

Научном већу
Института техничких наука САНУ
Кнез Михаилова 35/IV
11000 Београд
Република Србија

МОЛБА

Молим Научно веће Института техничких наука САНУ да у складу са Правилником о поступку и начину вредновања и квантитативном исказивању научно-истраживачких резултата истраживача (Службени Гласник РС, бр. 24/2016, 21/2017 и 38/2017) покрене поступак мог избора у звање виши научни сарадник. У прилогу достављам:

1. Стручну биографију
2. Библиографију
3. Извештај о цитирањости досадашњих публикација
4. Прилоге о квалитативним резултатима досадашњег научно-истраживачког рада

За чланове комисије предлажем:

1. Др Славица Савић, виши научни сарадник (поступак избора за научног саветника у току), Институт *BioSense*, Универзитет у Новом Саду, председница комисије
2. Др Небојша Лабус, виши научни сарадник ИТН САНУ
3. Др Ђорђе Вельовић, доцент, виши научни сарадник, Технолошко-металуршки факултет, Универзитет у Београду

У Хановеру, 21.07.2020.

Подносилац молбе



Др Миодраг Ј. Лукић,
Научни сарадник ИТН САНУ

1. Стручна биографија

Миодраг (Јован) Лукић рођен је 17.01.1984. године Сарајеву. Основну школу је започео у Бугојну, Босна и Херцеговина, а завршио у Црној Гори, као и средњошколско гимназијско образовање. На Факултету за физичку хемију Универзитета у Београду дипломирао је априла 2009. године. Непосредно након тога се запошљава на Институту техничких наука као истраживач приправник и отпочиње докторске студије на Факултету за физичку хемију Универзитета у Београду, где је децембра 2014. године одбранио докторску дисертацију под називом „Двостепено синтеровање, фазне трансформације, електричне и механичке особине наноструктурних биокерамичких материјала на бази хидроксиапатита“. У звање истраживач сарадник је изабран 2011. године, реизабран 2014. године, а у звање научни сарадник је изабран у 25.11.2015. године (број одлуке 660-01-00011/198). Од 1.12.2017 до 31.12.2018. године боравио је на Универзитету у Констанцу, СР Немачка, на постдокторском усавршавању на департману за физичку хемију. Од 1.7.2019 до (очекивано 30.9.2020) борави на постдокторском усавршавању на Лајбницовом Универзитету у Хановеру, СР Немачка. Добитник је, редом, (вишегодишње) стипендије СО Бар, Црна Гора, изабран на конкурсу за 300 најбољих студената у Србији од стране Европског покрета у Србији 2007. године, награде за најбољу усмену презентацију Конференције младих истраживача у Београду, 2011. године, награде за најбољу постерску презентацију на конференцији YUCOMAT 2012. године, обе награде додељене од стране Друштва за истраживање материјала Србије, награде за најбољу усмену презентацију на конференцији 2017. године од стране Српског керамичког друштва, као и стипендије за постдокторски истраживачки боравак од 6 месеци од стране агенције ДААД (Немачка служба за академску размену) 2017. године за научни пројекат о раним фазама нуклеације у воденим растворима алуминијума. Поред успешног докторског образовања у области густих биокерамичких материјала на бази калцијум фосфата и бројних објављених публикација из области наноструктурних керамичких материјала, стекао је ново знање и искуство у областима (не)класичне нуклеације. Нова знања усвојио је бавећи се основним истраживањима у системима алуминијума и гвожђа, као и о утицају адитива на поступке раздавања фаза, отварајући пут за савремене примене у медицини, техничким материјалима за заштиту од корозије, размену топлоте, фармацији, новим изворима енергије, и бројним другим областима од интереса за савремено друштво. До сада је објавио 18 радова у међународним часописима, више од 80 % као M21a/M21 категорију. Аутор је једног националног патента и два поглавља у књизи. Рецензент је бројних часописа као и Холандске и Руске научне фондације. Члан је научног одбора конференције младих истраживача (Young Researchers' Conference) и научног већа ИТН САНУ од 2015. године. Члан је (стално или повремено у току претходног петогодишњег периода) Друштва за истраживање материјала Србије, Друштва за керамичке материјале Србије, Европског керамичког друштва, и бројних стручних и научних међународних друштава и форума. Остварио је многобројне контакте и сарадње, што се види кроз зеједничке публикације и захвалнице. Радови су му цитирани 208 пута, без аутоцитата 187 пута, (база Scopus, на дан 22.6.2020), Хиршов индекс - 7. Држављанин је Републике Србије.

Најзначајни национални и међународни пројекти

- "Молекуларно дизајнирање наночестица контролисаних морфолошких и физичкохемијских карактеристика и функционалних материјала на њиховој основи" национални пројекат, ИИИ 45004, 2011-2020, руководилац проф. др Д. Ускоковић, Институт техничких наука САНУ
- „Наноструктурно дизајнирање вишефункционалних и синтетизованих функционално градијентних електричних и биолошких материјала“ билатерални пројекат између Републике Србије и Републике Словеније, 2012-2013, руководилац др С. Марковић, Институт техничких наука САНУ
- „Развој и евалуација терапеутика на бази биоактивних стакала за ткивно инжењерство и контролисану доставу лекова“, билатерални пројекат између Републике Србије и Савезне републике Немачке, 2014-2015, руководилац др М. Стевановић, Институт техничких наука САНУ
- „Биокомпабилне честице и скафолди пројектовани за доставу лекова и регенеративну медицину“, билатерални пројекат између Републике Србије и Републике Словеније, 2016-2017, руководилац др М. Стевановић, Институт техничких наука САНУ
- „Study of the aluminum(III) oxide nucleation mechanism and the influence of Ca^{2+} ions“, пројекат финансиран од Немачке агенције за академску размену (ДААД), 2017-2018, индивидуална стипендија додељена др М.Ј. Лукићу, за боравак на Универзитету Констанц, СР Немачка
- „High-capacity electrodes for aqueous rechargeable multivalent-ion batteries and supercapacitors: next step towards a hybrid model – HiSuperBat“, пројекат из програма PROMIS, Фонд за науку Републике Србије, 2020-2022, руководилац др М. Вујковић, Факултет за физичку хемију, Универзитет у Београду

Рецензент је у следећим часописима¹:

- Environmental Science & Technology (IF 7.864)
- Journal of Materials Research and Technology (IF 5.289)
- Colloids & Surfaces B: Biointerphases (IF 4.389)
- Scientific Reports (IF 4.011)
- Ceramics International (IF 3.83)
- Journal of the American Ceramic Society (IF 3.502)
- Ionics (IF 2.394)
- Biomedical Engineering Online (IF 2.013)
- Micron (IF 1.577)
- Chemical Industry & Chemical Engineering Quarterly (IF 0.870)
- Science of Sintering (IF 0.680)
- Tehnika – Novi materijali
- SN Applied Science
-

Рецензент је у следећим и научним фондацијама²:

- Dutch Science Foundation
- Russian Science Foundation;

¹ Најважније захвалнице након рецензија дате су у Прилогу 1.

² Прилог 2.

Методе карактеризације

- аутоматизовани систем за прецизне потенциометријске титрације, термалне методе анализе са масеном спектрометријом, УВ-Вис спектрометрија, ИЦ спектрометрија, дифрактометрија праха, дилатометрија, сканирајућа електронска микроскопија са хемијском анализом, трансмисиона електронска микроскопија, методе одређивања величине честица, изотермална титрациона калориметрија, електродна импедансна спектроскопија, метода аналитичког центрифугирања;

Сарадња са студентима

- *Желько Јанићијевић* - сарадња на изради завршног рада, Испитивање адсорпције протеина на наночестичној хидроксиапатитној керамици (3 месеца), Електротехнички факултет, Универзитет у Београду, 2011 (**Прилог 3**)
- *Желько Јанићијевић*, дипл. инг. електротехнике, мастер – сарадња са докторандом на новом приступу синтези хидроксиапатита у електричном пољу, резултати публиковани: Alternating current electric field modified synthesis of hydroxyapatite bioceramics, Materials & Design, 109 (2016), 511-519. doi.org/10.1016/j.matdes.2016.07.061 (**IF 4.498**); Методе: термална анализа, инфрацрвена спектроскопија, дилатометрија.
- *Дарија Петковић* – студент завршне године Факултета за физичку хемију, Универзитет у Београду, истраживачка пракса, 2-3 месеца, 2017. год. Тема: Утицај брзине загревања на хемијске промене током синтеровања хидроксиапатита; Методе: инфрацрвена спектроскопија, дилатометрија са масеном спектрометријом. Резултати у припреми.
- *Теодора Илић* – студент завршне године Факултета за физичку хемију, Универзитет у Београду на размени (IAESTE) на Универзитету у Констанцу, СР Немачка, 1 месец, 2018. год. Тема: Утицај присуства полиглутаминске киселине на нуклеацију у воденим системима гвожђа(III); Методе: потенциометријске титрације, одређивање величине честица DLS методом. Резултати у припреми.
- *Nele Marquardt* – студент мастер студија, хемија, Лајбницов Универзитет Хановер, СР Немачка, истраживачи пројекат, 6 недеља, Тема: Утицај присуства полиаспарагинске киселине на нуклеацију у воденим системима алуминијума(III); Методе: потенциометријске титрације, сканирајућа електронска микроскопија са хемијском анализом, инфрацрвена спектроскопија, писање и корекција научног извештаја (**Прилог 4**). Резултати у припреми.

Ангажованост у образовању и формирању стручних и научних кадрова и наставне активности

- Учешће у реализацији лабораторијских вежби и експерименталних демонстрација у склопу посете студената Електротехничког факултета, Универзитет у Београду, лабораторијама ИТН-а САНУ децембра 2016 год., на предмету „Биоматеријали“ на 4. години студија (**Прилог 5**)
- Показна испитивања материјала и демонстрација рада на инструментима за карактеризацију у материјала (дилатометрија, термална анализа, одређивање расподеле величине честица) студентима Технолошко-металуршког факултета, Универзитет у Београду, на предметима: Процесирање и примена керамичких материјала, Технологија грађевинских материјала, Карактеризација керамичких материјала, 2016-2017. год. (**Прилог 6**)
- Организација и имплементација предмета „Основе аналитике материјала“ (Grundlagen der Materialanalytik), мастер ниво студија, – писање скрипте за лабораторијски експеримент кристализације калцијум карбоната, одржавање колоквијума студенетима, корекција студентских извештаја, 2020 год, Лајбницов Универзитет у Хановеру (реф. контакт: проф. др Денис Гебауер (Denis Gebauer), Институт за неорганску хемију, Лајбницов Универзитет Хановер).
- Надгледање извођења лабораторијских вежби из предмета аналитичка хемија, основни ниво студија, вежбе из инструменталне анализе, одржавање колоквијума. Померено за август 2020. услед пандемије. Лајбницов Универзитет у Хановеру (реф. контакт: проф. др Денис Гебауер (Denis Gebauer), Институт за неорганску хемију, Лајбницов Универзитет Хановер).

Најзначајније остварене сарадње³

- Лајбницов Универзитет Хановер, СР Немачка
- Универзитет Констанц, СР Немачка
- Саутерн Крос Универзитет, Аустралија
- Кинески универзитет за геонауке, Пекинг, НР Кина
- Школа за хемијски и процесни инжењеринг, Универзитет Лидс, Велика Британија
- Центар за истраживање и примену нанотехнологије (СУНУМ), Универзитет Сабанџи, Истанбул, Турска
- друге научно-истраживачке институције са простора бивше СФР Југославије

³ Захвалнице за бројне сарадње наведене у **Прилогу 7. а-в**

2. Библиографија

2.1 Пре избора у звање научни сарадник (25. новембар 2015)

М13 (7.0) - Монографска студија/поглавље у књизи М11 или рад у тематском зборнику водећег међунарданог значаја

- S. Marković, M. Lukić, Č. Jovalekić, S. D. Škapin, D. Suvorov, D. Uskoković. Sintering effects on microstructure and electrical properties of CaCu₃Ti₄O₁₂ ceramics, (2013) Ceramic Transactions, (Eds. Narottam P. Bansal, Jitendra P. Singh, Song Ko, Ricardo Castro, Gary Pickrell, Navin Jose Manjooran, Mani Nair, Gurpreet Singh), 240, pp. 337-348. John Wiley & Sons doi.org/10.1002/9781118744109.ch37

М21а (10.0) - Радови објављени у међународним часописима изузетних вредности

- M. Lukić, Z. Stojanović, S.D. Škapin, M. Maček-Kržmanc, M. Mitrić, S. Marković, D. Uskoković, Dense fine-grained biphasic calcium phosphate (BCP) bioceramics designed by two-step sintering, Journal of the European Ceramic Society, 31 (2011), 19-27. doi.org/10.1016/j.jeurceramsoc.2010.09.006 (IF 2.575) Категорија: Materials Science, Ceramics (1/25) (44 хетероцитата)
- M. J. Lukić*, S. D. Škapin, S. Marković and D. Uskoković, Processing route to fully dense nanostructured HA bioceramics: from powder synthesis to sintering, Journal of the American Ceramic Society, 95 (2012), 3394-3402. doi.org/10.1111/j.1551-2916.2012.05376.x (IF 2.272) Категорија: Materials Science, Ceramics (2/25) (10 хетероцитата)

М21 (8.0) - Радови објављени у врхунским међународним часописима

- S. Marković, L. Veselinović, M. J. Lukić, L. Karanović, I. Bračko, N. Ignjatović N. D. Uskoković, Synthetical bone-like and biological hydroxyapatites: A comparative study of crystal structure and morphology (2011) Biomedical Materials, 6 (4) no. 045005 doi.org/10.1088/1748-6041/6/4/045005 (IF 2.619) Категорија: Engineering, Biomedical (17/70) (48 хетероцитата)
- M. J. Lukić*, Lj. Veselinović, Z. Stojanović, M. Maček-Kržmanc, I. Bračko, S. D. Škapin, S. Marković and D. Uskoković, Peculiarities in sintering behaviour of Ca-deficient hydroxyapatite nanopowders, Materials Letters, 68 (2012), 331-335. doi.org/10.1016/j.matlet.2011.10.085 (IF 2.120) Категорија: Materials Science, Multidisciplinary (51/225) (7 хетероцитата) (нормиран на 6,7 поена)
- M. J. Lukić*, Lj. Veselinović, M. Stevanović, J. Nunić, S. Marković and D. Uskoković, Hydroxyapatite nanopowders prepared in the presence of zirconium ions, Materials Letters, 122 (2014), 296-300. doi.org/10.1016/j.matlet.2014.02.072 (IF 2.489) Категорија: Materials Science, Multidisciplinary (60/260) (6 хетероцитата)
- M. J. Lukić*, Č. Jovalekić, S. Marković, and D. Uskoković, Enhanced high-temperature electrical response of dense hydroxyapatite upon grain size refinement, Materials Research Bulletin, 61 (2015), 534-538. doi.org/10.1016/j.materresbull.2014.10.072 (IF 2.128) Категорија: Materials Science, Multidisciplinary (75/251) (5 хетероцитата)

- M. Stevanović, N. Filipović, J. Djurdjević, M. **M. Lukić**, Milenković, A. Boccaccini, 45S5 Bioglass®-based scaffolds coated with selenium nanoparticles or with poly(lactide-co-glycolide)/selenium particles: Processing, evaluation and antibacterial activity, Colloids and Surfaces B: Biointerfaces, 132 (2015), 208-215. DOI: 10.1016/j.colsurfb.2015.05.024 (**IF 4.287**) Категорија: Materials Science, Biomaterials (7/32) (36 хетероцитата)
- S. Marković, **M. J. Lukić**, S. D. Škapin, B. Stojanović, D. Uskoković, Designing, fabrication and characterization of nanostructured functionally graded HAp/BCP ceramics, (2015) Ceramics International, 41 (2) pp. 2654-2667. doi.org/10.1016/j.ceramint.2014.10.079 (**IF 2.661**) Категорија: Materials Science, Ceramics (3/27) (21 хетероцитата)

M34 (0.5) Саопштење са међународног скупа штампано у изводу

- **M. Lukić**, N. Ignjatović, S. Marković, D. Uskoković, Precipitation synthesis and twostep sintering of hydroxyapatite nanopowders, Eleventh Annual Conference Yucomat 2009, 31. avgust- 4. septembar, Herceg Novi, Crna Gora, Book of Abstracts, стр. 187.
- Lj. Veselinović, S. Marković, **M. Lukić**, D. Uskoković, The XRD analysis of the calcium phase composition depending on powder synthesis and heating rates, Twelfth Annual Conference Yucomat 2010, 6-10 septembar, Herceg Novi, Crna Gora, Book of Abstracts, стр. 90.
- **M. J. Lukić**, Z. Stojanović, Lj. Veselinović, S. Marković, D. Uskoković, Influence of heating rate on two-step sintering behaviour of different hydroxyapatite nanopowders, Twelfth Annual Conference Yucomat 2010, 6-10 septembar, Herceg Novi, Crna Gora, Book of Abstracts, стр. 142.
- **M. J. Lukić**, Z. Stojanović, Lj. Veselinović, S. Marković, D. Uskoković, Designing of dense nanostructured calcium-phosphate based ceramics, 10 th Junior Euromat, 26-30 Jul, 2010, Lozana, Švajcarska, Book of Abstracts, стр. 47.
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- **M. J. Lukić**, Lj. Veselinović, S. D. Škapin, M. Maček-Kržmanc, S. Marković, D. Uskoković, DSC-TG-MS study of hydroxyapatite nanopowders, Twelfth Young Researchers Conference Materials Science and Engineering, 2013, 11-13 decembar, Beograd, Srbija, knjiga apstrakata, ctp. 35.

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- **M. Lukić**, L. Mančić, S.D. Škapin, M. Mitrić, D. Uskoković, Structural investigation of CaCu₃B₄O₁₂ (B = Ti, Ru) Ljiljana Veselinović, S. Marković, Sixteenth Annual Conference Yucomat 2014, 1-5 septembar, Herceg Novi, Crna Gora, Book of Abstracts, str. 67.

М 64 (0.2) Саопштења са скупа од националног значаја штампана изводу

- **M. J. Lukić**, L. Veselinović, Z. Stojanović, S. Marković, N. Ignjatović, D. Uskoković, Master sintering kriva nano kalcijum hidroksiapatita (CaHAp), Осма конференција младих истраживача – Наука и инжењерство нових материјала, 21.-23. decembar 2009. godine, Book of Abstracts, str. 17.

М71 (6.0) - Одбранјена докторска дисертација

Миодраг Ј. Лукић „Двостепено синтетовање, фазне трансформације, електричне и механичке особине наноструктурних биокерамичких материјала на бази хидроксиапатита“. Факултет за Физичку хемију, Универзитет у Београду (2014)

<http://dais.sanu.ac.rs/handle/123456789/600?show=full>,

<https://fedorabg.bg.ac.rs/fedora/get/o:11600/bdef:Asset/view?language=en>

Табела 1. Број бодова остварених пре избора у звање Научни сарадник (25.11.2015)

Ознака	Број	Вредност индикатора	Вредност после нормирања	Укупна вредност/вредност након нормирања
M13	1	7	7	7
M21a	2	10	10+10	20
M21	6	8	8+6,7*+8+8+8+8	48/46,7*
M34	21	0,5	21x0,5	10,5
M64	1	0,2	0,2	0,2
M71	1	6	6	6
Укупно				92,2/90,4

***Нормирано у случају више од 7 коаутора**

2.2 Након избора у звање научни сарадник (25. новембар 2015)

M13 (7.0) - Монографска студија/поглавље у књизи или рад у тематском зборнику водећег међународног значаја

- M. Stevanović, **M. J. Lukić**, A. Stanković, N. Filipović, M. Kuzmanović, Ž. Janićijević, Biomedical inorganic nanoparticles: Preparation, properties, and processing, in Materials for Biomedical Engineering: Inorganic Micro- and Nanostructures, Biomedical Engineering, ELSEVIER, (2019), 1-45, eBook ISBN: 9780081028155

M21a (10.0) - Радови објављени у међународним часописима изузетних вредности

- **M. J. Lukić**, E. Wiedenback, H. Reiner, D. Gebauer, Chemical trigger toward phase separation in the aqueous Al(III) system revealed, *Science Advances*, 6: eaba6878, 2020. doi: 10.1126/sciadv.aba6878 (IF 13.116) Категорија: Multidisciplinary Sciences (4/71) (без хетероцитата)
- **M. J. Lukić***, M. Kuzmanović, M. Sezen, F. Bakan, A. Egelja, L. Veselinović, Inert atmosphere processing of hydroxyapatite in the presence of lithium iron phosphate, *Journal of the European Ceramics Society*, 38 (2018) 2120-2133. doi.org/10.1016/j.jeurceramsoc.2017.12.023 (IF 3.923) Категорија: Materials Science, Ceramics (1/28) (1 хетероцитат)
- Đ. Veljović, T. Matić, T. Stamenić, V. Kojić, S. Dimitrijević-Branković, **M. J. Lukić**, S. Jevtić, Ž. Radovanović, R. Petrović, Đ. Janaćković. Mg/Cu co-substituted hydroxyapatite – Biocompatibility, mechanical properties and antimicrobial activity, (2019) *Ceramics International*, 45 (17), pp. 22029-22039. doi.org/10.1016/j.ceramint.2019.07.219 (IF 3.83) Категорија: Materials Science, Ceramics (2/28) (5 хетероцитата) (нормиран на 6,25 поена)
- M. Omerašević, **M. Lukić**, M. Savić-Biserčić, A. Savić, Matović Lj., Baščarević Z., D. Bučevac, Permanent disposal of Cs ions in the form of dense pollucite ceramics having low thermal expansion coefficient, *Ceramics Interanational*, 52 (2020) 115-122 doi.org/10.1016/j.net.2019.07.001 (IF 3.83) Категорија: Materials Science, Ceramics (2/28) (без хетероцитата)

M21 (8.0) - Радови објављени у врхунским међународним часописима

- **M. J. Lukić**, A. Rose, D. Gebauer, Non-classical Nucleation towards Separation and Recycling Science: Iron and Aluminium (Oxy)(hydr)oxides, *Current Opinion in Colloid & Interface Science*, in press, 2020, doi.org/10.1016/j.cocis.2020.03.010 (IF 6.79) Категорија: Chemistry, Physical (34/159) (без хетероцитата)
- T.Pantić, I. Milanović, **M. Lukić**, J. Grbović Novaković, S. Kurko, N. Biliškov, S. Milošević-Govedarović, The influence of mechanical milling parameters on hydrogen desorption from $Mg_{0.2}-WO_3$ composites, *International Journal of Hydrogen Energy*, 45, 14 (2020) 7901-7911, doi.org/10.1016/j.ijhydene.2019.07.167 (IF 4.939) Категорија: Electrochemistry (7/27) (без хетероцитата)
- **M. J. Lukić***, M. Sezen, Đ. Veljović, A. Mraković, A facile route for hydroxyapatite densification with an increased heating rate, *Materials Letters*, 207 (2017) 12-15. doi.org/10.1016/j.matlet.2017.07.020 (IF 2.437) Категорија: Materials Science, Multidisciplinary (73/271) (без хетероцитата)

- Ž. Janićijević, **M. J. Lukić**, Lj. Veselinović, Alternating current electric field modified synthesis of hydroxyapatite bioceramics, Materials & Design, 109 (2016), 511-519. doi.org/10.1016/j.matdes.2016.07.061 (**IF 4.498**) Категорија: Materials Science, Multidisciplinary (47/275) (1 хетероцитат)

M22 (5.0) – Радови у истакнутим међународним часописима

- M. Čebela, B. Janković, R. Hercigonja, **M. J. Lukić**, Z. Dohčević-Mitrović, D. Milivojević, B. Matović, Comprehensive characterization of BiFeO₃ powder synthesized by the hydrothermal procedure (2016) Processing and Application of Ceramics, 10 (4), pp. 201-208. doi.org/10.2298/PAC1604201C (**IF 1.152**) Категорија: Materials Science, Ceramics (11/27) (5 хетероцитата)

M24 (2.0) – Рад у часопису међународног значаја верификованог посебном одлуком

- L. Al-Rukaibawi, **M. J. Lukić**, Thereoteical study on the efficiency of utilization of nanoclay-CFRP composite materials in the root area of wind turbine blades (2018), Metallurgical and Material Engineering, 24 (4), pp. 291-316, doi.org/10.30544/397 (без цитата)

M32 (1.5) Предавање по позиву са међународног скупа штампано у изводу

- **M. J. Lukić**, New aspects in processing of hydroxyapatite ceramics, Program and the Book of Abstracts/Serbian Ceramic Society Conference Advanced Ceramics and Application VI: New Frontiers in Multifunctional Material Science and Processing, September 18-20, 2017 Beograd, Srbija, pp. 50.

M34 (0.5) Саопштење са међународног скупа штампано у изводу

- **M. J. Lukić**, M. Kuzmanović, M. Sezen, F. Bakan, L. Veselinović, Simultaneous thermal analysis and dilatometric study of HAp-LiFePO₄ system, 11th Students' Meeting [and] ESR [Early Stage Researchers] Workshop, COST IC1208 Conference for Young Scientists in Ceramics, October 21-24, 2015, Novi Sad, Srbija 2015, Book of Abstracts, pp. 65-65.
- A. Stanković, **M. J. Lukić**, M. Jović, M. Sezen, M. Milenković, M. Stevanović, Synthesis of PLGA/nano-ZnO composite particles for biomedical applications, Joint Event 4th World Conference on Physico-Chemical Methods in Drug Discovery and Development (PCMDD-4) and 1st World Conference on ADMET and DMPK, Septembar 21-24, Rovinj, Hrvatska, Book of Abstract, pp. 76.
- A. Boccaccini, M. Stevanović, N. Filipović, L. Veselinović, **M. J. Lukić**, M. Milenković, Development and evaluation of 45S5 bioglass scaffolds coated with selenium nanoparticles or with poly (lactide-co-glycolide)/selenium nanoparticles, European Symposium and Exhibition on Biomaterials and Related Areas (Euro BioMAT), Weimar, Germany, 2015.
- Ž. Janićijević, **M. J. Lukić**, Reliable low-cost experimental setup for material synthesis modification by applying alternating electric fields, Program and the Book of

Abstracts/Fourteenth Young Researchers' Conference Materials Sciences and Engineering, December 9-11, 2015, Beograd, Srbija, pp. 23.

- N. Filipović, M.J. Lukić, A. Sengottuvelan, S. Kaišarević, N. Andrić, A.R. Boccaccini, M. Stevanović, Coated calcium phosphate scaffolds for bone tissue engineering produced by foam replica method, Program and the Book of Abstracts/Fourteenth Young Researchers' Conference Materials Sciences and Engineering, December 9-11, 2015, Beograd, Srbija, pp. 3.
- M. Omerašević, **M. Lukić**, Z. Baščarević, J. Orlić, M. Mirković, M. Savić-Biserčić, L. Matović, Safe trapping of Cs radionuclides in sintered matrix of zeolites, Program and the Book of Abstracts/Fourteenth Young Researchers' Conference Materials Sciences and Engineering, December 9-11, 2015, Beograd, Srbija, pp. 45.
- T. Pantić, I. Milanović, **M. Lukić**, J. Grbović-Novaković, S. V. Kurko, N. Biliškov, S.S. Milošević, Is WO₃ catalyst for hydrogen desorption? Program and the Book of Abstracts/Sixteenth Young Researchers' Conference Materials Sciences and Engineering, December 6-8, 2017, Beograd, Srbija, pp. 50.
- **M.J. Lukić**, D. Gebauer, The mechanism of homogeneous nucleation in aqueous Al(III) system: a non-classical perspective, 7th Granada-Münster Discussion Meeting, 27-29th November 2019, Granada, Španija, Book of Abstracts, pp. 3.

М92 (12.0) Регистрован патент на националном нивоу

- Патент по пријави: П-72/11, 09.02.2011, „Поступак добијања биокерамичких материјала високе густине на бази калцијум фосфата паралелном оптимизацијом метода синтезе и синтеровања“ Д. Ускоковић, **М. Лукић**, С. Марковић, Љ. Веселиновић, З. Стојановић, уписан у Регистар патената Завода за интелектуалну својину под бројем 54576 (2016. год.)

Табела 2. Број бодова остварених **након** избора у звање Научни сарадник (25.11.2015)

Ознака	Број	Вредност индикатора	Вредност	Укупна
			после нормирања	вредност/вредност након нормирања
M13	1	7	7	7
M21a	4	10	10+10+6,25*+10	40/ 36,25*
M21	4	8	8+8+8+8	32
M22	1	5	5	5
M24	1	2	2	2
M32	1	1,5	1,5	1,5
M34	8	0,5	8x0,5	4
M92	1	12	12	12
Укупно			103,5/99,75*	

***Нормирано у случају више од 7 коаутора**

Табела 3. Квантитативни услови за избор у звање виши научни сарадник

Виши научни сарадник	Потребно	Остварено
Укупно	50	103,5/99,75*
Обавезни 1 M10+M20+M31+M32+M33+M41+M42+M90	40	103,5/99,75*
Обавезни 2 M11+M12+M21+M22+M23	30	77/73,25*

***Нормирано у случају више од 7 коаутора**

Табела 4. Квантитативни исказ вредности импакт фактора

Вредност импакт фактора пре стицања звања Научни сарадник	21,15
Вредност импакт фактора након стицања звања Научни сарадник	44,51
Вредност импакт фактора укупно	65,66

3. Извештај о цитираности радова кандидата др Миодрага Ј. Лукића

на основу базе података Scopus, 22.6.2020

УКУПНО: 207 цитата, од тога 187 хетероцитата

Хиршов индекс: 7

1. M. Lukić, Z. Stojanović, S.D. Škapin, M. Maček-Kržmanc, M. Mitrić, S. Marković, D. Uskoković, Dense fine-grained biphasic calcium phosphate (BCP) bioceramics designed by two-step sintering, Journal of the European Ceramic Society, 31 (2011), 19-27. doi.org/10.1016/j.jeurceramsoc.2010.09.006

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Mg/Cu co-substituted hydroxyapatite – Biocompatibility, mechanical properties and antimicrobial activity

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Microstructure-property relations of biphasic calcium phosphate obtained by hot pressing process

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Türk, S., Altınsoy, I., Çelebi Efe, G., İpek, M., Özacar, M., Bindal, C.

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Ngoc, T.-N.D., Tra, T.-N., Nguyen, T.-H., Huynh, C.-K., Vo Van, T.

Preparation and characterization of nano-sized biphasic calcium phosphate (BCP) for demineralized dentin infiltration in hypersensitivity treatment

(2018) IFMBE Proceedings, 63, pp. 677-680.

DOI: 10.1007/978-981-10-4361-1_116

DOCUMENT TYPE: Conference Paper

Radovanovic, Z., Veljovic, D., Radovanovic, L., Zalite, I., Palcevskis, E., Petrovic, R., Janackovic, D.

Ag⁺, Cu²⁺ and Zn²⁺ doped hydroxyapatite/tricalcium phosphate bioceramics: Influence of doping and sintering technique on mechanical properties

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Dorozhkin, S.V.

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Fakhraei, O., Hesaraki, S., Alizadeh, M., Ebadzaeh, T.
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6602122010;7005211281;14325251500;36089488000;
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DOCUMENT TYPE: Book
PUBLICATION STAGE: Final

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Zare, E.N., Jamaledin, R., Naserzadeh, P., Afjeh-Dana, E., Ashtari, B., Hosseinzadeh, M., Vecchione, R., Wu, A., Tay, F.R., Borzacchiello, A., Makvandi, P.

Metal-Based Nanostructures/PLGA Nanocomposites: Antimicrobial Activity, Cytotoxicity, and Their Biomedical Applications

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DOCUMENT TYPE: Review

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DOCUMENT TYPE: Article

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DOCUMENT TYPE: Review

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DOCUMENT TYPE: Article

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DOCUMENT TYPE: Article

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Molecular designing of nanoparticles and functional materials

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Biomedical inorganic nanoparticles: Preparation, properties, and perspectives

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DOI: 10.1016/B978-0-08-102814-8.00001-9

DOCUMENT TYPE: Book Chapter

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Molecular designing of nanoparticles and functional materials

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(2020) Ceramics International, 46 (8), pp. 11443-11465.

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DOCUMENT TYPE: Review

Ayoub, G., Zebic, M.L., Miletic, V., Petrović, R., Veljovic, D., Janackovic, D.

Dissimilar sintered calcium phosphate dental inserts as dentine substitutes: Shear bond strength to restorative materials

(2020) Journal of Biomedical Materials Research - Part B Applied Biomaterials,
DOI: 10.1002/jbm.b.34578
DOCUMENT TYPE: Article

Martínez-Gracida, N.O., Esparza-González, S.C., Castillo-Martínez, N.A., Serrano-Medina, A., Olivas-Armendariz, I., Campos-Múzquiz, L.G., Múzquiz-Ramos, E.M.
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Myat-Htun, M., Mohd Noor, A.-F., Kawashita, M., Baba Ismail, Y.M.
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18. M.J. Lukić, D. Gebauer, A. Rose

Non-classical Nucleation towards Separation and Recycling Science: Iron and Aluminium (Oxy)(hydr) oxides, Current Opinion in Colloid & Interface Science, accepted, online 6th April 2020, doi.org/10.1016/j.cocis.2020.03.010

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19. MJ Lukić, E Wiedenbeck, H Reiner, D Gebauer

Chemical trigger toward phase separation in aqueous Al(III) system revealed
Science Advances 6 (23), eaba6878
doi: 10.1126/sciadv.eaba6878

Без цитата тренутно

4. Прилози о квалитативним резултатима досадашњег научно-истраживачког рада

Прилог 1 – рецензент, Environmental Science & Technology (IF 7.864)

06-May-2019

Journal: Environmental Science & Technology

Manuscript ID : es-2019-02485e

Title : "Mechanistic insight into biopolymer induced iron oxide mineralization through quantification of molecular bonding"

Author(s): Sand, Karina; Jelavić, Stanislav; Dobberschütz , Sören ; Ashby, Paul; Marshall, Matthew; Dideriksen, Knud; Stipp, Susan ; Kerisit, Sébastien; Friddle, Raymond; De Yoreo, James

Dear Dr. Lukic:

This manuscript has been submitted for possible publication in Environmental Science & Technology. We would greatly appreciate if you would agree to review this manuscript.

As Environmental Science & Technology strives to provide rapid review and publication for authors, we would be hoping to receive your comments on the manuscript within three weeks.

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Thank you for your time and consideration.

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Associate Editor
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eFax: 1(202)354-4603
Email: hofstetter-office@est.acs.org
03-Jun-2019

Journal: Environmental Science & Technology

Manuscript ID: es-2019-02485e

Title: "Mechanistic insight into biopolymer induced iron oxide mineralization through quantification of molecular bonding"

Author(s): Sand, Karina; Jelavić, Stanislav; Dobberschütz , Sören ; Ashby, Paul; Marshall, Matthew; Dideriksen, Knud; Stipp, Susan ; Kerisit, Sébastien; Friddle, Raymond; De Yoreo, James

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Прилог 1 – рецензент, Scientific Reports (IF 4.011)

Датум: Петак, 10 Август, 2018 13:45 CEST
Од: scientificreports@nature.com
Одговори: scientificreports@nature.com
За: miodrag.lukic@uni-konstanz.de

Dear Dr. Lukic,

A manuscript has been submitted to Scientific Reports, which, because you have published related work yourself, we were hoping you would be interested in reviewing. The manuscript comes from Prof Liu et al. and is entitled "Nano-to-Submicron Hydroxyapatite Coatings for Magnesium-based Bioreversible Implants – Deposition, Characterization, Degradation, and Mechanical Properties"; the abstract is appended below.

Scientific Reports is an online multidisciplinary publication which is committed to providing a rapid and fair review process. We would hope to receive your comments within 10 days if you are able to review the manuscript. However if you would like to assist us, but require additional time to review the manuscript, please do not hesitate to contact us.

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If you are unable to help on this occasion, we would appreciate any suggestions for alternative reviewers – perhaps someone in your own laboratory might be suitably qualified?

Many thanks in advance for your help; I look forward to hearing from you. Please do not hesitate to contact me by replying to this e-mail if you have any questions.

Best regards,

Marija Vukomanovic
Editorial Board Member
Scientific Reports

Тема: Receipt of reviewer's report for SREP-18-29489B

Датум: Петак, 30 Новембар, 2018 12:50 CET

Од: scientificreports@nature.com

Одговори: scientificreports@nature.com

За: miodrag.lukic@uni-konstanz.de

Dear Dr. Lukic,

Thank you for submitting your report on "Nano-to-Submicron Hydroxyapatite Coatings for Magnesium-based Bioreversible Implants – Deposition, Characterization, Degradation, Mechanical Properties, and Cytocompatibility" by Prof Liu et al. A copy of this report is attached below for your reference.

Best regards,

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E-mail: scientificreports@nature.com

We greatly welcome your feedback as a peer reviewer for Scientific Reports. Please follow [this link](https://springernature.eu.qualtrics.com/jfe/form/SV_b7SYXaPdUko7LHD?j=110) to complete a brief survey on your experience in reviewing this paper.

Прилог 1 – рецензент, Colloids & Surfaces B: Biointerfaces (IF 4.389)

Ms. Ref. No.: COLSUB-D-20-01162
Title: Silencing of survivin and cyclin B1 through arginine modified calcium phosphate nanoparticles for non-small-cell lung cancer therapy
Colloids and Surfaces B: Biointerfaces

Dear Dr. Miodrag J Lukic,

Thank you for agreeing to review manuscript number COLSUB-D-20-01162 for Colloids and Surfaces B: Biointerfaces.

I would very much appreciate if you would submit your review by Jul 12, 2020.

Please note that, if present, we ask you to include Highlights and the Graphical Abstract in the reviewing process.

To submit your review, please do the following:

1. Go to this URL: <https://ees.elsevier.com/colsub/>
2. If you need to retrieve password details, please go to: http://ees.elsevier.com/COLSUB/autemail_query.asp.

3. Click [Reviewer Login]
This takes you to the Reviewer Main Menu.

4. Click [Pending Assignments]

5. Click [Submit Recommendation] (in the Actions column)

6. Choose your recommendation e.g. Accept, Revise, Reject

7. Rate the paper by clicking on the appropriate check boxes in the Manuscript Review form underneath

8. Insert your confidential comments to the author (your name will not be released to the author)

9. Enter your comments to the editor (these are not available to the author)

10. Click [Proceed]

11. Click [Edit Review] if you wish to make further changes or [Submit Review to Journal Office] to confirm

12. Click [OK] to confirm your overall recommendation.

Ms. Ref. No.: COLSUB-D-20-01162
Title: Silencing of survivin and cyclin B1 through arginine modified calcium phosphate nanoparticles for non-small-cell lung cancer therapy
Colloids and Surfaces B: Biointerfaces

Dear Dr. Miodrag J Lukic,

Thank you for taking the time to review the above-referenced manuscript.

You can access your comments by:

1. Going to: <https://ees.elsevier.com/colsub/>
2. Entering your login details
3. Click [Reviewer Login]

If you have not yet activated or completed your 30 days of access to Scopus and ScienceDirect, you can still access them via this link:

http://scopees.elsevier.com/ees_login.asp?journalacronym=COLSUB&username=miodrag.lukic@itn.sanu.ac.rs

You can use your EES password to access Scopus and ScienceDirect via the URL above. You can save your 30 days access period, but access will expire 6 months after you accepted to review.

Thank you again for sharing your time and knowledge.

For further assistance, please visit our customer support site at <http://help.elsevier.com/app/answers/list/p/7923> Here you can search for solutions on a range of topics, find answers to frequently asked questions and learn more about EES via interactive tutorials. You will also find our 24/7 support contact details should you need any further assistance from one of our customer support representatives.

Yours sincerely,

Dganit Danino
Editor
Colloids and Surfaces B: Biointerfaces

Прилог 1 – рецензент, Ceramics International (IF 3.83)

Reviewer Invitation for CERI-D-19-00324

From Pietro Vincenzini 
Sender eeserver@eesmail.elsevier.com 
To miodrag.lukic@itn.sanu.ac.rs 
Reply-To Pietro Vincenzini 
Date 2019-01-12 08:19

Message 84 of 217

Ms. Ref. No.: CERI-D-19-00324

Title: Thermal stability of Al-substituted hydroxyapatite
Margarita Goldberg, Ph.D.; Pavel Protsenko, Ph.D.; Valeriy Smirnov, Ph.D.; Olga Antonova; Sergey Smirnov; Alexander Konovalov, Ph.D.; Konstantin Vorkachev; Evgeniy Kudryavtsev, Ph.D.; Sergey Barinov, Prof.; Vladimir Komlev, Prof.
Ceramics International

Dear Dr. Miodrag J Lukic,

Given your expertise in this area, I would appreciate your comments on the above paper. I have included the abstract of the manuscript below to provide you with an overview.

If you are unable to act as a reviewer at this time, I would greatly appreciate your suggestions for alternate reviewers.

To accept this invitation, please click here:

<https://ees.elsevier.com/ceri/1.asp?i=37108581-G2MXY1QNA>

To decline this invitation, please click here:

<https://ees.elsevier.com/ceri/1.asp?i=37108481-wEJ83002>

Alternatively, to register your response using the Elsevier Editorial System please do the following:

1. Go to this URL: <https://ees.elsevier.com/ceri/>

2. Enter these login details:

Your username is: miodrag.lukic@itn.sanu.ac.rs

If you need to retrieve password details, please go to: http://ees.elsevier.com/CERI/autocmail_query.asp.

3. Click [Reviewer Login]

This takes you to the Reviewer Main Menu.

4. Click [New Reviewer Invitations]

5. In "Action Links" click either [Agree to Review] or [Decline to Review]

If I do not receive any reply within 7 days, I will assume you cannot accept the invitation.

I look forward to hearing from you in the near future.

As a reviewer you are entitled to complimentary access to Scopus and ScienceDirect for 30 days. Full instructions and details will be provided upon accepting this invitation to review.

Ms. Ref. No.: CERI-D-19-00324

Title: Thermal stability of Al-substituted hydroxyapatite
Ceramics International

Dear Dr. Miodrag J Lukic,

Thank you for taking the time to review the above-referenced manuscript. You can access your comments and the decision letter when it becomes available.

To access your comments and the decision letter, please do the following:

1. Go to this URL: <https://ees.elsevier.com/ceri/>

2. Enter your login details

3. Click [Reviewer Login]

Thank you again for sharing your time and expertise.

If you have not yet activated or completed your 30 days of access to Scopus and ScienceDirect, you can still access them via this link:

http://scopees.elsevier.com/ees_login.asp?journalacronym=CERI&username=miodrag.lukic@itn.sanu.ac.rs

You can use your EES password to access Scopus and ScienceDirect via the URL above. You can save your 30 days access period, but access will expire 6 months after you accepted to review.

Also, please visit our reviewer recognition platform <https://www.reviewercognition.elsevier.com/> to collect your reviewer certificate and to benefit from discounts on Elsevier products and services.

Yours sincerely,

Pietro Vincenzini
General Editor
Ceramics International

Прилог 1 – рецензент, Journal of Materials Research and Technology (IF 5.289)

Ref: JMRT_2019_655_R1

Title: The enhancement of hydroxyapatite thermal stability by Al doping

Journal: Journal of Materials Research and Technology

Corresponding Author: Margarita Goldberg

Dear Dr. Lukic,

The above-referenced manuscript is under consideration for publication. As you kindly reviewed the original version, I would be grateful if you could evaluate whether the authors have adequately addressed your concerns in this revision, and provide a recommendation on its suitability for publication. Our goal is to provide as rapid a response as possible to our authors, so please reply to this invitation as soon as possible.

If you have any concerns about potential conflicts of interest, please consult the Editor.

If you are willing to review this manuscript, please click on the link below:

[Accept Invitation](#)

If you accept this invitation, I would appreciate your submitting your review within 30 days.

Please submit your review via EVISE® at: http://www.evise.com/evise/faces/pages/navigation/NavController.jspx?JRNL_ACR=JMRT.

If you cannot review this manuscript, please click on the link below. I would also appreciate your suggestions for alternate reviewers.

[Decline](#)

I look forward to receiving your response.

Kind regards,

Paulo Rios

Coeditor

Journal of Materials Research and Technology

Ref: JMRT_2019_655

Title: The enhancement thermal stability of hydroxyapatite by Al doping

Journal: Journal of Materials Research and Technology

Dear Dr. Lukic,

Thank you for your review for the above-referenced manuscript. I greatly appreciate the commitment of your time and expertise. Without the dedication of reviewers like you, it would be impossible to manage an efficient peer review process and maintain the high standards necessary for a successful journal.

When a final decision has been reached regarding this manuscript you will be able to view this decision, as well as reviews submitted by any other reviewers, at: http://www.evise.com/evise/faces/pages/navigation/NavController.jspx?JRNL_ACR=JMRT. You can also access your review comments here, at any time.

I hope that you will consider Journal of Materials Research and Technology as a potential journal for your own publications in the future.

Kind regards,

Paulo Rios

Coeditor

Journal of Materials Research and Technology

Прилог 1 – рецензент, Journal of the American Ceramic Society (IF 3.502)

16-Oct-2014

Dear Mr. Lukic:

Manuscript ID JACERS-35774 entitled "Biocompatible quercetin-functionalized silica as novel antioxidant dental implant materials" with Prof. Catauro as contact author has been submitted to the Journal of the American Ceramic Society.

I invite you to review this manuscript. The abstract appears at the end of this letter, along with the names of the authors.

Please consider whether you have any conflict(s) of interest that may have an impact on the impartiality of your review (including in relation to any Company and/or commercial product mentioned in the article). If your conflict is serious enough to preclude your participation you should decline this invitation to review. Please contact me or the Editorial Office prior to accepting this invitation if you'd like to discuss what constitutes a serious conflict.

Please let me know as soon as possible if you will be able to accept my invitation to review. If you are unable to review at this time, I would appreciate you recommending another expert reviewer when you respond. You may e-mail me with your reply or click the appropriate link below to automatically register your reply with our online manuscript submission and review system.

Agreed: http://mc.manuscriptcentral.com/jacers?URL_MASK=8cd9dd928b7c433389d276f025f08765

Declined: http://mc.manuscriptcentral.com/jacers?URL_MASK=31af6cb99f9e451f95b8c935754efba3

Unavailable: http://mc.manuscriptcentral.com/jacers?URL_MASK=c021a9356ab64b6d9875809b1f6df0b7

Once you accept my invitation to review this manuscript, you will be notified via e-mail about how to access Manuscript Central, our online manuscript submission and review system. You will then have access to the manuscript and reviewer instructions in your Reviewer Center.

I realize that our expert reviewers greatly contribute to the high standards of the Journal, and I thank you for your present and/or future participation.

Sincerely,
Prof. Lisa Klein, Editor
Journal of the American Ceramic Society
licklein@rci.rutgers.edu

07-Nov-2014

Dear Mr. Lukic:

Thank you for reviewing manuscript # JACERS-35774 entitled "Biocompatible quercetin-functionalized silica as novel antioxidant dental implant materials" for the Journal of the American Ceramic Society.

On behalf of all the Editors of the Journal of the American Ceramic Society, we appreciate the voluntary contribution that each reviewer gives to the Journal. We thank you for your participation in the online review process and hope that we may call upon you again to review future manuscripts.

Sincerely,

Prof. Lisa Klein
Journal of the American Ceramic Society

Прилог 1 – рецензент, Micron (IF 1.577)

Ref: JMIC_2018_59

Title: Micro and Nanostructural Analysis of a Human Tooth Using Correlated Focused Ion Beam (FIB) and Transmission Electron Microscopy (TEM) Investigations

Journal: Micron

Dear Dr. Lukic,

Thank you for agreeing to review manuscript number JMIC_2018_59 for Micron

If possible, we would appreciate receiving your review by 07/Aug/2018.

Please click [here](#) to read detailed instructions on how to conduct a review.

Does the manuscript represent a technical advance or innovative use of microscopy/imaging or whether does it represent a routine application of microscopy methods?

In particular we draw your attention to the following instructions that we ask you to please follow:

- If present, include Highlights and the Graphical Abstract in the reviewing process.
- Give specific comments and suggestions, including about layout and format, title, abstract, introduction, graphical abstracts and/or highlights, method, statistical errors, results, conclusion/discussion, language and references.
- If you suspect plagiarism, fraud or have other ethical concerns, raise your suspicions with the editor, providing as much detail as possible. Visit Elsevier's ethics site or the COPE [guidelines](#) for more information.
- According to COPE [guidelines](#), reviewers must treat any manuscripts they are asked to review as confidential documents. Since peer review is confidential, they must not share the review or information about the review with anyone without the agreement of the editors and authors involved. This applies both during and after the publication process.
- Any suggestion that the author includes citations to reviewers' (or their associates') work must be for genuine scientific reasons and not with the intention of increasing reviewers' citation counts or enhancing the visibility of reviewers' work (or that of their associates).

You may submit your comments online at: http://www.evise.com/evise/faces/pages/navigation/NavController.jspx?JRNL_ACR=JMIC. Please login as a Reviewer using your username and password.

If you cannot remember your password please click the "Forgotten your username or password?" link on the Login page.

You may access the manuscript by selecting the "Pending Assignments" link on your Home page. To submit your comments, please click on the "My Overall Recommendation". There you will find spaces for confidential comments to the editor, comments for the author and a report form to be completed.

Click here to access the PDF

[VIEW PDF](#)

Thank you in advance for your cooperation.

.....

.....

Ref: JMIC_2018_59

Title: Micro and Nanostructural Analysis of a Human Tooth Using Correlated Focused Ion Beam (FIB) and Transmission Electron Microscopy (TEM) Investigations

Journal: Micron

Dear Dr. Lukic,

Thank you for your review for the above-referenced manuscript. I greatly appreciate the commitment of your time and expertise. Without the dedication of reviewers like you, it would be impossible to manage an efficient peer review process and maintain the high standards necessary for a successful journal.

When a final decision has been reached regarding this manuscript you will be able to view this decision, as well as reviews submitted by any other reviewers, at: http://www.evise.com/evise/faces/pages/navigation/NavController.jspx?JRNL_ACR=JMIC. You can also access your review comments here, at any time.

I hope that you will consider Micron as a potential journal for your own publications in the future.

Kind regards,

R.F. Egerton
Receiving Editor
Micron

Прилог 1 – рецензент, Ionics (IF 2.394)

Dear Dr. Lukić:

Manuscript ID IONICS-2015-0560 entitled "Comparative Evaluation of Electrical Conductivity of hydroxyapatite Ceramics Densified through Ramp and Hold, Spark Plasma and Post Sinter Hot Isostatic Pressing Routes" with Dr. M as contact author has been submitted to IONICS.

I would appreciate if you could review this manuscript. The abstract appears at the end of this letter, along with the names of the authors. Please let me know as soon as possible if you will be able to accept my invitation to review the paper. If you are unable to review at this time, I would appreciate you recommending another expert reviewer. You may e-mail me with your reply or click the appropriate link at the bottom of the page to automatically register your reply with our online manuscript submission and review system.

Once you accept my invitation to review this manuscript, you will be notified via e-mail about how to access Manuscript Central, our online manuscript submission and review system. You will then have access to the manuscript and reviewer instructions in your Reviewer Center.

I realize that our expert reviewers greatly contribute to the high standards of the Journal, and I thank you for your present and/or future participation.

Sincerely,
Prof. Werner Weppner
IONICS Editor-in-Chief
ww@tf.uni-kiel.de

09-Nov-2015

Dear Dr. Lukić:

Thank you for reviewing manuscript # IONICS-2015-0560, entitled "Comparative Evaluation of Electrical Conductivity of hydroxyapatite Ceramics Densified through Ramp and Hold, Spark Plasma and Post Sinter Hot Isostatic Pressing Routes" for IONICS.

We appreciate very much the voluntary contribution that each reviewer gives to the Journal. We thank you for your participation in the online review process and hope that we may call upon you again to review future manuscripts.

Sincerely,
Prof. Werner Weppner
Editor-in-Chief, IONICS
ww@tf.uni-kiel.de

Прилог 2 – рецензент, Холандска научна фондација

Date: February 18, 2020
File: VI.Veni.202.160
Mail id: 2020/ENW/00837059

Dear Dr Lukic,

With this email, NWO, the Dutch Research Council, would like to inquire with you if you are willing to act as a reviewer of a research proposal by P. Ranjan for a Veni grant in the Talent Scheme, entitled: 'Nanoarchitects: Building-up functional composites'. A summary of the research proposal can be found at the end of this e-mail. Please keep this summary and the applicant's name confidential. Additionally, please note that the proposal itself consists of a research part of only six pages, and a CV part of (on average) six pages.

Confidential peer review is an essential part of the assessment procedure of NWO. We would highly appreciate your opinion on the proposed research as an external expert in the field. If you are willing to review this proposal, you will receive login details for our online referee system ISAAC in a separate email. With these details, you can access the complete proposal in ISAAC. To ensure that the assessment procedure remains on schedule, we kindly ask you to submit your review before 10th March 2020. To be able to compare between assessments, please use the assessment form in ISAAC and write your review in English.

Please inform us whether you are willing to act as a reviewer for this proposal by replying to this email within two days after receiving this request. Should you not be able to review this proposal, we would greatly appreciate it if you could provide suggestions of possible alternative reviewers, either in your research team or elsewhere. Please keep in mind that your suggested referees should be of sufficient seniority. Veni applicants are within three years after their PhD, and referees should be more senior than the applicants. NWO strives not to approach reviewers who may have a conflict of interest in reviewing the proposal at hand. If you feel that there is such a conflict of interest, please let us know.

Thank you for your assistance in this matter.

Yours sincerely,
Varsha Kapoorchan
Coordinator Veni Domain Science (ENW)

Date: March 10, 2020
File: VI.Veni.202.160
Mail id: 2020/ENW/00853736

Dear Dr Lukic,

On behalf of NWO Domain Science, I would like to thank you for your review of the Veni research proposal by P. Ranjan, entitled: 'Nanoarchitects: Building-up functional composites'.

The review is an essential contribution to the assessment process. We are aware that it may have taken you a considerable amount of time to conduct and we are very grateful for your assistance.

Decisions on this Veni round will be taken in July 2020. A list of granted projects will be published at www.nwo.nl.

Yours sincerely,

Varsha Kapoorchan
Coordinator Veni Domain Science (ENW)



Прилог 2 – рецензент, Руска научна фондација



Russian Science Foundation

RSF information system

Reviewer Profile

General Information

First name * Modrag Last name * Lukic

Citizenship * Serbia

Date of birth * 17.01.1984

Gender * Male

Additional info

Workplace

Primary place of employment and other workplaces * Institute of Technical Sciences of Serbian Academy of Sciences and Arts, Belgrade, Serbia - currently postdoctoral scientist at Institute of Inorganic Chemistry, Leibniz University Hanover, Hanover, Germany



Russian Science Foundation

RSF information system

- Official documents
- Reviewer profile
- Proposal review
- Contact information

This page displays a list of applications sent to you for expertise.

Before you begin the review, you should read the documents that regulate the Foundation's expertise procedure, and the competition documentation (<http://grant.rscf.ru/enexp/anonymous/official-docs>).

In order to prevent conflict of interest, it is necessary that you confirm your agreement to perform each review (the tab "Pending"). In order to do so, please open the proposal by clicking on its number (the short information about proposal file will open in a new window), read the information, and accept (or reject) it for review by clicking on the corresponding button opposite the proposal. You have about three-four days to confirm your agreement (or rejection). In case we don't receive your consent/rejection within this time the proposal will be reassigned to another expert.

After you confirm your consent, the application will be moved to the tab "In progress".

The tab "In progress" displays a list of the proposals you have accepted for review. To view a full proposal, click on its number (the full proposal file will open in a new window). To prepare your evaluation report on concrete proposal, click on the "Evaluation form" link opposite the corresponding proposal. The tab "Completed" displays a list of completed reviews. For more information please contact the RIAC, the RSF operator for organizing and supporting international expertise, by calling +7 (495) 225-6283 (ext. 127) or emailing to expertise@russiancouncil.ru.

Proposal Review

Proposal №	sent	review deadline	accepted	done	
20-73-10016	2020-05-19		2020-05-20	13.06.2020	Review form
20-73-10110	2020-05-15		2020-05-16	14.06.2020	Review form
20-79-10210	2020-05-13		2020-05-14	15.06.2020	Review form

Жељко Јанићијевић – Испитивање адсорзије протеина на наночестичној хидроксиапатитној керамици



ЕЛЕКТРОТЕХНИЧКИ ФАКУЛТЕТ
УНИВЕРЗИТЕТ У БЕОГРАДУ

ЗАВРШНИ РАД

ИСПИТИВАЊЕ АДСОРЦИЈЕ
ПРОТЕИНА НА НАНОЧЕСТИЧНОЈ
ХИДРОКСИАПАТИТНОЈ КЕРАМИЦИ

МЕНТОР:
проф. др Дејан Раковић

СТУДЕНТ:
Жељко Јанићијевић 254/07

Београд, јул 2011.

ЗАХВАЛНОСТ

На првом месту велику захвалност дuguјем проф. др Дејану Раковићу. Без његове несебичне помоћи и искрене подршке један овако озбиљан подухват не би био могућ. Његови савети и сугестије су ми помогли да брже напредујем у свом научном усавршавању, а његов ентузијазам ми је омогућио да науку посматрам из још једне потпуно другачије перспективе. Хвалу му што ми је пружио шансу да своју идеју преточим у експеримент.

Такође, на овом месту бих се захвалио и проф. др Драгану Ускоковићу, руководиоцу групе Центра за нове материјале и нанотехнологије Института техничких наука САНУ у Винчи. Без његове помоћи и подршке не би били обезбеђени основни ресурси за ово истраживање. Његов перманентни надзор обезбедио је да се истраживање креће у правом смjeru.

Велику помоћ у решавању практичних недоумица и проблема при раду пружили су ми проф. др Ненад Милосавић са Хемијског факултета у Београду и проф. др Ненад Игњатовић, на чemu им се искрено захваљујем .

Посебну захвалност дuguјем Миодрагу Лукићу-Мињи PhD студенту Факултета за физичку хемију у Београду који је био моја десна рука и највећи подршка током свих фаза припреме и експерименталног рада у лабораторији. Захваљујуби сарадњи са њим многе препреке и проблеме при раду сам превазилазио лакше и брже.

Ово истраживање се не би могло одвијати без mr Зорана Стојановића који је издвојио време и труд да хидротермално синтетише хидроксиапатитне керамичке прахове.

Свим осталим истраживачима и запосленима у лабораторији Центра за нове материјале и нанотехнологије, Института техничких наука САНУ захваљујем на пријатном дружењу и угодном боравку у лабораторији где се ниједног тренутка нисам осећао као странац.

На крају бих се захвалио својој породици и девојци Наташи на љубави, подршци и разумевању.

The influence of polyaspartic acid (pAsp) on nucleation in the aqueous Al(III) System

Internship II –
inorganic-chemical material chemistry

Protocol: Nele Marquardt

Time period: 16.12.2019 – 23.12.2019; 02.01.2020 – 05.02.2020

Supervisor: Dr. Miodrag J. Lukić

Examiner: Prof. Dr. Denis Gebauer

Institute of Analytical Chemistry
Gottfried Wilhelm Leibniz University Hannover



УНИВЕРЗИТЕТ У БЕОГРАДУ
ЕЛЕКТРОТЕХНИЧКИ ФАКУЛТЕТ

Булевар краља Александра 73, П.Ф. 35-54, 11120 Београд, Србија

Тел: +381 11 3248464, Факс: +381 11 3248681

Поштоване колеге, шаљем вам

ЗАХВАЛНИЦУ

на помоћи коју су ми др Миодраг Лукић, дипл.физ.хем., др Ненад Филиповић, дипл.физ.хем., др Ана В. Станковић, дипл.физ.хем. и др Зоран Стојановић дипл. инж. технол. пружили у извођењу наставе на предмету "Биоматеријали", који држим на четвртој години студија првог степена.

Наведене колеге су у децембру 2016. године учествовале у реализацији лабораторијских вежби и експерименталних демонстрација на Институту техничких наука САНУ, током којих су наши студенти могли да стекну драгоценна практична знања из области о којима уче на овом предмету.

У Београду, 15.05.2020.

M.Sc. Жељко Јанићијевић, асистент

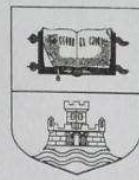
Универзитет у Београду
Електротехнички факултет



Univerzitet u Beogradu



Tehnološko
Metalurški
fakultet



IZJAVA O ANGAŽOVANOSTI U OBRAZOVANJU I FORMIRANJU STRUČNIH I NAUČNIH KADROVA

Dr Miodrag Lukić, naučni saradnik Instituta tehničkih nauka SANU, je više puta u prethodnom periodu, studentima Tehnološko-metalurškog fakulteta u sklopu praktične nastave, a u okviru stručnih poseta, organizovao pokazna ispitanja materijala i demonstrirao rad na više uređaja koji služe za karakterizaciju materijala. U toku stručnih poseta Institutu tehničkih nauka SANU u periodu 2016-2017. godine, kolega Lukić je studentima koji su pohadali kurseve: Procesiranje i primena keramičkih materijala, Tehnologija građevinskih materijala i Karakterizacija keramičkih materijala organizovao pokazne eksperimente i demonstrirao rad na više uređaja: dilatometru (Setaram SETSYS Evolution TMA), uređaju za raspodelu veličina čestica (Mastersizer 2000 Malvern Instruments Ltd., UK), uređaju za TGA/DTA (Setsys Evolution, Setaram, France). Miodrag Lukić je koristeći svoje znanje i iskustvo, koristeći navedene metode karakterizacije, učestvovao u istraživanjima sprovedenim u okviru završnog master rada Tanje Stamenić i doktorske disertacije kandidata Giuma Ayoub, o čemu govore zajedničke publikacije i zahvalnice.

U Beogradu, 13.5.2020.

dr Đorđe Veljović, docent
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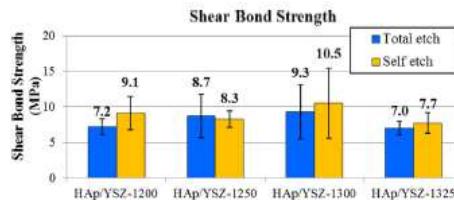


Fig. 10. SBS of HAp/YSZ inserts sintered at different temperatures bonded to dental composite using adhesives applied by „total-etch“ or „self-etch“ protocol.

acceptable concentrations of 32–37%. This would suggest equal opportunities for dentists to apply their preferred protocol of adhesive application without the need to alter their clinical routine.

5. Conclusion

Starting from stoichiometric HAp powder synthesized by modified precipitation method and YSZ powder synthesized by plasma method, hydroxyapatite/yttrium-stabilized zirconia bioceramic inserts were successfully processed. The addition of YSZ particles affected the simultaneous increase of hardness and fracture toughness of HAp, although the dilatometric analysis indicated decrease of shrinkage of HAp matrix in the presence of YSZ particles. The fracture toughness of HAp/YSZ inserts higher than $1.80 \text{ MPam}^{1/2}$ indicated the significant positive effect of incorporation of stabilized tetragonal ZrO_2 particles on the reinforcement of HAp matrix. The values of fracture toughness of the inserts sintered in this study are close to the upper limit of human dentin. Similar and high values of hardness and fracture toughness of inserts sintered at different temperatures indicated significantly greater effect of YSZ addition compared to the temperature of the final sintering step.

SBS values between HAp/YSZ inserts and commercial adhesive and composite, indicated that phosphoric acid etching has no effect on bond strength. Resin-based composites could be adequately bonded to HAp/YSZ inserts following the „self-etch“ protocol of adhesive application as a clinically easier method compared to „total-etch“, yet with the similar result. The values of fracture toughness and hardness of the inserts indicated the possibility of their use as dentin substitutes, warranting further research.

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Author Contributions

Xiang Yu: offered an idea for the study and experiment; Fei Liu: conducted the experiments and data analyses; Zhen Zhang significantly fulfilled the result analysis, and wrote the manuscript; Yi Ren: provided suggestion for the analysis with constructive discussions. All authors read and approved the manuscript.

Additional Information

Competing Interests: The authors declare no competing interests.

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complex and it is not easy to fully understand the exact mechanism of cell membrane damage involved with particles. When immobilized in a polymer matrix, amount of filler, interactions between filler and polymer matrix, and particle dispersion within polymeric particles may all influence the antimicrobial activity of the material. All of this as well as kinetic release of ZnO from the PLGA polymer matrix will be the subject of our next study. Also, the subject of our future research will be to determine minimum bactericidal concentration (MBC) and influence of different external factors of antibacterial activity of ZnO and PLGA/nano-ZnO against selected bacterial strains (laboratory and clinical isolates).

4. Conclusion

Uniform, spherical ZnO particles with average diameter of 63 nm were synthesized and then successfully immobilized within a PLGA polymer matrix (PLGA/nano-ZnO). This was confirmed by X-ray diffraction, scanning electron microscopy, laser diffraction, differential thermal analysis, and thermal gravimetric analysis. Influence of different solvents as well as different drying methods on morphology of PLGA/nano-ZnO particles was evaluated. The best morphology was obtained in the case of PLGA/nano-ZnO particles prepared by physicochemical solvent/nonsolvent method with acetone as solvent and dried at room temperature. These PLGA/nano-ZnO particles are spherical in shape, uniform, and with diameters below 1 μ m. The MTT assay data indicate good biocompatibility of these ZnO and PLGA/nano-ZnO. Both types of particles, ZnO and PLGA/nano-ZnO, exhibited antimicrobial inhibition activity against Gram-positive bacteria *Staphylococcus aureus*, *Staphylococcus epidermidis*, and *Bacillus subtilis* and the Gram-negative bacteria *Escherichia coli*, *Klebsiella pneumoniae*, *Salmonella abony* and *Pseudomonas aeruginosa*, and the yeast *Candida albicans*. Our data suggest that PLGA/nano-ZnO nanoparticles are promising candidates for applications in biomedical field since it is expected that such particles will demonstrate a combination of desirable properties in one device, that is, controlled drug-delivery function and prevention or elimination of possible infections.

Competing Interests

The authors declare that there is no conflict of interests regarding the publication of this paper.

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INV-NOP2

New aspects in processing of hydroxyapatite ceramics

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Sintering of hydroxyapatite ceramics has been a challenging topic for decades since the material has good bioactivity, proven biocompatibility, low cost, and high availability. Besides its biomaterial applications, hydroxyapatite has been used so far as a catalyst support, sensor material, etc. For improvements in its functional properties, new synthesis and processing routes are certainly required.

This work will present current achievements in new processing routes of hydroxyapatite ceramics. In the first part, sintering of hydroxyapatite in the presence of lithium iron phosphate will be presented. Such composition induces formation of liquid phase during sintering and interaction between materials that provides decreasing of the processing temperature and formation of reinforcing Fe-rich phase located along the grain boundaries of the matrix material. Furthermore, an influence of heating rate on pure hydroxyapatite sintering will be presented showing that conventional processing with high heating rates can be beneficial for microstructural refinement without any drawbacks regarding the final density of sintered ceramics. This will be discussed regarding the chemical changes induced due to release of hydroxyapatite structural ionic species.

INV-NOP3

Self-assembly on surfaces and nanotechnology

Jelena Manojlovic

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Tribology is a study of friction, lubrication and wear. The basic principles of friction have been described very well in an empirical way, but the molecular mechanisms underlying friction are still not understood. With the development of nanotechnology and the new experimental probes, scientists have been able to study the origins of friction on the atomic scale. Usually, there is a need to reduce the friction coefficient and the lubricants are normally employed. In this research special attention is dedicated to the boundary lubrication regime, when specific molecules form absorbed molecular film on the solid surfaces and dry contact is excluded. A good model for boundary lubrication are the self-assembled monolayers. Our aim was to produce homogeneous monolayers of surfactants on muscovite mica. We have chosen quaternary ammonium surfactants, to use the ion-exchange capabilities of the negatively charged mica substrate and positively charged head groups of the quaternary ammonium surfactants (primary cetyltrimethylammonium bromide). The adsorbed layers were characterized by contact angle measurements and atomic force microscopy imaging. It has been shown that the temperature during solution preparation can be potentially detrimental to surfactant adsorption on the solid surface from solution.

Прилог 9 – сертификат стипендије ДААД за боравак на Универзитету Констанц, 1.12.2017-30.05.2018.



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PhD Miodrag Lukic

has been awarded a scholarship by the DAAD for further study and training.

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25.11.2015. године

Београд

На основу члана 22. става 2. члана 70. став 5. Закона о научноистраживачкој делатности ("Службени гласник Републике Србије", број 110/05 и 50/06 – исправка и 18/10), члана 2. става 1. и 2. тачке 1 – 4.(прилози) и члана 38. Правилника о поступку и начину вредновања и квантитативном исказивању научноистраживачких резултата истраживача ("Службени гласник Републике Србије", број 38/08) и захтева који је поднео

Институција техничких наука САНУ у Београду

Комисија за стицање научних звања на седници одржаној 25.11.2015. године, донела је

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Др Миродраг Лукић

стиче научно звање

Научни сарадник

у области природно-математичких наука - хемија

ОБРАЗЛОЖЕЊЕ

Институција техничких наука САНУ у Београду

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participated and presented an oral communication: "**The mechanism of homogeneous nucleation in aqueous Al(III) system: a non-classical perspective**" in the 7th GMDM meeting held in Granada (Spain) from November 27th to 30th, 2019

Encarnación Ruiz Agudo

Department of Mineralogy and Petrology
University of Granada
GMDM organizer

Carlos Rodríguez Navarro

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DEPARTMENT OF MINERALOGY AND PETROLOGY
University of Granada
GMDM organizer



Прилог 12 – вест на сајту Лајбницовог Универзитета Хановер о публикацији објевљеној у часопису Science advances (2020) <https://www.uni-hannover.de/de/universitaet/aktuelles/presseinformationen/detail/news/neuer-mechanismus-der-bildung-von-aluminiumoxyhydroxid/>

Fakultäten für Beschäftigte Suche Kontakt English

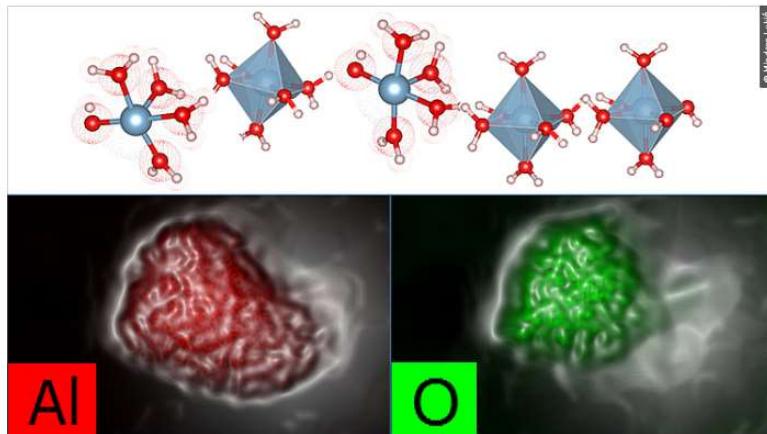
Leibniz Universität Hannover

Universität Studium Forschung Weiterbildung

Universität Aktuelles & Presse Presseinformationen Neuer Mechanismus ...

Neuer Mechanismus der Bildung von Aluminiumoxyhydroxid

Presseinformation vom 23.06.2020



Elementaranalyse eines Aluminiumoxyhydroxidpartikels entsprechend der Verteilungen von Aluminium (rot, links) und Sauerstoff (grün, rechts) in der Rasterelektronenmikroskopie (künstlerisch bearbeitet) und die chemische Struktur der Pränukleationscluster (oben).

Studie des Instituts für Anorganische Chemie veröffentlicht

Aluminiumverbindungen finden schon seit dem 19. Jahrhundert Anwendung in der Industrie: als Flammenschutzmittel, in Sonnencremes und Zahnpasten oder auch in der Medizin als Mittel, um Magensäure zu binden. Jetzt konnten Wissenschaftlerinnen und Wissenschaftler des Instituts für Anorganische Chemie erstmals einen neuen Mechanismus der Bildung von Aluminiumoxyhydroxidpartikeln in wässrigen Lösungen experimentell bestätigen.

"Das in dieser Studie gewonnene, neuartige Verständnis des Nukleationsmechanismus im Aluminiumsystem ist sehr wichtig, um potentielle Anwendungen der Aluminiumchemie zu erweitern", sagt Dr. Miodrag Lukic, Erstautor der Studie, die jüngst in der Open-Access-Fachzeitschrift Science Advances erschienen ist. In der Praxis werden Aluminiumverbindungen beispielsweise in nachhaltigen Energiequellen wie Aluminiumionen-Batterien genutzt, helfen bei der Abwasserbehandlung oder dienen in neuartigen metallorganischen Gerüstverbindungen als Basis für Biosensoren und Wärmeaustausch. Auch eine Anwendung in Impfstoffen ist möglich.

Више детаља је могуће наћи на датом сајту.

*Materials Research Society of Serbia
& Institute of Technical Sciences of SASA*

award

Miodrag Lukić

*For the best presentation at the Ninth Young Researchers' Conference
- Materials Science and Engineering
held on December 20-22 2010 in Belgrade, Serbia*

Presentation named "The influence of powder characteristics on two-step sintering behavior of hydroxyapatite" was declared the best presentation at the 9YRC 2010, considering the quality of research (originality and actuality) and the quality of presentation (clarity, terminology and assurance).

*President of the Programming
and Organizing Committee
Nenad Ignjatović
Prof. Dr. Nenad Ignjatović*

*President of MRS-Serbia
Director of ITS SASA
Dragan Uskoković
Prof. Dr. Dragan Uskoković*

Materials Research Society of Serbia

awards

Miodrag J. Lukić

For the best poster presentation of the Conference YUCOMAT 2012

Poster P.S.B.5, named "SYNERGISTIC EFFECT OF HYDROXYAPATITE NANOPOWDERS HIGH CRYSTALLINITY AND NON-ORDERED PARTICLES' BOUNDARY REGIONS ON LOW-TEMPERATURE SINTERING", was declared the best poster presentation of the Conference YUCOMAT 2012, considering scientific contribution, look, graphic design and quality of presentation.

*The President of MRS- Serbia
Prof. Dragan Uskoković*



19 YRC - Scientific and Organizing Committee

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Прилог 16 – чланство у разним међународним друштвима и форумима

Screenshot of LinkedIn groups page showing various professional networks and forums.

The page displays a list of groups under the "Your groups" tab. Each group entry includes the group name, member count, and a "Create group" button.

- Society for Biomaterials** (7,269 members)
- BIOMATERIAL NETWORK** (4,939 members)
- Materials Research Professionals** (22,944 members)
- Chemistry World** (25,895 members)
- Engineering Jobs Worldwide: Business & Career Network** (604,971 members)
- "H2020 NANOTECH" Nanotechnology, NMP, NanoScience, Materials, Optics & Photonics** (7,818 members)
- Horizon 2020, Framework Programme for Research and Innovation Group** (137,204 members)
- Science Network - Pharma, Biotech, Medical, Chemical, Healthcare - Discussions, Events & Jobs** (274,430 members)
- " HORIZON 2020 " Framework Programme for Research and Innovation** (213,301 members)
- "H2020 MARIE CURIE Actions" Fellowship & Research Grants, PhD Careers and R&D Jobs** (21,083 members)
- EU Projects Partner Search** (35,828 members)