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#### • **PERSONAL INFORMATION**

*Family name, First name:* Užarević, Krunoslav

*Date of birth:* 25 March 1978, Zagreb, Croatia.

*Identification number of the scientist:* **251576**

*URL for web site:* <http://www.irb.hr/eng/People/Krunoslav-Uzarevic>

#### • **EDUCATION**

2015 PostDoc position in Friščić Research Group, McGill University, Montreal, QC, Canada

2009 PhD in General and Structural Chemistry; Faculty of Science, University of Zagreb, Croatia; mentor Prof Marina Cindrić.

2001 Master; Faculty of Science, University of Zagreb, Croatia

#### • **WORKING POSITION**

2017 – *Senior* Research Associate, Head of Laboratory for Green Synthesis, Division of Physical Chemistry, Ruđer Bošković Institute, Zagreb, Croatia.

2016-2017 Research Associate; Head of Laboratory for Green Synthesis, Division of Physical Chemistry, Ruđer Bošković Institute, Zagreb, Croatia.

#### • **PREVIOUS POSITIONS**

2014-2016 *Postdoc Researcher – Marie Curie Fellow*  
*Department of Chemistry, McGill University, Montreal, Canada.*

2012 – 2014 Research Associate  
Division of Physical Chemistry, Ruđer Bošković Institute, Zagreb, Croatia.

2010 – 2012 Senior Research and Teaching Assistant  
Faculty of Science, University of Zagreb, Croatia

2002 – 2010 Research and Teaching Assistant  
Faculty of Science, University of Zagreb, Croatia

#### • **PROJECTS**

**2019-2021** European Social Fund and Croatian Science Foundation – 300 000 E  
“Mechanochemical and solvent-free strategies towards functional porous materials with advanced physico-chemical and catalytic properties”.

**2016-2019** Croatian Science Foundation Starting Grant (duration 3 years). 150000 E – Funding propositions were that I was not allowed to write or collaborate on other major projects during this time, but after the closure of the Grant I have already applied for one national and one EU call.  
**(PI)**

**2019** Grant of Croatian Academy of Sciences and Arts for the organization of an international scientific meeting (Solid-State Science and Research 2019). **(PI)**

**2019-** DESY synchrotron grant: Real-time and in situ monitoring of the mechanical stress and amorphization processes in relevant metal-organic frameworks **(PI)**

**2016-** DESY synchrotron grant: Real-time and in situ monitoring of mechanochemical reaction mechanisms, (PI Tomislav Friščić)



**2015-2017** Bilateral Project "Simultaneous synchrotron X-ray powder diffraction and Raman spectroscopy monitoring of mechanochemical reactions *in situ* and in real time"; German partner dr. Franziska Emmerling, BAM institute, Berlin (duration 2 years). **(PI)**

**2014** Grant of Croatian Academy of Sciences and Arts for project "Development of Raman spectroscopic methodology for direct and *in situ* monitoring of mechanochemical reactions". **(PI)**

#### • FELLOWSHIPS AND AWARDS

2015 Ruđer Bošković Institute award for outstanding scientific contribution in 2013.

2014 NEWFELPRO Outgoing Scheme Fellowship for research at McGill University, Montreal Canada, in the group of Prof Tomislav Friščić.

2014 Departmental award for outstanding scientific publication in 2013.

2013 Award of the American Chemical Society and Crystal Growth and Design journal for the best poster presentation at "Past, Present and Future of Crystallography" conference, Milano.

2009 "National award for excellence" obtained from the Ministry of Science, Sports and Education of the Republic Croatia.

#### • SUPERVISION OF DOCTORAL AND POSTDOCTORAL STUDENTS

2019 Supervision of a postdoc student – Dr. Dijana Saftić – mechanochemical organic synthesis

2017-present Supervision of a postdoc student – Dr. Bahar Karadeniz – mechanochemical synthesis of MOF materials

2018-present Mentor to a Ph. D. student in the field of mechanochemical prebiotic synthesis

2014-2018 Mentor of a Ph. D. student in the field of organic mechanochemical synthesis. Ruđer Bošković Institute, Zagreb, Croatia. Thesis defended in 2018, June 27<sup>th</sup>. Thesis title: DEVELOPMENT OF MECHANO-CHEMICAL SYNTHESIS OF AMIDES, UREAS AND TRIAZOLES

2002 – 2012: Mentoring the experimental work and writing of the Thesis for 10 graduate students in their obtaining of a Master degree. Faculty of Science, University of Zagreb, Croatia

2009-2012 Work from five students was later published in four scientific papers: *Cryst. Growth Des.* **9** (2009), 5327–5333; *Croat. Chem. Acta.* **84** (2011) 232-239; *Crystengcomm.* **13** (2011), 4314-4323; *Chem. Eur. J.* **18** (2012) 5620-5631.

2009 – Mentoring the student work (Zoran Kokan) awarded by the University of Zagreb Chancellor's Award – later published as a *Cryst. Growth Des.* **9** (2009), 5327.

#### • TEACHING ACTIVITIES

2002 – 2014 More than 3000 working hours teaching laboratory and seminar courses for students in Chemistry, Biology and Physics. Faculty of Science, University of Zagreb, Croatia.

#### • INSTITUTIONAL RESPONSIBILITIES

2016 – Member of the Divisional Scientific Board, RBI

2013- Member of the Chemistry Scientific Board at RBI

2011 –2013 Administrator for Student Electronic Application System. Faculty of Science, University of Zagreb, Croatia.

#### • MEMBERSHIPS

Croatian Crystallographic Association, Croatian Chemical Society, Canadian Society for Chemistry (2015), American Chemical Society (2013).



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• **REVIEWING ACTIVITIES**

Reviewer for ACS Applied Materials and Interfaces, Chemical Communications, ACS Sustainable Chemistry and Engineering, Nanoscale, Crystal Growth & Design, CrystEngComm, ChemistrySelect, Chemistry-An Asian Journal, RSC Advances, Dalton Transactions, New Journal of Chemistry, Journal of Molecular Structure, Croatica Chemica Acta, Vibrational Spectroscopy, Contributions, Small Methods, Kemija u industriji.  
Reviewer for international projects VV2014, Slovakia.

• **EDITORIAL ACTIVITIES**

2017-present Regional Editor for "Molecular Crystals and Liquid Crystals", Taylor & Francis.

• **ORGANIZATIONAL ACTIVITIES**

2017 – Chairman of the Organization Committee of Solid-State Science and Research 2017 Conference, Zagreb, 28-30 June 2017. 115 participants from 8 countries.

2019 – Chairman of the Organization Committee of international meeting Solid-State Science and Research 2019, Zagreb, 27-29 June 2019. 162 registered participants from 15 countries.

• **MAJOR SCIENTIFIC COLLABORATIONS in the last 5 years**

Prof. Tomislav Friščić, Mechanochemical synthesis and monitoring, McGill University, Montreal, Canada.

Prof. Omar Farha, Metal-Organic Frameworks, Northwestern University, Evanston, IL, USA.

Dr. Jose Hernandez, Organic and prebiotic synthesis, RWTH Aachen, Germany.

Dr. Franziska Emmerling, Mechanochemical synthesis, BAM Institute, Berlin, Germany.

Prof. Vladimir Kataev and Prof. Yulia Krupskaya, Magnetism, Leibnitz Institute for Solid-State and Materials Research, IFW Dresden, Germany.

Prof. Alexey Popov, Chemistry of fullerenes, Leibnitz Institute for Solid-State and Materials Research, IFW Dresden, Germany.

Dr. Robert Dinnebier, X-Ray Diffraction, Max Planck Institute, Stuttgart, Germany.

Prof. Janez Plavec, Solid-state tautomerism, Kemijski Inštitut, Ljubljana, Slovenija.

Prof. Blaž Likozar, Catalysis, Kemijski Inštitut, Ljubljana, Slovenija.

Prof. Gregor Mali, Solid-state NMR of paramagnetic species, Kemijski Inštitut, Ljubljana, Slovenija.

Dr. Marco di Michiel, Monitoring of mechanochemical reactions, ESRF synchrotron, Grenoble, France.

Dr. Martin Etter, Monitoring of mechanochemical reactions, DESY synchrotron, Hamburg, Germany.

Dr. Mirta Rubčić, Synthesis of coordination and organic compounds, PMF, Zagreb, Croatia.

Prof. Vladislav Tomišić (and his group), Solution mechanisms and kinetics, PMF, Zagreb, Croatia.

• **BOOK CHAPTERS**

1. Krunoslav Užarević, Vladimir Stilinović, Mirta Rubčić, Supramolecular Control over Tautomerism in Organic Solids in *Tautomerism: Concepts and Applications in Science and Technology*, Ed. Antonov, Liudmil, Wiley-VCH Verlag GmbH & Co, 2016, Weinheim, Germany, Pages 295-328.

## • PUBLICATIONS

51 publications in international peer-reviewed journals. 1276 citations, *h* index:20 (Google Scholar, 20/11/2019). An asterisk denotes the corresponding authorship. 1 preprint in ChemRxiv, also submitted for publication.

- 51.** Bahar Karadeniz, Dijana Žilić, Igor Huskić, Luzia Germann, Athena M. Fidelli, Senada Muratović, Ivor Lončarić, Martin Etter, Robert E. Dinnebier, Dajana Barišić, Nikola Cindro, Timur Islamoglu, Omar K. Farha, Tomislav Friščić, Krunoslav Užarević\*, Controlling the polymorphism and topology transformation in porphyrinic zirconium metal-organic frameworks via mechanochemistry, *J. Am. Chem. Soc.* (**2019**), minor revision, (22.10.2019.) (IF 14.695)
- 50.** Luzia S. Germann, Athanassios D. Katsenis, Igor Huskić, Patrick A. Julien, Krunoslav Užarević, Martin Etter, Omar K. Farha, Tomislav Friščić, Robert E. Dinnebier, Real-time in situ monitoring of particle and structure evolution in the mechanochemical synthesis of UiO-66 metal-organic frameworks, *Cryst. Growth Des.* (**2019**), 19, accepted for publication, doi: 10.1021/acs.cgd.9b01477, (IF 4.153).
- 49.** Nikola Cindro, Martina Tireli, Bahar Karadeniz, Tomislav Mrla, Krunoslav Užarević\*, Investigations of Thermally Controlled Mechanochemical Milling Reactions, *ACS Sustainable Chemistry & Engineering* (**2019**) doi:10.1021/acssuschemeng.9b03319 (IF 6.97)
- 48.** Ghada Ayoub, Bahar Karadeniz, Ashlee J. Howarth, Omar K. Farha, Ivica Đilović, Luzia S. Germann, Robert E. Dinnebier, Krunoslav Užarević\*, Tomislav Friščić\*, *Chemistry of Materials* (**2019**), 31, 15, 5494-5501. DOI: 10.1021/acs.chemmater.9b01068. (IF 10.16)
- 47.** Dajana Barišić, Nikola Cindro, Marina Juribašić Kulcsár, Martina Tireli, Krunoslav Užarević, Nikola Bregović, Vladislav Tomišić, Protonation and anion binding properties of aromatic bis-urea derivatives – apprehending the proton transfer. *Chemistry- a European journal.* (**2019**) 25, 4695-4706. DOI:10.1002/chem.201805633 (IF 5.16)
- 46.** Jiangyang You, Dejana Carić, Boris Rakvin, Zoran Štefanić, Krunoslav Užarević, Marina Kveder, Matrix material structure dependence of the embedded electron spin decoherence. *The Journal of chemical physics.* (**2019**), 150, 164124. (IF 2.99)
- 45.** Tomislav Stolar, Stipe Lukin, Martina Tireli, Irena Sović, Bahar Karadeniz, Irena Kereković, Gordana Matijašić, Matija Gretić, Zvonimir Katančić, Igor Dejanović, Marco di Michiel, Ivan Halasz, Krunoslav Užarević\*, Control of Pharmaceutical Cocrystal Polymorphism on Various Scales by Mechanochemistry: Transfer from the Laboratory Batch to the Large-Scale Extrusion Processing, *ACS Sustainable Chem. Eng.*, (**2019**), 7 (7), pp 7102–7110 DOI: 10.1021/acssuschemeng.9b00043 (IF 6.97)
- 44.** Stipe Lukin, Martina Tireli, Tomislav Stolar, Dajana Barišić, Maria Valeria Blanco, Marco di Michiel, Krunoslav Užarević, and Ivan Halasz, Isotope Labeling Reveals Fast Atomic and Molecular Exchange in Mechanochemical Milling Reactions, *J. Am. Chem. Soc.* (**2019**), 141 (3), 1212–1216. DOI: 10.1021/jacs.8b12149 (IF 14.695)
- 43.** Bahar Karadeniz, Ashlee J. Howarth, Tomislav Stolar, Timur Islamoglu, Igor Dejanović, Martina Tireli, Megan C. Wasson, Su-Young Moon, Omar K. Farha, Tomislav Friščić, Krunoslav Užarević\*, *ACS Sustainable Chem. Eng.* (**2018**), 6, 15841-15849. doi:10.1021/acssuschemeng.8b04458 (IF 6.97)
- 42.** Stipe Lukin, Martina Tireli, Ivor Lončarić, Dajana Barišić, Primož Šket, Domagoj Vrsaljko, Marco di Michiel, Marco, Janez Plavec, Janez; Krunoslav Užarević\*, Ivan Halasz Mechanochemical carbon-carbon bond formation that proceeds via a cocrystal intermediate. *Chemical Communications* (**2018**) 54, 13216-13219. (IF 6.290)
- 41.** Alen Bjelopetrović, Stipe Lukin, Ivan Halasz, Krunoslav Užarević, Ivica Đilović, Dajana Barišić, Ana Budimir, Marina Juribašić Kulcsar, Manda Čurić, Mechanism of Mechanochemical C–H Bond Activation in an Azobenzene Substrate by Pd(II) Catalysts, *Chem. Eur. J.*, (**2018**), 42, 10672-10682. (IF 5.16)
- 40.** Athena M. Fidelli, Bahar Karadeniz, Ashlee J. Howarth, Igor Huskić, Luzia S. Germann, Ivan Halasz, Martin Etter, Su-Young Moon, Robert E. Dinnebier, Vladimir Stilinović, Omar K. Farha, Tomislav Friščić, Krunoslav Užarević\*. Green and rapid mechanosynthesis of high-porosity NU- and UiO-type metal-organic frameworks. *Chemical Communications.* (**2018**), 54, 6999-7002 doi: 10.1039/C8CC03189D (IF 6.29)

- 39.** Krunoslav Užarević,\* Nenad Ferdelji, Tomislav Mrla, Patrick A. Julien, Boris Halasz, Tomislav Friščić and Ivan Halasz, Enthalpy vs. friction: heat flow modelling of unexpected temperature profiles in mechanochemistry of metal–organic frameworks, *Chemical Science*, (2018), 9, 2525-2532; doi: 10.1039/C7SC05312F (IF 9.56)
- 38.** Stipe Lukin, Ivor Lončarić, Martina Tireli, Tomislav Stolar, Maria V. Blanco, Predrag Lazić, Krunoslav Užarević, Ivan Halasz, Experimental and Theoretical Study of Selectivity in Mechanochemical Cocrystallization of Nicotinamide with Anthranilic and Salicylic Acid, *Cryst. Growth. Des.* (2018), 18, 1539-1547; doi: 10.1021/acs.cgd.7b01512 (IF 4.153)
- 37.** Martina Tireli, Silvija Maračić, Stipe Lukin, Marina Juribašić Kulcsar, Dijana Žilić, Mario Cetina, Ivan Halasz, Silvana Raić-Malić, Krunoslav Užarević, Solvent-free copper-catalyzed click chemistry for the synthesis of N-heterocyclic hybrids based on quinolone and 1,2,3-triazole, *Beil. J. Org. Chem.* (2017), 13, 2352–2363. doi:10.3762/bjoc.13.232 (IF 2.53)
- 36.** Stipe Lukin, Tomislav, Stolar Tomislav; Martina Tireli, Dajana Barišić, Marco Di Michiel, Krunoslav Užarević, Ivan Halasz, Ivan. Solid-State Supramolecular Assembly of Salicylic Acid and 2-Pyridone, 3- Hydroxypyridine or 4-Pyridone, *Croatica Chemica Acta*, (2017), 90, 707-710. (IF 0.73)
- 35.** Nikola Biliškov, Andreas Borgschulte, Krunoslav Užarević, Ivan Halasz, Stipe Lukin, Sanja Milošević, Igor Milanović, Jasmina Grbović Novaković, In-Situ and Real-time Monitoring of Mechanochemical Preparation of  $\text{Li}_2\text{Mg}(\text{NH}_2\text{BH}_3)_4$  and  $\text{Na}_2\text{Mg}(\text{NH}_2\text{BH}_3)_4$  and Their Thermal Dehydrogenation, *Chem. Eur. J.* (2017), 23, 16274–16282, DOI: 10.1002/chem.201702665 (IF 5.16)
- 34.** Stipe Lukin, Tomislav Stolar, Martina Tireli, Maria Blanco, Darko Babić, Tomislav Friščić, Krunoslav Užarević, Ivan Halasz, Tandem *in situ* monitoring for quantitative assessment of mechanochemical reactions involving structurally unknown phases, *Chem. Eur. J.* (2017), 23, 13941–13949. doi: 10.1002/chem.201702489 (IF 5.16)
- 33.** Tomislav Stolar, Lisa Batzdorf, Stipe Lukin, Dijana Žilić, Cristina Mottillo, Tomislav Friščić, Franziska Emmerling, Ivan Halasz, Krunoslav Užarević, *In situ* monitoring of mechanosynthesis of the archetypal metal-organic framework HKUST-1: the effect of liquid additives on milling reactivity, *Inorg. Chem.*, (2017), 56, 6599–6608, DOI: 10.1021/acs.inorgchem.7b00707 (IF 4.85)
- 32.** N. Bregović, N. Cindro, B. Bertoša, D. Barišić, L. Frkanec, K. Užarević, V. Tomišić, Dehydroacetic acid derivatives bearing amide and urea moieties as effective anion receptors, *Chem. Eur. J.* (2017), accepted for publication, DOI: 10.1002/chem.201701677.(IF 5.16)
- 31.** M. Juribašić Kulcsár, I. Halasz, A. Budimir, K. Užarević, S. Lukin, F. Emmerling, J. Plavec, M. Čurić, Reversible Gas-Solid Ammonia N–H Bond Activation Mediated by an Organopalladium Complex, *Inorg. Chem.*, (2017), 56, 5342–5351. (IF 4.85)
- 30.** A. Monas, K. Užarević, I. Halasz, M. Juribašić Kulcsár, M. Čurić, Vapour-induced solid-state C–H bond activation for the clean synthesis of an organopalladium biethiol sensor, *Chem. Commun.* (2016), 52, 12960-12963. DOI: 10.1039/C6CC06062E. (IF 6.29)
- 29.** T. Stolar, S. Lukin, J. Požar, M. Rubčić, G. M. Day, I. Biljan, D. Šišak Jung, G. Horvat, K. Užarević, E. Meštrović, I. Halasz, Solid-State Chemistry and Polymorphism of the Nucleobase Adenine. *Cryst. Growth Des.* (2016), 16, 3262-3270. (IF 4.153)
- 28.** K. Užarević, V. Štrukil, C. Mottillo, P. A. Julien, A. Puškarić, Tomislav Friščić, I. Halasz, Exploring the Effect of Temperature on a Mechanochemical Reaction by *in Situ* Synchrotron Powder X-ray Diffraction, *Cryst. Growth Des.* (2016), 16, 2342-2347, DOI: 10.1021/acs.cgd.6b00137. (IF 4.153)
- 27.** I. Huskić, Jan-Constantin Christopherson, Krunoslav Užarević, Tomislav Friščić, *In situ* monitoring of vapour-induced assembly of pharmaceutical cocrystals using a benchtop powder X-ray diffractometer, *Chem. Commun.* (2016), 52, 5120-5123, DOI: 10.1039/C6CC01583B. (IF 6.29)
- 26.** Patrick A. Julien, Krunoslav Užarević, Athanassios D Katsenis, Simon A. J. Kimber, Timothy C. Wang, Omar K. Farha, Yuancheng Zhang, Jose Casaban, Luzia Germann, Martin Etter, Robert E. Dinnebier, Stuart L. James, Ivan Halasz, Tomislav Friščić, *In situ* monitoring and mechanism of the mechanochemical formation of a microporous MOF-74 framework, *J. Am. Chem. Soc.* (2016), 138 (9), 2929–2932, DOI: 10.1021/jacs.5b13038. (IF 14.695)

- 25.** Krunoslav Užarević, Timothy C. Wang, Su-Young Moon, Athena M. Fidelli, Joseph T. Hupp, Omar K. Farha, Tomislav Friščić, Mechanochemical and Solvent-free Assembly of Zirconium-Based Metal-organic Frameworks, *Chem. Commun.* (2016), 52, 2133-2136. DOI: 10.1039/C5CC08972G (IF 6.29)
- 24.** K. Užarević, Ivan Halasz, Tomislav Friščić, Real-Time and In Situ Monitoring of Mechanochemical Reactions: A New Playground for All Chemists, *J. Phys. Chem. Lett.* (2015), 6, 4129–4140. (IF 7.329)
- 23.** M. Tireli, M. Juribašić Kulcsár, N. Cindro, M. Borovina, D. Gracin, M. Ćurić, I. Halasz, \* K. Užarević\*, Mechanochemical reactions studied by *in situ* Raman spectroscopy: base catalysis in liquid-assisted grinding, *Chemical Communications* (2015) 51, 8058-8061. (IF 6.29)
- 22.** A. D. Katsenis, V. Štrukil, C. Mottillo, P. A. Julien K. Užarević, M-H. Pham, T-O. Do, S. A. J. Kimber, P. Lazić, O. Magdyshyuk, R. E. Dinnebier, I. Halasz, T. Friščić, *In situ* X-ray diffraction monitoring of a mechanochemical reaction reveals a unique topology metal-organic framework, *Nature Communications*, (2015), 6, doi:10.1038/ncomms7662.
- 21.** I. Đilović, K. Užarević\*, Conformational adaptations of acyclic receptor templated by weakly coordinating anions; *CrystEngComm*, (2015), 17, 3153-3161, corresponding author.
- 20.** M. Juribašić, N. Bregović, V. Stilinović, V. Tomišić, M. Cindrić, P. Šket, J. Plavec, M. Rubčić, K. Užarević\*, Supramolecular stabilization of metastable tautomers in solution and solid state *Chem. Eur. J.* (2014) 20, 17333-17345, corresponding author, Hot article; Article highlighted as inner cover. (IF 5.16)
- 19.** D. Gracin, V. Štrukil, T. Friščić, I. Halasz, K. Užarević\*, Laboratory real-time and *in situ* monitoring of mechanochemical milling reactions using Raman spectroscopy, *Angew. Chem. Int. Ed.* (2014) 53, 6193. IF: 11,700 (5 years). (IF 12.257)
- 18.** M. Juribašić, K. Užarević, D. Gracin, M. Ćurić, Mechanochemical C–H Bond Activation: Rapid and Regioselective Double Cyclopalladation Monitored by *in situ* Raman Spectroscopy, *Chemical Communications* (2014) 50, 10287. IF: 6,485 (5 years). First author (shared with M. Juribašić). (IF 6.29)
- 17.** N. Bregović, N. Cindro, L. Frkanec, K. Užarević V. Tomišić, Thermodynamic Study of Dihydrogen Phosphate Dimerisation and Complexation with Novel Urea- and Thiourea-Based Receptors *Chem. Eur. J.* (2014) 20, 15863-15871. (IF 5.16)
- 16.** I. Halasz, T. Friščić, S. A. Kimber, K. Užarević, A. Puškarić, C. Mottillo, P. Julien, V. Štrukil, V. Honkimäki, R. E. Dinnebier, Quantitative *in situ* and real time monitoring of mechanochemical reactions, *Faraday Discussions*, (2014), 170, 203-221. DOI:10.1039/C4FD00013G
- 15.** K. Užarević, I. Halasz, I. Đilović, N. Bregović, M. Rubčić, D. Matković-Čalogović and V. Tomišić, Dynamic molecular recognition in the solid state for separating mixtures of isomeric dicarboxylic acids, *Angewandte Chemie International Edition* (2013), 52, 5504–5508. (corresponding author) DOI: 10.1002/anie.201301032 (IF 12.257)
- 14.** K. Užarević, G. Pavlović and M. Cindrić, Mononuclear and polynuclear molybdenum(VI) complexes coordinated by *N*-4-methoxysalicylidene-2-amino-3-hydroxypyridine, *Polyhedron* (2013), 52, 294–300.
- 13.** W. Schilf, B. Kamiński and K. Užarević, Nitrogen and carbon CP/MAS NMR investigations of keto-enol tautomerism in asymmetric *o*-hydroxy Schiff bases *Journal of Molecular Structure*, (2013) 1031, 211-215.
- 12.** K. Užarević, Z. Kokan, B. Perić and S. Kirin, Concomitant polymorphism in the pseudo-peptide Me<sub>2</sub>N-*p*C<sub>6</sub>H<sub>4</sub>C(O)-Phe-OEt *Journal of Molecular Structure*, (2013), 1031, 160-167.



- 11.** M. Rubčić, K. Užarević, I. Halasz, N. Bregović, M. Mališ, I. Đilović, Z. Kokan, R. S. Stein, R. E. Dinnebier and V. Tomišić, Desmotropy, Polymorphism, and Solid-State Proton Transfer: Four Solid Forms of an Aromatic o-Hydroxy Schiff Base, *Chemistry - A European Journal* (**2012**) 18, 5620–5631. (corresponding author). (IF 5.16)
- 10.** V. Stilinović, K. Užarević, I. Cvrtila and B. Kaitner, Bis(morpholine) hydrogen bond pincer – a novel series of heteroleptic Cu(II) coordination compounds as receptors for electron rich guests *CrystEngComm*, (**2012**), 14, 7493–7501
- 9.** K. Užarević\*, I. Đilović, N. Bregović, V. Tomišić, D. Matković-Čalogović, and M. Cindrić, Anion-Templated Supramolecular C<sub>3</sub>-Assembly for Efficient Inclusion of Charge- Dispersed Anions into Hydrogen-Bonded Networks, *Chemistry - A European Journal* (**2011**), 17, 10889–10897. (corresponding author) (IF 5.16)
- 8.** K. Užarević\*, M. Rubčić, M. Radić, A. Puškarić, and M. Cindrić, Mechanosensitive metal–ligand bonds in the design of new coordination compounds. *Crystengcomm*. (**2011**), 13, 4314–4323.
- 7.** I. Halasz, M. Rubčić, K. Užarević, I. Đilović, and E. Meštrović, The cocrystal of 4-oxopimelic acid and 4,4'-bipyridine: polymorphism and solid state transformations, *New Journal of Chemistry* (**2011**), 35, 24–27.
- 6.** T. Jednačak, P. Novak, K. Užarević, I. Bratoš, J. Marković and M. Cindrić, Bioactive Phenylenediamine Derivatives of Dehydroacetic Acid: Synthesis, Structural Characterization and Deuterium Isotope Effects. *Croatica chemica acta* (**2011**), 84, 232–239; (if: 0.773).
- 5.** K. Užarević\*, M. Rubčić, V. Stilinović, B. Kaitner and M. Cindrić, Keto–enol tautomerism in asymmetric Schiff bases derived from *p*-phenylenediamine, *Journal of Molecular Structure* (**2010**), 984, 232–239.
- 4.** K. Užarević\*, M. Rubčić, I. Đilović, Z. Kokan, D. Matković-Čalogović, and M. Cindrić, Concomitant Conformational Polymorphism: Mechanochemical Reactivity and Phase Relationships in the (Methanol)cis-dioxo-(*N*-salicylidene-2-amino-3-hydroxypyridine) molybdenum(VI) Trimorph, *Crystal Growth and Design* (**2009**), 9, 5327–5333. (IF 4.153)
- 3.** K. Užarević, I. Đilović, D. Matković-Čalogović, D. Šišak, and M. Cindrić, Anion-Directed Self-Assembly of Flexible Ligands into Anion-Specific and Highly Symmetrical Organic Solids, *Angewandte Chemie International Edition* (**2008**) 47, 7022–7025. (IF 12.257)
- 2.** V. Oreščanin, L. Mikelić, T. Sofilić, A. Rastovčan-Mioč, K. Užarević, G. Medunić, L. Elez, S. Lulić, Leaching Properties of Electric Arc Furnace Dust Prior/Following Alkaline Extraction, *Journal of Environmental Science & Health. Part A.* (**2007**), 42, 323–329.
- 1.** M. Cindrić, T. Kajfež Novak, K. Užarević, Molecular and crystal structures of *N, N'*-propylene- and *N, N'*- phenylene-diylbis[3-(1-aminoethyl)-6-methyl-2*H*-pyran-2, 4(3*H*)-dione], *Journal of Molecular Structure*. 750 (**2005**), 135–141.

#### PREPRINTS (SUBMITTED)

1. Selective Nucleobase Pairing Extends Plausible Prebiotic Conditions to the Solid State  
[https://chemrxiv.org/articles/Selective\\_Nucleobase\\_Pairing\\_Extends\\_Plausible\\_Prebiotic\\_Conditions\\_to\\_the\\_Solid\\_State/8327162/2](https://chemrxiv.org/articles/Selective_Nucleobase_Pairing_Extends_Plausible_Prebiotic_Conditions_to_the_Solid_State/8327162/2)



## • PRESENTATIONS AND PROMOTIONS

68 presentations, 16 invited presentations, 1 workshop. Only oral and invited presentations are listed.

25. K. Užarević, Rapid, clean and scalable synthesis of microporous functional MOFs and their non-conventional forms via mechanochemistry, Research Workshop "Interdisciplinary Endeavour in Technology at Nanoscale, Water and Environment" of the of Center of Excellence for Science and Technology - Integration of Mediterranean region (STIM), University of Split, Croatia. October 09 2019. (INVITED)

24. K. Užarević, New advances in Mechanochemistry; non-ambient reaction conditions and in situ monitoring techniques, Seminar of Institute of Organic Chemistry, RWTH Aachen, Germany. September 06 2019. (INVITED by Prof. Carsten Bolm).

23. K. Užarević, Rapid and scalable production of zirconium UiO- metal-organic frameworks by water-assisted mechanochemistry and extrusion, ACS Green Chemistry and Engineering, June 11-13 2019. (talk)

22. K. Užarević, In situ monitoring of mechanochemical reactions for new advances in solid-state chemistry, ACS Green Chemistry and Engineering, June 11-13 2019. (talk)

21. K. Užarević, Rapid and clean synthesis of functional MOFs and their non-conventional forms via mechanochemistry, Seminar at Chemical Institute, Ljubljana, May 23 2019 (INVITED)

20. K. Užarević, Advancing mechanochemistry by insights from Raman and NMR spectroscopy, Adriatic NMR, June 6-9 2019, Ston, Croatia (INVITED)

19. K. Užarević, Rapid, clean and scalables synthesis of microporous functional MOFs and their non-conventional forms via mechanochemistry, Seminar of "Nanoscale Chemistry", Leibniz Institute for Solid-State and Materials Research, IFW Dresden, Germany, May 16 2019. (INVITED)

18. K. Užarević, In situ monitoring of mechanochemical reactions for new advances in solid-state chemistry, Croatian Meeting of Chemists and Chemical Engineers, Šibenik, April 9-12 2019. (INVITED).

17. K. Užarević, In situ monitoring of mechanochemical reactions for new advances in organic chemistry, Beilstein Organic Chemistry Symposium 2018, Mechanochemistry: Microscopic and Macroscopic Aspects. November 13.-15 -2018. (INVITED)

16. K. Užarević, *In situ monitoring of mechanochemical reactions for new developments in materials chemistry*, Deutsches Elektronen-Synchrotron DESY, Hamburg, Germany, Condensed Matter Physics and Chemistry seminar, June 13 2017. (INVITED)

15. K. Užarević, INCOME2017 - 9th International Conference on Mechanochemistry and Mechanical Alloying, September 03.-07. 2017. (talk)

14. K. Užarević, Selektivno molekulsko prepoznavanje u čvrstom stanju, Symposium of Croatian Academy of Science and Arts, December 07 2017. (INVITED)

13. K. Užarević, Solvent-free methods for controllable synthesis of metastable pharmaceutical solids, Structure-property correlation in pharmaceutical solids, 24th Congress and General Assembly of the International Union of Crystallography, Hyderabad, 21.-28- 2017- 2017. (INVITED)

12. K. Užarević, N. Ferdelji, B. Halasz, I.Halasz, Monitoring the Heat Flow in Mechanochemical Reactions, oral presentation, Solid-State Science & Research 2017 Meeting, Zagreb, Hrvatska, 28.-30. 06. 2017. (talk)

11. K. Užarević, Ayoub, Ghada; Halasz, Ivan; Friščić, Tomislav, Clean and rapid synthesis of microporous mixed-metal MOF-74 materials via mechanochemistry, 24th Croatian-Slovenian Crystallographic Meeting, Book of Abstracts 24th Croatian-Slovenian Crystallographic Meeting, Bol, Hrvatska, 21-25.09.2016 (talk)





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<http://www.irb.hr/eng/People/Krunoslav-Uzarevic>

10. K. Užarević, Solid-state Chemistry and Green Chemistry, Regional Seminar for Chemistry Educational Workers, Zagreb, 26.09.2016. (INVITED)
9. K. Užarević; Đilović, Ivica, Solid-state molecular recognition and separation of organic anionic isomers by application of mechanochemistry, EMN Meeting on Supramolecular materials, Berlin, Germany, 18. 08.2016 (INVITED)
8. K. Užarević, Rapid, clean and gram-scale synthesis of microporous functional materials via mechanochemistry, Bundesanstalt für Materialforschung und -prüfung (BAM), BAM Institute, Berlin, 17.08.2016 (INVITED)
7. K. Užarević; Julien, Patrick A.; Ayoub, Ghada; Friščić, Tomislav, Mechanochemical synthesis of a microporous MOF-74 metal-organic framework studied by in situ synchrotron X-ray diffraction, 24th Annual Meeting of the German Crystallographic Society (DGK), Universität Stuttgart, Stuttgart, Germany, 14–17.03.2016. (talk)
6. K. Užarević, Porosity from grinding: rapid, clean and gram- scale synthesis of microporous functional materials via mechanochemistry, XI Meeting of Young Chemical Engineers, Zagreb, Croatia, 18-19.02.2016. (INVITED)
5. K. Užarević; Halasz, Ivan; Motillo, Cristina; Julien, Patrick; Puškarić, Andreas; Štrukil, Vjekoslav; Friščić, Tomislav, Variable-temperature in situ powder X-ray diffraction monitoring of mechanosynthesis of metal-organic frameworks, 250th American Chemical Society National Meeting & Exposition, Boston, USA, 16-20.08. 2015. (talk)
4. K. Užarević, Halasz Ivan, Mechanochemical synthesis, Seminar of Chemical Students Section, Faculty of Science, March 2013. (INVITED)
3. K. Užarević, Workshop in mechanochemical synthesis, Open day at Faculty of Science, Zagreb, Croatia 2011.
2. K. Užarević, Flexible podands in anion receptor chemistry, XXI Croatian meeting of Chemists and Chemical Engineers, Trogir, Croatia, 19.– 22.04.2009. (INVITED)
1. K. Užarević; Đilović, Ivica; Kokan, Zoran; Cindrić, Marina; Matković-Čalogović, Dubravka. Concomitant trimorph of cis-dioxo[(N-3-oxypirid-2-yl)-salicydeneiminato- O, N, O'-methanol] molybdenum(VI), Slovenian-Croatian Crystallographic Meeting (17; 2008), Ptuj, Slovenia, 19.- 22.06.2008. (talk)

## **HOBBIES**

Alpinism (title alpinist at the Croatian Mountaineering Association); Rock-climbing; Skiing; Hiking; Gardening.