

НАСТАВНО-НАУЧНОМ ВЕЋУ ФИЗИЧКОГ ФАКУЛТЕТА УНИВЕРЗИТЕТА У БЕОГРАДУ

Пошто смо на седници Изборног и Наставно-научног Већа Физичког факултета Универзитета у Београду, одржаној 19. новембра 2025. године, одређени за чланове Комисије за припрему извештаја по расписаном конкурс за избор једног ДОЦЕНТА за ужу научну област ПРИМЕЊЕНА ФИЗИКА на Физичком факултету у Београду подносимо следећи

ИЗВЕШТАЈ

На конкурс за избор једног ДОЦЕНТА за ужу научну област ПРИМЕЊЕНА ФИЗИКА на Физичком факултету у Београду, који је објављен у листу "Послови" дана 3.12.2025, пријавио се само један кандидат, др Мирјана Сарван, доцент на Физичком факултету Универзитета у Београду.

БИОГРАФИЈА, НАСТАВНА И НАУЧНА АКТИВНОСТ ДР МИРЈАНЕ САРВАН

1. Основни биографски подаци.

Кандидат др Мирјана Сарван рођена је 1963. године. Физички факултет у Београду уписала је школске 1982/83. године после завршене Математичке гимназије, где се на трећој години студија опредељује за истраживачки (експериментални) смер.

Дипломирала је 13. марта 1989. године на смеру Теоријска и експериментална физика просечном оценом 8.21. Од школске 1989/90. године била је сарадник на предметима Физичка механика и Термофизика, Таласи и структура материје, Електромагнетизам, као и предметима на којима је држала експерименталне вежбе општих курсева за студенте Хемијског факултета, Молекуларне биологије и Факултета физичке хемије.

Постдипломске студије уписала је школске 1991./92. године на смеру Физика кондензованог стања материје, које завршава просечном оценом 9.22.

Магистарску тезу под насловом „Проучавање утицаја 3d- и 4f- јона на физичке особине монокристала SrTiO_3 “ је одбранила 2000. године под руководством проф. др Јаблана Дојчиловића.

Докторску дисертацију под насловом „Утицај термичког третмана алуминијума на луминесцентне особине анодних оксидних слојева“ одбранила је 2012. године под руководством проф. др Беђка Касалице.

2. Наставна активност

Радни однос на Физичком факултету др Мирјана Сарван је засновала 1990. године. Као асистент држала је експерименталне вежбе на седам различитих курсева I, II и IV године студија (Физичка механика, Термофизика, Физика за студенте хемије и молекуларне биологије, Електромагнетизам, Таласи и структура материје, Испитивање материјала и Физика чврстог стања).

На мастер студијама држи предмет Карактеризација материјала. Била је члан више комисија за одбрану дипломских и мастер радова из области Примењене физике. Др Мирјана Сарван има изузетан педагошки дар. Вежбе које је држала студентима су увек разумљиве и добро интегрисане у курс.

У првом доцентском периоду (од 2015. до 2020. године) је држала предавања из предмета Испитивање материјала за студенте А и Ц смера. У другом деоцентском периоду (2020. - 2025.), поред редовних наставних обавеза на предметима општих курсева физике за студенте Факултета за физичку хемију (Физика 2 и Физика 3), држала је консултативна предавања из Карактеризације материјала.

За свој рад у настави оцењена је од стране студената оценом 4.616.

3. Научна активност

Др Мирјана Сарван се до магистратуре бавила истраживањима која су обухватала испитивања диелектричних особина материјала, под руководством проф. др Јаблана Дојчиловића. После магистратуре почела је, под руководством др Бранислава Јованића из Института за физику, да се бави истраживањима везаним за испитивање утицаја различитих стресогених фактора на биолошке објекте [А8, Б2, Б3, Б4]. Године 2006. прелази на истраживања везана за анодне оксидне слојеве алуминијума у једносмерном и наизменичном режиму. Докторску дисертацију под насловом Утицај термичког третмана алуминијума на луминесцентне особине анодних оксидних слојева одбранила је 2012. године под руководством проф. др Беђка Касалице. До сада је учествовала на низу домаћих пројеката из основних истраживања и то:

- пројекат „Луминесцентна и фототермална својства ласерских кристала под високим притиском, танких оксидних филмова, полупроводника и биолошких система“ под руководством др Бранислава Јованића у пројектном циклусу 2002-2006 година,

- пројекат „Угљеничне и неорганске наноструктуре“ под руководством проф. др Милана Дамњановића у пројектном циклусу од 2006-2011. године и

- пројекат “Графитне и неорганске наноструктуре ниске димензионалности” под руководством проф. др Милана Дамњановића у пројектном циклусу 2011-2019.

Резултати научног рада др Мирјане Сарван су публиковани у 15 радова у међународним часописима који према класификацији Министарства за просвету, науку и технолошки развој припадају категоријама M21, M22 и M23. Од тога је објавила 10 радова у врхунским међународним часописима из категорије M21, 2 рада у истакнутим међународним часописима из категорије M22 и 3 рада у међународним часописима категорије M23.

Такође, кандидаткиња има седам саопштења на међународним скуповима штампаних у целини категорије M33 и осам саопштења на међународном скупу штампаном у изводу категорије M34. Има и седам саопштења на скуповима националног значаја штампаних у целини категорије M63. Публикације др Мирјане Сарван су цитиране 122 пута (хетероцитати-SCOPUS) њихов укупни импакт фактор износи 42.496.

Кандидат др Мирјана Сарван је такође дала значајан допринос у формирању и поступку акредитације лабораторије за еталонирање мерила температуре, спектрофотометријских величина, релативне влажности, мерила масе, волуметријских судова и рН метара на Физичком факултету у Београду, која је и данас акредитована од стране АТС – а. Тренутна позиција др Мирјане Сарван у овој лабораторији је место метролога и заменика техничког руководиоца Лабораторије.

4. Списак публикација

А. Радови у међународним часописима

Радови из категорије M21

[A1] B. Kasalica, I. Belca, S. Stojadinovic, **M. Sarvan**, M. Peric, Lj. Zekovic, “*Nature of the galvanoluminescence of oxide films formed by aluminum anodization in inorganic electrolytes*”, Journal of Physical Chemistry C 111 (2007) 12315–12319. [M21 IF 3.369/2008]

[A2] **M. Sarvan**, S. Stojadinovic, B. Kasalica, I. Belca, Lj. Zekovic, “*Effect of aluminum annealing on the galvanoluminescence properties of anodic oxide films formed in organic electrolytes*”, Electrochimica Acta 53 (2008) 2183–2187. [M21 IF 3.325/ 2009]

[A3] B. Kasalica, S. Stojadinović, I. Belča, **M. Sarvan**, Lj. Zeković, J. Radić-Perić, “*Anomalous sodium doublet D_2/D_1 spectral line intensity ratio – a manifestation of CCD’s presaturation effect*”, Journal of Analytical Atomic Spectrometry 28 (2013) 92–97. [M21 IF 3.220/2011]

[A4] **M. Sarvan**, J. Radić–Perić, B. Kasalica, I. Belča, S. Stojadinović, M. Perić *"Investigation of long-duration plasma electrolytic oxidation of aluminium by means of optical spectroscopy"*, Surface & Coating Technology 254 (2014) 270 – 276 [M21 IF 2.20]

[A5] D. M. Popovic, J. S. Chai, A. A. Zekic, M. Trtica, J. Stasic, **M. Sarvan** *"The influence of applying the additional continuous laser on the synthesis of silicon-based nanoparticles by picoseconds laser ablation in liquid"* Laser Physics Letters 11 (2014) 116101 [M21 IF 2.96]

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[A8] Kasalica B., Petkovic-Benazzouz M., **Sarvan M.**, Belca I., Maksimovic B., Misailovic B., Popovic Z. *"Mechanisms of plasma electrolytic oxidation of aluminum at the multi-hour timescales"* Surface & Coatings Technology, (2020), vol. 390 [M21a IF 3.958]

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Радови из категорије M22

[A11] **Mirjana Sarvan**, Miljenko Perić, Ljubiša Zeković, Stevan Stojadinović, Ivan Belča, Marija Petković, Bećko Kasalica *"Identification of the $C^2\Pi-X^2\Sigma^+$ band system of AlO in the ultraviolet galvanoluminescence obtained during aluminum anodization"* Spectrochimica Acta A: Molecular and Biomolecular Spectroscopy 81 (2011) 672–678. [M22 IF 2.098/2011]

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Радови из категорије M23

[A13] Radomir Ranković, Stevan Stojadinović, **Mirjana Sarvan**, Bećko Kasalica, Marija Krmar, Jelena Radić-Perić, Miljenko Perić *"A multidisciplinary study on magnesium"*, Journal of Serbian Chemical Society 77 (2012) 1483–1528. [M23 IF 0.879/2011] Review

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Б. Радови у зборницима међународних конференција

Радови у зборницима међународних конференција штампани у целини (M33)

[B1] S. Stojadinović, B. Kasalica, I. Belča, **M. Sarvan**, M. Tadić, M. Petković, Lj. Zeković, *"The effect of annealing on the galvanoluminescence spectra of barrier anodic oxide films formed in organic electrolytes"* XVII Symposium on Condensed Matter Physics – SFKM 2007, Vršac 226-229.

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[B6] Marija M. Petković Benazzouz, **Mirjana Ž. Sarvan**, Ivana Djordjevic, Katarina M. Miletić, Goran V. Janjić. *Exploring The Influence Of Geometric Parameters On Fluorine-Oxygen (F...O) Interactions* 29th CONFERENCE OF THE SERBIAN CRYSTALLOGRAPHIC SOCIETY (2024)

[B7] Marija M. Petković Benazzouz, **Mirjana Ž. Sarvan**, Katarina M. Miletić, Goran V. Janjić, Aleksandra A. Rakic, *EXPLORING F...F INTERACTIONS IN CRYSTAL STRUCTURES: INSIGHTS INTO GEOMETRIC ARRANGEMENTS* . 29th CONFERENCE OF THE SERBIAN CRYSTALLOGRAPHIC SOCIETY (2024)

Радови у зборницима међународних конференција штампани у изводу (M34)

[B8] **Sarvan Mirjana**, Dojčilović Jablan, Kulagin Nikolaj, *Anomalous of the Dielectric Parametars os SrTiO₃ Crystals Doped by RE-Ions*, International Conference od Physics in Laser Crystals (ICPLC), August 26-September 2, (2002).

[B9] **M. Sarvan**, M. Petkovic Benazzouz, A. Rakic, G. Janjic, *Acceptor ability of coordinated oxygen atom. Crystallographic and quantum-chemical study*, 25th Conference of the Serbian Crystallographic Society (2018), Book of Abstracts, pp 70-71.

- [B10] M. Petkovic Benazzouz, **M. Sarvan**, I. Đorđević, G. Janjic, *Crystallographic insight into the substitution of Sulphur by selenium, quantum-chemical calculation and biosystem recognition*, 26th Conference of the Serbian Crystallographic Society (2019), Book of abstracts, pp 36-37.
- [B11] **M. Sarvan**, M. Petkovic Benazzouz, G. Janjic, *Bond-bond interactions, the missing fundament of supramolecular architecture*, 26th Conference of the Serbian Crystallographic Society (2019), Book of abstracts, pp 88-89.
- [B12] A. A. Rakic, I. S. Đorđević, M. Popadic, **M. Sarvan**, M. Petkovic Benazzouz, G. V. Janjic, *Substitution of S by Se, Supramolecular insight*, Quantum Crystallography Online Meeting QcrOM2020 (2020), Book of abstracts, pp 30.
- [B13] M. Petkovic Benazzouz, A. Rakic, N. Trisovic, G. Janjic, **M. Sarvan**, *Fluorination of aromatic groups. The effect of coordination on fluorine interactions*, 27th Conference of the Serbian Crystallographic Society (2021), Book of abstracts, pp. 48-49.
- [B14] M. M. Petkovic Benazzouz, **M. Sarvan**, I. Đorđević, K. Miletic, G. Janjic, *Exploring the influence of geometric parameters on fluorine-oxygen (F...O) interactions*, 29th Conference of the Serbian Crystallographic Society (2024), Book of abstracts, pp. 92.
- [B15] M. Petković Benazzouz, **M. Sarvan**, K. Miletić, G. Janjić, A. Rakic, *Exploring f...f interactions in crystal structures: insights into geometric arrangements*, 29th Conference of the Serbian Crystallographic Society (2024), Book of abstracts, pp. 101

В. Радови у зборницима домаћих конференција

Радови у зборницима домаћих конференција штампани у целини (M63)

- [B1] S. Stojadinović, B. Kasalica, I. Belča, M. Tadić, **M. Sarvan**, M. Petković, D. Nikolić, Љ. Zeković, *“Uticaj temperaturnog pretretmana površine aluminijuma na galvanoluminescenciju poroznih anodnih oksidnih slojeva”*, LI ETRAN, Igalo, 2007, N.M1.4. 1-4.
- [B2] S. Stojadinović, I. Belča, R. Vasilić, B. Kasalica, M. Petković, M. Tadić, **M. Sarvan**, Lj. Zeković, *“Fotoluminescentne karakteristike poroznih oksidnih slojeva dobijenih anodizacijom aluminijuma u sulfaminskoj kiselini”*, LIII ETRAN, Vrnjačka Banja, 2009, NM 1.9-1-4.

[B3] S. Stojadinović, R. Vasilić, I. Belča, B. Kasalica, M. Petković, Z. Nedić, **M. Sarvan**, Lj. Zeković, *“Plazma elektrolitička oksidacija aluminijuma u elektrolitima koji sadrže volfram”*, LIV ETRAN, Donji Milanovac, 2010, NM 1.1-1-4.

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5. Списак цитата

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ЗАКЉУЧАК

Комисија констатује да се на конкурс за избор једног доцента за ужу научну област Примењена физика јавио један кандидат чији резултати задовољавају услове за избор у звање доцента прописане Законом о високом образовању, Статутом Универзитета у Београду и Статутом и Правилником за изборе у звања Физичког факултета. Др Мирјана Сарван је до сада објавила 15 радова у међународним часописима са импакт фактором већим од 1 и укупним импакт фактором тих радова 42,496 који су цитирани 122 пута (без самоцитата и цитата коаутора). Од последњег избора у звање доцента, објавила је 3 рада у међународним часописима ($ИФ > 1$).

У досадашњем наставном раду кандидат је показао способност за рад и комуникацију са студентима, а њен педагошки рад је оцењен од стране студената оценом 4,616.

Такође, врло је важан допринос кандидаткиње у раду и развоју Лабораторије за еталонирање акредитоване од стране АТС-а.

На основу свега наведеног Комисија сматра да кандидаткиња др Мира Сарван одговара специфичним захтевима уже научне области Примењена физика, те предлаже Изборном већу Физичког факултета да усвоји овај Извештај и изабере др Мирјану Сарван у звање доцента Физичког факултета за ужу научну област Примењена физика.

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