

# ŽIVOTOPIS: dr. sc. Stjepko Krehula (Rujan 2019)

## OSOBNI PODACI

**Ime:** Stjepko Krehula  
**Datum rođenja:** 13. prosinca 1975.  
**Mjesto rođenja:** Virovitica, Hrvatska  
**Državljanstvo:** Hrvatsko



## ZAPOSLLENJE

**Radno mjesto:** Viši znanstveni suradnik  
**Institucija:** Zavod za kemiju materijala, Institut Ruđer Bošković (IRB)  
**Adresa:** Bijenička cesta 54, 10000 Zagreb, Hrvatska  
**E-mail:** stjepko.krehula@irb.hr

## OBRAZOVANJE

- 2006.** Doktor prirodnih znanosti, Prirodoslovno-matematički fakultet Sveučilišta u Zagrebu (mentor dr. sc. Svetozar Musić)  
Disertacija: *Sinteza i mikrostrukturalna svojstva željezovih oksihidroksida i oksida*
- 2000.** Diplomirani inženjer kemije, Prirodoslovno-matematički fakultet Sveučilišta u Zagrebu (mentor prof. dr. sc. Nikola Kallay)  
Diplomski rad: *Određivanje entalpije površinskih reakcija masenom titracijom*

## RADNO ISKUSTVO

- 2014. -** Viši znanstveni suradnik, Zavod za kemiju materijala, IRB
- 2008. - 2014.** Znanstveni suradnik, Zavod za kemiju materijala, IRB
- 2007. - 2008.** Viši znanstveni asistent, Zavod za kemiju materijala, IRB
- 2000. - 2007.** Znanstveni asistent, Zavod za kemiju materijala, IRB

## NASTAVNO ISKUSTVO

- 2007.** Laboratorijske vježbe iz fizikalne kemije, Dodiplomski studij na Prirodoslovno-matematičkom fakultetu Sveučilišta u Zagrebu

## PODRUČJE ZNANSTVENOG INTERESA

Sinteza nanočestica metalnih oksida; istraživanje utjecaja kationa metala na nastajanje i svojstva nanočestica željezovih oksida; mikrostrukturalna karakterizacija nanočestica metalnih oksida korištenjem različitih instrumentalnih tehnika: rendgenska difrakcija u prahu (XRPD), Mössbauerova spektroskopija, infracrvena spektroskopija s Fourierovom transformacijom (FT-IR), ultraljubičasta-vidljiva-bliska infracrvena (UV-Vis-NIR) spektroskopija, visokorezolucijska pretražna elektronska mikroskopija (FE-SEM), spektroskopija karakterističnog rendgenskog zračenja (EDS), tehnike termičke analize (TGA, DTA), magnetska mjerenja (SQUID), fotokatalitička i elektrokatalitička svojstva nanostrukturnih metalnih oksida, oksihidroksida i hidroksida.

## PROJEKTI (voditelj ili suradnik na projektima)

- 2019. – 2021.** *Kompoziti nanočestica miješanih oksida i hidroksida željeza i prijelaznih metala i ugljikovih nanomaterijala za fotokatalitičke i elektrokatalitičke primjene* (bilateralni hrvatsko-srpski projekt, voditelj projekta dr. sc. Stjepko Krehula)
- 2017. - 2021.** *Nastajanje i svojstva 1D  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> nanostruktura dopiranih odabranim metalnim ionima* (Hrvatska zaklada za znanost, voditeljica projekta dr. sc. Mira Ristić)
- 2017. - 2021.** *Sinteza naprednih anorganskih katalizatora s povećanim brojem kiselih mjesta* (Hrvatska zaklada za znanost, voditelj projekta dr. sc. Josip Bronić)
- 2017. – 2019.** *Dizajn nanočestica ferita za primjene u poljoprivredi i zaštiti okoliša* (bilateralni hrvatsko-mađarski projekt, voditeljica projekta dr. sc. Mira Ristić)
- 2017. – 2019.** *Iron oxide nanostructures for environmental and energy applications* (bilateralni hrvatsko-kineski projekt, voditeljica projekta dr. sc. Mira Ristić)
- 2016. – 2017.** *Nanostrukturni željezovi oksidi za primjene u zaštiti okoliša* (bilateralni hrvatsko-srpski projekt, voditeljica projekta dr. sc. Mira Ristić)
- 2016. - 2017.** *Nano/mikrostruktura, optička i magnetska svojstva dopiranih elektroispređenih vlakana  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> i ZnO* (bilateralni hrvatsko-austrijski projekt, voditeljica projekta dr. sc. Mira Ristić)
- 2015. - 2017.** *Sinteza i karakterizacija nanočestica i nanovlakana željezovih oksida i njihova primjena u katalizi za zaštitu okoliša* (bilateralni hrvatsko-kineski projekt, voditeljica projekta dr. sc. Mira Ristić)
- 2012. - 2013.** *Istraživanje faktora koji utječu na svojstva nanočestica metala i metalnih oksida* (bilateralni hrvatsko-austrijski projekt, voditeljica projekta dr. sc. Mira Ristić)
- 2008. - 2010.** *Metalni oksidi - strukturna i magnetska svojstva* (bilateralni hrvatsko-srpski projekt, voditeljica projekta dr. sc. Mira Ristić)
- 2007. - 2012.** *Sinteza i mikrostruktura metalnih oksida i oksidnih stakala* (projekt MZOŠ 098-0982904-2952, voditelj dr. sc. Svetozar Musić do 2011., dr. sc. Mira Ristić od 2011.)
- 2002. - 2006.** *Sinteza i mikrostruktura metalnih oksida i oksidnih stakala* (projekt MZOŠ 0098062, voditelj projekta dr. sc. Svetozar Musić)
- 2000. - 2002.** *Sinteza i mikrostruktura metalnih oksida i oksidnih stakala* (projekt MZOŠ 00980903, voditelj projekta dr. sc. Svetozar Musić)

## ORGANIZACIJSKO ISKUSTVO

- 2018.** Organizacijski odbor konferencije MECAME 2018 – Mediterranean Conference on the Applications of the Mössbauer Effect (Zadar, Croatia, 27-31.05.2018.)
- 2017.** Organizacijski odbor konferencije MECAME 2017 – Mediterranean Conference on the Applications of the Mössbauer Effect (Jerusalem, Israel, 05-07.06.2017.)
- 2016.** Organizacijski odbor konferencije MECAME 2016 – Mediterranean Conference on the Applications of the Mössbauer Effect (Cavtat, Croatia, 31.05.-03.06.2016.)
- 2015.** Organizacijski odbor konferencije MECAME 2015 – Mediterranean Conference on the Applications of the Mössbauer Effect (Zadar, Croatia, 07-10.06.2015.)
- 2013.** Organizacijski odbor konferencije ICAME 2013 – 32nd International Conference on the Applications of the Mössbauer Effect (Opatija, Croatia, 01-06.09.2013.)
- 2010.** Organizacijski odbor Otvorenih dana Instituta Ruđer Bošković
- 2008.** Organizacijski odbor konferencije EUCMOS 2008 – XXIX European Congress on Molecular Spectroscopy (Opatija, Croatia)
- 2008.** Organizacijski odbor Otvorenih dana Instituta Ruđer Bošković

## ZNANSTVENI RADOVI OBJAVLJENI U CC ČASOPISIMA

- [1] T. Preočanin, S. Krehula, N. Kallay\*, *Enthalpy of surface reactions: temperature dependency of pH of acidic or basic concentrated hematite suspension*, *Applied Surface Science* 196 (2002) 392-400 (IF 5.155, Q1 in Materials Science, Coatings & Films).
- [2] S. Krehula, S. Popović, S. Musić\*, *Synthesis of acicular  $\alpha$ -FeOOH particles at a very high pH*, *Materials Letters* 54 (2002) 108-113 (IF 3.019, Q2 in Materials Science, Multidisciplinary).
- [3] S. Musić\*, S. Krehula, S. Popović, Ž. Skoko, *Some factors influencing forced hydrolysis of FeCl<sub>3</sub> solutions*, *Materials Letters* 57 (2003) 1096-1102 (IF 3.019, Q2 in Materials Science, Multidisciplinary).
- [4] S. Musić\*, S. Krehula, S. Popović, *Thermal decomposition of  $\beta$ -FeOOH*, *Materials Letters* 58 (2004) 444-448 (IF 3.019, Q2 in Materials Science, Multidisciplinary).
- [5] S. Musić\*, S. Krehula, S. Popović, *Effect of HCl additions on forced Hydrolysis of FeCl<sub>3</sub> solutions*, *Materials Letters* 58 (2004) 2640-2645 (IF 3.019, Q2 in Materials Science, Multidisciplinary).
- [6] S. Krehula, S. Musić\*, S. Popović, *Influence of Ni-dopant on the properties of synthetic goethite*, *Journal of Alloys and Compounds* 403 (2005) 368-375 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [7] S. Krehula, S. Musić\*, *Influence of ruthenium ions on the precipitation of  $\alpha$ -FeOOH,  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> and Fe<sub>3</sub>O<sub>4</sub> in highly alkaline media*, *Journal of Alloys and Compounds* 416 (2006) 284-290 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [8] S. Krehula, S. Musić\*, S. Popović, Ž. Skoko, *The influence of Zn-dopant on the precipitation of  $\alpha$ -FeOOH in highly alkaline media*, *Journal of Alloys and Compounds* 420 (2006) 260-268 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [9] S. Krehula, S. Musić\*, *Influence of Mn-dopant on the properties of  $\alpha$ -FeOOH particles precipitated in highly alkaline media*, *Journal of Alloys and Compounds* 426 (2006) 327-334 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [10] S. Krehula, S. Musić\*, *The influence of Cd-dopant on the properties of  $\alpha$ -FeOOH and  $\alpha$ -Fe<sub>2</sub>O<sub>3</sub> particles precipitated in highly alkaline media*, *Journal of Alloys and Compounds* 431 (2007) 56-64 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [11] S. Krehula\*, S. Musić, *Influence of copper ions on the precipitation of goethite and hematite in highly alkaline media*, *Journal of Molecular Structure* 834-836 (2007) 154-161 (IF 2.120, Q3 in Chemistry, Physical).
- [12] S. Krehula\*, S. Musić, *Formation of magnetite in highly alkaline media in the presence of small amounts of ruthenium*, *Croatica Chemica Acta* 80 (2007) 517-527 (IF 0.731, Q4 in Chemistry, Multidisciplinary).
- [13] S. Krehula\*, S. Musić, *Influence of aging in an alkaline medium on the microstructural properties of  $\alpha$ -FeOOH*, *Journal of Crystal Growth* 310 (2008) 513-520 (IF 1.573, Q3 in Materials Science, Multidisciplinary).
- [14] S. Krehula\*, S. Musić, *Influence of cobalt ions on the precipitation of goethite in highly alkaline media*, *Clay Minerals* 43 (2008) 95-105. (IF 1.219, Q4 in Chemistry, Physical)
- [15] S. Krehula\*, S. Musić, *A novel route for the synthesis of nanosize particles of metallic palladium*, *Materials Letters* 62 (2008) 4369-4370 (IF 3.019, Q2 in Materials Science, Multidisciplinary).
- [16] S. Krehula\*, S. Musić, *The influence of a Cr-dopant on the properties of  $\alpha$ -FeOOH particles precipitated in highly alkaline media*, *Journal of Alloys and Compounds* 469 (2009) 336-342 (IF 4.175, Q1 in Materials Science, Multidisciplinary).

## ZNANSTVENI RADOVI OBJAVLJENI U CC ČASOPISIMA

- [17] S. Krehula\*, S. Musić, *Formation of iron oxides in a highly alkaline medium in the presence of palladium ions*, Journal of Molecular Structure 924-926 (2009) 201-207 (IF 2.011, Q3 in Chemistry, Physical).
- [18] S. Krehula\*, S. Musić, *Spectroscopic and electron microscopic investigation of iron oxides formed in a highly alkaline medium in the presence of rhodium ions*, Journal of Molecular Structure 976 (2010) 61-68 (IF 2.120, Q3 in Chemistry, Physical).
- [19] S. Krehula\*, S. Musić, *Growth of uniform lath-like  $\alpha$ -(Fe,Al)OOH and disc-like  $\alpha$ -(Fe,Al)<sub>2</sub>O<sub>3</sub> nanoparticles in a highly alkaline medium*, Materials Chemistry and Physics 123 (2010) 67-76 (IF 2.210, Q2 in Materials Science, Multidisciplinary).
- [20] S. Krehula\*, S. Musić, *The influence of platinum(IV) ions on the formation of iron oxides in a highly alkaline medium*, Journal of Molecular Structure 993 (2011) 382–389 (IF 2.120, Q3 in Chemistry, Physical).
- [21] S. Krehula\*, S. Musić, *Hydrothermal synthesis of platinum group metal nanoparticles*, Croatica Chemica Acta 84 (2011) 465-468 (IF 0.705, Q4 in Chemistry, Multidisciplinary).
- [22] S. Krehula\*, S. Musić, *The effect of iridium(III) ions on the formation of iron oxides in a highly alkaline medium*, Journal of Alloys and Compounds 516 (2012) 207-216 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [23] S. Krehula\*, G. Štefanić, K. Zadro, L. Kratofil Krehula, M. Marciuš, S. Musić, *Synthesis and properties of iridium-doped hematite ( $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>)*, Journal of Alloys and Compounds 545 (2012) 200-209 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [24] S. Krehula\*, S. Musić, *Formation of AgFeO<sub>2</sub>,  $\alpha$ -FeOOH, and Ag<sub>2</sub>O from mixed Fe(NO<sub>3</sub>)<sub>3</sub>-AgNO<sub>3</sub> solutions at high pH*, Journal of Molecular Structure, 1044 (2013) 221-230 (IF 2.011, Q3 in Chemistry, Physical).
- [25] S. Krehula\*, L. Kratofil Krehula, S. Musić, *Synthesis and microstructural properties of  $\alpha$ -Fe<sub>1-x</sub>Ga<sub>x</sub>OOH solid solutions*, Journal of Alloys and Compounds 581 (2013) 335-343 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [26] G. Štefanić\*, S. Krehula, I. Štefanić, *The high impact of a milling atmosphere on steel contamination*, Chemical Communications 49 (2013) 9245-9247 (IF 6.164, Q1 in Chemistry, Multidisciplinary).
- [27] K. Kos, H. Posilović\*, A. Durman, M. Ristić, S. Krehula, *White Encrustation Produced from Deer Antler Phosphate on Prehistoric Ceramics from Podunavlje*, Archaeometry 57 (2015) 636–652 (IF 1.545, Q3 in Chemistry, Inorganic & Nuclear).
- [28] S. Krehula\*, M. Ristić, S. Kubuki, Y. Iida, M. Fabián, S. Musić, *The formation and microstructural properties of uniform  $\alpha$ -GaOOH particles and their calcinations products*, Journal of Alloys and Compounds, 620 (2015) 217-227 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [29] S. Krehula\*, M. Ristić, S. Kubuki, Y. Iida, M. Perović, M. Fabián, S. Musić, *Synthesis and microstructural properties of mixed iron–gallium oxides*, Journal of Alloys and Compounds 634 (2015) 130–141 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [30] Y. Iida, K. Akiyama, B. Kobzi, K. Sinkó, Z. Homonnay, E. Kuzmann, M. Ristić, S. Krehula, T. Nishida, S. Kubuki\*, *Structural analysis and visible light-activated photocatalytic activity of iron-containing soda lime aluminosilicate glass*, Journal of Alloys and Compounds 645 (2015) 1–6 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [31] G. Štefanić\*, S. Krehula, I. Štefanić, *Phase development during high-energy ball-milling of zinc oxide and iron – the impact of grain size on the source and the degree of contamination*, Dalton Transactions 44 (2015) 18870-18881 (IF 4.052, Q1 in Chemistry, Inorganic & Nuclear).
- [32] S. Krehula\*, M. Ristić, S. Kubuki, Y. Iida, L. Kratofil Krehula, S. Musić, *The effects of In<sup>3+</sup> doping on the properties of precipitated goethite*, Journal of Alloys and Compounds 658 (2016) 41-48 (IF 4.175, Q1 in Materials Science, Multidisciplinary).

- [33] S. Krehula\*, M. Ristić, M. Reissner, S. Kubuki, S. Musić, *Synthesis and properties of indium-doped hematite*, Journal of Alloys and Compounds, 695 (2017) 1900-1907 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [34] M. Ristić\*, S. Krehula, M. Reissner, M. Jean, B. Hannover, S. Musić, *Synthesis and properties of precipitated cobalt ferrite nanoparticles*, Journal of Molecular Structure 1140 (2017) 32–38 (IF 2.120, Q3 in Chemistry, Physical).
- [35] B. Kobzi, E. Kuzmann, K. Sinko, Z. Homonnay, M. Ristić, S. Krehula, T. Nishida, S. Kubuki\*, *The relationship between Sn<sup>II</sup> fraction and visible light activated photocatalytic activity of SnO<sub>x</sub>SiO<sub>2</sub> glass studied by Mossbauer spectroscopy*, Journal of Radioanalytical and Nuclear Chemistry 311 (2017) 1859-1865 (IF 1.186, Q3 in Chemistry, Inorganic & Nuclear).
- [36] L. Kratofil Krehula\*, A. Papić, S. Krehula, V. Gilja, L. Foglar, Z. Hrnjak-Murgić\*, *Properties of UV protective films of poly(vinyl-chloride)/TiO<sub>2</sub> nanocomposites for food packaging*, Polymer Bulletin 74 (2017) 1387-1404 (IF 1.858, Q3 in Polymer Science).
- [37] B. Kobzi, Y. Watanabe, K. Akiyama, E. Kuzmann, Z. Homonnay, S. Krehula, M. Ristić, T. Nishida, S. Kubuki\*, *<sup>57</sup>Fe-Mossbauer study and methylene blue decomposing effect of nanoparticle mixtures composed of metallic iron and maghemite*, Journal of Alloys and Compounds 722 (2017) 94-100 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [38] M. Ristić\*, S. Krehula, M. Reissner, S. Musić, *<sup>57</sup>Fe Mössbauer, XRD, FT-IR, FE SEM Analyses of Natural Goethite, Hematite and Siderite*, Croatica Chemica Acta 90 (2017) 499–507 (IF 0.731, Q4 in Chemistry, Multidisciplinary).
- [39] M. Ristić\*, S. Krehula, M. Reissner, S. Musić, *Microstructural Properties of Natural Allophane/Gibbsite from a White Bauxite Deposit in Montenegro*, Croatica Chemica Acta 91 (2018) 65–70 (IF 0.731, Q4 in Chemistry, Multidisciplinary).
- [40] B. Kobzi, E. Kuzmann, Z. Homonnay, S. Krehula, M. Ristić, S. Kubuki\*, *Improving the visible-light photocatalytic activity of SnO<sub>x</sub>-SiO<sub>2</sub> glass systems by introducing SnO<sub>x</sub> nanoparticles*, Journal of Radioanalytical and Nuclear Chemistry 316 (2018) 579-586 (IF 1.186, Q3 in Chemistry, Inorganic & Nuclear).
- [41] S. Krehula\*, M. Ristić, C. Wu, X. Li, L. Jiang, J. Wang, G. Sun, T. Zhang, M. Perović, M. Bošković, B. Antić, L. Kratofil Krehula, B. Kobzi, S. Kubuki, S. Musić, *Influence of Fe(III) doping on the crystal structure and properties of hydrothermally prepared β-Ni(OH)<sub>2</sub> nanostructures*, Journal of Alloys and Compounds 750 (2018) 687–695 (IF 4.175, Q1 in Materials Science, Multidisciplinary).
- [42] M. Ristić\*, M. Reissner, S. Krehula, S. Musić, *<sup>57</sup>Fe Mössbauer spectroscopic study and magnetic properties of 1D Fe(IO<sub>3</sub>)<sub>3</sub> particles and their thermal decomposition to α-Fe<sub>2</sub>O<sub>3</sub>*, Materials Letters 227 (2018) 47–50 (IF 2.687, Q2 in Materials Science, Multidisciplinary).
- [43] V. Gilja, L. Kratofil Krehula\*, Z. Katančić, S. Krehula, Z. Hrnjak-Murgić, J. Travas-Sejdic, *Influence of Titanium Dioxide Preparation Method on Photocatalytic Degradation of Organic Dyes*, Croatica Chemica Acta 91 (2018) 323–334 (IF 0.731, Q4 in Chemistry, Multidisciplinary).
- [44] S. Krehula\*, M. Ristić\*, I. Mitar, C. Wu, X. Li, L. Jiang, J. Wang, G. Sun, T. Zhang, M. Perović, M. Bošković, B. Antić, S. Musić, *Synthesis and Properties of Ni-doped Goethite and Ni-doped Hematite Nanorods*, Croatica Chemica Acta 91 (2018) 389–401 (IF 0.731, Q4 in Chemistry, Multidisciplinary).
- [45] L. Kratofil Krehula\*, J. Stjepanović, M. Perlog, S. Krehula, V. Gilja, J. Travas-Sejdic, Z. Hrnjak-Murgić, *Conducting polymer polypyrrole and titanium dioxide nanocomposites for photocatalysis of RR45 dye under visible light*, Polymer Bulletin 76 (2019) 1697–1715 (IF 1.858, Q3 in Polymer Science).
- [46] S. Krehula\*, M. Ristić, Ž. Petrović, L. Kratofil Krehula, I. Mitar, S. Musić, *Effects of Cu doping on the microstructural, thermal, optical and photocatalytic properties of α-FeOOH and α-Fe<sub>2</sub>O<sub>3</sub> 1D nanoparticles*, Journal of Alloys and Compounds 802 (2019) 290–300 (IF 4.175, Q1 in Materials Science, Multidisciplinary).

## CITIRANOST ZNANSTVENIH RADOVA (SCOPUS rujan 2019)

Ukupno citata: 752

Neovisni citati: 547

h-indeks: 14

## POGLAVLJA U KNJIGAMA

- 2013.** S. Musić, M. Ristić, S. Krehula, *<sup>57</sup>Fe Mössbauer spectroscopy in the investigation of the precipitation of iron oxides* in V.K. Sharma, G. Klingelhofer, T. Nishida (editors), *Mössbauer spectroscopy: applications in chemistry, biology, industry, and nanotechnology*, John Wiley & Sons, Hoboken, New Jersey, USA, 2013, pages 470-504.

## UREDNIŠTVO KNJIGA SAŽETAKA ZNANSTVENIH SKUPOVA

- 2018.** Book of Abstracts MECAME 2018 – Mediterranean Conference on the Applications of the Mössbauer Effect (Zadar, Croatia)
- 2017.** Book of Abstracts MECAME 2017 – Mediterranean Conference on the Applications of the Mössbauer Effect (Jerusalem, Israel)
- 2016.** Book of Abstracts MECAME 2016 – Mediterranean Conference on the Applications of the Mössbauer Effect (Cavtat, Croatia)
- 2015.** Book of Abstracts MECAME 2015 – Mediterranean Conference on the Applications of the Mössbauer Effect (Zadar, Croatia)
- 2013.** Book of Abstracts ICAME 2013 – 32nd International Conference on the Applications of the Mössbauer Effect (Opatija, Croatia)
- 2008.** Book of Abstracts EUCMOS 2008 – XXIX European Congress on Molecular Spectroscopy (Opatija, Croatia)

## UREDNIŠTVO ČASOPISA

- 2016.** Gostujući urednik svečanog broja časopisa *Croatica Chemica Acta* posvećenog dr. sc. Svetozaru Musiću (*Musić Festschrift*)

## ČLANSTVO U MEĐUNARODNIM ODBORIMA

- 2019.** Član Međunarodnog odbora za primjenu Mosbbuerovog efekta (International Board on the Applications of the Mössbauer Effect, IBAME)

## MEĐUNARODNA SURADNJA

Prof. Shiro Kubuki - Tokyo Metropolitan University, Tokyo, Japan  
Prof. Junhu Wang - Dalian Institute of Chemical Physics, Dalian, China  
Prof. Michael Reissner - Technische Universität Wien, Vienna, Austria  
Prof. Zoltan Homonnay - Eötvös Loránd University, Budapest, Hungary  
Dr. Erno Kuzmann - Eötvös Loránd University, Budapest, Hungary  
Dr. Marija Perović - Institute of Nuclear Sciences Vinca, Belgrade, Serbia  
Dr. Marko Bošković - Institute of Nuclear Sciences Vinca, Belgrade, Serbia  
Dr. Dalibor Stanković - Institute of Nuclear Sciences Vinca, Belgrade, Serbia  
Dr. Bratislav Antić - Institute of Nuclear Sciences Vinca, Belgrade, Serbia  
Dr. Martin Fabian - Institute of Geotechnics, Slovak Academy of Sciences, Slovakia

## POZVANA PREDAVANJA

- [1] S. Krehula: *The influence of metal cations on the synthesis and microstructural properties of iron oxides*, Magbiovin workshop: Advanced Techniques for physico-chemical characterization of MNPs, Vinča Institute, Belgrade, Serbia, 6 July 2015.
- [2] S. Krehula: *Properties of doped iron oxides synthesized in a highly alkaline medium*, Faculty of Humanity-Oriented Science and Engineering, Kindai University, Iizuka, Fukuoka, Japan, 10 March 2016.
- [3] S. Krehula: *Properties of doped iron oxides synthesized in a highly alkaline medium*, Japan Mössbauer Spectroscopy Forum, Tokyo Metropolitan University, Tokyo, Japan, 17 March 2016.
- [4] S. Krehula: *Hydrothermal synthesis, characterization and OER activity of nanostructured Ni-Fe (oxy)hydroxides*, 13th National Mössbauer Spectroscopy Conference, Beijing, China, 22 July 2017.
- [5] S. Krehula: *Influence of Metal Doping on the Properties of Iron Oxide Nanoparticles*, International Workshop on Advances in Nanomaterials, 17-21 September 2018, National Institute of Materials Physics, Magurele, Bucharest, Romania.
- [6] S. Krehula: *Influence of Doping on the Structural, Optical and Photocatalytic Properties of Iron Oxide Nanoparticles*, 5th Mediterranean Conference on the Applications of the Mössbauer Effect and 41st Workshop of the French Speaking Group of Mössbauer Spectroscopy (MECAME & GFSM 2019), Montpellier, France, 19-23.05.2019.
- [7] S. Krehula: *Structural, optical and photocatalytic properties of elongated Cu-, Co- and Sn-doped goethite and hematite nanoparticles*, International Conference on the Applications of the Mössbauer Effect, 01-06 September, 2019, Dalian, China.

## SUDJELOVANJA NA ZNANSTVENIM SKUPOVIMA (prezenter)

- [1] S. Musić, **S. Krehula**, S. Popović, Ž. Skoko: *Some factors influencing forced hydrolysis of FeCl<sub>3</sub> solutions* (oral presentation), 11th Slovenian-Croatian Crystallographic Meeting, 27-30 June 2002, Bohinj, Slovenia.
- [2] **S. Krehula**, S. Musić, S. Popović, N. Ljubešić: *Formation of  $\beta$ -FeOOH by forced hydrolysis of FeCl<sub>3</sub> solutions and thermal decomposition of  $\beta$ -FeOOH particles* (oral presentation), 12th Croatian-Slovenian Crystallographic Meeting, 19-22 June 2003, Plitvice, Croatia.
- [3] **S. Krehula**, S. Musić, Ž. Skoko, S. Popović: *Influence of Zn-doping on the properties of synthetic goethite* (oral presentation), 14th Croatian-Slovenian Crystallographic Meeting, 21-24 June 2005, Vrsar, Croatia.
- [4] **S. Krehula**, S. Musić, S. Popović: *Influence of Ni-dopand on the properties of synthetic goethite* (poster presentation), International Conference on the Applications of the Mössbauer Effect (ICAME 2005), 5-9 September 2005, Montpellier, France.
- [5] **S. Krehula**, S. Musić: *Influence of Copper Ions on Precipitation of Goethite and Hematite in Highly Alkaline Media* (poster presentation), XXVIII European Congress on Molecular Spectroscopy (EUCMOS 2006), 3-8 September 2006, Istanbul, Turkey.
- [6] **S. Krehula**, S. Musić: *The Influence of Cr-dopant on the properties of alpha-FeOOH particles precipitated in highly alkaline media* (oral presentation), E-MRS Fall Meeting, 17-21 September 2007, Warsaw, Poland.
- [7] **S. Krehula**, S. Musić: *Formation of iron oxides in a highly alkaline medium in the presence of palladium ions* (poster presentation), XXIX European Congress on Molecular Spectroscopy (EUCMOS 2008), 31 August – 5 September 2008, Opatija, Croatia.
- [8] **S. Krehula**, S. Musić: *Formation of iron oxides in a highly alkaline medium in the presence of rhodium ions* (poster presentation), International Conference on the Applications of the Mössbauer Effect (ICAME 2009), 19-24 July 2009, Vienna, Austria.
- [9] **S. Krehula**, S. Musić: *Nastajanje željezovih oksida u jako lužnatom mediju u prisutnosti paladijevih iona* (poster), XXI. Hrvatski skup kemičara i kemijskih inženjera, 19-22.04.2009., Trogir, Hrvatska.
- [10] **S. Krehula**, S. Musić: *Precipitation of  $\alpha$ -FeOOH at high pH in the presence of Au(III)* (poster presentation), 239th ACS National Meeting, 21-25 March 2010, San Francisco, USA.

## SUDJELOVANJA NA ZNANSTVENIM SKUPOVIMA (prezenter)

- [11] **S. Krehula**, S. Musić: *The influence of platinum(IV) ions on the formation of iron oxides in a highly alkaline medium* (poster presentation), 30th European Congress on Molecular Spectroscopy (EUCMOS 2010), 29 August – 3 September 2010, Florence, Italy.
- [12] **S. Krehula**, S. Musić: *The effect of various metal cations on the formation of iron oxides in a highly alkaline medium* (poster presentation), The 31st International Conference on the Applications of the Mössbauer effect (ICAME 2011), 25-30 September 2011, Kobe, Japan.
- [13] **S. Krehula**, S. Musić: *Formation of  $\alpha$ -FeOOH, AgFeO<sub>2</sub> and Ag<sub>2</sub>O from the mixed Fe(NO<sub>3</sub>)<sub>3</sub>-AgNO<sub>3</sub> solutions at high pH* (poster presentation), 31st European Congress on Molecular Spectroscopy (EUCMOS 2012), 26-31 August 2012, Cluj-Napoca, Romania.
- [14] **S. Krehula**, Lj. Kratožil Krehula, S. Musić: *Synthesis and microstructural properties of  $\alpha$ -Fe<sub>1-x</sub>Ga<sub>x</sub>OOH solid solutions* (poster presentation), International Conference on the Applications of the Mössbauer effect (ICAME 2013), 1-6 September 2013, Opatija, Croatia.
- [15] **S. Krehula**, M. Ristić, S. Musić: *Synthesis and microstructural properties of uniform  $\alpha$ -GaOOH,  $\alpha$ -Ga<sub>2</sub>O<sub>3</sub> and  $\beta$ -Ga<sub>2</sub>O<sub>3</sub> particles of different shapes* (poster presentation), NANOCON 2013, 16-18 October 2013, Brno, Czech Republic.
- [16] **S. Krehula**, M. Ristić, S. Kubuki, Y. Iida, M. Fabián, S. Musić: *Synthesis and microstructural properties of mixed iron-gallium oxide nanoparticles* (poster presentation), NANOCON 2014, 5-7 November 2014, Brno, Czech Republic.
- [17] **S. Krehula**: *Synthesis and Microstructural Properties of Mixed Iron-Gallium Oxides* (poster presentation), Mediterranean Conference on the Applications of the Mössbauer effect (MECAME 2015), Zadar, Croatia, 7-10 June 2015.
- [18] **S. Krehula**, M. Ristić, S. Kubuki, S. Musić: *Preparation and properties of indium-doped goethite* (poster presentation), International Conference on the Applications of the Mössbauer effect (ICAME 2015), 13-18 September 2015, Hamburg, Germany.
- [19] **S. Krehula**: *Properties of Iron Oxides Doped with Gallium and Indium* (oral presentation), Mössbauer Spectroscopy in Materials Science (MSMS 2016), 23-27 May 2016, Liptovsky Jan, Slovakia.
- [20] **S. Krehula**: *Synthesis and Properties of Indium-Doped Iron Oxides* (poster presentation), 2nd Mediterranean Conference on the Applications of the Mössbauer effect (MECAME 2016), 31 May - 3 June 2016, Cavtat, Croatia.
- [21] **S. Krehula**, M. Ristić, M. Reissner, C. Frandsen, S. Musić, <sup>57</sup>Fe Mössbauer spectroscopy analysis of Fe-bearing phases in the manufacture of TiO<sub>2</sub> pigment (poster presentation), 33rd European Congress on Molecular Spectroscopy (EUCMOS 2016), 30 July – 4 August 2016, Szeged, Hungary.
- [22] **S. Krehula**, M. Ristić, C. Wu, X. Li, L. Jiang, J. Wang, G. Sun, T. Zhang, M. Perović, M. Bošković, B. Antić, B. Kobzi, S. Kubuki and S. Musić, *Microstructural properties and OER activity of hydrothermally prepared Ni-Fe (oxy)hydroxides* (oral presentation), 3rd Mediterranean Conference on the Applications of the Mössbauer Effect (MECAME 2017), Jerusalem, Israel, 5–7 June 2017.
- [23] **S. Krehula**, M. Ristić, J. Wang, T. Zhang, M. Perović, M. Bošković, B. Antić, S. Kubuki and S. Musić, *Microstructural properties of Ni-doped hematite ( $\alpha$ -Fe<sub>2</sub>O<sub>3</sub>)* (poster presentation), The International Conference on the Applications of the Mössbauer Effect (ICAME 2017), Sankt Peterburg, Russia, 3–8 September 2017.
- [24] **S. Krehula**, M. Ristić, Ž. Petrović and S. Musić: *Synthesis and Microstructural Properties of Cu-Doped Goethite and Cu-doped Hematite Nanoneedles* (poster presentation), 4th Mediterranean Conference on the Applications of the Mössbauer Effect (MECAME 2018), Zadar, Croatia, 27-31 May 2018.
- [25] **S. Krehula**, M. Ristić, Ž. Petrović, L. Kratožil Krehula, S. Musić, *Effects of tin doping on the structural, optical and photocatalytic properties of iron oxide nanoparticles* (oral presentation), 2nd International Conference on Radioanalytical and Nuclear Chemistry (RANC 2019), Budapest, Hungary, 05–10 May 2019.



## RECENZIJE ZNANSTVENIH RADOVA

Recenzent znanstvenih radova za časopise:

- Chemistry of Materials (IF 10.159),
- Materials Research Letters (IF 7.440),
- Applied Surface Science (IF 5.155),
- Journal of Alloys and Compounds (IF 4.175),
- CrystEngComm (IF 3.382),
- Journal of the American Ceramic Society (IF 3.094),
- Journal of Magnetism and Magnetic Materials (IF 2.683),
- Beilstein Journal of Nanotechnology (IF 2.269),
- Materials Science in Semiconductor Processing (IF 2.722),
- Industrial & Engineering Chemistry Research (IF 2.587),
- Materials Chemistry and Physics (IF 2.781),
- Journal of Crystal Growth (IF 1.573),
- Journal of Advanced Ceramics (IF 1.605),
- Desalination and Water Treatment (IF 1.383),
- Journal of Nanoscience and Nanotechnology (IF 1.354),
- Clay Minerals (IF 1.219),
- Croatica Chemica Acta (IF 0.731),
- Hyperfine Interactions