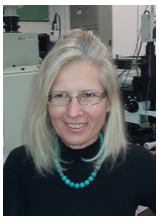
PERSONAL INFORMATION

Andreja Gajović (maiden surname: Sekulić)



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Skype, Andreja Gajovic

Sex female | Date of birth 30/11/1968 | Nationality Croat

POSITION

Head of the Laboratory, Senior Scientist

WORK EXPERIENCE

01. 01. 2017. – now

Scientific Adviser (Senior scientist), Head of the laboratory

Ruđer Bošković Institute (RBI)

- Study of nanostructured metal oxides mainly for photovoltaics and photocatalytic application. Study of biomaterials with the accent on calcium phosphates for bone implants application. Characterization by using Raman spectroscopy and electron microscopy techniques.
- Application on different national and international project calls, leadership of national and international projects.
- Organization of the experimental work in laboratory mainly directed to study of different metal oxides nano structures.
- Mentorship of the PhD students and postdoc.
- Organization of the international conferences and meetings.
- Participation in international organizations and societies, as European electron microscopy society, Multinational congress of Microscopy Board. Participation in managements boards of COST actions etc. Leading of Croatian Microscopy society.
- Activities within different boards: Scientific Council of RBI, national committee for election to scientific titles in field of physics in Croatian Agency for Science and Higher Education and Evaluation panel for Croatian Science Foundation for Physics

Business or sector Physics, Solid State Physics, Material science

03. 04. 2011. – 31. 12. 2016.

Senior Research Associate, with the title Senior Scientist (from 9th of March 2012), from March 2016 Head of the Laboratory

Ruđer Bošković Institute

- Study of nanostructured metal oxides for different application including photovoltaics and photocatalytic application, silicon thin films for photovoltaics. Study of biomaterials with the accent on calcium phosphates for bone implants application. Characterization by using Raman spectroscopy and electron microscopy techniques.
- Application on different national and international project calls, leadership of national and international projects, organization of the experimental work in laboratory mainly directed to study of different metal oxides nano structures.
- Mentorship od the diploma and PhD theses, lectures and invited talks about applications of Raman spectroscopy and HRTEM on different functional materials.
- Organization of the national and international conferences and meetings, participation in international organizations and societies, as European electron microscopy society, in managements boards of COST actions etc.

Business or sector Physics, Solid State Physics, Material science

10. 12. 2003. – 03. 04. 2011.

Research Associate

Ruđer Bošković Institute

- Experimental work in laboratory, specialization in high resolution transmission electron microscopy (HRTEM) and chemical processing (as hydrothermal treatment). Study of different perovskite ferroelectric and multiferroic all based on metal oxides as main stream of work. Study of calcium phosphates, silicon nano structures and other systems in collaboration with other groups. All the investigation were based on results achieved by using Raman spectroscopy, scanning electron microscopy, X-ray diffraction and transmission electron microscopy.
- Collaboration in national and international projects including technological projects.
- Mentorship od the diploma and PhD theses.

Business or sector Physics, Solid State Physics, Material science

12. 09. 2003. – 10. 12. 2003.

Higher Research Assistant

Ruđer Bošković Institute

- Experimental work in laboratory, study of the phase transition in metal oxides using Raman spectroscopy, X-ray diffraction and electron microscopy, study of the Si thin films using Raman spectroscopy.

Business or sector Physics, Solid State Physics, Material science

10. 11. 1999. - 12. 09. 2003.

Research assistant

Ruđer Bošković Institute

- Experimental work in laboratory, study of the phase transition in metal oxides using Raman spectroscopy, X-ray diffraction and electron microscopy, scanning and transmission electron microscopy.

Business or sector Physics, Solid State Physics, Material science

01. 10. 1994. – 10. 11. 1999.

Younger research assistant

Ruđer Bošković Institute

- Experimental work in laboratory, study of the phase transition in metal oxides using Raman spectroscopy.

Business or sector Physics, Atomic and Molecular Physics, Material science

EDUCATION AND TRAINING

01. 04. 2007. – 31. 03. 2008.

Postdoctoral specialization

Institute Jožef Stefan, Department of Nanostructured Materials, Center for electron microscopy, Ljubljana, Slovenia

- the techniques of high resolution transmission electron microscopy (HRTEM) including analytical techniques in TEM

12. 09. 2003.

Ph. D. in physics

Department of Physics, Faculty of science, University of Zagreb

- experimental work using Raman spectroscopy, X-ray diffraction, transmission electron microscopy, title of the PhD theses: “Investigation of TiO2/ZrO2 system between micro – and nanoparticles” (supervisor: K. Furić)

10. 11. 1999.

M. Sc. in Physics

Department of Physics, Faculty of science, University of Zagreb

- postgraduate study of Physics, course: Atomic and Molecular physics, Solid State Physics as additional elective course, title of the M. Sc. theses: “Investigation of structural changes of zirconia, titania and their mixtures by Raman spectroscopy” (supervisor: K. Furić)

14. 07. 1994. **Diploma in Physics**

Department of Physics, Faculty of science, University of Zagreb

- Basis and advances courses in experimental and theoretical physics, elective courses of experimental atomic and molecular physics. Title of the diploma theses: "Raman spectroscopy of ZrO2 on high temperatures" (supervisor: K. Furić).

CAREER BREAKS

20. 08. 1998. – 18. 09. 1999. maternity leave
20. 11. 2001. – 10. 06. 2002. maternity leave

PERSONAL SKILLS

Mother tongue(s): Croatian

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C	C	C	C	C
	Replace with name of language certificate. Enter level if known.				
Slovenian	C	C	B	B	B
	Replace with name of language certificate. Enter level if known.				

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
Common European Framework of Reference for Languages

Organizational / managerial skills

- **Leadership:**

March 2016 – now: head of the Laboratory for energy conversion materials and sensors.
2016 – now: president of Croatian Microscopy Society (CMS)
2013 – 2016 vice president of CMS
2010-2012 leader of the Scientific Division of Croatian Physical Society

- **Organization of national and international science events:**

2015-2017 chair of Multinational Congress on Microscopy 2017 (MCM2017), Rovinj, Croatia, September 24.-29. 2017. (>450 participants from 30 country)
2013-2015 member of the International Scientific Organizing Committee of Multinational Congress on Microscopy, August 23-28 2015, Eger, Hungary.
2013 member of the Organizing committee of 8th Meeting of Croatian Physics Society, Primošten.
2012 vice president of the Organizing committee of Croatian Microscopy Symposium, Pula.
2011 president of the Organizing committee of 7th Meeting of Croatian Physics Society, Primošten.
2010 member of the Organizing committee of International Physics Olympiad, Zagreb.

Job-related skills

- Raman spectroscopy, high resolution transmission electron microscopy (HRTEM), selected area electron diffraction (SAED), scanning electron microscopy (SEM), energy dispersive X-ray spectroscopy (EDXS), basic of X-ray diffraction (XRD).

Digital competence

Windows, Microsoft Office, OriginLab, Adobe Photoshop, LabSpec (software for Raman spectroscopy analysis), Digtal Micrograph (software for analysis of HRTEM), X'pert High Score and Eva (software for XRD analysis).

- All knowledge concerning software is acquired during scientific career.

Other skills

RESEARCH INTERESTS:

- **Nanostructures for photo-voltaic solar cells and photo-catalysts:**

Preparation and structured analysis of nanostructures based on titanium oxides, iron oxides and hydroxides with the addition of dopants. Tailoring of the morphology and the active surface of catalysts by varying the synthesis conditions. Investigate the properties of titanate nanotubes pure or functionalized by transition metals. The aim is to explore and improve the structural properties in relation to functional properties of titanate nanostructures for applications in photo-voltaic, photo-catalytic reactions in water purification treatment, and for gas sensors.

- **Oxide ceramics:**

Investigation of porous ZrO2, TiO2, ZrTiO4 ceramics with potential application as materials for high-strength ceramics components, as electro ceramics for microwave resonators in electronic and for humidity sensors. Solid-state synthesis by combination of environmentally friendly mechanochemical synthesis and sintering. The study of phase transitions performed in situ at high temperatures by Raman spectroscopy with the aim of understanding the reactions in the solid state. Based on the analysis of structures at the nano scale (using electron microscopy), explanation and the prediction of the electrical properties of ceramics measured in different atmospheres (el. properties in collaboration with A. Šantić, RBI).

- **Structural analysis of functional materials:**

Structural study of calcium phosphates (CaP) coatings and CaP composites for bone implants.

Analysis of nanostrured silicon thin films for solar cells combining Raman spectroscopy and high-resolution electron microscopy (HRTEM) to understand their optical properties.

Raman spectroscopy of carbon nanostructures for catalysts (in collaboration with Frits Haber Instutute of Max Planck Society, Berlin, Germany).

Raman spectroscopy of 2D materials as graphene and 2D transition metal dichalcogenides.

- Multiferroic and ferroelectrics:

Structural study of ferroic and multiferroic materials (materials with related ferroelectric and ferromagnetic properties). Preparation by hydrothermal chemical synthesis of BiFeO3 and investigation of the structure and the properties in the relation with the syntheses process. Thermo-Raman spectroscopy for monitoring of phase transitions in ferroelectric ceramics and nanostructures.

- Oxide materials with luminescent properties:

Yttrium oxides based nanopowders doped with rare earth elements. The study of the luminescence observed in ZrTiO4 ceramics without additives. Study of the nano-structure of the prepared materials in order to understand the luminescent properties observed at the micro scale dimensions using micro-Raman spectroscopy.

Driving license

A and B

ADDITIONAL INFORMATION

Publications

ISI Web of Science, Corre Collection papers (*corresponding author):

Last 5 years:

1. **Milivoj Plodinec, Ivana Grčić, Marc G. Willinger, Adnan Hammud, Xing Huang, Ivana Panžić, Andreja Gajović, Black TiO2 nanotube arrays decorated with Ag nanoparticles for enhanced visible-light photocatalytic oxidation of salicylic acid, *Journal of alloys and compounds*. 776 (2018/2019) 883-896**
2. **Luka Pavić, Željko Skoko, Andreja Gajović, Dangsheng Su, Andrea Moguš-Milanković. Electrical transport in iron phosphate glass-ceramics. *Journal of non-crystalline solids*. 502 (2018) 44-53**
3. **Buljan Meić, Iva; Kontrec, Jasminka; Domazet Jurašin, Darija; Selmani, Atiđa; Njegić Džakula, Branka; Maltar-Strmečki, Nadica; Lyons, Daniel Mark; Plodinec, Milivoj; Čeh, Miran; Gajović, Andreja; Dutour Sikirić Maja; Kralj, Damir, How similar are amorphous calcium carbonate and calcium phosphate? A comparative study of amorphous phases formation conditions, *Crystengcomm. 20 (2018) 35-50***
4. **Mandić, Vilko; Plodinec, Milivoj; Kereković, Irena; Juraić, Krunoslav; Janicki, Vesna; Gracin, Davor; Gajović, Andreja; Moguš-Milanković, Andrea; Willinger, Marc Georg. Tailoring anatase nanotubes for the photovoltaic device by the**

anodization process on behalf of microstructural features of titanium thin film. *Solar energy materials and solar cells*. 168 (2017) ; 136-145.

5. **Meljanac, Daniel; Juraić, Krunoslav; Mandić, Vilko; Skenderović, Hrvoje; Bernstorff, Sigrid; Plaisier, Jasper R.; Šantić, Ana; Gajović, Andreja; Šantić, Branko; Gracin, Davor. The influence of thermal annealing on the structural, optical and electrical properties of AZO thin films deposited by magnetron sputtering. // Surface & coatings technology. 321 (2017) 292-299.**
6. **Macan, Jelena; Brcković, Lidija; Gajović, Andreja. Influence of preparation method and alumina content on crystallization and morphology of porous yttria stabilized zirconia. Journal of the European Ceramic Society. 37 (2017) 3137-3149.**
7. **Macan, Jelena; Paljar, Klaudia; Burmas, Bruno; Špehar, Goran; Leskovac, Mirela; Gajović, Andreja. Epoxy-matrix composites filled with surface-modified SiO2 nanoparticles. Journal of thermal analysis and calorimetry. 127 (2017) 1; 399-408.**
8. **Danijel Namjesnik, Sanela Mutka, Damir Iveković, Andreja Gajović, Mark Willinger, Tajana Preočanin, Application of the surface potential data to elucidate interfacial equilibrium at ceria/aqueous electrolyte interface, *Adsorption: journal of the international adsorption society*. 22 (2016); 825-837.**
9. **Kosor, Tihomir; Nakić-Alfirević, Barbara; Gajović Andreja, Geopolymerization Index of fly ash geopolymers. *Vibrational spectroscopy*. 85 (2016); 104-111**
10. **A. Selmani, I. Coha, K. Magdić, B. Čolović, V. Jokanović, S. Šegota, S. Gajović, A. Gajović, D. Jurašin, M. Dutour Sikirić, Maja, Multiscale study of the cationic surfactants influence on amorphous calcium phosphate precipitation, *Crystal engineering communication* 17 (2015), 8529-8548.**
11. **Milivoj Plodinec, Ana Šantić, Janez Zavašnik, Andreja Gajović*, Giant persistent photoconductivity in $BaTiO_3/TiO_2$ heterostructures, *Appl. Phys. Lett.* 105 (2014), 152101-1-152101-5.**
12. **Milivoj Plodinec, Andreja Gajović*, Damir Iveković, Nenad Tomašić, Boris Zimmerman, Jelena Macan, Tatjana Haramina, D. S. Su, Marc Willinger. Study of thermal stability of (3-aminopropyl)trimethoxy silane-grafted titanate nanotubes for application as nanofillers in polymers., *Nanotechnology* 25 (2014) 435601-435614.**
13. **Milivoj Plodinec, Andreja Gajović*, Gregor Jakša, Kristina Žagar, Miran Čeh. High-temperature hydrogenation of pure and silver-decorated titanate nanotubes to increase their solar absorbance for photocatalytic applications. *Journal of Alloys and Compounds* 591 (2014) 147–155.**
14. **Vincenzo Buscaglia, Saurabh Tripathi, Valeri Petkov, Monica Dapiaggi, Marco Deluca, Andreja Gajović, Yang Ren. Average and local atomic-scale structure in $BaZr_xTi_{1-x}O_3$ (x=0.10, 0.20, 0.40) ceramics by high-energy x-ray diffraction and Raman spectroscopy *Journal of Physics: Condensed Matter* 26 (2014) 065901 (13pp).**
15. Andreja Gajović, Jelena Vukajlović Pleština, Kristina Žagar, Milivoj Plodinec, Sašo Šturm, Miran Čeh. Temperature-dependent Raman spectroscopy of BaTiO3 nanorods synthesized by using a template-assisted sol–gel procedure. *Journal of Raman Spectroscopy*. 44 (2013) 412-420.
16. Deluca, Marco; Vasilescu, Catalina A.; Ianculescu, Adelina C.; Berger, Daniela C.; Ciomaga, Cristina E.; Curecheriu, Lavinia P.; Stoleriu, Laurentiu; Gajović, Andreja; Mitoseriu, Liliana; Galassi, Carmen. Investigation of the composition-dependent properties of BaTi1-xZrxO3 ceramics prepared by the modified Pechini method. *Journal of the European Ceramic Society*. 32 (2012), 13; 3551-3566.
17. Skenderović Božičević, Martina; Gajović, Andreja; Zjakić, Igor. Identifying a common origin of toner printed counterfeit banknotes by micro-Raman spectroscopy. *Forensic science international*. 223 (2012); 314-320.
18. Gajović, Andreja; Silva, Adrián M.T.; Segundo, Ricardo A.; Šturm, Sašo; Jančar, Boštjan; Čeh, Miran. Tailoring the phase composition and morphology of Bi-doped goethite–hematite nanostructures and their catalytic activity in the degradation of an actual pesticide using a photo-Fenton-like process. *Applied catalysis. B, Environmental*.

103 (2011), 3/4; 351-361.
19. Sović, David; Gajović, Andreja; Iveković, Damir. Bioelectrocatalytic and biosensing properties of horseradish peroxidase covalently immobilized on (3-aminopropyl)trimethoxysilane-modified titanate nanotubes. *Electrochimica acta*. 56 (2011); 9953-9960.
20. Šantić, Ana; Skoko, Željko; Gajović, Andreja; Reis, Signo T.; Day, Delbert E.; Moguš-Milanković, Andrea. Physical properties of lead iron phosphate glasses containing Cr2O3. *Journal of non-crystalline solids*. 357 (2011) , 21; 3578-3584 .
21. Žagar, Kristina; Rečnik, Aleksander; Šturm, Sašo; Gajović, Andreja; Čeh, Miran. Structural and chemical characterization of BaTiO3 nanorods. *Materials research bulletin*. 46 (2011), 3; 366-371.
22. Gajović, Andreja; Šturm, Sašo; Jančar, Boštjan; Šantić, Ana; Žagar, Kristina; Čeh, Miran. The synthesis of pure-phase bismuth ferrite in the Bi–Fe–O system under hydrothermal conditions without a mineralizer. *Journal of the American Ceramic Society*. 93 (2010), 10; 3173-3179.
23. Iveković, Damir; Gajović, Andreja; Čeh, Miran; Pihlar, Boris. Prussian Blue-Modified Titanate Nanotubes : A Novel Nanostructured Catalyst for Electrochemical Reduction of Hydrogen Peroxide. *Electroanalysis*. 22 (2010), 19; 2202-2210.
24. Juraić, Krunoslav; Gracin, Davor; Šantić, Branko; Meljanac, Daniel; Zorić, Nedeljko; Gajović, Andreja; Dubček, Pavo; Bernstorf, Sigrid; Čeh, Miran. GISAXS and WAXS analysis of amorphous-nanocrystalline silicon thin films. *Nuclear instruments & methods in physics research. Section B: Beam interactions with materials and atoms*. 268 (2010); 259-262.
25. Plodinec, Milivoj; Friščić, Ivica; Iveković, Damir; Tomašić, Nenad; Su, Dangsheng; Zhang, Juan; Gajović, Andreja*. Mechanochemical stability of hydrogen titanate nanostructures. *Journal of alloys and compounds*. 499 (2010), 1; 113-120.
26. Tomašić, Nenad; Gajović, Andreja; Bermanec, Vladimir; Rajić Linarić, Maša; Su, Dangsheng; Škoda, Radek. Preservation of the samarskite structure in a metamict ABO4 mineral: a key to crystal structure identification. *European journal of mineralogy*. 22 (2010), 3; 435-442.
27. Zhang, Jian; Su Dangsheng; Blume, Raoul; Schlögl, Robert; Wang, Rui; Yang, Xiangguang; Gajović, Andreja. Surface Chemistry and Catalytic Reactivity of a Nanodiamond in the Steam-Free Dehydrogenation of Ethylbenzene. *Angewandte Chemie. International edition*. 49 (2010), 46; 8640-8644.
28. Gajović, Andreja; Friščić, Ivica; Plodinec, Milivoj; Iveković, Damir. High temperature Raman spectroscopy of titanate nanotubes. *Journal of molecular structure*. 924/926 (2009); 183-191.
29. Gajović, Andreja; Gracin, Davor; Juraić, Krunoslav; Sancho-Parramon, Jordi; Čeh, Miran. Correlating Raman-spectroscopy and high-resolution transmission-electron-microscopy studies of amorphous/nanocrystalline multilayered silicon thin films. *Thin Solid Films*. 517 (2009), 18; 5453-5458.
30. Gajović, Andreja; Šantić, Ana; Djerdj, Igor; Tomašić, Nenad; Moguš-Milanković, Andrea; Su, Dang Sheng. Structure and electrical conductivity of porous zirconium titanate ceramics produced by mechanochemical treatment and sintering. *Journal of alloys and compounds*. 479 (2009); 525-531.
31. Gracin, Davor; Etlinger, Božidar; Juraić, Krunoslav; Gajović, Andreja; Dubček, Pavo; Bernstorff, Sigrid. DC Conductivity of Amorphous-nanocrystalline Silicon Thin films. *Vacuum*. 84 (2009), 1; 243-246.
32. Gracin, Davor; Sancho-Parramon, Jordi; Juraić, Krunoslav; Gajović, Andreja; Čeh, Miran. Analysis of amorphous-nanocrystalline multilayer structures by optical, photo-deflection and photocurrent spectroscopy. *Micron*. 40 (2009), 1; 56-60.
33. Ivanković, Marica; Brnardić, Ivan; Ivanković, Hrvoje; Huskić, Miroslav; Gajović, Andreja. Preparation and properties of organic-inorganic hybrids based on poly(methyl methacrylate) and sol-gel polymerized 3-glycidyloxypropyltrimethoxysilane. *Polymer*. 50 (2009), 12; 2544-2550.
34. Macan, Jelena; Gajović, Andreja; Ivanković, Hrvoje. Porous zirconium titanate ceramics synthesized by sol-gel process. *Journal of the European Ceramic Society*. 29

(2009), 4; 691-696.
35. Sancho-Parramon, Jordi; Gracin, Davor; Modreanu, Mircea; Gajović, Andreja. Optical spectroscopy study of nc-Si based p-i-n solar cells. *Solar Energy Materials and Solar Cells*. 93 (2009), 10; 1768-1772.
36. Biljan, Tomislav; Gajović, Andreja; Meić, Zlatko. Visible and NIR luminescence of nanocrystalline beta-Ga2O3: Er3+ prepared by solution combustion synthesis. *Journal of Luminescence*. 128 (2008), 3; 377-382.
37. Gajović, Andreja; Gracin, Davor; Djerdj, Igor; Tomašić, Nenad; Juraić, Krunoslav; Su, Dang Sheng. Nanostructure of thin silicon films by combining HRTEM, XRD and Raman spectroscopy measurements and the implication to the optical properties. *Applied surface science*. 254 (2008), 9; 2748-2754.
38. Gajović, Andreja; Tomašić, Nenad; Djerdj, Igor; Su, Dangsheng; Furić, Krešimir. Influence of mechanochemical processing to luminescence properties in Y2O3 powder. *Journal of Alloys and Compounds*. 456 (2008); 313-319.
39. Gracin, Davor; Gajović, Andreja; Juraić, Krunoslav; Čeh, Miran; Remes, Zdenek; Poruba, Aleš; Vanecek, Milan. Spectral response of amorphous-nanocrystalline silicon thin films. *Journal of Non-Crystalline Solids*. 354 (2008), 19-25; 2286-2290.
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44. Biljan, Tomislav; Gajović, Andreja; Meić, Zlatko; Meštrović, Ernest. Preparation, characterization and luminescence of nanocrystalline Y2O3:Ho. *Journal of Alloys and Compounds*. 431 (2007), 1-2; 217-220.
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46. Gracin, Davor; Bernstorff, Sigrid; Dubček, Pavo; Gajović, Andreja; Juraić, Krunoslav. The influence of substrate morphology on growth of thin silicon films by GISAXS. *Thin Solid Films*. 515 (2007), 14; 5615-5619.
47. Gracin, Davor; Etlinger, Božidar; Juraić, Krunoslav; Gajović, Andreja; Dubček, Pavo; Bernstorff, Sigrid. The DC conductivity and structural ordering of thin silicon films at the amorphous to nano-crystalline phase transition. *Vacuum*. 82 (2007) , 2; 205-208 .
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49. Makreski, Petre; Jovanovski, Gligor; Kaitner, Branko; Gajović, Andreja; Biljan, Tomislav. Minerals from Macedonia XVIII. Vibrational spectra of some sorosilicates. *Vibrational Spectroscopy*. 44 (2007), 1; 162-170.
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Preparation of nanostructured ZrTiO4 by solid state reaction in equimolar mixture of TiO2 and ZrO2. *Crystal Research and Technology*. 41 (2006), 11; 1076-1081.

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61. Makreski, Petre; Jovanovski, Gligor; Gajović, Andreja. Minerals from Macedonia XVII. Vibrational spectra of some common appearing amphiboles. *Vibrational spectroscopy*. 40 (2005); 98-109.
62. Štefanić, Goran; Musić, Svetozar; Gajović, Andreja. Thermal behavior of the amorphous precursors of the ZrO2-CrO1.5 system. *Journal of Molecular Structure*. 744-747 (2005); 541-549.
63. Tomašić, Nenad; Gajović, Andreja; Bermanec, Vladimir; Rajić, Maša. Recrystallization of metamict Nb-Ta-Ti-REE complex oxides: A coupled X-ray-diffraction and Raman spectroscopy study of aeschynite-(Y) and polycrase-(Y). *Canadian mineralogist*. 42 (2004), 6; 1847-1857.
64. Moguš-Milanković, Andrea; Šantić, Ana; Gajović, Andreja; Day, Delbert E. Spectroscopic investigation of MoO3-Fe2O3-P2O5 and SrO-Fe2O3-P2O5 glasses. Part I. *Journal of non-crystalline solids*. 325 (2003); 76-84.
65. Musić, Svetozar; Popović, Stanko; Maljković, Miroslava; Skoko, Željko; Furić, Krešimir; Gajović, Andreja. Thermochemical formation of IrO2 and Ir. *Materials letters*. 57 (2003), 29; 4509-4514.
66. Musić, Svetozar; Popović, Stanko; Maljković, Miroslava; Furić, Krešimir; Gajović, Andreja. Influence of synthesis procedure on the formation of RuO2. *Materials Letters*. 56 (2002), 5; 806-811.
67. Musić, Svetozar; Popović, Stanko; Maljković, Miroslava; Furić, Krešimir; Gajović, Andreja. Formation of RuO2 and Ru by thermal decomposition of ruthenium(III)-acetylacetonate. *Journal of Materials Science Letters*. 21 (2002), 14; 1131-1134.
68. Gajović, Andreja; Stubičar, Mirko; Ivanda, Mile; Furić, Krešimir. Raman spectroscopy of ball-milled TiO2. *Journal of Molecular Structure*. 563 (2001), 2; 315-320.
69. Moguš-Milanković, Andrea; Gajović, Andreja; Šantić, Ana; Day, Delbert E. Structure of sodium phosphate glasses containing Al2O3 and/or Fe2O3. Part I. *Journal of Non-Crystalline Solids*. 289 (2001), 1-3; 204-213.

70. Moguš-Milanković, Andrea; Šantić, Ana; Gajović, Andreja; Day, Delbert E. Electrical properties of sodium phosphate glasses containing Al2O3 and/or Fe2O3. Part II. *Journal of non-crystalline solids*. 296 (2001), 1-2; 57-64.
71. Štefanić, Igor; Musić, Svetozar; Štefanić, Goran; Gajović, Andreja. Thermal behavior of ZrO2 precursors obtained by sol-gel processing. *Journal of molecular structure*. 481 (1999), Special issue SI; 621-625.
72. Musić, Svetozar; Štefanić, Goran; Vidović, Neda; Sekulić, Andreja. The effects of gamma-irradiation on the electrokinetic and thermal behavior of zirconium hydroxide. *Journal of Thermal Analysis*. 59 (2000), 3; 837-846.
73. Štefanić, Goran; Musić, Svetozar; Gržeta, Biserka; Popović, Stanko; Sekulić, Andreja. Influence of pH on the stability of low temperature t-ZrO2. *Journal of physics and chemistry of solids*. 59 (1998), 6-7; 879-885.
74. Štefanić, Goran; Musić, Svetozar; Gržeta, Biserka; Popović, Stanko; Sekulić, Andreja. XRD and laser Raman spectroscopy investigation of the stability of low temperature t-ZrO2. *Croatica chemica acta*. 71 (1998), 3; 789-806.
75. Gotić, Marijan; Ivanda, Mile; Popović, Stanko; Musić, Svetozar; Sekulić, Andreja; Turković, Aleksandra; Furić, Krešimir. Raman investigation of nanosized TiO2. *Journal of Raman spectroscopy*. 28 (1997), 7; 555-558.
76. Musić, Svetozar; Gotić, Marijan; Ivanda, Mile; Popović, Stanko; Turković, Aleksandra; Trojko, Rudolf; Sekulić, Andreja; Furić, Krešimir. Chemical and microstructural properties of titanium dioxide synthesized by sol-gel procedure. *Materials science & engineering. B, Solid-state materials for advanced technology*. B47 (1997), 1; 33-40.
77. Sekulić, Andreja; Furić, Krešimir; Stubičar, Mirko. Raman study of phase transitions in pure and alloyed zirconia induced by ball-milling and a laser beam. *Journal of molecular structure*. 410 (1997); 275-279.
78. Sekulić, Andreja; Furić, Krešimir; Tonejc, Antun; Tonejc, Anđelka; Stubičar, Mirko. Determination of the monoclinic, tetragonal and cubic phases in mechanically alloyed ZrO2-Y2O3 and ZrO2-CoO powder mixtures by Raman spectroscopy. *Journal of materials science letters*. 16 (1997); 260-262.
79. Štefanić, Goran; Musić, Svetozar; Popović, Stanko; Sekulić, Andreja. FT-IR and laser Raman spectroscopic investigation of the formation and stability of low temperature t-ZrO2. *Journal of molecular structure*. 408 (1997); 391-394.
80. Gotić, Marijan; Ivanda, Mile; Sekulić, Andreja; Musić, Svetozar; Popović, Stanko; Turković, Aleksandra; Furić, Krešimir. Microstructure of nanosized TiO2 obtained by sol-gel synthesis. *Materials letters*. 28 (1996), 1-3; 225-229.
81. Štefanić, Goran; Musić, Svetozar; Sekulić, Andreja. Influence of precipitation chemistry and ball-milling on the thermal behavior of zirconium hydroxide. *Thermochimica acta*. 273 (1996); 119-133.

Other scientific papers:

1. Kosanović, Cleo; Stubičar, Nada; Tomašić, Nenad; Stubičar, Mirko; Subotić, Boris; Gajović, Andrea; Sekovanić, Lavoslav., Spectroscopy study of synthetic forsterite obtained from zeolite precursors. *Kemija u industriji*. 57 (2008) 51-57.
2. Popović, Stanko; Skoko, Željko; Gajović, Andreja; Furić, Krešimir; Musić, Svetozar. X-Ray diffraction study of thermal properties of titanium dioxide. *Fizika A*. 14 (2005) 19-28.
3. Stubičar, Mirko; Dužević, Davor; Krumes, Dragomir; Stubičar, Nada; Sekulić, Andreja; Furić, Krešimir; Sondi, Ivan; Ban Švastović, Đuro; Milat, Ognjen; Kaysser, W.A., X-ray Difraction Study of Structural Changes in ZrO2-Y2O3-MgO Powder Mixtures Induced by High Energy Ball milling. *Metalurgija (Sisak)*. 35 (1996) 247-253.
4. Stubičar, Mirko; Dužević, Davor; Krumes, Dragomir; Stubičar, Nada; Sekulić, Andreja; Furić, Krešimir; Sondi, Ivan; Ledić, Milka; Jeren, Ivan; Milat, Ognjen, Study of Structural Chages in Powders Induced by High-Energy Ball Milling. *Metalurgija (Sisak)*; 2nd International Symposium of Croatian Metallurgists: State and Development of Plastic Metal Processing; Summaries of Lectures. 35 (1996), 2; 119-119.

Author of book chapters:

1. **M. Deluca and A. Gajović „Raman Spectroscopy of Nanostructured Ferrroelectric Materials“, chapter in book „Nanoscale Ferroelectrics and Multiferroics“, Key Processing and Characterization Issues and Nanoscale**

Effects", WILEY (UK) (2016), ed. M. Algueró, J. M. Gregg, L. Mitoseriu. Part2: Characterization (of the Nanostructured Materials): Crystal Structure.

2. **A. Ianculescu, D. Berger, C. Vasilescu, M. Olariu, B. S. Vasile, L. P. Curecheriu, A. Gajović, R. Trusca. Incorporation Mechanism and Functional Properties of Ce-Doped BaTiO3 Ceramics Derived from Nanopowders Prepared by the Modified Pechini Method // Nanoscale Ferroelectrics and Multiferroics: Key Processing and Characterization Issues, and Nanoscale Effects / Alguer´o, Miguel ; Gregg, J. Marty ; Mitoseriu, Liliana (ed.). Chichester, UK : John Wiley & Sons, Ltd., 2016. pg. 14-43.**

Abstracts and extended abstracts published in proceedings of international and national conferences: 129 abstracts and 14 extended abstracts, **last 5 years:** 50 abstracts, 3 extended abstracts.

Editor for the Book of Abstracts: **2017 Book of Abstracts, Multinational Congress on Microscopy 2017 (MCM2017), Rovinj, Croatia, September 24.-29. 2017.**

2015 Proceedings of 3rd Croatian Microscopy Congress with international participation, April 26-29, 2015. Zadar, Croatia, ed. A. Ambrijević Ristov, A. Gajović, I. Weber, A. Vidoš, publishers: Rudjer Bošković Institute and Croatian Microscopy Society, 2015.

2013 Osmi znanstveni sastanak Hrvatskog fizikalnog društva: Knjiga sažetaka / Požek, Miroslav; Ban, Ticijana; Bilušić, Ante; Dominis Prester, Predrag; Gajović, Andreja; Kumerički, Krešimir; Kurečić, Ivana; Pavin, Nenad; Radolić, Vanja; Szilner, Suzana; Tutiš, Eduard (ur.). Zagreb : Hrvatsko fizikalno društvo, 2013 (zbornik). URL link to work

2012 Hrvatski mikroskopijski simpozij, Knjiga sažetaka / Gajović, A; Tomašić, N (ed.), Zagreb : Hrvatsko mikroskopijsko društvo, 2012 (zbornik).

2011 Sedmi znanstveni sastanak Hrvatskog fizikalnog društva: Knjiga sažetaka / Gajović, Andreja; Tokić, Vedrana; Zorić, Maja; Tomislav, Maruščak (ed.), Zagreb : Hrvatsko fizikalno društvo, 2011.

Referee for international journals: **Applied Catalyst B – Environmental**, **Journal of American Ceramic Society**, Journal of Alloys and Compounds, Journal of Physics and Chemistry of Solids, **Electrochemistry communication**, Journal of Nanoscience and Nanotechnology, **Dalton Transactions**, Physica status solidi, Journal of Solid State Chemistry, Journal of Material Science, **Nanoscal research letter**, Physica E, Thin Solid Films, **Applied surface sciences**, Journal of Nanoparticle Research, **Materials Research Bulletin**, **EPJ Plus**, Phase transition, Materials Chemistry and Physics, Materials Characterization, **Ceramics International**, Physica E, Macedonian Journal of Chemistry and Chemical Engineering, Eurasian Chemico-Technological Journal, **Acta Slovenica**, Kemija u industriji, **Macedonian Journal of Chemistry and Chemical Engineering.**

Presentations

Invited talks at the conferences:

1. **"Raman spectroscopy technique and specific applications for study of ceramics", 11th Conference for Young Scientists in Ceramics, 21-24. 10. 2015, Novi Sad, Serbia.**
2. **"Titania based nanostructures for various applications", 3rd Conference of the Serbian Society for Ceramic Materials, 15-17. 06. 2015, Belgrade, Serbia.**
3. "Ag-functionalized titanate nanostructures for photo-catalytic application", COST MP0901 Designing novel materials for nanodevices: From Theory to Practice, Workshop on characterization of semiconductor nanostructures; the role of defects, 2 - 4. 12. 2013, Rudjer Boskovic Institute, Zagreb, Croatia.
4. "Basics of Raman spectroscopy and applications to metal oxides", COST MP0904 Single- and Multiphase Ferroics and Multiferroics with Restricted Geometries: Training School on Nanostructured oxides: from laboratory research to industrial applications, CNR-IENI: Institute for Energetics and Interphases, Genova, Italija, 12-13.03.2012.
5. "Microscopy in analysis of functional ceramics and nanostructures", Multinational Congres on Microscopy 2011., Urbino, Italija, 04-09. September 2011.
6. "Sintheses of $BiFeO_3$ – multiferroic material for MERAM (Magnetoelectric Random Access Memory)", 2. Workshop of industrial and applied physics of Croatian physical society, Zagreb, Croatia, 26th of February 2010.
7. "Zirconium titanate ceramics as humidity sensors" 1. Workshop of industrial and applied physics of Croatian physical society, Zagreb, Croatia, 12th of January 2009.

Invited talks at foreign institutions:

1. **"Applications of Raman spectroscopy to ceramics", Belgian Ceramic Research Centre, Mons,**

Belgium, 17th of May 2016.

2. "Applications of Raman spectroscopy to glasses and ceramics" LMCPA - Laboratoire des Matériaux Céramiques et Procédés Associés, Meubeuge, France, 19th of May 2016.

3."Raman spectroscopy and observation of the luminescence in metal oxides", Nuclear Institute Vinča, Laboratory GAMA – 030, Serbia, 7th of December 2009.

4."Basics of Raman spectroscopy and some applications to inorganic nanomaterials", ETH, Multifunctional materials group, Zürich, Switzerland, 6th of September 2007.

Talks in Croatia and Slovenia:

1."Nanostructures of metal oxides – How to prepare them and why?", Institute of Physics, Zagreb, Croatia, 24th of September 2009.

2."Electron microscopy study of phase relations in the Fe–Bi–O system" Croatian Society for electron microscopy, Zagreb, Croatia, 20th of May 2008.

3."From goethite to bismuth ferrit", Department of nanostructural materials, K7, Institute Jožef Stefan, Ljubljana, Slovenia, 25th of February 2007.

4."Raman spectroscopy - applications to inorganic nanomaterials", Department of nanostructural materials, K7, Institute Jožef Stefan, Ljubljana, Slovenia, 24th of September 2007.

5."Nanostrukturni TiO2 pripravljem mehanokemijskim postupkom", Croatian Society for electron microscopy, Zagreb, Croatia, 8th of June 2004.

Talks with the aim of promotion of science:

2016 "Nano-structures for photovoltaics cells" lecture for students, gymnasium professors and Physics department of University Osijek in the scope of project "Natural sciences are in".

2013 "Application of electron microscopy for investigation of functional materials", seminar for secondary school professors, Zagreb, Croatia

2010 "What is connected with nano-wires and what flow through nano-tubes?", Open days of Rudjer Bošković Institute, Zagreb Croatia.

2006 "Application of electron microscopy", promotion of application of electron microscopy in industry, Iron factory, Sisak, Croatia.

2005 "Investigation of nanostructure of materials", Open days of Rudjer Bošković Institute, Zagreb Croatia.

Projects Leader:

2018-2022 "Nanocomposites comprising perovskites for photovoltaics, photo-catalysis and sensing" (IP2018-01-5246), national project of Croatian Science Foundation.

2018-2019 Croatian – Slovenian bilateral project: „Functionalized TiO_2 nanostructures for application in photo-catalysis and sensors", Between Rudjer Bošković Institute and Institute Jožef Stefan, Ljubljana. Funding: Ministry of Science, Education and sport, Croatia.

2018-2019 Croatian - Austrian bilateral project: "TiO2, ZnO and BaTiO3 nanostructures and nanolayers for gas- and humidity-sensing devices with improved functionalities" Between Rudjer Bošković Institute and Materials Center Leoben, Funding: Ministry of Science, Education and sport, Croatia.

2015-2018 "Zinc Oxide and Titanium Dioxide Nanocomposites for Photovoltaic Application" (IP-2014-09-9419), national project of Croatian Science Foundation.

2016-2020 Development of young researchers' career - training of new doctors of science, project of Croatian Science Foundation.

2016-2017 Croatian Agency for SMEs, Innovations and Investments (HAMAG-BICRO), Proof of concept (PoC) project: „Multifunkcionalna komora za električna mjerenja (Multifunctional chamber for electrical measurements)".

2017-2019 Croatian – France COGITO, bilateral project: "Micro-Raman spectroscopy study of bio-ceramic surface composition changes". Between Ruđer Bošković Institute, Materials Physics Division, Laboratory for energy conversion materials and sensors and University of Valenciennes and Hainaut Cambrésis, Laboratoire des Matériaux Céramiques et Procédés Associés (LMCPA), Pôle universitaire de Maubeuge, France. Funding: Ministry of Science, Education and sport, Croatia.

2016-2017 Croatian – Germany DAAD, bilateral project: "In situ growth optimization of 2D transition metal dichalcogenides (TMDs) for potential applications in electronics and optoelectronics". Between Ruđer Bošković Institute, Materials Physics Division, Laboratory for energy conversion materials and sensors and Fritz Haber Institute of the Max Planck Society, Dept. Inorganic Chemistry, Berlin. Funding: Ministry of Science, Education and sport, Croatia.

2016-2017 Croatian – Serbian bilateral project: "Preparation and characterization of the thin filmc from modified TiO2 nanostructures for application in photovoltaic cells". Between Ruđer Bošković Institute, Materials Physics Division, Laboratory for energy conversion materials and sensors and Nuclear institute "Vinča", Laboratory for Radiation Chemistry and Physics "Gamma", Funding: Ministry of Science, Education and sport, Croatia.

2016/2017 „Perovskiti za fotonaponsku primjenu (Perovskites for photovoltaic application)" Croatian Academy of Sciences and Arts Foundation

2015/2016 „Postojana fotovodljivost u BaTiO3/TiO2 heterostrukturi (Persistent photoconductivity in BaTiO3 / TiO2 heterostructures)", Croatian Academy of Sciences and Arts Foundation.

2014-2015 Croatian - Austrian, bilateral project: "Design, physico-chemical and mechanical characterization of innovative ceramic composites for bone implants". Between Ruđer Bošković Institute, Materials Physics Division, Laboratory for Molecular Physics Zagreb and Institut für Struktur- und Funktionskeramik, Montanuniversitaet Leoben. Funding: Ministry of Science, Education and sport, Croatia.

2014-2015 Croatian – Germany DAAD, bilateral project: "Structure and properties of functionalized one-dimensional titanate nanostructures designed for gas sensing application – part II". Between Ruđer Bošković Institute, Materials Physics Division, Laboratory for Molecular Physics Zagreb and Fritz Haber Institute of the Max Planck Society, Dept. Inorganic Chemistry, Berlin. Funding: Ministry of Science, Education and sport, Croatia.

2014 "Dizajn i karakterizacija inovativnih keramičkih kompozita za koštane implantate (Design and characterization of ceramic composites for bone implants". Funding: Croatian Academy of Sciences and Arts Foundation.

2012 Croatian – Germany DAAD, bilateral project: "Structure and properties of functionalized one-dimensional titanate nanostructures designed for gas sensing application". Between Ruđer Bošković Institute, Materials Physics Division, Laboratory for Molecular Physics Zagreb and Fritz Haber Institute of the Max Planck Society, Dept. Inorganic Chemistry, Berlin. Funding: Ministry of Science, Education and sport, Croatia.

2012 "Utjecaj sinteze na strukturu i svojstva multiferoičnog bizmutovog ferita (Influence of the syntheses on the structure and properties of multiferroic bismuth ferrite)", Croatian Academy of Sciences and Arts Foundation.

2010-2011 Croatian – Slovenian bilateral project: „Correlation of structure and properties of nanostructured perovskites". Between Rudjer Bošković Institute, Materials Physics Division, Laboratory for Molecular Physics Zagreb and K7-Nanostructured materials, Institute Jožef Stefan, Ljubljana. Funding: Ministry of Science, Education and sport, Croatia.

2006-2007 leader of Croatian – Germany DAAD, bilateral project: "Nanostructured transition metal oxides as new humidity sensors materials". Between Rudjer Bošković Institute, Materials Physics Division, Laboratory for Molecular Physics Zagreb and Fritz Haber Institute of the Max Planck Society, Dept. Inorganic Chemistry, Berlin. Funding: Ministry of Science, Education and sport, Croatia.

Associate:

2018-2021 WP leader in project with industry "Improvement of solar cells and modules through research and development", project financed by EU structural fonds.

2015-2016 associate in the role of mentor in EU social fond project „Nanostructures of titanium dioxide for photo-voltaic application/professional development of young researchers/postdocs" (project leader: Davor Gracin)

2014-2018 associate in national project of Croatian science foundation project "Studies of Mechanisms of Formation and Basic Interactions in Bioinspired Materials - Structural and Kinetic Approach" (project leader: Damir Kralj)

2014-2015 associate in Croatian - Slovenian bilateral project "Developement of calcium phosphate bioceramics for hard tissue regeneration by biomimicking biomineralization processes in crustaceans" (project leader: Maja Sikirić)

2013 associate in Proof of concept project "Multifunctional composite coatings for bone implants" Funding: BICRO, Croatia (project leader: Maja Sikirić)

2011-2014 associate in Slovenian nacional project of ARRS agency „J2-4237 Electron microscopy and microanalysis of materials at sub-micrometer scale" (project leader: Zoran Samardžija)

2007– 2013 Researcher in the national project "Physics and applications of nanostructures and bulk matter", no. 098 0982904 2898, project leader: Krešimir Furić / Mile Ivanada. Funding:

Ministry of Science, Education and sport, Croatia.

2009-2010 associate in Croatian - Slovenian bilateral project "Nanocrystalline silicon as possible materials for third generation solar cells" (coordinator for Croatia: Davor Gracin). Funding: Ministry of Science, Education and sport, Croatia.

2007-2008 associate in Croatian - Slovenian bilateral project "Influence of quantum effects on vibrational properties of nano-crystalline silicon" (coordinator for Croatia: Davor Gracin). Funding: Ministry of Science, Education and sport, Croatia.

2007-2008 associate in Croatian - Slovenian bilateral project "Development of nanostructured catalyst-based sensors for electrochemical detection of hydrogen peroxide" (coordinator for Croatia: Damir Iveković). Funding: Ministry of Science, Education and sport, Croatia.

2006-2008 associate in Macedonian national project "СИЛИКАТНИ МИНЕРАЛИ ОД МАКЕДОНИЈА – ИДЕНТИФИКАЦИЈА И СИС¬ТЕ¬МА¬ТИЗАЦИЈА", Скопје ("Silicate minerals from Macedonia – identification and systematization", Skopje). Funding: Macedonian ministry of science.

2004-2007 associate (for Raman spectroscopy) in international project "LPAMS - FW6 European projects", coordinator for Croatia : Davor Gracin.

2004-2005 Researcher in international project "Nanostructures – catalysts", the collaboration project between the Fritz Haber Institute of the Max Planck Society, Dept. Inorganic Chemistry, Berlin and Ruđer Bošković Institute, Division of Material Physics, molecular Physics Laboratory, Zagreb. Funding: Ministry of Science, Education and sport, Croatia.

2004-2005 associate in technological project of Ministry of Science "Složeni fotonaponski modul", project leader: Davor Gracin. Funding: Ministry of Science, Education and sport, Croatia.

2002-2005 Researcher in the national project "Physics and application of nanostructure" no. 0098022, project leader: Krešimir Furić, Funding: Ministry of Science, Education and sport, Croatia.

Associate in center of excellence:

2014-2019 collaborator in Center of excellence for new materials and sensors, in units: Graphene and New functional materials

Conferences

Talks at the international conferences and meetings:

2015 COST Action MP1308 Meeting Title: TO-BE Spring Meeting 2015, University Of Aveiro, Aveiro, Portugal, 30-03-2015 to 02-04-2015, Milivoj Plodinec, Andreja Gajović, Ivana Grčić, Miran Čeh, Marc Willinger, "Preparation and properties of TiO_2 based one dimensional nanostructures decorated by Ag and modified in reduction atmosphere".

2013 COST Meeting Action: MP0904: Recent advances in ferro/piezoelectric and multiferroic-based composites, Istitute of Science and Technology ISTEC-CNR Faenza, Faenza, Italy, 22.-23. 04. 2013, A. Gajović, M. Plodinec, J. Šipišić, M. Čeh, "Thermo-Raman spectroscopy study of phase transitions in barium titanate nanostructures"

2011 Conference of COST MP0904 Action Single- and multiphase ferroics and multiferroics with restricted geometries, June 30th -July 1st , 2011, Bordeaux University Campus, "On the processing and properties of nanostructured single- and multiphase ferroics and multiferroics: Strengths, needs and joint initiatives", Bordeaux, Francuska, A. Gajović, J. Šipušić, M. Plodinec, A. Šantić, P. McGuiness, M. Čeh, "Influence of syntheses conditions to properties of pure phase $BiFeO_3$ synthesized under hydrothermal conditions without addition of a mineralizer".

2010 Internationa Symposium on Advanced Electron Microscopy for Catalysis and Energy Storage Materials, Berlin, Njemačka, 17 - 20. 01. 2010, A. Gajović, S. Šturm, B. Jančar, M. Čeh, „Incorporation of large ions in goethite nanorods to manipulate the morphology".

2010 EUCMOS 2008 XL European Congress on Molecular Spectroscopy, Firenca, Italija, A. Gajović, R. Krsmanović, J. Macan, D. S. Su, H. Ivanković, "Raman spectroscopy and luminescence of mesoporous $ZrTiO_4$ ceramics".

2009 The First Joint Meeting of Dreiländertagung and Multinational Congress on Microscopy, Graz, Austrija, 30.08.-04.09.2009. A. Gajović, D. Gracin, M. Čeh, "Thin films in solar cells: electron microscopy study of crosssection combined with depth profiling by Raman spectroscopy".

2009 6. Scientific meeting of Croatian physical society, Primošten, Hrvatska, 08. - 11. 10. 2009., A. Gajović, J. Vukajlović, M. Plodinec, K. Žagar, M. Čeh, "Struktura i temperaturno ovisni strukturni fazni prijelazi BaTiO3 nanožica".

2008 EUCMOS 2008 XXXIX European Congress on Molecular Spectroscopy, Opatija, Hrvatska, 31.08.-05.09.2008., A. Gajović, I. Friščić, M. Plodinec, D. Iveković, "High temperature Raman spectroscopy of titanate nanotubes".

2007 16th Croatian-Slovenian Crystallographic Meeting, Petrčani, Hrvatska June 14-17, 2007, A.

Gajović, I. Djerdj, N. Tomašić, A. Šantić, "Structure of zirconium titanate ceramics for humidity sensors".

2007 Slonano 2007, 10. - 12. 10., 2007, Ljubljana, Slovenija, A.Gajović, D. Gracin, M. Čeh, „The nanostructure of silicon thin films for solar cells".

2007 10th ECERS, "International Conference and Exhibition of the European Ceramic Society", Berlin, Germany, June 17 - 21, 2007, A. Gajović, A. Šantić, I. Djerdj, N. Tomašić, A. Moguš-Milanković, D. S. Su, "Zirconium Titanate Ceramics for Humidity Sensors Synthesized by Mechanochemical Treatment and Sintering".

2006 2nd Croatian Congress on Microscopy with International Participation, 18-21.05 2006, A. Gajović, D. Gracin, I. Djerdj, N. Tomašić, D. S. Su, R. Schlögl, "Structure of the silicon thin films for solar cells", Topusko, Croatia.

2005 14th Croatian-Slovenian Crystallographic Meeting, Vrsar, Hrvatska June 15-19, 2005, A. Gajović, D. Gracin, N. Tomašić, D. S. Su, R. Schlögl, "Crystalline to amorphous phase in silicone thin films".

2005 7th Multinational Congress on Microscopy, Portorož, Slovenija, June 26-30, 2005, A. Gajović, K. Furić N. Tomašić, D. S. Su, R. Schlögl, "Influence of microstructure to luminescence in Y_2O_3 powders".

2004 13th Slovenian-Croatian Crystallographic Meeting, Bovec, Slovenia, 16-20 June, 2004, A. Gajović, N. Tomašić, K Furić and S. Musić, "Nanostructured TiO_2 prepared by mechanochemical treatment".

2004 XXVII European Congress on Molecular Spectroscopy (XXVII EUCMOS), Krakow, Poland, 5. - 10. September, 2004, A. Gajović, K. Furić, G. Štefanić and S. Musić, "*In situ* high temperature study of ZrO_2 ball milled to nanometric sizes".

Teaching

- **University of Zagreb, Faculty of Science, Postgraduate study in Geology and minerology, ac. y. 2014/2015 organization of workshop for postgraduate studies "Electron microscopy and diffraction", lecture "Electron microscopy, high resolution electron microscopy (HRTEM) – basic principles and techniques"**
- **University of Zagreb, Faculty of Pharmacy and Biochemistry, Postgraduate Specialist Studies: "Medical biochemistry and laboratory medicine" lecture „Electron microscopy" for course New Technologies in Medical-biochemistry, ac. ys. 2011/2012, 2014/2015, 2015/2016.**
- **18. 5. 2016. Laboratoire des Matériaux Céramiques et Procédés Associés (LMCPA), Maubeuge (France): lecture "Raman spectroscopy and some application to ceramics" to Master students.**
- University of Zagreb, Faculty of Science, Graduate study in Physics;

  Assistant in practicum:
- ac. y. 2005/2006 "Physical Practicum V", "Physical Practicum II", ,
- ac. y. 2004/2005 "Physical Practicum V", "Practicum in Basic Physics I"
- ac. y. 2003/2004 "Physical Practicum V", "Practicum in Basic Physics II"

Mentorship

Mentorsip and co-mentorship of 3 PhD students: 2 of them finished PhD few months before deadline: Milivoj Plodinec (Department of Physics, Faculty of Science, University of Zagreb, 2014) i Barbara Nakić-Alfirević (Faculty of Chemical Engineering and Technology, University of Zagreb, 2013), and one finished few weeks before deadline; M. Skenderović Božičević (Faculty of Graphic Arts, University of Zagreb, 2016).

SUBSEQUENT CAREER OF CANDIDATES AND JOINT PAPERS OUT OF PhD THESES:

Dr. Milivoj Plodinec as postdoc participate in the work of the laboratory, and is associet at number of projects and the center of excellence. He wrote a project application to the Humboldt scholarship for postdoctoral training at the Fritz Haber Institute of the Max Planck Society in Berlin (FHI-MPS). In the moment he is already at postdoctoral training until end of july 2018 at FHI-MPS (mentor Dr. Marc Willinger).

In co-autorship with mentor A. Gajović he published 7 papers:

1. **Milivoj Plodinec, Ivana Grčić, Marc G. Willinger, Adnan Hammud, Xing Huang, Ivana Panžić, Andreja Gajović, Black TiO2 nanotube arrays decorated with Ag nanoparticles for enhanced visible-light photocatalytic oxidation of salicylic acid, Journal of alloys and compounds. 776 (2018/2019) 883-896**
2. **M. Plodinec, A. Gajović*, D. Iveković, N. Tomašić, B. Zimmerman, J. Macan, T. Haramina, D. S. Su, M. Willinger, *Nanotechnology* 25 (2014) 435601(Q1, IF: 3.672, cit 1)**
3. **M. Plodinec, A. Gajović*, G. Jakša, K. Žagar, M. Čeh, *J. Alloys Compnd*. 591 (2014) 147. (Q1, IF: 2.726, cit7).**
4. **M. Plodinec, A. Šantić, J. Zavašnik, M. Čeh A. Gajović*, *Appl. Phys. Lett*.105 (2014); 152101-1-152101-5. (IF:3.515 citations:0).**
5. **A. Gajović, J. Vukajlović Pleština, K. Žagar, M. Plodinec, S. Šturm, M. Čeh, *J. Raman***

***Spectrosc*. 44 (2013) 412 (Q1, IF: 2.519, cit 8).**

6. M. Plodinec, I. Friščić, D. Iveković, N. Tomašić, D. S. Su, J. Zhang, A. Gajović, *J. Alloys Compnd*. 499(2010), 113 (Q1, IF:2.726 cit 6).
7. A. Gajović, I. Friščić, M.Plodinec, D. Iveković, *J. Mol. Struct*. 924/926(2009)183 (Q3, IF:1, 602, cit 32).

Two PhD students are employed outside of the scientific institutions and evryone of them published one scientific paper in co-autorship with the mentor during or after PhD study.

Dr. sc. Martina Skenderović Božičević is employee in Croatian national bank and published paper:

8. Skenderović Božičević, Martina; Gajović, Andreja; Zjakić, Igor, *Forensic science international*. 223 (2012) 314-320 (Q1, IF 2.307, cit 9).

Dr. sc. Barbara Nakić-Alfirević is employee in lime factory GIRK Kalun d.d. Drniš and published paper:

8. Kosor, Tihomir; Nakić-Alfirević, Barbara; Gajović Andreja, Geopolymerization Index of fly ash geopolymers. *Vibrational spectroscopy*. 85 (2016); 104-111 (Q1, IF 1.682, cit 0)

Mentorsip and co-mentorship of 3 diploma students: **I. Jerčinović (Department of Physics, Faculty of Science, University of Zagreb, 2012)**, J. Vukajlović Pleština (Department of Physics, Faculty of Science, University of Zagreb, 2010), A. Vukov (Faculty of Chemical Engineering and Technology, University of Zagreb, 2010).

Published one Q1 paper with diploma student:

- Andreja Gajović, Jelena Vukajlović Pleština, Kristina Žagar, Milivoj Plodinec, Sašo Šturm, Miran Čeh, *Journal of Raman Spectroscopy*. 44 (2013), 3; 412-420.

Published altogether 8 papers in journals indexed in WoS Corre Collection and >40 congres abstract and extended abstract in co-autorship with PhD students, diploma students and postdocs.

Visit to foreign scientific institutions

2016. visiting professor in Laboratoire des Matériaux Céramiques et Procédés Associés, Meubeuge, France. Two invited talks to scientists and one lecture for master students.

2006. – now more short visits (2 weeks or shorter, altogether more than 6 months) in Department of Inorganic Chemistry, **Fritz Haber Institute of the Max Planck Society, Berlin, Germany** in the frame of Croatian-Germany DAAD projects, **4 bilateral projects** (leader on Croatian side), work on projects using HRTEM technics.

2008. – now more short visits in **Institute Jožef Stefan, Ljubljana, Slovenia** (altogether more than 3 months), Department: K7, Nanostructural materials in the frame of Croatian-Slovenian bilateral projects), work on projects using HRTEM technics.

2007. – 2008. Postdoc specialization in **Institute Jožef Stefan, Ljubljana, Slovenia** Department: K7, Nanostructural materials, Center for electron microscopy financed by grant of Slovenian national founding agency „Ad Futura".

2003 – 2005 more short visits (2 weeks or shorter) in Fritz Haber Institute of the Max Planck Society, Dept. Inorganic Chemistry, Berlin in the frame of FHI-IRB collaboration. During the first stay trained to work independently on high resolution transmission electron microscope (HRTEM).

Honors and awards

2007-2008 Ad Futura agency, Slovenia, grant for post-doctoral study

2006 Winner of the IMC16/IFSM Scholarship for Young Scientists for attendance at IMC16 (16th International Congress of Electron Microscopy), Sapporo Japan.

Memberships

Membership in science organizations

1994 – now member of Croatian Physical Society,

2010-2012 leader of the Scientific Division of Croatian Physical Society (CPS) and member of CPS Management Board

1998 – now member of Croatian Microscopy Society (CMS),

2017-now president of CMS,

2013-2016 vice president of CMS

2011 secretary of CMS

1998 – now member of European Electron Microscopy Society

2002 – now member of Croatian Crystallographic Society

2005 - 2013 member of Croatian Zeolite Association

Commissions, committees, boards and work groups

May 2017-now member of committee for election to scientific titles in field of physics in Croatian Agency for Science and Higher Education

2016-now member of Evaluation panel for Croatian Science Foundation for Physics

2016-now member of the scientific council of RBI

2016-now member of Supervisory board of the Croatian Physical Society

2015-2017 chair of Multinational Congress on Microscopy 2017 (MCM2017), Rovinj, Croatia, September 24.-29. 2017. (>450 participants from 30 country).

2016 member of International Scientific Advisory Board (ISAB) for The 16th European Microscopy Congress (EMC2016), 28th August to 2nd of September 2015, Lyon, France.

2015 member of the International Scientific Organising Board and chairperson of Multinational Congress on Microscopy, 2015 (MCM2015) from August 25–30, 2015, Eger, Hungary.

2015 member of the Scientific Committee of 3rd Croatian Microscopy Congress, April 26th-29th 2015, Zadar, Croatia.

2014-2018 member of management committee (representative of Croatia) of COST Action MP1308 "Towards Oxide-Based Electronics (TO-BE)".

2014-2018 substitute member of management committee (representative of Croatia) of COST Action MP1307 "Stable Next-Generation Photovoltaics: Unraveling degradation mechanisms of Organic Solar Cells by complementary characterization techniques (StableNextSol)".

2014 Ph. D. commission member for Milivoj Plodinec, Department of Physics, Faculty of Science, University of Zagreb

2014 Ph. D. commission member for Vladimir Tudić, Faculty of Electrical Engineering and Computing, University of Zagreb

2013-2017 member of of management committee (representative of Croatia) of COST Action MP1301 "New Generation Biomimetic and Customized Implants for Bone Engineering, NEWGEN".

2013 member of the Scientific board and chairperson of Microscopy conference (MC) 2013, from August 25–30, 2013, Regensburg/Germany.

2013 member of international commission for Ph. D. of Barbara Horvat, Jožef Stefan International Postgraduate School, Jožef Stefan Institute, Ljubljana, Slovenia, September 2013.

2012 member of Evaluation panel for Croatian Science Foundation for the program Brain Gain – PostDoc

2011-2014 member of management committee (representative of Croatia) of COST Action MP0904 "SIMUFER: Single- and Multiphase Ferroics and Multiferroics with Restricted Geometries".

2011 member of international commission for Ph. D. of Kristina Žagar, Jožef Stefan International Postgraduate School, Jožef Stefan Institute, Jamova 39, 1000 Ljubljana, Slovenia

2006 member of the scientific comity of 2nd Croatian Congress on Microscopy with International Participation, 18th to 21st of May 2006, Topusko, Croatia.

References, Citations

Citation report, ISI Web of Science ISI Web of Science, Core Collection (21. 01. 2019):

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