

## Dr. ENISA OMANOVIĆ-MIKLIČANIN

Update September 2017

37 full papers and overview articles;

7 books

57 contributions at international conferences

### ----- EDUCATION -----

Ph.D. Chemistry; Karl-Franzens University of Graz, Austria

Area of specialization: analytical chemistry 2005

M.Sc. Chemistry; Faculty of Natural Sciences and Mathematics, University of Sarajevo, Bosnia and Herzegovina 2001

M.Sc. Chemistry; Karl-Franzens University of Graz, Austria 1999

B.Sc. Chemistry; Faculty of Natural Sciences and Mathematics, University of Sarajevo, Bosnia and Herzegovina 1998

### ----- RESEARCH FOCUS -----

Analytical chemistry, nanotechnology, nanobiotechnology and food chemistry with emphasis on:

- development of the new analytical methods for investigation of nanoparticle-biomolecule interactions;
- nanoparticle synthesis and characterization;
- development of the new analytical methods with application for analysis of food samples and environmental sample;
- development of chemical sensors, biosensors and nanosensors for various applications.

### ----- PROFESSIONAL EXPERIENCE -----

**Full Professor** in the field of applied chemistry in agriculture and food science; Faculty of Agriculture and Food Sciences, University of Sarajevo, Bosnia and Herzegovina  
2017 -

**Associate Professor** in the field of applied chemistry in agriculture and food science; Faculty of Agriculture and Food Sciences, University of Sarajevo, Bosnia and Herzegovina  
2011 – 2017

**Assistant professor** in Chemistry and Instrumental Methods, Faculty of Agriculture and Food Sciences, University of Sarajevo, Bosnia and Herzegovina  
2006 – 2011

**Senior Assistant** in Chemistry, Faculty of Agriculture and Food Sciences, University of Sarajevo, Bosnia and Herzegovina  
2002 – 2006

**Assistant** in Chemistry, Faculty of Agriculture and Food Sciences, University of Sarajevo, Bosnia and Herzegovina  
1999 – 2002

## ----- RESEARCH EXPERIENCE -----

**Research visit** to University of Leeds, Nanomanufacturing Institute and Faculty of Biological Sciences, host: prof. dr. Terry Wilkins and laboratory of Iain Mainfeld (Project: QualityNano Research Infrastructure) July 2015

**Postdoctoral Fellow:** European Commission, Joint Research Centre, Institute for Health and Consumer Protection, Nanobiotechnology Unit, Ispra, Italy 2012 -2014

**Research visit** to Department of Analytical Chemistry, Faculty of Chemistry, University of Granada, Spain; laboratory of prof. dr. Ana Maria Garcia Campana (Program: JoinEU-SEE, Erasmus Mundus External Cooperation Window, staff mobility) July 2010

**Research visit** to Department of Analytical and Food Chemistry, University of Vienna, Austria, laboratory of prof. dr. Franz Dickert (Program: ÖAD – Austrian Academic Exchange Office, Ernst Mach scholarship for post-doc research) February 2009

**Research visit** to Institute for Analytical Chemistry, Karl-Franzens University, Graz, Austria, laboratory of prof. dr. Kurt Kalcher (Program: CEEPUS, «Free Mover» PL-110, ÖAD– Austrian Academic Exchange Office, Scholarship for PhD research) June – August 2004

**Sixth Post-Graduate Summer School on Green Chemistry**, Interuniversity Consortium «Chemistry for the Environment» (INCA), European Commission-Improving Program August 31 – September 6, 2003

**Research visit** to Institute for Analytical Chemistry, Karl-Franzens University, Graz, Austria, laboratory of prof. dr. Kurt Kalcher (Program: CEEPUS, «Free Mover» PL-110, ÖAD– Austrian Academic Exchange Office, Scholarship for PhD research) April – July 2003

**Research visit** to Institute for Analytical Chemistry, Karl-Franzens University, Graz, Austria, laboratory of prof. dr. Kurt Kalcher (Program: ÖAD– Austrian Academic Exchange Office, Scholarship for PhD research) September 2002

**Research visit** to Institute for Analytical Chemistry, Karl-Franzens University, Graz, Austria, laboratory of prof. dr. Kurt Kalcher (Program: ÖAD– Austrian Academic Exchange Office, Scholarship for PhD research) May – July 2001

**Research visit** to Institute for Analytical Chemistry, Karl-Franzens University, Graz, Austria, laboratory of prof. dr. Kurt Kalcher (Program: EU Commission, TEMPUS – PHARE JEP grant) July - October 2000

**Research visit** to Department for Plant nutrition, Justus-Libig University, Giessen, Germany (Program: DAAD Scholarship) April – July 2000

**Research visit** to Institute for Analytical Chemistry, Karl-Franzens University, Graz, Austria, laboratory of prof. dr. Kurt Kalcher (Program: ÖAD– Austrian Academic Exchange Office, Scholarship for M.Sc. research) October 1999 – January 2000

**Research visit** to Institute for Analytical Chemistry, Karl-Franzens University, Graz, Austria, laboratory of prof. dr. Kurt Kalcher (Program: ÖAD– Austrian Academic Exchange Office, Scholarship for M.Sc. research) June 1999

## ----- PUBLICATIONS AND PROJECTS -----

### Books

(Total No.:7)

Enisa Omanović-Miklićanin (in press): "Application of Nanospectroscopy in Food Science and Agriculture", chapter in the textbook "Optical Nanospectroscopy", Part III "Optical Nanospectroscopy: Applications", editors: Norman MacMillan, Evgeniya Sheremet, Monika Fleischer, Publisher: De Gryter

**Enisa Omanović-Miklićanin**, Almir Badnjević (2017): "Introduction into nanotechnology" university book, Sarajevo, Bosnia and Herzegovina

**Enisa Omanović-Miklićanin**, Esma Velagić-Habul, Tajana Preočanin, Ivone Jakaša, Maida Đapo, Danijela Sedić, Anesa Pita-Bahto (2017): "Physical-chemical instrumental methods in food and water analysis", university book, Sarajevo, Bosnia and Herzegovina

Esma Velagić-Habul, **Enisa Omanović-Miklićanin** (2011): „Chemical contamination of food“, Sarajevo, Bosnia and Herzegovina

Esma Velagić-Habul, **Enisa Omanović-Miklićanin**, Josip Jurković (2008): „Chemistry lab book for the students of agriculture“, Sarajevo, Bosnia and Herzegovina

**Enisa Omanović** (2004): "Calculation in General Chemistry", university book for students of first year of biotechnology faculties in Bosnia and Herzegovina, Sarajevo, Bosnia and Herzegovina

## Articles

(total: 37)

1. Enisa Omanović-Miklićanin, Tarik Husremović, Alma Jakupović, Anes Omerbašić: „Application of Biological Surface Adsorption Index Approach (BSAI) in Characterization of Interactions between Gold Nanoparticles and Biomolecules“, In: Badnjevic A. (eds) CMBEBIH 2017. IFMBE Proceedings, vol 62. Springer, Singapore, 2017, 176-182
2. Amra Dorić, Džana Mulaomerović, Adnan Fojnica, Belma Alispahić, Sabina Halilović, Enisa Omanović-Miklićanin: "Development of the method for quantification of amino acid adsorbed on nanoparticle surface", In: Badnjevic A. (eds) CMBEBIH 2017. IFMBE Proceedings, vol 62. Springer, Singapore, 2017, 171-175.
3. Mirjana Maksimović, Enisa Omanović-Miklićanin: "Towards Green Nanotechnology: maximizing Benefits and minimizing Risks", In: Badnjevic A. (eds) CMBEBIH 2017. IFMBE Proceedings, vol 62. Springer, Singapore, 2017, 164-170
4. Enisa Omanović-Miklićanin, Iain Manfeld, Terry Wilkins: „Application of Isothermal Titration Calorimetry in evaluation of protein-nanoparticle interactions“, Journal of Thermal Analysis and Calorimetry, 2017, 127:605–613
5. Enisa Omanović-Miklićanin, Mirjana Maksimović: "Nanosensors Applications in Agriculture and Food Industry", Bulletin of the Chemists and Technologists of Bosnia and Herzegovina, 2016, 47, 59-70
6. Enisa Omanović-Miklićanin, Mirjana Maksimović, Ivana Vinković Vrček, Džana Mulaomerović, Amra Dorić: „Application of Nanotechnology in Food Packaging“, Proceeding book of 5<sup>th</sup> Workshop: Specific methods for food safety and quality, Satellite event of the 13th International Conference on Fundamental and Applied Aspects of Physical Chemistry - PHYSICAL CHEMISTRY, 2016., pp. 119-125
7. Mirjana Maksimović, Vladimir Vujović, Enisa Omanović-Miklićanin, :“Application of Internet of Things in food packaging and transportation“, International Journal of Sustainable Agricultural Managements and Informatics, Vol. 1, No. 4, pp. 333-350, ISSN 2054-5827, 2015

8. Mirjana Maksimovic, Vladimir Vujovic, Enisa Omanovic-Miklicanin: „A low cost Internet of Things solution for traceability and monitoring food safety during transportation“, HAICTA proceeding book, 583-593 (2015), [http://ceur-ws.org/Vol-1498/HAICTA\\_2015\\_paper66.pdf](http://ceur-ws.org/Vol-1498/HAICTA_2015_paper66.pdf)
9. E. Omanović-Miklićanin, M. Maksimović, V. Vujović: „[The Future of Healthcare: Nanomedicine and Internet of Nano Things](#)“, Folia Medica Facultatis Medicinae Universitatis Sarajevisis, Vol 50, No 1 (2015)
10. Enisa Omanovic-Miklicanin, Sandro Valzacchi, Catherine Simoneau, Douglass Gilland, Francois Rossi, „Solid-phase microextraction/gas chromatography–mass spectrometry method optimization for characterization of surface adsorption forces of nanoparticles“ Anal Bioanal Chem (2014), 406: 6629-6636

### Conference contributions:

(total: 57)

1. Enisa Omanović-Miklićanin, Mirjana Maksimović: **“Nanotechnology in Food and Agriculture”**, Fourth Annual Conference on Optical Nanospectroscopy, 28-31.3.2017, Lisabon, Portugal **(invited speaker)**
2. Mirjana Maksimović, Enisa Omanović-Miklićanin: **“Towards Green Nanotechnology: maximizing Benefits and minimizing Risks”**, 2<sup>nd</sup> International Conference on Medical and Biological Engineering, 16-18.3.2017, Sarajevo, Bosnia and Herzegovina
3. Enisa Omanović-Miklićanin, Mirjana Maksimović: **“Nanomaterials in Modern Technology with Emphasis on Application in Modern Medicine”**, 9th international scientific conference Contemporary Materials, 5th September, 2016, Banja Luka, Bosnia and Herzegovina, (poster)

### Projects:

(total: 27)

1. Enisa Omanović-Miklićanin, Amina Kozarić, Damir Marjanović: **„Influence of dialysis, size and shape of gold nanoparticles on cytotoxicity and cell distribution“** Ministry of Civil Affairs of Bosnia and Herzegovina, 2016-2018

### Awards

**„Best Poster Award“ for poster presentation: “Development of putrescine biosensors for the development of meat freshness” (E. Omanovic, K. Kalcher, J. Jurkovic), International Conference of Enzyme Technology RELATENZ 2007, 20-23 June 2007, Varadero, Cuba.**

### ----- COURSES -----

- Chemistry (including basics of General, Analytical, Inorganic and Organic chemistry) for students of Agriculture and Food Technology 2006 - present
- Analytical Instrumental Methods for students of Agriculture and Food Technology 2006– present
- Organic Chemistry for students of International Burch University, Sarajevo 2014 -
- Chemistry for students of International Burch University, Sarajevo 2014 -
- Biochemistry for students of International Burch University, Sarajevo 2014 -
- Pharmaceutical Biotechnology for students of International University of Sarajevo

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|------------------------------------------------------------------------------------------------------------------------|-------------|
|                                                                                                                        | 2010 – 2011 |
| - Chemistry for students of International University of Sarajevo                                                       | 2005 – 2010 |
| - Organic Chemistry, Organic Chemistry I and Organic Chemistry II for students of International University of Sarajevo | 2005 – 2010 |
| - General Chemistry for students of Chemistry, Faculty of Natural Sciences and Mathematics                             | 2006        |
| - Analytical Chemistry Lab courses for students of Chemistry, Faculty of Natural Sciences and Mathematics              | 2000 -2006  |

----- **SUPERVISION** -----

- 2 bacaleaurate
- 6 diploma work (in English language)
- 1 graduate thesis (old educational system)
- 17 master thesis
- 5 master thesis (in English language)
- 2 master thesis (old educational system)
- 1 PhD thesis

----- **LANGUAGES** -----

Bosnian – mother tongue  
 English – fluently  
 Italian and German - basic

----- **MEMBERSHIP IN PROFESSIONAL BODIES** -----

- Member of Organizing Committee – 4<sup>th</sup> Central and Eastern European Conference on Thermal Analysis and Calorimetry, 2017, Moldova
  - Member of Organizing Committee – 2nd Conference of Biomedical and Biological Engineering, 2017, Sarajevo, Bosnia and Herzegovina,
  - Member of Organizing and Scientific Committee – 2<sup>nd</sup> Congress of Chemists and Chemical Engineers of Bosnia and Herzegovina with International Participation, 2014 and 2016, Sarajevo, Bosnia and Herzegovina
  - Member of Organizing Committee - 26th International Scientific-Expert Conference of Agriculture and Food Sciences, 2015, Sarajevo, Bosnia and Herzegovina
  - Member of Organizing Committee - 3rd Central and Eastern European Conference on Thermal Analysis and Calorimetry, 2015, Ljubljana, Slovenia
  - Member of Scientific Committee - 1st Conference of Biomedical and Biological Engineering, Sarajevo, Bosnia and Herzegovina,
  - Member of Organizing and Scientific Committee - 1st Congress of Chemists and Chemical Engineers of Bosnia and Herzegovina with International Participation, 2014, Sarajevo, Bosnia and Herzegovina
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- Reviewer in NANO brief reports and reviews, Talanta, Food Control
  - Expert for quality assurance in higher education of Bosnia and Herzegovina
  - Expert in Institute for Accreditation of Bosnia and Herzegovina