



Danijela Randjelović

Naučni savetnik



Adresa: Centar za mikroelektronske tehnologije, Institut za hemiju, tehnologiju i metalurgiju, Univerzitet u Beogradu, Njegoševa 12, 11000 Beograd, SRBIJA

Telefon: +381 11 2630 757

Faks: +381 11 182 995

E-mail: danijela@nanosys.ihm.bg.ac.rs

Akademski titula: 2008 Doktor elektrotehničkih nauka - Univerzitet u Beogradu, Elektrotehnički fakultet

Naučno zvanje: 2014 Naučni savetnik – Institut za hemiju, tehnologiju i metalurgiju, Univerzitet u Beogradu

- Učešće u organizacijama i odborima:**
- IEEE Senior Member (Institute of Electric and Electronic Engineers, Piscataway, New Jersey, U.S.A.)
 - President of the Organizing Committee of the "Second REGMINA Workshop on MEMS and NEMS Technologies" – April 2011
 - Member of the International Program Committee of International Conference EUROSENSORS XXV – September 2011
 - Member of the International Scientific Committee of International Conference "Science in Technology" SCiNTE 2015 - November 2015

Radno iskustvo: 1996 – **Today** Centar za mikroelektronske tehnologije, Institut za hemiju, tehnologiju i metalurgiju, Univerzitet u Beogradu

Nagrade: 2012 Best oral paper, 28th International Conference On Microelectronics

- Oblasti istraživanja:**
- Višenamenski MEMS senzori zasnovani na termospregu (vakuumski senzori, senzori protoka, senzori vrste gasa, termalni konvertori)
 - Analitičko i numeričko (CoventorWare) modelovanje MEMS termalnih senzora
 - Razvoj inteligentnih transmitera zasnovanih na senzorima baziranim na termospregu
 - AFM karakterizacija materijala, MEMS/NEMS komponenti, bakterija i nanoemulzija za doziranje lekova
 - Fotonski senzori, plazmonika
 - MEMS i NEMS naprave
 - Razvoj senzora na inovativnim (fleksibilnim) podlogama
 - Štampani senzori

- Specijalistički kursevi, treninzi i boravci u inostranstvu:**
- **Postdoktorska stipendija, april 2009 – jul 2009:** Institute of Microelectronics IMEL/NCSR "Demokritos", Athens, Greece, Supervisor: Dr Christos Tsamis, finansijer Министарство за науку и технолошки развој Републике Србије
 - **Dvomesecni trening, oktobar – novembar 2010:** (AFM characterization of novel materials - ZnO films and polymer films and training at Plasma etching system): Institute of Microelectronics IMEL/NCSR "Demokritos", Athens, Greece, finansijer FP7 EU project REGMINA
 - **"FP7 – Financial and project management" course,** februar 2011, Europa Media Non-profit Ltd.,
 - **"FP7 – Financial Reporting and Audits" course,** oktobar 2011, Europa Media Non-profit Ltd.,
 - **Short Term Scientific Mission (STSM), maj 2015:** "Printed sensors - materials, fabrication, evaluation and the role of AFM characterization": Laboratory of Paper Coating and Converting Åbo Akademi University, Turku, Finland, finansijer COST Action FP1104

- Recenzije:**
- **Časopisi:** Sensors and Actuators A: Physical, Sensors
 - **Konferencije:** EUROSENSORS XXV, IEEE Int. Conference on Microelectronics (MIEL), YUCOMAT 2009, ETRAN
 - **EU projekti:** EMRP, EMPIR, H2020, COST TDP

Citati: 113 (bez autocitata), februar 2016; h index = 6 (izvor: SCOPUS)

Strani jezici: engleski, francuski

Učešće u projektima: Medjunarodni:

1999 – 2000 Implementation of process modules to sub-micron C-MOS technology and sensors, bilateral collaboration between Yugoslavia and Greece

2005 – 2008 Micro-nano cantilevers based detection of small electromagnetic forces, SCOPES (Scientific co-operation between Eastern Europe and Switzerland), Proj. No. IB7320-110923, Swiss National Science Foundation (SNSF)

2008 – 2012 Reinforcement of Regional Microsystems and Nanosystems Centre (REGMINA), Proj. No. 205533, 7th Framework Programme, European Union (scientific secretary)

2012 – 2016 New possibilities for print media and packaging - combining print with digital, COST FP1104 action, European Union (MC Member)

2013 – 2016 New permanent magnets for electric-vehicle drive applications (MAG-DRIVE), Proj. ref. 605348, 7th Framework Programme, European Union (scientific secretary)

2015 – 2019 Active and intelligent fibre-based packaging - innovation and market introduction (ActInPak), COST FP1405 action, European Union (MC Member)

Domaći:

1996 – 2000 Microelectronics, Optoelectronics and Microsystem Technologies, Proj. No. 10E05, Ministry of Science and Technology, Republic of Serbia

2002 – 2004 Microsystem and Nanosystem Technologies for Sensors and Optoelectronics, Proj. No. 10E05, Ministry of Science and Environmental Protection, Republic of Serbia

2005 – 2007 Micro and Nanosystem Technologies, Structures and Sensors, Proj. No. TR-6151, Ministry of Science and Environmental Protection, Republic of Serbia

2008 – 2010 Microsystem, Nanosystem Technologies and Devices, Proj. No. 11027, Ministry of Science and Technological Development, Republic of Serbia

2011 – 2016 Micro and Nanosystems for Power Engineering, Process Industry and Environmental Protection MiNaSyS, Proj. No. TR-32008, Ministry of Education, Science and Technological Development, Republic of Serbia

Odabrane publikacije: Poglavlja

1. A.B. Nastasović, T.B. Novaković, Z.M. Vuković, B.M. Ekmešćić, D.V. Ranđelović, D.D. Maksin, Z.P. Miladinović, "Polymer-Based Monolithic Porous Composite", Chapter in the book Proceedings of the III Advanced Ceramics and Applications Conference, Atlantis Press, November 2015, pp. 241-257, Print ISBN: 978-94-6239-156-7, Online ISBN: 978-94-6239-157-4

Radovi u časopisima

2. T. Isailović, S. Đorđević, B. Marković, D. Ranđelović, N. Cekić, M. Lukić, I. Pantelić, R. Daniels, S. Savić, Biocompatible nanoemulsions for improved aceclofenac skin delivery: formulation approach using combined mixture-process experimental design, *Journal of Pharmaceutical Sciences*, Volume 105, Issue 1, pp. 308-323, January 2016
3. M.N. Todosijević, M.M. Savić, B.B. Batinić, B.D. Marković, M. Gašperlin, D.V. Ranđelović, M.Ž. Lukić, S.D. Savić, Biocompatible microemulsions of a model NSAID for skin delivery: A decisive role of surfactants in skin penetration/irritation profiles and pharmacokinetic performance, *International Journal of Pharmaceutics*, Volume 496, Issue 2, pp. 931-941, December 2015
4. S.M. Djordjević, N.D. Cekić, M.M. Savić, T.M. Isailović, D.V. Ranđelović, B.D. Marković, S.R. Savić, T. Timić-Stameniće, R. Daniels, S.D. Savić, Parenteral nanoemulsions as promising carriers for brain delivery of risperidone: Design, characterization and in vivo pharmacokinetic evaluation, *International Journal of Pharmaceutics*, Volume 493, Issues 1-2, pp. 40-54, September 2015
5. M.N. Todosijević, N.D. Cekić, M.M. Savić, M. Gašperlin, D.V. Ranđelović, S.D. Savić, Sucrose ester-based biocompatible microemulsions as vehicles for aceclofenac as a model drug: formulation approach using D-optimal mixture design, *Colloids and Polymer Science*, Volume 292, Issue 12, pp. 3061-3076, December 2014
6. A.B. Meničanin, N.P. Ivanišević, Lj.D. Živanov, M.S. Damjanović, A.M. Marić, D.V. Ranđelović, "Improved Performance of Multilayer CPW Inductors on Flexible Substrate", *IEEE Transactions on Magnetics*, Vol. 50, No. 11, Article#: 8401204, November 2014
7. N. Perinka, M. Držková, D.V. Ranđelović, P. Bondavalli, M. Hajná, P. Bober, T. Syrový, Y. Bonnassieaux, J. Stejskal, „Characterization of Polyaniline-Based Ammonia Gas Sensors Prepared by Means of Spray Coating and Ink-Jet Printing“, *Sensor Letters*, Vol. 12, No. 11, pp. 1620-1627, November 2014
8. I. Jurić, D. Ranđelović, I. Karlović, I. Tomić, Influence of the surface roughness of coated and uncoated papers on the digital print mottle, *Journal of Graphic Engineering and Design*, Volume 5, Number 1, pp. 17-23, 2014
9. D.V. Ranđelović, M.P. Frantlović, B.L. Miljković, B.M. Popović, Z.S. Jakšić, "Intelligent Thermal Vacuum Sensors Based on Multipurpose Thermopile MEMS Chips", *Vacuum*, Vol. 101, pp. 118-124, March 2014
10. O.M. Jakšić, Z.S. Jakšić, Ž.D. Čupić, D.V. Ranđelović, Lj.Z. Kolar-Anić, "Fluctuations in Transient Response of Adsorption-Based Plasmonic Sensors", *Sensors and Actuators B: Chemical*, Volume 190, pp. 419-428, January 2014
11. O.M. Jakšić, D.V. Ranđelović, Z.S. Jakšić, Ž.D. Čupić, Lj.Z. Kolar-Anić, "Plasmonic sensors in multi-analyte environment: rate constants and transient analysis", *Chemical Engineering Research and Design*, Volume 92, Issue 1, pp. 91-101, January 2014
12. S.M. Đorđević, T.S. Radulović, N.D. Cekić, D.V. Ranđelović, M.M. Savić, D.R. Krajišnik, J.R. Milić, S.D. Savić, Experimental Design in Formulation of Diazepam Nanoemulsions: Physicochemical and Pharmacokinetic Performances, *Journal of Pharmaceutical Sciences*, Volume 102, Issue 11, pp. 4159-4172, November 2013
13. A.B. Meničanin, Lj.D. Živanov, G.M. Stojanović, N.M. Samardžić, D.V. Ranđelović, "Transport parameters

of inkjet printed nano-particle silver on polyimide substrate measured at room and liquid nitrogen temperatures", IEEE Transactions on Electron Devices, Volume 60, Issue 9, pp. 2963-2967, September 2013

14. J. Milić, V.P. Beškosi, D.V. Randjelović, J. Stojanović, M.V. Vrvic, "Visualisation of the interaction between Acidithiobacillus ferrooxidans and oil shale by atomic force microscopy", Journal of Mining and Metallurgy, Section B: Metallurgy, Volume 48, Issue 2, pp. 207-217, 2012
15. Z. Jakšić, M. Milinović, D. Randjelović, "Nanotechnological Enhancement Of Infrared Detectors By Plasmon Resonance In Transparent Conductive Oxide Nanoparticles", Journal of Mechanical Engineering vol. 58, No. 6, pp. 367-375, 2012
16. J. Avdalović, V. Beškosi, D. Randjelović, M. Stojanović, S. Zildžović, M. Vrvic, "Ispitivanje mogućnosti bioluženja fosfora iz fosfatne rude sa ležišta Lisina", Zaštita materijala, 53, broj 3, pp. 225-230, 2012
17. D. Randjelović, M. Frantlović, B. Miljković, B. Rosandić, Z. Jakšić, B. Popović, "Intelligent Thermopile-Based Vacuum Sensor", Original Research Article, Procedia Engineering, Volume 25, pp. 575-578, 2011
18. Z. Djurić, D. Randjelović, P. Krstajić, I. Jokić, M. Djukić, "Theory of Infrared Detector Based on the Microcantilever Resonant Frequency Temperature Dependence" Original Research Article, Procedia Engineering, Volume 25, pp. 383-386, 2011
19. N.I. Potkonjak, T.N. Potkonjak, S.N. Blagojević, B. Dudić, D.V. Randjelović, "Current oscillations during the anodic dissolution of copper in trifluoroacetic acid", Corrosion Science, Volume 52, Issue 5, pp. 1618-1624, May 2010,
20. A. Petropoulos, G. Kaltsas, D. Randjelović, E. Gogolides, "Study of flow and pressure field in microchannels with various cross-section areas", Microelectronic Engineering, Volume 87, pp. 827-829, 2010
21. D. Randjelović, Z. Djurić, A. Petropoulos, G. Kaltsas, Ž. Lazić, M. Popović, "Analytical modelling of thermopile based flow sensor and verification with experimental results", Microelectronic Engineering, Volume 86, Issues 4-6, pp. 1293-1296, April-June 2009
22. T. Novaković, N. Radić, B. Grbić, V. Dondur, M. Mitrić, D. Randjelović, D. Stoychev, P. Stefanov, "The thermal stability of porous alumina/stainless steel catalyst support obtained by spray pyrolysis", Applied Surface Science, Volume 255, Issue 5, Part 2, pp. 3049-3055, 30 December 2008
23. D. Randjelović, A. Petropoulos, G. Kaltsas, M. Stojanović, Ž. Lazić, Z. Djurić, M. Matić, "Multipurpose MEMS Thermal Sensor Based on Thermopiles", Sensors and Actuators A, Sensors and Actuators A: Physical, Vol. 141, Issue 2, pp. 404-413, 15 February 2008
24. J. Lamovec, V. Jović, D. Randjelović, R. Aleksić, V. Radojević, "Analysis of the composite and film hardness of electrodeposited nickel coatings on different substrates", Thin Solid Films, 516, pp. 8646-8654, 2008
25. Z. Djurić, D. Randjelović, I. Jokić, J. Matović, J. Lamovec, "A new approach to IR bimaterial detectors theory", Infrared Physics & Technology 50, pp 51-57, 2007
26. 1. D.M. Todorović, M. Smiljanić, M. Sarajlić, D. Vasiljević-Radović, D. Randjelović, Investigation of the effects of Ar plasma etching in Si surface by photoacoustic method, Journal de Physique IV, 125 pp. 451-455, 2005
27. Z. Djurić, O. Jakšić, D. Randjelović, "Adsorption-Desorption Noise in Micromechanical Resonant Structures", Sensors and Actuators A, 96, 2-3, pp 244-251, Feb 2002
28. Z. Djurić, P. Krstajić, M. Smiljanić, D. Randjelović, "Influence of Carrier Diffusion on the Response of RCE Detector", IEEE I. Quant. Electr., 38, 2, pp. 197-202, Feb. 2002
29. Z. Djurić, P. Krstajić, M. Smiljanić, D. Randjelović, "The Effect of Diffusion on the Impulse Response of RCE Detector", IEEE Photonics Technol. Lett., 13, 6, pp. 620-622, 2001
30. Z. Djurić, Z. Jakšić, D. Randjelović, T. Danković, W. Ehrfeld, A. Schmidt, "Enhancement of Radiative Lifetime in Semiconductors Using Photonic Crystals", Infrared Physics & Technology, 40, 1, pp. 25-32, 1999

Predavanja po pozivu

31. D.V. Randjelović, "Multipurpose thermopile-based MEMS sensors developed at ICTM – review of results and perspectives", International Conference Science in Technology ScinTE 2015, 5-7 November, Athens, Greece, 2015, Website: <http://www.scinte.gr>
32. D.V. Randjelović, " Multipurpose Thermopile-Based MEMS Sensors Developed at ICTM-CMTM, Results and Future Plans ", IN+, Instituto Superior Tecnico, Center for Innovation, Technology and Policy Research, Lisbon, Portugal, April 2013, Website: <http://in3.dem.ist.utl.pt/events.asp?EventsID=9>
33. D.V. Randjelović, T. Muck, G. Kaltsas , "Printed Sensors – State of the Art and the Latest Trends", 2nd APOSTILLE FP7 project Workshop on Printed, flexible and nano electronics, May 2013, Novi Sad, Srbija, Website: <http://www.apostille.rs>
34. D.V. Randjelović, T. Novaković, Lj. Rozić, "AFM Studies of Ceramic Based Adsorbents, Catalysts and Composites", 2nd Conference of the Serbian Ceramic Society (2CSCS-2013) Book of Abstracts, pp. 26, Belgrade, Serbia, June 5-7, 2013