Dr Katarina Radulović

Naučni savetnik

Adresa: Centar za mikroelektronske tehnologije
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Obrazovanje:
1995 Dipl. inž. elektrotehnike, Elektrotehnički fakultet Univerziteta u Beogradu
1999 Magistar tehničkih nauka
2005 Doktor tehničkih nauka

Zvanja:
1995 Istraživač pripravnik
1995 Istraživač saradnik
2006 Viši naučni saradnik
2013 Naučni savetnik

Profesionalno iskustvo:
1995 – 2003 Centar za multidisciplinarne studije Univerziteta u Beogradu
2003 – Centar za mikroelektronske tehnologije, Institut za hemiju, tehnologiju i metalurgiju Univerziteta u Beogradu

Nagrade i priznanja:
2012: najbolji usmeno prezentovan rad na 28. Međunarodnoj Konferenciji MIEL 2012
2011: najbolji rad podsekcije nanoETRAN (u sklopu sekcije Mikroelektronika i Optoelektronika) 55. konferencije ETRAN

Oblasti interesovanja:
Modelovanje i simulacije MEMS struktura i komponenti
Postupci vakuumskog naparavanja tankih slojeva (sputtering)
Karakterizacija poluprovodničkih materijala primenom fotoakustične i infracrvene spektroskopije.

Stručne veštine:
Rad na uređajima za fizičko vakuum naparavanje tankih slojeva (sputtering)
Rad na (μ)FTIR spektroskopskim uređajima firme ThermoScientific Instruments
Numeričko 2D/3D modelovanje MEMS struktura u komercijalnim softverskim paketima Comsol Multiphysics i ANSYS

Znanje jezika: Engleski

Najznačajniji projekti:
Međunarodni:
2006 – 2008 Micro/Nanocantilevers-based Detection of small electromagnetic forces programa SCOPES (Scientific Co-operation between Eastern Europe and Switzerland), IB7320-110923
2008 – 2011 Reinforcement of Regional Microsystems and Nanosystems Center (REGMINA), 205533, FP7
2013 – 2016 New permanent magnets for electric-vehicle drive applucations-MAGDRIVE, 605348, FP7-EU

Primenjena istraživanja:
1995 – 2000 Mikroelektronika, optoelektronika i mikroelektronske tehnologije, 10E05, Ministarstvo nauke republike Srbije
2001 – 2004 Novi elektronski materijali za izradu optoelektronskih i planarnih NTC senzora, IT.1.04.0296.B, Ministarstvo nauke i zaštite životne sredine
2001 – 2004 Mikrosistemske i nanosistemske tehnologije za senzore i optoelektroniku, IT.1.04.0062.B, Ministarstvo nauke i zaštite životne sredine
2005 – 2007 Razvoj novih poluprovodničkih materijala i izrada debeloslojnih senzora, Ministarstvo nauke
2005 – 2007 Mikro i nanosistemske tehnologije, strukture i senzori, TR-6151, Ministarstvo nauke
2006 Industrijski merači procesnih veličina sa radio komunikacijom, IP 8245B iz programa inovacionih projekata Ministarstva nauke
2008 – 2010 Mikrosistemske, nanosistemske tehnologije, strukturu i senzori, TR11027, Ministarstvo nauke i tehnološkog razvoja
2011 – 2014 MikrosistemskeMikro, nano-sistemi i senzori za primenu u elektroprivredi, procesnoj industriji i zaštiti životne sredine, TR32008, Ministarstvo prosvete i nauke Republike Srbije

Izabrane publikacije:
Publikovani radovi:

1. Ivana Jokić, Miloš Frantlović, Zoran Djurić, **Katarina Radulović,** Zorana Jokić**,** Adsorption–desorption noise

in microfluidic biosensors operating in multianalyte environments, Microelectronic Engineering, 144 (2015), 32-36

2. A.Ž. Tomović, V.P. Jovanović, I.Đurišić, V.Z. Cerovski, B. Nastasijević, S.R. Veličković, **K. Radulović**, R.Žikić, Fast photoluminescence quenching in thin films of 4,4'-bis(2,2-diphenylvinyl)-1,1'-biphenyl exposed to air, Journal of Luminescence, 167(2015), 204–210
3. D. M. Todorovic, M. D. Rabasovic, D. D. Markushev, V. Jovic, **K. T. Radulovic**, M. Sarajlić, Photoacoustic Elastic Bending Method: Characterization of Thin Films on Silicon Membranes, Int. J. Thermophys (2015) 36:1016–1028
4. Miloš Frantlović, Ivana Jokić, Zoran Djurić, **Katarina Radulović,** Analysis of the competitive adsorption and mass transfer influence on equilibrium mass fluctuations in affinity-based biosensors, Sensors and Actuators B, 166(2012), 535-543
5. Ivana Jokić, Zoran Djurić, Miloš Frantlović, **Katarina Radulović**, Predrag Krstajić, Fluctuations of the mass adsorbed on microcantilever sensor surface in liquid-phase chemical and biochemical detection, Microelectronic Engineering, 97, (2012), pp.396-399.
6. Ivana Jokić, Zoran Djurić, Miloš Frantlović, **Katarina Radulović**, Predrag Krstajić, Zorana Jokić, Fluctuations of the number of adsorbed molecules in biosensors due to stochastic adsorption-desorption processes coupled with mass transfer, Sensors and Actuators B 166– 167 (2012) 535– 543.
7. Z.G. Đurić, I.M. Jokić, M.P. Frantlović, **K.T. Radulović**, Two-layer absorption and adsorbed mass fluctuations on micro/nanostructures, Microelectronic Engineering, 86 (4-6), (2009), 1278-1281.
8. P.M. Nikolić, W. Koenig, S.S. Vujatović, V. Blagojević, D. Luković, S. Savić, **K. Radulović,** D. Urošević, M.V. Nikolić, Far infrared properties of PbTe doped with cerium, Journal of alloys and compounds, 433(1-2), (2007), 292-295.
9. **K.T. Radulović,** P.M. Nikolić, D. Vasiljević-Radović, D. M. Todorović, S.S. Vujatović, A. I. Bojičić, V. Blagojević, D. Urošević, "A Contribition of Carrier Transport Processes to the Photoacoustic Effects in Doped Narrow Gap Semiconductors", Rev.Sci.Instrum., 74(1) (2003) 595-597.
10. P. M. Nikolić, D. M. Todorović, S.S. Vujatović, S. Đurić, P. Mihajlović, V. Blagojević, **K.T. Radulović**, A. I. Bojičić, D. Vasiljević-Radović, J. Elazar, D. Urošević, Anisotropy in Thermal and Electronic Properties of Single Crystal $GeSe_2$ Obtained by the Photoacoustic Method, Jpn. J. Appl. Phys., 37, (1998),4925-30.
11. P. M. Nikolić, S.S. Vujatović, D. M. Todorović, M. B. Miletić, A. Golubović, A. I. Bojičić, F. Kermendi, **K. T. Radulović**, J. Elazar, Thermal and Electronic Transport Properties of Single Crystal $PtSb_2$ Obtained by the photoacoustic Method, Jpn. J. Appl. Phys., 36(3A), (1997), 35-40.
12. P.M. Nikolić, D.M. Todorović, A.I. Bojičić, **K.T. Radulović**, D. Urošević, J. Elazar, V. Blagojević, P. Mihajlović, M. Miletić, Transport Properties of Carriers in GaAs Obtained Using the Photoacoustic Method with Transmision Detection Configuration, J. Phys. Cond. Matter, 8, (1996), 5673-5683.
13. D.M. Todorović, P.M. Nikolić, A.I. Bojičić, **K.T. Radulović**, Thermoelastic and Electronic Strain Contribution to the Frequency Transmission Photoacoustic Effect in Semiconductors, Phys. Rev. B, 55(23), (1997), 15631-42.

Saopštenja:

1. **Katarina Radulović**, Sandor Kasas, A nonlinear 3D Finite Element Model of the Human Red Blood Cell Deformation during Atomic Force Microscope Indentation, International Conference and BioPhysics Summer School From Solid State to BioPhysics IV, 6-13 June 2008, Cavtat, Croatia
2. Z.G. Djurić, **K.T. Radulović**, I.M. Jokić, M.P. Frantlović, Characterization of Adsorption-Desorption Processes on Semiconductor Surfaces Using Nanocantilever Mass Sensors, Proc. 28th International Conference on Microelectronics (MIEL 2012), 161-164, Niš, Serbia, 13-16 may, 2012
3. D. M. Todorović, D. D. Markushev, M. D. Rabasović, **K. T. Radulović**, V. Jović, Photoacoustic Elastic Bending Method: Study of the Silicon Membranes, Proc. 28th International Conference on Microelectronics (MIEL 2012), 169-172, Niš, Serbia, 13-16 may, 2012
4. **K.T. Radulović**, I.M. Jokić, M.P. Frantlović, Z.G. Djurić, Adsorption-Desorption Noise in Nanowire FET
5. Biosensors, Proc. 28th International Conference on Microelectronics (MIEL 2012), 203-206, Niš, Serbia, 13-16 may, 2012.
6. Zoran Jakšić, Danijela Randjelović, Marko Obradov, and **Katarina Radulović**, Redshifting Approach for Nanoplasmonic Enhancement of Semiconductor Infrared Detectors, Proc. 28th International Conference on Microelectronics (MIEL 2012), 207-210, Niš, Serbia, 13-16 may, 2012
7. Ivana Jokić, **Katarina Radulović**, Dana Vasiljević-Radović, Detection of target substances using affinitz based MEMS/NEMS sensors: a problem of selectivityProc. 5th international Scientific Conference on Defensive Technologies OTEH 2012, pp.398-401, September 18-19, Belgrade, isbn 978-86-81123-85-4.
8. Milče M. Smiljanić, **Katarina Radulović**, Žarko Lazić, Vesna Jović, Bogdan Popović SOI piezoresistive low pressure sensor for high temperature environments Proc. 5th international Scientific Conference on Defensive Technologies OTEH 2012, pp.422-426, September 18-19, Belgrade, isbn 978-86-81123-85-4.
9. Zoran Jakšić, Milija Sarajlić, Katarina Radulović, Marko Obradov, Dragan Tanasković, Slobodan Vuković, Photon management in semiconductor infrared photodetectors: diffractive and plasmonic antireflective structures, Proc. 5th International Scientific Conference on Defensive Technologies OTEH 2012, Belgrade, pp. 707-712, Sep. 18-19, 2012, isbn 978-86-81123-85-4
10. D. Tanasković, Z. Jakšić**, K. Radulović**, O. Jakšić, M. Sarajlić, Ž. Lazić, Nanoaperture array-based plasmonic sensors of dangerous substances using transparent conductive oxides, Proc. 5th International Scientific Conference on Defensive Technologies OTEH 2012, Belgrade, pp. 673-677, Sep. 18-19, 2012, isbn 978-86-81123-85-4
11. I.Jokić**, K.Radulović**, M.Frantlović, Z.Đurić,D. Vasiljević-Radović, Combined influence of competitive

binding and mass transfer on response of affinity-based biosensors, Regional Biophysics Conference 2012, Proceedings, pp.45-47, Kladovo, Serbia, Sep.3.-7. 2012. ISBN: 978-86-904161-1-0
12. I. Jokić, **K. Radulović**, M. Frantlović, P. Krstajić, Analysis of response and adsorption-desorption fluctuations spectrum of MEMS/NEMS chemical and biological sensors, Proc. 4th International Scientific Conference on Defensive Technologies OTEH 2011, pp. 447-451, ISBN 978-86-81123-50-8
13. Zoran Jakšić, **Katarina Radulović**, Dragan Tanasković, Metal Nanowire Arrays with Ultralow or Negative Effective Permittivity for Adsorption-Based Chemical Sensing, Proc. 26th International Conference on Microelectronics MIEL 2008, Vol 1, Niš, Serbia, May 11-14, pp. 87-90, 2008

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