

Chair of General and Inorganic Chemistry

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ABSTRACT

Researchers from the Chair published over 50 scientific papers in the field of inorganic chemistry, geochemistry, bioinorganic chemistry, organometallic compounds, the chemistry of coordination compounds, tests of inorganic materials (construction materials, electrode materials, natural minerals, *etc.*), the development of chemically modified biosorbents. Also, they are participants in a number of national and international projects in the field of basic research and technological development, as well as projects for the popularization of science.

The following teachers and associates are currently working at the Chair:

Nikola Nikolić, full professor:

General chemistry

Fundamentals of inorganic chemistry

Inorganic raw materials

Applied non-metal chemistry

Chemistry in agriculture

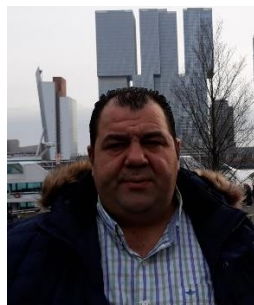


Dragan Đorđević, full professor (Head of Chair)

The techniques and methods for the characterization of inorganic compounds

Inorganic Chemistry 2

Theoretical inorganic chemistry



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Geochemistry

Chemistry of metals in the environment

Transition metal chemistry with coordination chemistry

General and Inorganic Chemistry
(Department of Biology)

Geochemistry (Department of Geography)

Maja Stanković, associate professor

General chemistry

Inorganic materials in industry

Inorganic reaction mechanism

Inorganic food chemistry

Inorganic compounds in medicine and pharmacy

Chemistry of gases



Nenad Krstić, assistant professor

Transition metal chemistry with coordination chemistry

Fundamentals of mineralogy

Inorganic compounds in medicine and pharmacy

Bioinorganic chemistry

School experiments in inorganic chemistry

Theoretical inorganic chemistry

The techniques and methods for the characterization of inorganic compounds



Milica Nikolić, teaching assistant (PhD student)



Vladimir Dimitrijević, research assistant
(PhD student)



The Chair contains the following instruments:

1. Electron spin resonance (ESR) spectrometer (Bruker Optics),
2. FTIR spectrophotometer Tensor with Hyperion microscope (Bruker Optics),
3. Stereo zoom microscope (Krüss),
4. Colorimeter.

Members of the Chair participate in the realization of the following projects:

1. Project TR 34008 - "*Development and characterization of a new biosorbent for the treatment of natural and wastewater*" (associate professor Maja Stanković, assistant professor Nenad Krstić, Vladimir Dimitrijević)
2. Project ON 171025 - "*Electric breakdown of gases, surface processes and applications*" (professor Nikola Nikolić)
3. Project ON 172061 - "*Combination libraries of heterogeneous catalysts, natural products, modified natural products and their analogues: a pathway to new biologically active agents*" (Milica Nikolić)
4. Project ON 176008 – "*Development programs of revitalization of the village of Serbia*" (associate professor Dragan Đorđević)

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Selected publications:

1. Stanković, M. N., Krstić, N. S., Mitrović, J. Z., Najdanović, S. M., Petrović, M. M., Bojić, D. V., Dimitrijević, V. D., & Bojić, A. L., (2016). Biosorption of copper (II) ions by methyl-sulfonated *Lagenaria vulgaris* shell: kinetic, thermodynamic and desorption studies. *New Journal of Chemistry*, 40(3), 2126-2134.

2. Krstić, N. S., Nikolić, R. S., Stanković, M. N, Nikolić, N. G., Đorđević, D. M., (2015). Coordination compounds of M(II) biometal ions with acid-type anti-inflammatory drugs as ligands—A review. *Tropical Journal of Pharmaceutical Research*, 14(2), 337-349.
3. Nikolić, R. S., Krstić, N. S., Nikolić, G. M., Kocić, G. M., Cakić, M. D, Anđelković, D. H., (2014). Molecular mechanisms of beneficial effects of lipoic acid in copper intoxicated rats assessment by FTIR and ESI-MS. *Polyhedron*, 80, 223-227.
4. Stanković, M. N., Krstić, N. S., Đorđević, D. M., Anastasijević, N. N., Mitić, V. V., Topličić-Ćurčić, G. A., Momčilović-Petronijević, A. J., Chemical analysis of mortars of archaeological samples from Mediana locality, Serbia. *Science of Sintering*, accepted for the publication.
5. Premović, P. I., Đorđević, D. M., & Pavlović, M. S., (2002). Vanadium of petroleum asphaltenes and source kerogens (La Luna Formation, Venezuela): isotopic study and origin. *Fuel*, 81(15), 2009-2016.
6. Radulović, N. S., Stojanović, N. M., Glišić, B. Đ., Randjelović, P. J., Stojanović-Radić, Z. Z., Mitić, K. V., Nikolić, M. G., & Djuran, M. I., (2018). Water-soluble gold (III) complexes with N-donor ligands as potential immunomodulatory and antibiofilm agents. *Polyhedron*, 141, 164-180.

Assistant professor Nenad Krstić is the winner of the following awards and recognitions:

- (1) Scholarship of the Fund for Young Talents of the Government of the Republic of Serbia (12.2006-12.2007);
- (2) EFG Eurobank scholarships for the best students of the final year of the state faculty (12.2007);
- (3) Best graduate chemist for 2007/2008 at the Faculty of Sciences and Mathematics (09.2008.);
- (4) Annual Award of the Serbian Chemical Society for 2008. (12.2008.);
- (5) Silver coin of the University of Niš for the best graduate student at the University of Niš in 2007/2008 for the group of faculties from the field of science and mathematics (06.2009.);
- (6) Award of the city of Vranje "Seventh September" for exceptional results in the field of education and scientific research (09.2009.).

Assistant professor Nenad Krstić was at postdoctoral studies as a scholar of the Ministry of Education, Science and Technological Development of the Government of the Republic of Serbia (10.2015.- 03.2016.) at BioMEMS Lab, University of Applied Sciences Aschaffenburg, Germany. He also went to this laboratory on two more occasions, once within a short study visit (05.12.-09.12.2016.) and the second time as a guest speaker (21.11.-01.12.2017.).

Assistant Milica Nikolić was in the Laboratory for Environmental and Life Sciences at the University of Nova Gorica, Slovenia within the exchange of master studies students

(TEMPUS project "Modernisation of Postgraduate Studies in Chemistry and Chemistry related Programmes") in the period 15.02.-15.03.2013. She is a winner of the following awards and recognitions: special recognition of the Serbian Chemical Society for outstanding success during the studies (December 2013.), the award of the fund of Nenad M. Kostić for the best master work in the field of chemistry at the Universities in Serbia (2013/2014), and "Ana Bjeletić and Ivan Marković" Fund award for the best student at the Department of Chemistry at the Faculty of Sciences and Mathematics in Niš for 2013/2014. Also, she received a scholarship of Foundation for Young Talents "Dositeja" for 2010/2011 and 2012/2013 awarded by the Ministry of Education, Science and Technological Development to the best students in the Republic of Serbia.