anja Pogačnik Krajnc[a], Jasmina Lazarević[c], Maja Remškar[a], Bojana Višić[a,c]

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Abstract. The increasing need to move away from intrinsically rigid to flexible and wearable sensors requires finding a sensing material that responds well to mechanical deformations through a change in the electrical signal. The best way to achieve flexibility is to combine nanomaterials with polymer matrices. While the carbon nanotubes have a good potential as fillers, they have a few setbacks as well. As they do not disperse well in most organic solvents, resulting in poor homogeneity when mixed with a polymer matrix, they have to be functionalized in order to enhance the interaction with the solvent. On the other hand, various inorganic TMDC NTs promise a wide spectrum of physical effects beyond the physics of CNTs [1]. They have a high aspect ratio, high specific surface area and excellent mechanical and vibrational/acoustic properties, making them suitable as composite nanofillers as only a small amount can be used for forming a conductive path [2]. Furthermore, MS_2 NTs disperse well in all commonly used solvents, simplifying the composite preparation [3]. Another family of nanomaterials that shows a great promise as a filler, is the family of metal oxides. Their substoichiometric MO_{3-x} ($0 \leq x \leq 1$) phases grow in different shapes, such as nanowires, flakes, needles and sheets. The optical, electrical and structural properties depend strongly on the degree of the reduction [4].
Overall, these materials possess a variety of properties desirable for fabrication of sensors for human health monitoring. Despite the advancements, thorough safety assessments are needed before large-scale production and clinical deployment of nanomaterials for health sensing applications [5].

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2. Evarestov, R. et al., *Materials Research Express* ***5*** 115028 (2018)
3. Yadgarov, L. et al., Physical Chemistry Chemical Physics **20** 20812-20 (2018)
4. Višić, B., et al., Nanotechnology **33** 275705 (2022)
5. Lazarević, J. and Višić, B., under review

Raman Signatures Of Instabilities In $InSiTe_3$

T. Belojica[a], A. Milosavljević[a], S. Djurdjić Mijin[ba], J. Blagojević[a], A. Šolajić[a], J. Pešić[a], B. Višić[a], V. Damljanović[a], M. O. Ogunbunmi[c], S. Bobev[cd], Yu Liu[d], C. Petrovic[def], Z. Popović[g], R. Hackl[hi], and N. Lazarević[a]

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Abstract. Layered van der Waals materials have gained considerable interest for their unique physical properties, yet $InSiTe_3$ remains largely unexplored due to uncertainties surrounding its crystal structure. In this work, we present a comprehensive experimental and theoretical investigation of $InSiTe_3$, confirming a rhombohedral structure with $P\bar{3}$ space group symmetry via single-crystal X-ray diffraction. Polarization-resolved Raman scattering reveals nine out of ten Raman-active modes expected for this symmetry, further validating the structural assignment. Beyond conventional phonon behavior, we identify strong anharmonicity and the emergence of a self-organized coherent phonon state associated with a high-energy A_g mode near 500 cm^{-1}. Analysis of phonon-phonon coupling parameters indicates that A_g modes exhibit coupling strengths up to eight times greater than E_g modes. Temperature-dependent Raman measurements from 80 to 300 K reveal notable changes in A_g mode intensities around 200 K and the appearance of broad spectral features in the phonon gap region, attributed to overtone excitations. Our findings point to an intrinsic lattice instability in $InSiTe_3$, driven by strong anharmonic interactions. However, further studies are required to fully uncover the microscopic origin of these instabilities and their implications for the material's physical properties.

*This research was supported by the Science Fund of the Republic of Serbia, 10925, Dynamics of CDW transition in strained quasi-1D systems – DYNAMIQS

O_2 plasma modification of MoS_2 nanotubes for photocatalytic degradation of organic water pollutants

Anja Pogačnik Krajnc[a, b], Gregor Filipič[a], Vitjan Lin Zupan[b], Srečo D Škapin[a], Jovan Blagojević[c], Bojana Višić[a,c], Nenad Lazarević[c] and Maja Remškar[a]

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Abstract. The dye contaminated wastewater is adversely affecting human health and the environment around the world. The issue can be resolved by photocatalytic degradation, which converts dyes into non-toxic compounds without producing secondary waste. In this work, we investigate the ability of MoS_2 nanotubes (NT) to decompose the rhodamine B (RhB) dye. MoS_2 NT synthesized by chemical vapor transport have high specific surface area, numerous S vacancies and favourable energy gap for visible light decomposition [1-2]. However, the initial degradation tests yielded poor results. The inert surface of MoS_2 NT was etched with O_2/Ar plasma which increased a number of catalytically active sites and introduced Mo-O bonds. UV-Vis and Raman spectroscopy, imaging techniques such as SEM, TEM and STM as well as the KPFM work function measurements verified the alteration. Simple MoO_3-MoS_2 system is formed, in which the reducibility of electron in the conductive band of MoS_2 increases, while the oxidability of hole in the valance band of MoO_3 also increases (Figure 1). We report over 90 % degradation efficiency, with the majority decomposing in the first 15 min of LED irradiation.

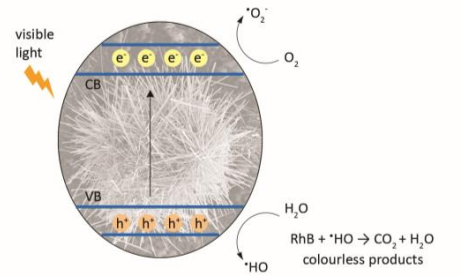

FIGURE 1. Shematic representation of photodegradation of RhB on MoS_2-MoO_3 NT.

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Advances in Solid State Physics and New Materials (5; 2025; Beograd)

Book of abstracts / Advances in Solid State Physics and New Materials - 30 years of the Center for Solid State Physics and New Materials at the Institute of Physics Belgrade, 19 – 23 May 2025, Belgrade, Serbia; editors Bojana Višić and Andrijana Šolajić. – Belgrade: Center for Solid State Physics and New Materials, Institute of Physics, 2025 (Belgrade: SASA).

ISBN 978-86-82441-65-6

1. Advances in Solid State Physics and New Materials

a) Физика чврстог стања - Апстракти

Date: January 17, 2025

To:
Dr. Bojana Višić,
Institute of Physics Belgrade,
Serbia
E-Mail: bojana.visic@ipb.ac.rs,
Registration ID & status: 20686, Invited Speaker/Session Chairs

Dear Dr. Bojana Višić,

We are writing in reference to the notification of abstract submission for 10th International Conference on Superconductivity and Magnetism - "ICSM2025" and the 3rd International Conference on Quantum Materials and Technologies - "ICQMT2025", to be held jointly from April 26 to May 3, 2025 in Ölüdeniz-Fethiye/Muğla, Turkiye. Details are given as follows:

Abstract Title: **Van der Waals nanotubes – optical properties and light-matter interactions**
Abstract ID No : 40025
Submitted Preference: Oral
Accepted Presentation: Invited Oral
Assigned Session: Quantum Functional Materials and Their Emerging Technologies
Tentative Date of Presentation: Wednesday, April 30th, 2025
Registration Status: Invited Speaker/Session Chairs

The above abstract has been reviewed very carefully by the International Program Committee (IPC) and it is our pleasure to inform you its acceptance with the details as outlined above. This is to serve a formal notification of the submitted abstract and we believe that your presentation will enhance the scientific program and add a new dimension to the debate of the session topics of cutting-edge research in physics, chemistry, materials science & engineering multi-disciplines.

We look forward to welcoming you at ICSM-ICQMT-2025 in Ölüdeniz-Fethiye/Muğla, Turkey.

Yours Sincerely,

Prof. Dr. Ali GENCER
Conference Director

Please note that Program Committee reserves the right to shift the presentation date depending on the actual evolution of the scientific program with confirmed registered participants.

ICSM 2025 ICQMT 2025

10th ICSM 2025 | 3rd ICQMT 2025

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Welcome Message from the Conference Director

Dear Esteemed Colleagues,

It is with great pleasure that I extend a heartfelt welcome to all attendees of the ICSM-ICQMT2025 conference. On behalf of the organizing committees, we are honored by the presence of our esteemed international colleagues, including plenary and keynote speakers and contributors from around the globe. Your participation enriches our conference immeasurably. We express our deepest gratitude to our sponsors and exhibitors, whose support plays a pivotal role in the success of this event. It is heartening to witness the conference's return to robust participation levels, a testament to our collective resilience in the face of recent global challenges. We condemn the loss of innocent people in the existing wars and stand in solidarity with those affected by the conflicts and advocate for the power of scientific collaboration to foster a sustainable global peace.

The dedication of our co-organizers has yielded an exceptional program of scientific discourse and social engagement, addressing the forefront of challenges within our field. We extend our sincere thanks for their tireless efforts. We are also grateful to Springer Nature Publishing, and specifically to Prof. Dr. Jason Robinson and Dr. Davide Migliorini, along with our guest editors Prof. Serap Safran and Prof. Mehmet Ali Aksan, for their commitment to publishing the conference's proceedings in the Journal of Superconductivity and Novel Magnetism.

For any inquiries during the conference, please reach out to us or directly to Prof. Dr. Serap Safran, Prof. Haluk Koralay. The full list of committee members is available on our website. This year, we are delighted to incorporate Spring School and Educational Courses from April 23th to 26th, offering young scholars the opportunity to further their expertise under the guidance of leading figures in Superconductivity, Magnetism, and Quantum Materials and their emerging technologies. Special thanks are also due to Mustafa Akdoğan for their invaluable contributions to these educational endeavors.

Once again, we thank you for your participation and wish you a fulfilling conference experience and a delightful stay in Oludeniz-Fethiye, a gem within the beautiful landscape of Turkiye.

Yours Sincerely,

Prof. Dr. Ali GENCER,
The Joint Conference Director,
On Behalf of All Committees of ICSM-ICQMT-2024

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Rotating Machines and Systems	Taketsune Nakamura

29.04.2025 TUESDAY / Hall: Hall 8				
08:30-09:15	PLN-1-Roland Wiesendanger			
09:15-09:30	COFFEE BREAK			
Hall 8	**From disorder to metastability and hidden phases in 2D quantum materials**		**Emil Bozin**	
			Mazhar Ali	
	I/C	Presentation Title	Abs. ID	Presenter and Affiliation
09:30-10:00	I	Ultrafast Structural Reconfiguration, Induced by Metastable Electronic Reordering in the Transition Metal Dichalcogenide	40035	Igor Vaskivskyi Jozef Stefan Institute Slovenia
10:00-10:30	I	Short-Range Correlations With Long-Range Implications: The Influence of Local Magnetic Structure in Quantum Materials	40047	Benjamin Frandsen Brigham Young University USA
10:30-11:00	I	Spin, charge, and lattice excitations in Fe(Se:S)	40029	Nenad Lazarevic Institute of Physics Belgrade Serbia
11:00-11:10	COFFEE BREAK			
Hall 8	**From disorder to metastability and hidden phases in 2D quantum materials**		**Jelena Pesic**	
			Igor Vaskivskiy	
	I/C	Presentation Title	Abs. ID	Presenter and Affiliation
11:15-11:45	I	The Josephson Diode Effect with 2D Kagome Mott Insulators Nb3X8 (X = Cl, Br, I)	40070	Mazhar Ali Delft University of Technology, Kavli Institute of Nanoscience Delft Netherlands
11:45-12:15	I	Role of Disorder in Wigner-Mott Transitions	30293	Vladimir Dobrosavljevic Florida State University and NHMFL USA
12:15-12:45	I	Role of impurities in hidden states of superconducting iron chalcogenides	40054	Qiang Li Stony Brook University USA
12:45-14:00	LUNCH BREAK			

14:00-14:40	HPLN-1-Hyunsoo Yang			
14:00-14:40	HPLN-2-Sastry Pamidi			
14:40-14:45	SHORT BREAK			
Hall 8	**From disorder to metastability and hidden phases in 2D quantum materials**		**Nenad Lazarevic**	
			Dragana Popovic	
	I/C	Presentation Title	Abs. ID	Presenter and Affiliation
14:45-15:15	I	Site and orbital selective states from predictive power of the embedded dynamical mean field theory (eDMFT) in correlated materials	30456	Gheorghe Pascut Stefan Cel Mare University (USV) of Suceava Romania
15:15-15:45	I	Hidden Local Symmetry Breaking as a Route to Ultralow Thermal Conductivity	40030	Emil Bozin Institute of Physics Belgrade Serbia
15:45-16:15	I	Hierarchical Charge Density Waves in Kagome Metals	40049	Sun-Woo Kim University of Cambridge United Kingdom
16:15-16:30	COFFEE BREAK			
Hall 8	**From disorder to metastability and hidden phases in 2D quantum materials**		**Bojana Visic**	
			Vladimir Dobrosavljevic	
	I/C	Presentation Title	Abs. ID	Presenter and Affiliation
16:30-17:00	I	Nonequilibrium Transport and Thermalization in Two-Dimensional Bad Conductors	40051	Dragana Popovic National High Magnetic Field Laboratory, Florida State University USA
17:00-17:20	C	Avoided metallicity in a hole-doped Mott insulator on a triangular lattice	30164	Chi Ming Yim Tsung Dao Lee Institute, Shanghai Jiao Tong University China
18:00-19:00	POSTER SESSION 2			
19:00-21:00	DINNER			
21:00-22:30	Panel Discussion			

ICSM 2025 ICQMT 2025

10th INTERNATIONAL CONFERENCE on SUPERCONDUCTIVITY and MAGNETISM

&

3rd INTERNATIONAL CONFERENCE on QUANTUM MATERIALS and TECHNOLOGIES

26th April - 03rd May 2025

Liberty Hotels Lykia / Ölüdeniz-Fethiye/TÜRKİYE

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Abstract ID: 40025

VAN DER WAALS NANOTUBES – OPTICAL PROPERTIES AND LIGHT-MATTER INTERACTIONS

B. Višić,1,2

[1]*Institute of Physics Belgrade, 11080, Belgrade, SERBIA*
[2]*Jozef Stefan Institute, 1000, Ljubljana, SLOVENIA*

Semiconducting transition metal dichalcogenides (TMDCs) can be synthesized in a wide range of structures and geometries, including closed cage nanostructures, such as nanotubes (NTs) or fullerene-like nanoparticles.

Individual multiwalled WS_2 and MoS_2 NTs are having a resurgence of interest, as interesting optical and electrical properties have been reported in recent years [1]. They are especially intriguing due to their stability, enhanced light-matter interactions, and ability to sustain exciton-polaritons in ambient conditions, i.e., strong coupling of excitonic resonances to the optical cavity. Namely, these nanotubes act as quasi 1-D polaritonic nanosystems and sustain both excitonic features and cavity modes in the visible-near infrared range. This ability to confine light to subwavelength dimensions under ambient conditions is induced by the high refractive index of WS_2.

On the other hand, NTs have been vastly neglected as possible alloyed TMDC. Most of the research so far, both theoretically and experimentally, focused on flat, two-dimensional structures, with only a few reports that focused on non-carbon-based alloyed NTs [2]. Additionally, TMDCs have opened a new frontier in the area of field emission devices, due to their layered structure and the presence of thin and sharp edges with high aspect ratios which enhance the local electric field. We grew highly crystalline multiwalled $Mo_{1-x}W_xS_2$ NTs via the chemical vapour transport method, with the molybdenum and tungsten atoms randomly distributed within the crystal structure [2]. A detailed analysis of the ED patterns from an eight-layer nanotube revealed that they grow in the 2H structure, with each shell consisting of one bilayer. The work function of the NTs is comparable than that of pure MoS_2 and lower of pure WS_2 NTs, making them ideal candidates for field emission applications.

References

[1] B. Višić, *et al.*, Phys. Rev. Res. **1**, 3 (2019).
[2] M.B Sreedhara, *et al.*, J Am Chem Soc **144,** 232 (2022).
[3] L. Pirker, *et al.*, Adv. Funct. Mater **33**, 15 (2023).

Subject: 🗓️ 14-18 Oct. Graphene Week 2024 - Speaker Invitation
From: Graphene Flagship Events <event@graphene-flagship.eu>
Date: 03/10/2024, 15:18
To: "bojanav@ipb.ac.rs" <bojanav@ipb.ac.rs>
CC: Aristeidis Bakandritsos - UP <a.bakandritsos@upol.cz>, Zdeněk Sofer <Zdenek.Sofer@seznam.cz>, Ioanna Zergioti <zergioti@mail.ntua.gr>

Dear Bojana,

On behalf of the **Graphene Week** International Scientific Programme Committee, it is our pleasure to invite you as **Speaker** to Graphene Week 2024, which will take place 14-18 October 2024, in Prague, Czech Republic.

Graphene Week stands at the forefront of cutting-edge science and innovation. As Europe's leading event on 2D Materials, supported by the European Commission, it unites over 500 international experts to discuss key topics concerning to graphene and 2DM.

For more details, please visit the Graphene Flagship website.

Your participation is very important for the success of this meeting. As a Graphene Week 2024 keynote speaker, **you will receive VIP benefits including:**

- Full waived fee registration. Please register here (full waived fee)
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- Exclusive networking opportunities

We kindly ask you to confirm your presence by forwarding an email to event@graphene-flagship.eu no later than **07 October 2024**.

Please provide us with the tentative title of your presentation at your earliest convenience.

We will be happy to provide you further information if you have any queries.

Looking forward to hearing from you.

Best regards,

Graphene Week 2024 Chairs

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Ioanna Zergioti

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Whether you are a student or early career researcher, academic professional or industry representative, Graphene Week 2024 will offer an outstanding programme with the main goal of exploring all trends related to graphene and 2D materials.

Don't miss the **19th edition of the longest standing and most comprehensive** 2D materials conference!

For more detailed information download our app!

Check the instructions here

Monday 14 October | Tuesday 15 October | Wednesday 16 October | Thursday 17 October | Friday 18 October

08:00
08:00 - 09:00

Registration Desk opens

Research

Plenary Session 4

09:00
09:00 - 10:45

Speakers:
09:00-09:40: Arben Merkoçi, ICN2, Spain
09:40-10:10: Doron Naveh, Bar-Ilan University, Israel
10:10-10:40: Bojana Višić, Institute of Physics of Belgrade, Serbia
Closing with a talk on Innovation Actions

GRAPHENE FLAGSHIP

11:15
11:15 - 13:15

Parallel Session: 2D Materials for Tomorrow

In collaboration with 2D-ENGINE
See full programme in the app

Research

11:15
11:15 - 13:15

2D Materials Photonics Applications Workshop

Organized by 2D-NEURALVISION and Gatepost projects, the "2D Materials for Photonic Applications" workshop presents expert-led sessions on the latest uses of 2D materials in photonics, aiming to enhance understanding and inspire advancements in the field.
Read more here

Innovation

11:15
11:15 - 12:15

Innovation Forum: Standardisation Training Session

Innovation Forum programme here

13:15
13:15 - 14:15

Lunch Break

Innovation

14:15
14:15 - 15:00

Czech Innovation Landscape Around 2D Materials

Workshop organised by AMIRES
More info please!

GRAPHENE FLAGSHIP

See full programme in the app

Research

15:00
15:00 - 18:15

Parallel Session: Production and Safe by Design & Other

In collaboration with SAFARI
See full programme in the app

Innovation

15:00
15:00 - 18:30

A Retrospective Analysis and the Future of 2D Materials in Desalination & Water Treatment

A Retrospective Analysis and the Future of 2D Materials in Desalination & Water Treatment
Hosted by the Research & Innovation Center for Graphene, we present the 3rd International EU-UAE Workshop.
International Water Workshop programme

19:00
19:00 - 22:00

Dinner Cruise on the Grand Bohemia

Three hour dinner cruise on the Vtlava River in Prague. Booking mandatory. Boarding starts at 19 on Pier 4.

Something for Everyone

Industry

Graphene Week 2024 is a great venue for discussing the commercialisation of graphene, industrial applications and challenges in upscaling processes. Several dedicated sessions will focus specifically on these and other topics related to innovation and industrialisation.

Highlights for industry

Academia

Graphene Week 2024 will feature over 25 keynote and invited speakers in plenary, around 100 oral contributions in parallel sessions, and approximately 300 poster presentations.

By attending Graphene Week 2024, you will have the rare opportunity to connect with relevant peers on a large and meaningful scale. New perspectives, new collaborations, and new technologies – they all begin here.

Highlights for researchers

CONFERENCE PROGRAMME

16th - 19th September

E-MRS 2024 Fall Meeting

Conference and exhibition held at the Main Campus of the
Warsaw University of Technology
Plac Politechniki 1 - Warsaw, Poland

European Materials Research Society

Warsaw University of Technology

Polish Materials Science Society

Institute of Physics
Polish Academy of Sciences

E-MRS 2024 Fall Meeting

16th - 19th September - Warsaw University of Technology - Poland

Symposium J

Sessions: Room 219 | Main Building
Poster Session: Aula | Physics Building

ELECTRONICS, PHOTONICS AND SPINTRONICS

SMART MATERIALS FOR ADVANCING ELECTRONICS & PHOTONICS

Symposium organizers:	Amrita **JAIN**	– Division of Advanced Composite Materials (PZMK)
	Rosaria **PUGLISI**	– CNR - IMM
	Vilko **MANDIC**	– University of Zagreb
	Yogendra Kumar **MISHRA (Main Organizer)**	– Mads Clausen Institute, University of Southern Denmark

Monday, 16 September 2024

NANOELECTRONICS J01

8:30	Molecular Building Blocks for Artificial Intelligence **Sreetosh GOSWAMI**	606
9:00	Local electrical properties of grain and phase boundaries **Hanna BISHARA**	1524
9:15	Wearable Electronics for Healthcare Applications: Recent Advancements and Future **Ajay BENIWAL**	1047
9:30	Resistive switching mechanism of CuO thin films grown hydrothermally **Monika OZGA**	1471
9:45	In situ TEM study of breakdown and thermal annealing effects on silver nanowire for memristive applications **Katarzyna BEJTKA**	1289
10:00	Bimodal Memristor **Seok Daniel NAMGUNG**	143
10:15	Tunable memristive performance in PVDF/LSMO junctions **Tongxin CHEN**	883
10:30	Coffee break	

PHOTOCATALYSIS J02

11:00	Strain-Driven Photocatalytic Processes in Hybrid Structures **Emerson COY**	1566
11:45	Anisotropic transport and Photothermoelectrics of a Ni-TiO2 hybrid material. **Harikrishnan GOPALAKRISHNAN**	1357

12:00 Atomic-scale investigation of Covalent Carbon Nitride materials on Ag(111) 1271
Nesrine SHAIEK

12:30 Lunch

ENERGY MATERIALS J03

14:00 Uncovering the Potential of Candle Soot Nanocarbon for Energy Storage Applications 1387
Chandra Shekhar SHARMA

14:30 A fresh perspective to synthesizing and designing carbon/sulfur composite cathodes using supercritical CO2 technology for advanced Li-S battery cathodes 1598
Lakshmi SHIVA SHANKAR

14:45 Delafossite-Based Electrode Materials for Energy Storage Applications 1569
Tanya DAGAR

15:00 Advanced _-Phase Transition Metal Hydroxide Nanostructures and their Composites for Energy Storage Electrode Materials 1568
Rajkamal ARYA

15:15 Converting ionic liquids into films for energy storage application 1561
Amrita JAIN

15:30 Coffee break

PEROVSKITE MATERIALS J04

16:45 Structural and Optoelectronic Investigations of Low-dimensional Ruddlesden-Popper and Dion-Jacobson Metal Halide Perovskite Phases 74
Abhishek YADAV

17:00 Electron Tunnelling through a Single Perovskite Quantum Dot: Energetics in Weak and Strong Interaction Regimes 103
Abhishek MAITI

17:15 Interface Engineering using Self-Assembled Monolayers for efficient Perovskite and Organic Light-Emitting Diodes 178
Gkeka DESPOINA

17:30 Improving the Stability of Lead-Free CsSnBr3 Halide Perovskite by DDAB-Assisted Post-passivation Surface Engineering 919
Anjana YADAV

17:45 Mn2+ Doping and Postpassivation Effects on Halide Perovskite Nanocrystals 818
Charu DUBEY

POSTER SESSION JP01

17:30 Investigating the effect of gamma radiation on vanadium dioxide: A study of structural and electrical transformations 01_1003
Sonika SINGH

17:30 Resistive switching of Lanthanum Titanium Oxide for Cross-Point Array Applications with Memristive Devices 02_1010
Jeongwoo LEE

17:30 Deposition of amorphous molybdenum silicide MoSi superconducting thin films via magnetron co-sputtering 03_1056
Luize DIPANE

17:30 Electrostatic influence on the formation and stability of One-dimensional (1-D) conductive microparticle chains 04_1104
Gunjan TIWARI

17:30 Recycled Newspaper cellulose for eco-desgined energy harvesting and pressure sensor technologies 05_1136
Guilherme MENDES FERREIRA

17:30 Impact of Zr Doping on Subthreshold Conduction in Polycrystalline ZnTe with Threshold Switching 06_1142
Wansun KIM

17:30 Colloidal Assemblies of Chiral Plasmonic Nanoparticles 07_1212
Pablo MARIANI

17:30 Implementation of a reservoir computing system using volatile Au/Ti/monolayer-MoS2/Au memristors 08_1237
Asmita THOOL

17:30 CN-based molecules as a flexible toolbox for synthesis of low-dimensional carbon nitrides structures 09_1291
Nataliya KALASHNYK

17:30 Electron Trapping Group Induced Enhancement in Photoresponses of Organic Field-Effect Transistors 10_1407
Sk SHAHARUKH

17:30	Funnel devices constructed using asymmetrically strained transition metal dichalcogenides **Kyung-Hwa YOO**	11_1410
17:30	PVDF/N-rGO nanofibers based Triboelectric Nanogenerator for self-powered IoT applications **Shilpa RANA**	12_1494
17:30	Surface-Enhanced Raman Scattering of a Randomly Distributed Single-Walled Carbon Nanotube Network decorated with Gold Nanoparticles **Ali ADNAN**	14_39
14:45	Microscopic study of local thermal, electrical and structural properties of ZnMgO thin films on different substrates **Anna KAZMIERCZAK-BALATA**	200
17:30	Viologen-based smart material for water detoxification **Marcin KULINSKI**	16_612
17:30	Compositional and Structural Influences on the Plasmonic Properties of Mo-based Janus Nano-Flakes **Marwan ALAM**	17_617
17:30	Soft and conductive polyacrylamide hydrogel-based flexible wearable sensors for electrocardiogram (ECG) monitoring **Saurabh SONI**	18_618
17:30	Photoresponse properties of green-assisted Fe3O4 nanoparticles supported activated carbon. **David IDISI**	19_69
17:30	Optimizing growth and topotactic transitions in vanadium oxide thin films for microbolometer application **Ujjwal CHITNIS**	20_698
17:30	Distinguishable Optical Signature in Bilayer AA and AB Stacked ReS2: A Comprehensive Investigation **Prahalad Kanti BARMAN**	21_705
17:30	Energy and exciton transfer in heterostructures with mixed dimensionality **Anna WROBLEWSKA**	22_708
17:30	Magnetic field effect on resonant properties of surface plasmon-polariton photodetectors **Sergii MAMYKIN**	23_727

17:30	Broadband absorption and omnidirectional anti-reflection in Polysilicon thin films decorated with light trapping arrays for solar applications. **Nipun VASHISTHA**	24_874
17:30	Innovative Gold-Decorated Domed Pillars for Enhanced Infrared Detection of Allylamine **Alejandro FERNÁNDEZ**	25_888
17:30	Energy transfer and exciton effects in CNT thin film-WSe2 heterostructures investigated by resonance Raman spectroscopy. **Anna WROBLEWSKA**	26_970
17:30	Investigation of phase transitions in amorphous vanadium oxide thin films **Rodica PLUGARU**	27_971
17:30	Studies on Interrelationship between Annealing Duration of ZnO Films and Dark Current of Near Infrared Organic Photodetectors **Ji Yeon SON**	28_981
17:30	Electrical strength of composite varistor coatings containing carbon nano dots **Krzysztof KOGUT**	1617

Tuesday, 17 September 2024

ADVANCED COMPOSITES J05

8:30	Advanced Nanocomposites for Electromagnetic Interference Shielding and Microwave Absorption **Raghvendra Singh YADAV**	737
9:00	Reprocessable, Self-Adhering High-Performance Carbon Fiber Reinforced Vitrimer Composites with Reversible Fatigue Resistance **Harsh SHARMA**	1567
9:15	Significance of carbon nanotube network configurationg on reinforcing and conductive performance in polymer-based nanocomposites **Alen OSELI**	1517
9:30	3D Printing of electrically conductive liquid composites **Niclas HAUTZ**	1206
9:45	Multi-functionality of flexible graphene foam/single wall carbon nanotube/polydimethylsiloxane composites **Shuting GUO**	654

10:00 3D printing of electroactive shape memory nanocomposites for liquid sensors 332
Xue WAN

10:15 Ultrasensitive Breast Cancer Diagnosis via Aptamer-Enabled Electroanalytical Detection of HER-2 with ZnO Tetrapod-K4PTC Nanocomposite 459
Reema RAWAT

10:30 Coffee break

HEALTHCARE MATERIALS J06

11:00 Microelectronic morphogenesis: From modular micro-origami robots to microelectronic life 1562
Oliver G. SCHMIDT

11:30 Atomic Structure Studies of MOCVD Graphene 1483
Rajveer Singh RAJURA

11:45 Piezoelectric peptide nanotube substrate sensors activated through sound wave energy. 1203
Allan J. FINLAY

12:00 Soft and conductive polyacrylamide hydrogel-based flexible wearable sensors for electrocardiogram (ECG) monitoring 756
Saurabh SONI

12:30 Lunch

SMART NANOSTRUCTURING J07

14:00 Laser-Processed Anodic Semitransparent Oxide Nanotubes Formed From a Ti-Au Co-Sputtered Alloy 1373
Katarzyna SIUZDAK

14:45 Automated dry synthesis and deposition of nanomaterials 171
Vincent MAZZOLA

15:00 Spin Selective Charge Transfer-SERS based Label-Free Enantioselective Discrimination of Chiral Molecules on Ag Nanoparticles Decorated Ni Nanorods Array 397
Lakshay BHARDWAJ

15:15 Tetrapods based Smart Materials for Advanced Technologies 451
Yogendra Kumar MISHRA

15:30 Coffee break

NANOSENSORS J08

16:00 Smart Nanomaterials for Chemical Sensors – Enabler for Consumer Electronic Applications 1607
Anton KÖCK

16:45 Strong Circularly Polarized Light Active Chiral 2D-Hybrid Transition Metal Perovskites 741
Anuja DATTA

17:15 Various techniques for Accurate Measurement of Noise current and Specific Detectivity for PbS Infrared Photodetectors 1115
Bhupesh BHARDWAJ

17:30 Reconfigurable Optoelectronic Logic Gates based on Bipolar Photo-responsive Dual-heterojunction Photodetectors 250
Taehyun PARK

17:45 Interface characterization of pure boron on silicon/germanium for broadband photodiodes 1207
Vinayak Vishwanath HASSAN

18:00 Development of fluorescent materials for the detection of phthalate vapors 197
Pablo LABRA-VÁZQUEZ

Wednesday, 18 September 2024

9:00 **PLENARY SESSION**

12:30 Lunch

PLASMONICS J09

13:00 Biowaste-Derived Gold Nanoparticles Coated Reduced Graphene Oxide Nanoplatforms: An Electrochemical Immunosensor for The Detection of Dengue NS1 1409
Dr. Arpita Pandey TIWARI

13:30 Chiral Plasmonic Superlattices Based for Biosensing 297
Tsz Him CHOW

13:45 Plasmonic resonances in cylindrical and tapered silicon nanowires 489
Rizwan RAFIQUE

14:00 Controlling the helicity of light by electrical magnetization switching 687
Pambiang Abel DAINONE

14:15 Near-field optical microscopy for unravelling light trapping mechanism in light funnel arrays decorated with deep subwavelength features 1499
Ankit KUMAR

14:30 Silicon-based diffractive optics for structured light in nonparaxial terahertz imaging systems 847
Sergej ORLOV

14:45 Colloidal Assemblies of Chiral Plasmonic Nanoparticles 1105
Pablo MARIANI

15:00 Design and fabrication of microcavities exhibiting localised surface plasmons on stretchable transparent substrates 849
Miguel MANSO SILVÁN

15:30 Coffee break

PHOTONICS J10

16:00 Boosting SWIR photosensing of group IV-based nanocrystals by alloying and embedding matrix-induced effects 1584
Ana-Maria LEPADATU

16:30 On-chip Strain Tuning Module for Photonic Link of Diamond Spin Qubits 671
Tetsuro ISHIGURO

16:45 Bottom-up evolution of nonstoichiometric metal/metal oxide systems 1565
Vilko MANDIĆ

17:00 Tunable ESIPT molecules applied to novel temperature responsive systems and efficient downconversion thin films 839
Guillermo MARTÍNEZ-DENEGRI

17:15 Vapor Phase Polymerization of Thieno[3,4-b] thiophene-Tosylate and its Application for Dynamic Structural Coloration 446
Mohammad Shaad ANSARI

17:30 Wavelength-dependent Multi-state Optoelectronic Logic-in-memory Operation based on Absorption Variation in Organic Semiconductors 139
Taehyun PARK

18:00 **YOUNG RESEARCHER AWARDS CEREMONY**

18:30 **SOCIAL EVENT**

Thursday, 19 September 2024

ACTIVE MATERIALS J11

8:00 Surface charge density op3misa3on in nanostructured thin films synthesised by oblique angle deposi3on as a high electron affinity material for triboelectric nanogenerators 1564
Michael MCKINLAY

8:30 AI-driven Self-charging TENG Sensor Insole Prototype for Fast Screening of Flat-Foot 1057
Moldir ISSABEK

8:45 Charge-to-spin conversion by topological surface states of amorphous Gd-alloyed BixSe1-x 829
Yuan LU

9:00 Growth of BaTaO_N Crystals by an NH_-Assisted BaCl_ Flux Method 190
Ginji HARADA

9:15 Synthesis and comparative analysis of VO2 thin films: thermochromic properties and air stability investigations 773
Jeremie GONCALVES

9:30 Berry Curvature Dipole Induced Giant Mid-infrared Second-harmonic Generation in 2D Weyl Semiconductor 745
Qundong FU

9:45 Synthesis and Characterization of Boron Nitride-doped Graphene 1004
Sergi CAMPOS JARA

10:00 Understanding and control of the formation of metallic nanoscale silicide contacts on vertical nanostructured channel for advanced 3D nanoelectronics devices: from Si to high mobility materials 1128
Jonas MÜLLER

10:15 Magnetron-Sputtered W-V-N alloy coatings: Unveiling Self-Lubricating Potential 1570
Akula UMAMAHESWARA RAO

10:30 Crystallization Mechanism of Soluble Acene in Polymer Blends under Residual Solvent Evaporation 932
Wi Hyoung LEE

10:30 Coffee break

2D MATERIALS J12

11:00 Polymer-2D materials based Triboelectric and Hybridized Systems for enabling next generation IoT applications 1498
Bharti SINGH

11:15 Tuneable physical properties of MoS_ for optoelectronic devices induced by strain via heat treatment 1394
Emanuele SANGIORGI

11:30 Enhancing the optical properties of 1L-MoS_ through thermal treatments 1231
Antonino MADONIA

11:45 Exploring Nanostructured Graphenes Elaborated via On-Surface Reactions 892
Nataliya KALASHNYK

12:00 MoxWx-1S2 nanotubes for field emission application 45
Bojana VIŠIC

12:15 Ruddlesden-Popper Perovskite-MoS2 Hybrid Heterojunctions for Stable and Efficient Self-powered Photodetectors 81
Rashid M. ANSARI

12:30 Lunch

NANOMATERIALS J13

14:00 Josephson Transport across T-shaped and Series-Configured Double Quantum Dots System at Infinite-U Limit 1390
Bhupendra KUMAR

14:15 Transfer of supramolecular arrangements from solution to surface: towards applications in device manufacturing through self-assembly 577
Melina VAVALI

14:30 Versatile cutting-edge materials engineered to meet the demanding requirements of modern electronics 1028
Aleksandra MOTYKA

15:00 Comparison of optical and luminescence properties of as prepared and annealed ZnO nanoparticles prepared using sol-gel method 1477
Francis DEJENE

15:15 Ultra-level detection of heavy metals using SERS substates developed by direct laser writing lithography 176
Anjika KUMARI

15:30 Coffee break

FUNCTIONAL MATERIALS J14

16:00 Functional Organic Materials For Energy 1001
Maria MONTRONE

16:15 Engineered exciton diffusion length enhances device efficiency in highly efficient small molecules photovoltaics 1550
Muhammad SAJJAD

16:45 Fabrication of semiconductor thin films by laser-assisted zone casting 880
Michal WYSKIEL

17:00 Pioneering Screen-Printed RF Electronics: Transparent and Flexible Antennas and Metamaterial Absorbers 340
Sungjoon LIM

17:15 Implementation of a Physically Unclonable Functions Capable of Generating Multiple Keys Using Small Molecules-based Heterostructure 225
Raksan KO

17:30 Phase behaviour and dynamics of organic cations in Formamidinium Lead Iodide (FAPI) using machine-learned potentials 868
Sangita DUTTA

17:45 Room-Temperature Laser Induced Water Release in a Spin-Crossover Metal-Organic Framework: a Structure-Properties Investigation 935
Sara GULLACE

#00045
MoxWx-1S2 nanotubes for field emission application

J. Smart materials for advancing electronics & photonics
B. Višić [1, 2,*], L. Pirker [2, 3], R. Lawroski [4], R. Schreiner [4], M. Remškar [2].
[1]Institute of Physics - Belgrade (Serbia), [2]Jozef Stefan Institute - Ljubljana (Slovenia), [3]J. Heyrovsky Institute of Physical Chemistry - Prague (Czech Republic), [4]OTH Regensburg - Regensburg (Germany)

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Email: bojana.visic@ipb.ac.rs (B.Višić)

Abstract

Individual multiwalled WS_2 and MoS_2 nanotubes (NTs) are having a resurgence of interest, as interesting optical and electrical properties have been reported in recent years [1, 2]. On the other hand, nanotubes have been vastly neglected as possible alloyed transition metal dichalcogenides (TMDC). Most of the research so far, both theoretically and experimentally, focused on flat, two-dimensional structures, with only a few reports that focused on non-carbon-based alloyed NTs [3]. Additionally, TMDCs have opened a new frontier in the area of field emission devices, due to their layered structure and the presence of thin and sharp edges with high aspect ratios which enhance the local electric field.

In this work, we present highly crystalline multiwalled $Mo_{1-x}W_xS_2$ NTs grown with the chemical vapour transport method [4]. Energy-dispersive X-ray spectroscopy, Raman spectroscopy, and X-ray diffraction indicate that the molybdenum and tungsten atoms are randomly distributed within the crystal structure and that the material is highly crystalline. High resolution TEM and electron diffraction (ED) patterns further corroborate these findings. A detailed analysis of the ED patterns from an eight-layer nanotube revealed that they grow in the 2H structure, with each shell consisting of one bilayer. The work function of the NTs is comparable than that of pure MoS_2 and lower of pure WS_2 NTs, making them ideal candidates for field emission applications. Two devices with different geometrical setup were prepared and tested as field emitters, showing promising results for single nanotube field emission applications.

References

[1] B. Višić et al., Phys. Rev. Res. 1 3 (2019)

[2] DR Kazanov et al., Appl. Phys. Lett. 112 10 (2018)

[3] MB Sreedhara et al., J Am Chem Soc 144 232 (2022)

[4] L. Pirker et al., Adv. Funct. Mater (2022)

The 21th Symposium on Condensed Matter Physics - SFKM 2023, Belgrade - Serbia

Location: Main Lecture Hall -SASA Building
Kneza Mihaila 35/II Belgrade, Serbia

Date: 26th-30th June 2023

Day 1 – 26th June 2023

9:00 — 9:15	Conference opening	
Chair	***Zorica Konstantinović***	
9:15 — 09:45	Spin phenomena in van der Waals heterostructures	J. Fabian
09:45 — 10:15	Spin injection and spin-charge conversion processes in all-oxide heterostructures	B. Martinez
10:15 — 10:45	What is quantum spin torque: Spintronics meets nonequilibrium strongly correlated and long-range entangled quantum matter	B. Nikolić
10:45 – 11:00	Proximity Induced Spin-Orbit Coupling In Phosphorene/WSe2 and WSe2/Phosphorene/WSe2 van der Waals heterostructures	M. Milivojević
11:00 — 11:20	Coffee break	

Chair	***Zoran Popović***	
11:20 — 11:50	Transport in the emergent Bose liquid: Bad metal, strange metal, and weak insulator, all in one system	W. Ku
11:50 – 12:20	Spontaneous superconducting vortex induced by stray field of skyrmion in Chiral Magnet-Superconductor Heterostructures	X. Qiu
12:20 — 12:35	The Anisotropic Interlayer Exchange In Van Der Waals 2D Magnets	S. Stavrić
12:35 – 12:50	Charge To Spin Conversion In Graphene On 1T-TaS2 Monolayer Triggered By Charge Density Wave Proximity Effects	M. Gmitra
12:50 – 13:05	Ion-atom interaction potential dependence on the ion's charge exchange	N. Starčević
13:05 — 14:30	Lunch break	
Chair	***Jelena Pešić***	
14:30 — 15:00	The Ultrafast Thermodynamics Of Graphene And Twisted Bilayer Graphene	K.-J. Tielrooij
15:00 — 15:30	Exploring Functional Properties Of Two Dimensional Materials By Atomic Force Microscopy	B. Vasić

15:30 — 15:45	Unmovable Nodal Points and Lines in Two- Dimensional Materials: Dispersions and Positions in the Reciprocal Space	V. Damljanović
15:45 — 16:00	Solving the puzzle of magnetic 2D materials – from electronic structure to magnetic interactions	D. Šabani
16:00 — 16:30	Graphene For Physiological Parameter Sensing	M. Spasenović
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16:50 – 18:50	**Round table discussion** *Discussion will be held in the Serbian language*	

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Chair	***Darko Tanasković***

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9:30 — 10:00	Nonequilibrium transport and thermalization in strongly disordered 2D electron systems	D. Popović
10:00— 10:30	Dipole representation of half-filled Landau level	M. Milovanović

10:30— 10:45	Cumulant Expansion in the Holstein model: Spectral Functions and Mobility	P. Mitrić
10:45 – 11:00	Observation of many-body scarring in a Bose-Hubbard quantum simulator	A. Hudomal
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Chair	***Vladimir Dobrosavljević***	
11:20 — 11:50	Time reversal symmetry breaking and Bogoliubov-Fermi sufraces in multiband superconductors	I. Herbut
11:50 — 12:20	Disorder in FeSe1−xSx ($0 \leq x \leq 1$) superconducting crystals	C. Petrovic
12:20 — 12:50	Probing charge density wave phases and the Mott transition in 1T−TaS2 by Raman scattering	N. Lazarević
12:50 — 13:05	Uniaxial strain-induced changes in vibrational modes of FeSe	J. Pešić
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Chair	***Cedomir Petrovic***	
14:30 — 15:00	Surprises in transition metal dichalcogenides revealed by interlayer charge transport	L. Forro

15:00 — 15:30	Superconductivity and Charge-Density-Wave in Kagome Metal CsV3Sb5 Revealed by NMR measurement	J. Luo
15:30 — 15:45	Evolution of Lattice, Spin, and Charge Properties Across FeSe1-xSx Phase Diagram	A. Milosavljević
15:45 — 16:00	Exploring superconductivity in doped mono- and bilayer borophenes	B. Šoškić
16:00 – 16:30	Raman Studies of Kagome Lattice Systems	R. Hackl
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17:15 — 19:00	POSTER SESSION	

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9:15 — 9:45	On The Effects Of Finite Rate Driving On Disordered Magnetic Systems — Đ. Spasojević
9:45 — 10:00	Spin Activity Correlations in Driven Disordered Systems — D. Jovković

10:00 – 10:15	Higher-order Connectivity Patterns in the Correlation Structure of Complex Systems	S. Maletić
10:15— 10:45	Calcium-A life and death signal	M. Satarić
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12:35 — 13:05	Phyllosilicates as a platform for air-stable 2D magnetism	C. Teichert
13:05 — 13:35	Rare earth spin frustrated systems	Q. Zhang
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Day 4 – 29th June 2023

Chair	***Stevan Nađ-Perge***	
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9:30 — 10:00	Tuning Phases and Physical Properties of RENiO3	M. Radović
10:00— 10:30	Binary Oxides and Ferroelectricity: Ab-initio Insights Into The Polar-state Formation And Its Switching	M. Ležaić
10:30— 10:45	Analysis Of Two-Dimensional Crystals Via Rainbow Scattering	M. Hadžijojić
10:45 - 11:00	MoxWx-1S2 Nanotubes For Advanced Field Emission Application	B. Višić
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Chair	***Igor Herbut***	
11:20 — 11:50	Mott quantum critical phase of FeO dominates Earth's lower mantle	V. Dobrosavljević
11:50 — 12:20	Spectral Functions and Mobility of the Holstein Polaron	D. Tanasković
12:20 — 12:50	Nanostructure View Of Electronic Transitions In Selected Van Der Waals Quantum Materials	E. Božin
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Chair	***Marjana Ležaić***	
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15:00 — 15:30	Effect of Large Quantum Correlations in “Russian Doll” Quantum Dots: Impact on MEG Solar Cells	S. Tomić
15:30 — 15:45	A Nonequilibrium-Thermodynamics Perspective on Charge Separation in Organic Solar Cells	V. Janković
15:45— 16:00	Soft Cluster Crystals in Simulation and Experiment	N.Adžić
16:00— 16:30	How Can We Benefit From The Optical Properties Of Mn5+ To Make Pigments And Near-Infrared Phosphors?	M. Dramićanin
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17:20 – 17:50	Designing of a “perfect” porphyrin molecule for the Mechanically Controllable Break Junction Experiments	D. Dulić

17:50 — 18:05	Single-Molecule Probing By Rectification in a Nanogap	R. Žikić
18:05 – 18:35	Collective dynamics of social systems: a statistical physics approach	M. Mitrović Dankulov

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9:30 — 10:00	Efficient Photon and Phonon Interfaces for Spin Qubits in Diamond	M. Lončar
10:00— 10:30	Stability of vortices in dipolar droplets	A. Balaž
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Special session: Celebrating Milan Damnjanović's 70th Birthday Jubilee

Chair	***Časlav Brukner***	
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12:00 — 12:30	Superconductivity, Topology and Correlations In Twisted And Untwisted Graphene Structures	S. Nadj-Perge
12:30 — 13:00	Excitons and phonons in van-der-Waals 2D materials	J. Maultzsch
13:00 — 13:30	Finding Useful Metastable Materials – New Perspectives on an Old Problem	V. Stevanović
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Chair	***Janina Maultzsch***	
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15:00 – 15:30	Quantum Reference Frames: what they are and what they're good for	Č. Brukner
15:30 - 16:00	Reconstruction of Quantum Particle Statistics: Fermions, Bosons and Beyond	B. Dakić
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$Mo_xW_{x-1}S_2$ Nanotubes For Advanced Field Emission Application

Bojana Višić[a, b], Luka Pirker[b, c], Robert Lawroski[d], Rupert Schreiner[d], Maja Remškar[b]

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[b] *Department of Condensed Matter Physics, Jozef Stefan Institute, Jamova cesta 39, 1000, Ljubljana, Slovenia*
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[d] *Faculty of Applied Natural Sciences and Cultural Studies, OTH Regensburg, Seybothstraße 2, 93053 Regensburg, Germany*

Abstract. Individual multiwalled WS_2 and MoS_2 nanotubes (NTs) are having a resurgence of interest, as interesting optical and electrical properties have been reported in recent years [1, 2]. On the other hand, nanotubes have been vastly neglected as possible alloyed transition metal dichalcogenides (TMDC). Most of the research so far, both theoretically and experimentally, focused on flat, two-dimensional structures, with only a few reports that focused on non-carbon-based alloyed NTs [3]. Additionally, TMDCs have opened a new frontier in the area of field emission devices, due to their layered structure and the presence of thin and sharp edges with high aspect ratios which enhance the local electric field.In this work, we present highly crystalline multiwalled $Mo_{1-x}W_xS_2$ NTs grown with the chemical vapour transport method [4]. Energy-dispersive X-ray spectroscopy, Raman spectroscopy, and X-ray diffraction indicate that the molybdenum and tungsten atoms are randomly distributed within the crystal structure and that the material is highly crystalline. High resolution TEM and electron diffraction (ED) patterns further corroborate these findings. A detailed analysis of the ED patterns from an eight-layer nanotube revealed that they grow in the 2H structure, with each shell consisting of one bilayer. The work function of the NTs is comparable than that of pure MoS_2 and lower of pure WS_2 NTs, making them ideal candidates for field emission applications. Two devices with different geometrical setup were prepared and tested as field emitters, showing promising results for single nanotube field emission applications.

REFERENCES

1. Višić, B., et al., *Phys. Rev. Res.* **1** 3 (2019)
2. Kazanov, DR., et al., *Appl. Phys. Lett*. **112** 10 (2018)
3. Sreedhara, MB., et al., *J Am Chem Soc* **144** 232 (2022)
4. Pirker, L., et al., *Adv. Funct. Mater* (2022)

Crystal structure and phase transitions in $InSiTe_3$

T. Belojica[a], A. Milosavljević[a], S. Đurđić Mijin[a], A. Šolajić[a], J. Pešić[a], B. Višić[a], Yu Liu[b], C. Petrovic[b], Z. V. Popović[a,c] and N. Lazarević[a]

[a]*Center for Solid State Physics and New Materials, Institute of Physics Belgrade, University of Belgrade, Pregrevica 118, 11080 Belgrade, Serbia*
[b]*Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory, Upton, NY 11973-5000, USA*
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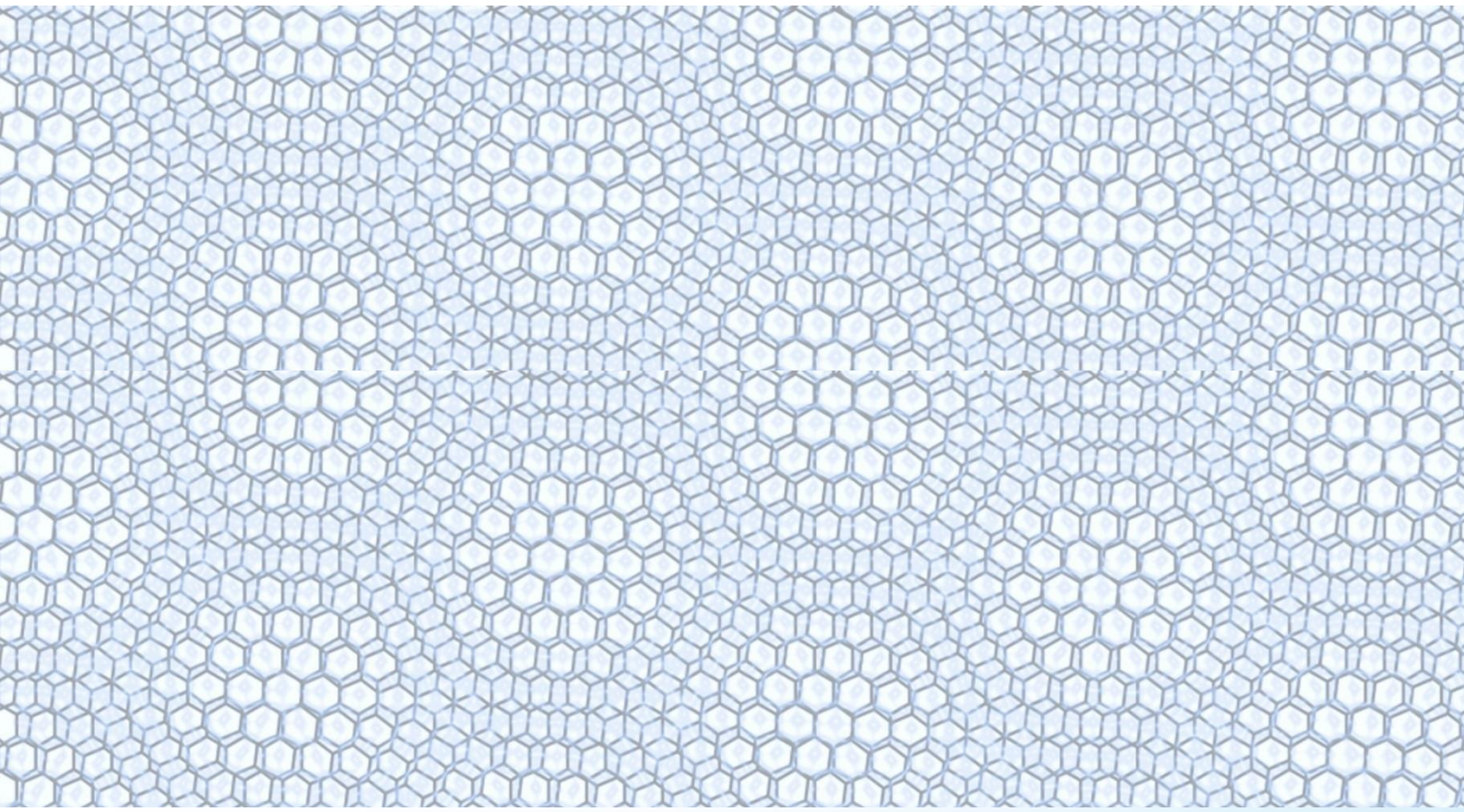
Abstract. Although first report of $InSiTe_3$ single crystal synthesis and its structure dates nearly 30 years ago, only a few studies are available up till today. Unlike its related compounds ($CrSiTe_3$, $CrGeTe_3$) which have been intensively studied, and their high and low temperature physical properties are well established, only resistivity and thermal conductivity, as well as theoretical predictions of thermodynamical and mechanical stability of $InSiTe_3$ were investigated. Probably, one of the main issues causing lack of research data is the proper determination of $InSiTe_3$ crystal structure, since the literature predicts three different space groups for this material, $P3$, $P\bar{3}$, and $P\bar{3}1m$.

In order to properly investigate $InSiTe_3$ crystal structure we employed inelastic light scattering technique, and DFT calculations for all suggested crystal structures. Six out of eight and seven out of ten Raman active modes for proposed $P\bar{3}1m$ and $P\bar{3}$ space groups, respectively, are observed and assigned, in agreement with numerical calculations. The theoretical calculations for $P3$ crystal structure are in a strong discrepancy with theoretical results, hence this proposed space group can be neglected. The obtained results suggest the coexistence of two triagonal crystal phases, high symmetry one, $P\bar{3}1m$ and low symmetry $P\bar{3}$ space group. Additionally, to the modes that are theoretically predicted, at around 500 cm^{-1} the A_{1g}/A_g "splitting" mode is detected. The appearance of this peak might be a consequence of local symmetry breaking due to a small difference in lattice parameters of both crystal phases. The temperature dependence of energies and linewidths of the most prominent Raman active modes show a monotonous decrease in energy and increase in linewidth when the material is heated from 80 K. At around 200 K discontinuities in phonon properties can be observed. Above the same temperature, additional features in Raman spectra between 175 and 300 cm^{-1} only in parallel scattering configuration are present, and may be a consequence of two-phonon processes. The phonon temperature dependence and these additional excitations indicate the presence of some kind of phase transition above 200 K. Due to the lack of theoretical and experimental studies the origin and type of this transition remains an open question and requires further analysis.



FLATLANDS

beyond graphene 2023

25-29 September 2023, Prague

BOOK OF ABSTRACTS

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Flatlands Beyond Graphene 2023 (25-29/9, Hotel Olšanká)				
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10:20	**K14**	Magnetic and electrostatic control of excitons in a 2D magnetic semiconductor	Nathan Wilson	27
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11:15	O53	Mobile interlayer excitons up to the Mott transition in moiré-free heterostructures	Edith Wietek	83
11:30	O54	Transparent, flexible, and tuneable graphene-based strain gauges	Joseph Neilson	84
11:45	O55	Valley polarisation in monolayer TMDs and TMD/2D perovskite heterostructures	Jakub Jasiński	85
12:00	O56	Excellent excitonic properties of novel hexagonal	Tomasz Woźniak	86

		MA_2Z_4 monolayers		
12:15	S7	Sponsor presentation: SPECS-GROUP		
12:30		Lunch		
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13:30	**P13**	Collective excitations in two-dimensional quantum materials	Ursula Wurstbauer	28
13:50	**K15**	Exploring near-field exciton-polariton dynamics towards tailored light-matter interactions	Lena Yadgarov	29
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15:30		Coffee Break		
Session 4: Oral Presentations 3, Chair: Adam Clancy				
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16:15	O61	Interlayer excitons in hBN separated van der Waals heterostructures	Asmund Ottesen	93
16:30	O62	Electrical control of ultrafast many-body physics in 1L-WS_2	Irantzu Landa	94
16:45	O63	Rapid spin depolarization in the layered 2D perovskite (BA)(Ma)PbI	Tobias Korn	95
17:00	O64	MXene-induced energy transfer	Lorena Manzanares	96
17:00	O64	Crystal growth and exfoliation of 2D materials	Zdeněk Sofer	97
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O36

$Mo_xW_{x-1}S_2$ nanotubes for advanced field emission application

Bojana Višić[1,2], Luka Pirker[2,3], Robert Lawroski[4], Rupert Schreiner[4], Maja Remškar[2]

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Individual multiwalled WS_2 and MoS_2 nanotubes (NTs) are having a resurgence of interest, as interesting optical and electrical properties have been reported in recent years [1, 2]. On the other hand, nanotubes have been vastly neglected as possible alloyed transition metal dichalcogenides (TMDC). Most of the research so far, both theoretically and experimentally, focused on flat, two-dimensional structures, with only a few reports that focused on non-carbon-based alloyed NTs [3]. Additionally, TMDCs have opened a new frontier in the area of field emission devices, due to their layered structure and the presence of thin and sharp edges with high aspect ratios which enhance the local electric field.

In this work, we present highly crystalline multiwalled $Mo_{1-x}W_xS_2$ NTs grown with the chemical vapour transport method [4]. Energy-dispersive X-ray spectroscopy, Raman spectroscopy, and X-ray diffraction indicate that the molybdenum and tungsten atoms are randomly distributed within the crystal structure and that the material is highly crystalline. High resolution TEM and electron diffraction (ED) patterns further corroborate these findings. A detailed analysis of the ED patterns from an eight-layer nanotube revealed that they grow in the 2H structure, with each shell consisting of one bilayer. The work function of the NTs is comparable to that of pure MoS_2 and lower of pure WS_2 NTs, making them ideal candidates for field emission applications. Two devices with different geometrical setup were prepared and tested as field emitters, showing promising results for single nanotube field emission applications.

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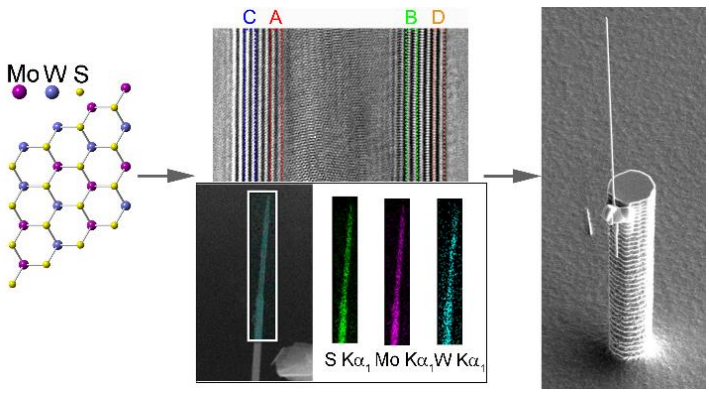
[1] B. Višić et al., Phys. Rev. Res. **1,** 3 (2019)
[2] DR Kazanov et al., Appl. Phys. Lett. **112,** 10 (2018)
[3] MB Sreedhara et al., J Am Chem Soc **144,** 232 (2022)
[4] L. Pirker et al., Adv. Funct. Mater (2022)



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Dear Dr. Bojana Visic,

On behalf of the "Workshop in strongly correlated electron systems", that we be held in Belgrade 09.-10. of Jun 2022. in honor of Academician Zoran V. Popovic, it is our great pleasure to invite you to present your latest research.

The workshop will be held as a hybrid event, combining both live (on-site) and virtual (on-line) presentations and participation.

Link: http://strainedfesc.ipb.ac.rs/workshop-in-strongly-correlated-electron-systems/

Sincerely yours,

Dr. Nenad Lazarevic

Belgrade, 16.05.2022.

Strained FeSC

Center for Solid State Physics & New Materials

IP8

9-10 June 2022, Institute of Physics Belgrade

http://strainedfesc.ipb.ac.rs/workshop-in-strongly-correlated-electron-systems/

WORKSHOP IN STRONGLY CORRELATED ELECTRON SYSTEMS

*Special focus of the conference will be devoted to Iron-chalcogenide superconductors and research performed during **StrainedFeSC project.***

"Workshop in strongly correlated electron systems" will be held in honor of Academician Zoran V. Popovic.

This workshop is supported by the Science Fund of the Republic of Serbia under the grant number 6062656 at Institute of Physics Belgrade Serbia.

Science Fund of the Republic of Serbia

WORKSHOP IN STRONGLY CORRELATED ELECTRON SYSTEMS
BELGRADE, JUNE 9 – 10, 2022

CONFERENCE PROGRAMME

Thursday, June 9, 2022

10^{00} – 10^{30} Welcome speech by the director of Institute of Physics Dr. Aleksandar Bogojević

10^{30} – 11^{00} Honorary speech, Zoran V. Popović, *Serbian Academy of Sciences and Arts, Belgrade, Serbia*

11^{00} – 11^{30} **Raman scattering study of the $FeSe_{1-x}S_x$**, Nenad Lazarević, *Institute of Physics Belgrade, University of Belgrade , Belgrade, Serbia*

11^{30} – 12^{00} **Light scattering in Fe pnictides and chalcogenides**, Rudi Hackl, *IFW Dresden, Dresden, Germany*

12^{00} – 12^{30} **Spin-lattice correlations at elevated temperatures in $EuTiO_3$**, Efthymios Liarokapis, *Department of Physics, National Technical University of Athens, Greece*

LUNCH BREAK

14^{00} – 14^{30} **Symmetries of layered structures**, Božidar Nikolić, *NanoLab, Faculty of Physics, University of Belgrade, Belgrade, Serbia*

14^{30} – 15^{00} **Nanoscale resistive switching in iridates and manganites**, Borislav Vasić, *Center for Solid State Physics and New Materials, Institute of Physics Belgrade, Serbia*

15^{00} – 15^{30} **Interplay of anomalous Hall angle and magnetic anisotropy in ferromagnetic topological crystalline insulator thin films,** Rajdeep Adhikari, *Institut für Halbleiter-und-Festkörperphysik, Johannes Kepler University, Linz, Austria*

15^{30} – 16^{00} **First Principle study of Evolution of Vibrational Modes of FeSe Under Uniaxial Strain,** Jelena Pešić, *Center for Solid State Physics and New Materials, Institute of Physics Belgrade, Serbia*

16^{00} – 16^{30} **Steps towards ab-initio predictions of electron mobility in materials with strong electron-phonon interaction**, Nenad Vukmirović, *Institute of Physics Belgrade, University of Belgrade, Belgrade, Serbia*

COFFEE BREAK

16^{45} – 17^{15} **Infrared and Raman Study in narrow gap semiconductor $FeGa_3$**, Darko Tanasković, *Institute of Physics University of Belgrade, Belgrade, Serbia*

17^{15} – 17^{45} **Effective Medium Theory in Maxwell Garnett Aproximation for Structural and Optical Characterization of some Chalcogenide – based Semiconducting Nanomaterials,** Jelena Mitrić, *Institute of Physics University of Belgrade, Belgrade, Serbia*

17^{45} – 18^{15} **Suppression of superconductivity and nematic order in FeSe1-xSx ($0 \leq x \leq 1$)**, Cedomir Petrovic, *Condensed Matter Physics and Materials Science Department, Brookhaven National Laboratory, Upton, USA*

WORKSHOP IN STRONGLY CORRELATED ELECTRON SYSTEMS
BELGRADE, JUNE 9 – 10, 2022

Friday, June 10, 2022

10^{00} – 10^{30} **A new family of Kitaev materials,** Qingming Zhang, *Lanzhou University, Institute of Physics, Chinese Academy of Sciences, Lanzhou, Gansu, China*

10^{30} – 11^{00} Complex oxide heterostructures for efficient spin to charge conversion, Alberto Pomar, *Instituto de Ciencia de Materiales de Barcelona, Barcelona, Spain*

11^{00} – 11^{30} **DFT+Σ2 method for electron correlation effects at transition metal surfaces and nano-devices**, Miloš Radonjić, *Institute of Physics Belgrade, University of Belgrade, Belgrade, Serbia*

COFFEE BREAK

11^{45} – 12^{15} **Dynamic tuning of quantum light emission from GaN/InGaN nanowire quantum dots by surface acoustic waves**, Snežana Lazić, *Departamento de Física de Materiales, Instituto 'Nicolás Cabrera' and Instituto de Física de Materia Condensada (IFIMAC), Universidad Autónoma de Madrid, Madrid, Spain*

12^{15} – 12^{45} **First-principles exploration of superconducting 2D materials for emerging quantum technologies**, Jonas Bekaert, *Condensed Matter Theory (CMT), Department of Physics & NANOlab Center of Excellence, University of Antwerp, Antwerp, Belgium*

12^{45} – 13^{15} **The electric field gradient at ^{57}Fe in $Fe_{1-\delta}Te_2$,** Valentin N. Ivanovski, *Department of Nuclear and Plasma Physics, Vinca Institute of Nuclear Sciences, National Institute of the Republic of Serbia, University of Belgrade, Belgrade, Serbia*

LUNCH BREAK

15^{00} – 15^{30} **Nonlinear and dynamic behaviour of exciton-polariton coupling processes in WS_2 nanostructures**, Bojana Višić, *Institute of Physics Belgrade, University of Belgrade, Belgrade, Serbia, Solid State Physics Department, Jozef Stefan Institute, Ljubljana, Slovenia*

16^{00} – 16^{30} **Synthesis and characterization of ternary Van der Waals MoxWx-1S2 nanotubes for advanced field emission application**, Luka Pirker, *Condensed Matter Physics Department, Jozef Stefan Institute, Ljubljana, Slovenia, Department of Electrochemical Materials, J. Heyrovský Institute of Physical Chemistry, Praha, Czech Republic*

16^{30} –17^{00} **Influence of magnetism and electron-phonon interaction on lattice dynamics of pure and Co-doped $K_xFe_{2-y}Se_2$ single crystals**, Marko Opačić, *Institute of Physics Belgrade, University of Belgrade, Belgrade, Serbia*

COFFEE BREAK

17^{15} –17^{45} **Suppression of inherent ferromagnetism in Pr-doped CeO_2 nanocrystal**, Novica Paunović, *Institute of Physics Belgrade, University of Belgrade, Belgrade, Serbia*

17^{45} – 18^{15} **Fluctuating hexamer precursor to a two-stage electronic transition in RuP**, Emil Bozin, *Condensed Matter Physics and Materials Science Division, Brookhaven National Laboratory, Upton, USA*

18^{15} ***Closing Ceremony***

Nonlinear and dynamic behaviour of exciton-polariton coupling processes in WS_2 nanostructures

Bojana Višić[1, 2], Sudarson Sekhar Sinha[3] Archana Byregowda[4] and Lena Yadgarov [4]

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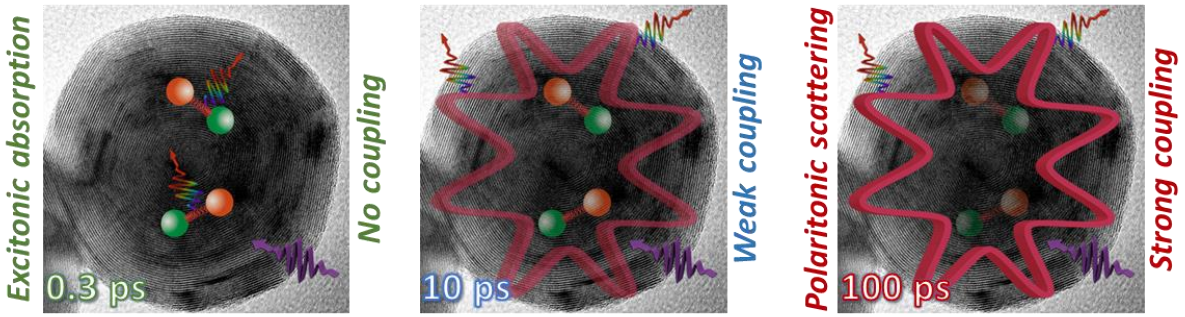
4 The Department Chemical Engineering, Ariel University, Ramat HaGolan St 65, 4077625 Israel

Semiconducting transition metal dichalcogenides can be synthesized in a wide range of structures and geometries, including closed cage nanostructures, such as nanotubes or fullerene-like nanoparticles (NSs). The latter are especially intriguing due to their stability, enhanced light-matter interactions, and ability to sustain exciton-polaritons (EPs) in ambient conditions, i.e., strong coupling of excitonic resonances to the optical cavity.
Here we investigate the dynamics of EPs formation in WS_2 NPs in the time domain using femtosecond transient extinction spectroscopy. We develop various analytical methods and models with time-dependent parameters to extract the underlying non-equilibrium dynamics of EPs formation. We find that the formation of EPs in WS_2 NPs is not instantaneous but a gradual process that occurs only after several picoseconds. Specifically, for the short delay times, the light-matter interaction is guided by excitonic absorption, whereas for the long delay times, the process is controlled by polaritonic scattering. We discover that the coupling strength is a time-dependent entity and not a constant as is usually defined. Namely, there is a nonlinear coupling between excitonic and external modes and a notable transition from weak to strong coupling limit. Our results show that the time-dependent phenomenological dynamical model quantitatively reproduces the nonlinear dynamical coupling as well as the effects of the pump fluence on the coupling strength.



Synthesis and characterization of ternary Van derWaals $Mo_xW_{x-1}S_2$ nanotubes for advanced field emission application

Pirker Luka [a,b], Lawrowski Robert [c], Schreiner Rupert [c], Remškar Maja [a,] VišićBojana [a,d]

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[b] *Department of Electrochemical Materials, J. Heyrovský Institute of Physical Chemistry, v.v.i., Praha, CzechRepublic*
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[d] *Institute of Physics Belgrade, University of Belgrade, Belgrade, Serbia*

Low-dimensional Van der Waals materials, based on atomically thin sheets stacked together, have in recent years become a rapidly developing field. Prepared from layered compounds, such as transition metal dichalcogenides (TMDCs), their constituents are held together by weak van der Waals forces. They can be found in form of quantum dots (0D), nanotubes (1D), and monolayers (2D), with eachmorphology having a unique set of properties. Their properties can be further altered by constructing heterostructures or with the synthesis of TMDC alloys.
Here we present the first $Mo_{1-x}W_xS_2$ nanotubes synthesized by the chemical transport reaction. The synthesized material has been characterized with AFM, KPFM, SEM, TEM, EDS, XRD, and Raman spectroscopy. The starting material contained MoS_2 and WS_2 in 50:50 atomic ratio. The transported material was composed of flakes and nanotubes of $Mo_{1-x}W_xS_2$. The diameters of the nanotubes range from10 nm up to a few microns, and their length up to several 10 □m. EDS data revealed that both transition metals are homogeneously distributed in this ternary compound, but the atomic ratio is close to 60:40. TheRaman spectra of the $Mo_{1-x}W_xS_2$ NTs is a superposition of Raman peaks attributed to MoS_2 and WS_2. All of the nanotubes are multi-walled and are highly crystalline with a low number of defects. The layers growin pairs, which is the consequence of the 2H phase. The average work function of the nanotubes is around 4.7 eV, situated between the work function of MoS_2 and WS_2. Single nanotube field emission devices were prepared with two different geometrical setups. The current-voltage-behaviour of both show a linear I-V dependence and no deviations from the ideal FN behaviour.

22nd INTERNATIONAL
SCIENTIFIC CONFERENCE

"EcoBalt 2021"

Riga, Latvia
October 21–23, 2021

BOOK OF ABSTRACTS

ORGANISED BY
UNIVERSITY OF LATVIA
FACULTY OF CHEMISTRY

International Scientific Conference "EcoBalt 2021", Riga, Latvia, October 21–23, 2021, Book of Abstracts, University of Latvia Press, 2021. 97 p.

Organisers
The Faculty of Chemistry, University of Latvia

ISBN 978-9934-18-724-7 (PDF)

https://doi.org/10.22364/isceb.2021

CONTENTS

AIR POLLUTION BY NANOPARTICLES CAUSED BY USE OF PYROTECHNICS

Maja Remškar[1, 2], Luka Pirker[1, 2], Bojana Višić[1, 3], Anton Gradišek[1], Agnese Osīte[4]

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Fireworks and other pyrotechnic devices with light effects and spectacular explosions are often used to celebrate different events due to their aesthetic and entertainment value. Effects connected to the smoke and noise are undesired side effects usually neglected by pyrotechnics enthusiasts. While dog owners attempt to protect their pets from such celebrations, and bird watchers to get prohibition of fireworks, members of the general population bring their children to enjoy the light spectacle. Unfortunately, they do not consider the local atmosphere pollution arising from the toxic combustion by-products. In addition, explosions portrayed in cartoons, together with the fireworks and sparklers as advertised in the media, influence the celebration habits, from birthday parties, wedding ceremonies to other festivities. As an example, sport events frequently start or finish with fireworks, while pyrotechnic articles are still occasionally used by fans during games although their use is formally forbidden.

We will present results from measurements of air pollution by aerosols during New Year fireworks in Ljubljana, during a football match at the local stadium between two national rivals and of indoor air pollution by particles during combustion of sparklers. The measurements have been performed using a scanning mobility particle sizer and a low-pressure cascade impactor. The collected particles were chemically analysed by X-ray energy dispersive analysis, scanning electron microscopy, and mass spectrometry. It was found that all three types of pyrotechnics caused a strong increase in the number concentration of aerosols but with a different outreach, from several km in the case of New Year firework to several metres during the combustion of sparklers. The concentrations of nanoparticles between 80 nm and 150 nm in size measured at 2.8 km from the firework platform during New Year in Ljubljana clearly increased shortly after the firework. Public data have shown an increase in concentrations of heavy metals typical for pyrotechnics (Cu, Sr, Ba) in PM_{10} even several days after the firework event. Beside carbon, the chemical analysis of the collected aerosols revealed the presence of typical elements used in pyrotechnic devices, like Mg, Al, V, Cr, Mn, Fe, Co, Ni, Cu, Zn, As, Rb, Sr, Sn, Ba, and Pb. The indoor combustion of a single sparkler has increased the total concentration of the aerosols for at least 150 times with respect to the background level. More than 10 % of the metals (Ba, Fe, Al) from the sparklers have been released into the local atmosphere in form of aerosols with the diameter of 100 nm or smaller [1]. Use of pyrotechnic articles and torches at a football match caused an increase in the number concentration of aerosols up to 12-fold. The estimated cumulative dose of the inhaled particles by the players during the match was about 300% higher than the dose one would get in a low-pollution environment [2].

References:

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2. Pirker, L.; Gradišek, A.; Višić, B.; Remskar, M. *Atmos.Environ.* **2020**, *233*, 117567-10.

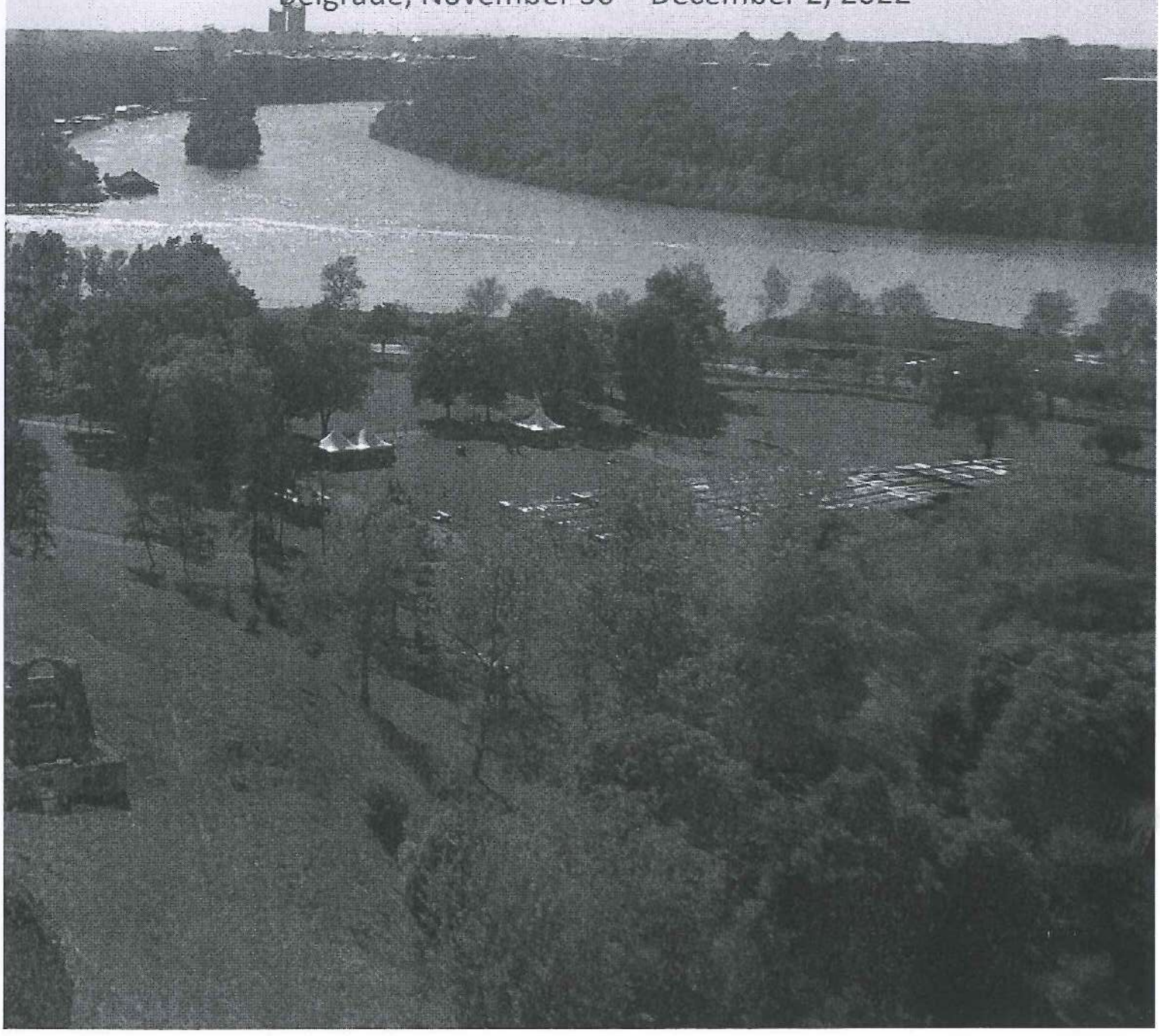
Contact person: Maja Remskar, Jožef Stefan Institute, Jamova 39, 1000 Ljubljana, Slovenia, phone: +386 1 4773961, e-mail: maja.remskar@ijs.si

INSTITUTE OF TECHNICAL SCIENCES OF SASA
MATERIALS RESEARCH SOCIETY OF SERBIA

Programme and the Book of Abstracts

TWENTIETH YOUNG RESEARCHERS' CONFERENCE MATERIALS SCIENCE AND ENGINEERING

Belgrade, November 30 – December 2, 2022



Aim of the Conference

Main aim of the conference is to enable young researchers (post-graduate, master or doctoral student, or a PhD holder younger than 35) working in the field of materials science and engineering, to meet their colleagues and exchange experiences about their research.

Topics

Biomaterials
Environmental science
Materials for high-technology applications
Materials for new generation solar cells
Nanostructured materials
New synthesis and processing methods
Theoretical modelling of materials

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Results of the Conference

Beside printed «Programme and the Book of Abstracts», which is disseminated to all conference participants, selected and awarded peer-reviewed papers will be published in journal "Tehnika – Novi Materijali". The best presented papers, suggested by Session Chairpersons and selected by Awards Committee, will be proclaimed at the Closing Ceremony. Part of the award is free-of-charge conference fee at YUCOMAT 2023.

Sponsors

Acknowledgement

The editor and the publisher of the Book of abstracts are grateful to the Ministry of Science, Technological Development and Innovation of the Republic of Serbia for its financial support of this book and The Twentieth Young Researchers' Conference - Materials Sciences and Engineering, held in Belgrade, Serbia.

7-2

Optical properties of nanostructured multi-stoichiometric tungsten suboxides

Bojana Višić[1,2,3], Luka Pirker[1,3], Marko Opačić[2], Ana Milosavljević[2], Nenad Lazarević[2], Boris Majaron[3,4], Maja Remškar[1]

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Tungsten suboxide (WO_{3-x}) nanomaterials were synthesized via chemical vapor transport method and the role of their crystal structures on the optical properties was investigated. These materials grow either in the shape of platelets or nanotiles, or as nanowires (W_5O_{14}, $W_{18}O_{49}$). For the first one which represents thin quasi-2D materials, the appearance of defect states gives rise to two indirect absorption edges. One is assigned to the regular bandgap between the valence and the conduction band, while the second is a defect-induced band. While the bandgap values of platelets and nanotiles are in the upper range of the reported values for the suboxides, the nanowires' bandgaps are lower due to the higher number of free charge carriers. Both types of nanowires sustain localized surface plasmon resonances, as evidenced from the extinction measurements, whereas the quasi-2D materials exhibit excitonic transitions. Photoluminescence emission peaks in the UV region were detected for all four materials. The interplay of the crystal structure, oxygen vacancies and shape can result in changes in optical behavior, and the understanding of these effects could enable intentional tuning of selected properties.

12. Konferenca fizikov v osnovnih raziskavah

ZBORNIK POVZETKOV

Terme Čatež
11. november 2022

Organizatorja

Fakulteta za matematiko in fiziko, Univerza v Ljubljani
Institut »Jožef Stefan«

Pokrovitelj

Društvo matematikov, fizikov in astronomov Slovenije

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Naslovna slika: Tina Arh - Vizualizacija Isingove spinske tekočine.

Program 12. Konference fizikov v osnovnih raziskavah

Terme Čatež, 11. 11. 2022

9.00-9.05	Pozdravni nagovor
9.05-9.30	**Andrej Zorko: Isingova spinska tekočina v antiferomagnetu na trikotni mreži**
9.30-9.45	Luka Šantelj: Prvi rezultati meritev pri eksperimentu Belle II
9.45-10.00	Katja Gosar: Magnetni gradiometer z ultrahladnimi atomi cezija na osnovi ene same Stern-Gerlachove slike
10.00-10.15	Aljaž Kavčič: Lokalizacija in senzorika skozi sipajoča tkiva z uporabo optičnih mikroresonatorjev
10.15-10.45	Premor
10.45-11.10	**Maruša Bradač: Vesoljski teleskop James Webb: o prvih galaksijah v vesolju**
11.10-11.25	Taj Jankovič: Hitrost vračanja snovi pri relativističnih plimskih raztrganjih zvezd
11.25-11.40	Miha Ravnik: Ionsko nabiti topološki defekti v nematskih tekočinah
11.40-11.55	Luka Snoj: Komunikacija z nevtroni
11.55-13.30	Kosilo
13.30-13.55	**Sašo Grozdanov: Strunske tekočine in magnetna difuzija**
13.55-14.10	Zala Lenarčič: Določanje kompleksnosti kvantnih stanj z uporabo strojnega učenja
14.10-14.25	Matej Krajnc: Gubanje nepodprtih epitelnih tkiv
14.25-14.40	Matjaž Žitnik: Interferenca dvofotonskih vzbuditev v atomu s svetlobo XUV
14.40-15.00	Premor
15.00-15.25	**Nerea Sebastian: Ferroelectric nematic phase: From the discovery to the shaping of polarization**
15.25-15.40	Lev Vidmar: Zlom ergodičnosti v kvantnih sistemih
15.40-15.55	Žiga Krajnik: Univerzalne anomalne fluktuacije v nabitih enovrstičnih sistemih
15.55-16.10	Žiga Kos: Defektna dinamika in redčenje v trodimenzionalnih aktivnih nematskih tekočinah
16.10-18.00	Ogled plakatov
	Predavanji v okviru občnega zbora DMFA
18.00-18.30	**Andrej Bauer: Matematični pogled na volilne sisteme v Sloveniji**
18.30-19.00	**Saša Prelovšek Komelj: Običajni in neobičajni hadroni**
19.00	Odhod avtobusa s študenti v Ljubljano
19.00-21.00	Večerja
okoli 21.00	Odhod avtobusa v Ljubljano

Izpostavljenost nanodelcem zaradi pirotehnike med nogometno tekmo

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Uporaba pirotehničnih izdelkov, kot so bakle in dimne bombe, so kljub prepovedim del folklore na naših nogometnih tekmah, še posebej na pomembnejših derbijih. Je pa uporaba pirotehnike nevarna. Poleg opeklin in poškodb ob morebitni eksploziji se pri gorenju pirotehnike sproščajo strupeni aerosoli, ki so nevarni za zdravje tako igralcev kot tudi gledalcev.

V naši študiji [1] smo spremljali, kako se spreminja koncentracija nanodelcev med nogometno tekmo med Olimpijo in Mariborom v ljubljanskih Stožicah. Tik za ograjo ob zelenici na sredi med severno in južno tribuno smo postavili dva detektorja: razvrščevalnik nanodelcev po velikosti na osnovi njihove električne mobilnosti, ki beleži številsko koncentracijo delcev med 13 in 570 nm, in kaskadni naletovalnik, s katerim smo zbirali delce med 30 nm in 10 µm za kasnejšo analizo s spektroskopskimi metodami.

Med tekmo so navijači bakle prižigali kar petkrat. Pri sočasnem prižigu bakel obeh navijaških skupin se je številska koncentracija delcev povečala za 12-krat. Ko so bakle ugasnile, je v treh minutah padla na polovico, v 15 minutah pa se vrnila na vrednosti pred prižigom. Igralci so bili med tekmo zaradi pirotehnike izpostavljeni trikrat večji količini delcev, kot bi jo prejeli sicer.

Slika 1: Navijači prižigajo bakle med nogometno tekmo

[1] L. Pirker et al., Atmospheric Environment, **233**, 117567 (2020)