

DIJANA JADREŠKO – CURRICULUM VITAE

Date of birth: November 22nd, 1980

Place of birth: Zagreb, Croatia

Nationality: Croatian

Present position: Research Associate, Laboratory for Physical Chemistry of traces, Division for Marine and Environmental Research, Ruđer Bošković Institute, Zagreb, Croatia

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CROSBI profile (MBZ: 290673): <https://www.croris.hr/crosbi/searchByContext/2/24900>

EDUCATION

2014 **Postdoctoral research** - Institute of Chemistry, Faculty of Natural Sciences and Mathematics, Sts. Cyril and Methodius University, Skopje, R. Macedonia

2006 – 2012 **Ph.D. in Chemistry**, Faculty of Science, University of Zagreb, Croatia

1999 – 2006 **Master's degree (MSc) in Chemistry**, Faculty of Science, University of Zagreb, Croatia

RESEARCH EXPERIENCE

2016 – *present* **Research Associate**, Laboratory for Physical Chemistry of Traces, Division for Marine and Environmental Research, Ruđer Bošković Institute, Zagreb, Croatia

2012 – 2016 **Senior research assistant**, Laboratory for Physical Chemistry of Traces, Division for Marine and Environmental Research, Ruđer Bošković Institute, Zagreb, Croatia

2006 – 2012 **Research Assistant**, Laboratory for Physical Chemistry of Traces, Division for Marine and Environmental Research, Ruđer Bošković Institute, Zagreb, Croatia

ELECTIONS TO SCIENTIFIC PROFESSIONS

2020 **Senior research associate** in the scientific field of Natural sciences, the field of Chemistry, the branch of Analytical Chemistry

2015 **Research associate** in the scientific field of Natural sciences, the field of Chemistry, the branch of Analytical Chemistry

TEACHING EXPERIENCE AND SUPERVISION OF STUDENTS

2023 Characterization of sacrificial agents with in situ generated free oxygen radicals and their application in photoelectrochemical production of hydrogen –

Supervisor of Master thesis (student Marija Lovrić, Faculty of Chemical Engineering and Technology, University of Zagreb; supervisor 1: prof. dr. sc. Kraljić Roković M., supervisor 2: dr. sc. Jadreško D.)

- 2023 The influence of the sacrificial agent on the stability of the SnS₂ photoanode - **Supervisor of the Bachelor's thesis** (student Mihaela Ćorić, Faculty of Chemical Engineering and Technology, University of Zagreb; supervisor 1: prof. dr. sc. Kraljić Roković M., supervisor 2: dr. sc. Jadreško D.)
- 2015 Electrochemical characteristics of 4-oxo-4H-pyran- dicarboxylic acid (chelidonic acid) and some of its metal complexes (*Electroanalysis* 29 (2017) 538-547) - **Student supervisor** (student Matija Kakša, Faculty of Science, University of Zagreb; supervisor 1: dr. sc. Jadreško D., supervisor 2: prof. dr. sc. Popović Z.)

PROJECTS

- 2022 A new electrochemical method for determining the antioxidant capacity of polyphenols by reaction with in situ generated free oxygen radicals, Croatian Academy of Science and Arts – **Principal investigator**
- 2018 – 2022 **Associate** on the research project “Geochemistry and the redox indicator record under different environmental conditions: towards a better understanding of past redox conditions”, Laboratory for Physical Chemistry of traces, Ruđer Bošković Institute – **Team member**
- 2014 – 2017 **Associate** on the research project “Development of voltammetric methods for characterizing natural antioxidants“ Laboratory for Physical Chemistry of traces, Division for Marine and Environmental Research, Ruđer Bošković Institute, Zagreb – **Team member**
- 2007 – 2013 **Associate** on the research project “Electroanalytical research of microcrystals and traces of dissolved substances”, Laboratory for Physical Chemistry of traces, Ruđer Bošković Institute, Zagreb – **Team member**

SCIENTIFIC PUBLICATIONS (26)

- 2023 Glavaš, M., Zlatić, K., **Jadreško, D.**, Ljubić, I., Basarić, N., *Fluorescent pH sensors based on BODIPY structure sensitive in acidic media*. *Dyes and pigments* 220 (2023) 111660, 11.
- 2023 Novak Jovanović, I., Vianello, R., **Jadreško, D.**, Racane, L., Hranjec, M., *Electrochemical oxidation and superoxide radical scavenging activity of 2-hydroxy/methoxy-phenylbenzothiazole derivatives*. *Journal of electroanalytical chemistry* 947 (2023), 117787, 11.

- 2022 **Jadreško D**, Miličević A, Novak Jovanović I: Reactivity of flavonoids toward superoxide radical: An electrochemical approach. *Electrochimica acta* 421 (2022) 140501.
- 2022 Jakopec S, Pantalon Juraj N, Brozović A, **Jadreško D**, Perić B, Kirin SI, Raić-Malić S: Ferrocene conjugates linked by 1,2,3-triazole and their Zn(II) and Cu(II) complexes: Synthesis, characterization and biological activity. *Applied organometallic chemistry* 36 (2022) 4.
- 2021 **Jadreško D**, Marković B, Medvidović-Kosanović M, Matković-Čalogović D, Széchenyi A, Počkaj M, Balić T, Popović Z: Structural and electrochemical properties of two novel CdX₂ (X = Br, I) picolinamide complexes. *Polyhedron* 194 (2021) 14906-14911.
- 2020 Mandić L, Džeba I, **Jadreško D**, Mihaljević B, Biczok L, Basarić N: Photophysical properties and electron transfer photochemical reactivity of substituted phthalimides. *New journal of chemistry* 44 (2020) 17252-17266.
- 2020 Rep V, Piškorić M, Šimek H, Mišetić P, Grbčić P, Padovan J, Gabelica Marković V, **Jadreško D**, Pavelić K, Kraljević Pavelić S, Raić-Malić S: Purine and purine isostere derivatives of ferrocene: An evaluation of ADME, antitumor and electrochemical properties. *Molecules* 25 (2020) 1570.
- 2020 Novak Jovanović I, Miličević A, **Jadreško D**, Hranjec M: Electrochemical oxidation of synthetic amino-substituted benzamides with potential antioxidant activity. *Journal of electroanalytical chemistry* 870 (2020) 114244
- 2019 **Jadreško D**: Simulation of alternative differential multi-pulse voltammetry. Evaluation of the electrochemical reversibility by the voltammogram symmetry. *Croatica chemica acta* 92 (2019) 95-102
- 2019 Novak Jovanović I, **Jadreško D**, Miličević A, Hranjec M, Perin N: An electrochemical study on the redox chemistry of cyclic benzimidazole derivatives with potent anticancer activity. *Electrochimica acta* 297 (2019) 452-462
- 2018 Foretić B, Vianello R, Matković- Čalogović D, **Jadreško D**, Picek I: Supramolecular inter-ionic charge-transfer complexes between derivatives of pyridinium-4- oxime cations and hexacyanoferrate(II) anions. *New journal of chemistry* 42 (2018) 16115-16126
- 2018 **Jadreško D**, Guziejewski D, Mirčeski V: Electrochemical Faradaic Spectroscopy. *ChemElectroChem* 5 (2018) 187-194
- 2017 **Jadreško D**, Kakša M, Popović Z: Electrochemical characteristics of 4-oxo-4H-pyran- dicarboxylic acid (chelidonic acid) and some of its metal complexes. *Electroanalysis* 29 (2017) 538-547
- 2015 Tranfić Bakić, M., **Jadreško, D.**, Hrenar, T., Horvat, G., Požar, J., Galić, N., Sokol, V., Tomaš, R., Alihodžić, S., Žinić, M., *Fluorescent phenanthridine-based calix[4]arene derivatives: synthesis and thermodynamic and*

- computational studies of their complexation with alkali-metal cations. RSC Advances* 5 (2015), 30.
- 2015 Guziejewski, D., Mirčeski, V., **Jadreško, D.**, *Measuring the electrode kinetics of surface confined electrode reactions at a constant scan rate. Electroanalysis* 27 (2015), 67-73.
- 2015 **Jadreško, D.**, Zelić, M., *Square-Wave Voltammetry of Electroinactive Surfactants. Electroanalysis* 27 (2015), 1669-1675.
- 2014 Komorsky-Lovrić, Š., **Jadreško, D.**, Lovrić, M., *Theory of square wave voltammetry of amalgam forming ions at spherical electrodes. Electrochimica acta* 130 (2014), 286-289.
- 2014 **Jadreško, D.**, Zelić, M., *Cyclic multipulse voltammetric techniques. Part II : EC mechanism. Journal of electroanalytical chemistry* 714/715 (2014), 30-37.
- 2013 **Jadreško, D.**, *Theory of square-wave voltammogram starting at the equilibrium potential. Journal of electroanalytical chemistry* 693 (2013), 56-59.
- 2013 **Jadreško, D.**, Zelić, M., *Cyclic multipulse voltammetric techniques. Part I: Kinetics of electrode processes. Journal of electroanalytical chemistry* 707 (2013), 20-30.
- 2013 Lovrić, M., **Jadreško, D.**, Komorsky-Lovrić, Š., *Theory of square-wave voltammetry of electrode reaction followed by the dimerization of product. Electrochimica acta* 90 (2013), 226-231.
- 2012 Zelić, M., Pižeta, I., **Jadreško, D.**, *Current Minimum in Differential Pulse Polarography. Croatica chemica acta* 85 (2012), 303-309.
- 2010 **Jadreško, D.**, Zelić, M., Lovrić, M., *A formal scan rate in staircase and square-wave voltammetry. Journal of electroanalytical chemistry* 645 (2010), 103-108.
- 2010 Lovrić, M., **Jadreško, D.**, *Theory of square-wave voltammetry of quasireversible electrode reactions using an inverse scan direction. Electrochimica acta* 55 (2010), 948-951.
- 2008 Zelić, M., **Jadreško, D.**, *Components of the Net Current in Differential Pulse Polarography. Electroanalysis* 20 (2008), 1897-1902.
- 2008 **Jadreško, D.**, Lovrić, M., *A theory of square-wave voltammetry of surface-active, electroinactive compounds. Electrochimica acta* 53 (2008), 27, 8045-8050.

AWARDS

- 2014 Division for Marine and Environmental Research award for Annual scientific achievement in 2013

ABSTRACTS IN BOOK OF ABSTRACTS

- 2022 Novak Jovanović I., Racané L., Jadreško D., Hranjec M. Electrochemical oxidation and superoxide radical scavenging activity of 2-hydroxy/methoxy phenylbenzothiazole derivatives, Conference Proceedings 8th Regional Symposium on Electrochemistry of South-East Europe and 9th Kurt Schwabe Symposium. Graz, Austria
- 2020 Rep V., Piškor M., Šimek H., Mišetić P., Grbčić P., Padovan J., Kraljević Pavelić S., **Jadreško D.**, Raić-Malić S. Conjugates of ferrocene and purine and purine isosteres: synthesis and biological evaluation. Book of abstract of XIII. Young Chemical Engineers meeting, Zagreb, Croatia
- 2019 Marcinek S., **Jadreško D.**, Omanović D. Development of voltammetric method for characterization and determination of surface active natural organic matter (humic substances). RSE SEE 7 Satellite student symposium, Split, Croatia
- 2018 Guziejewski D., Smarzewska S., **Jadreško D.**, Mirčeski V. Electrochemical Faradaic Spectroscopy. 17th International Conference on Electroanalysis ESEAC, Rodos, Greece
- 2018 **Jadreško D.**, Novak Jovanović I. Electrochemical characterization of biologically active derivatives of benzimidazol[1, 2-a]kinolina. 5th Day of Electrochemistry and 8th ISE SSRSE, Zagreb, Croatia
- 2017 **Jadreško D.**, Novak Jovanović I., Čižmek L., Komorsky-Lovrić Š. Voltammetric determination of b-carotene in fruits and vegetables. Book of abstracts. Budapest, Hungary
- 2016 **Jadreško D.**, Kakša M., Popović Z. Electrochemical characterization of Chelidonic acid and its metal complexes. 16th International Conference on Electroanalysis. Bath, UK
- 2014 **Jadreško D.** Theory of Alternative differential pulse voltammetry. 4th Day of Electrochemistry, Zagreb, Croatia
- 2014 **Jadreško D.**, Mirčeski V. Characterization of electrode processes by cyclic square-wave voltammetry. MatCatNet Workshop "From Molecules to Functionalised Materials" Scientific module "Polymers", Ohrid, R. Macedonia
- 2013 **Jadreško D.**, Zelić M. Cyclic normal pulse voltammetry in the study of EC reactions. Fourth Regional Symposium on Electrochemistry South-East Europe, Ljubljana, Slovenia
- 2013 Tranfić M., **Jadreško D.**, Galić N., Frkanec L., Tomišić V. Complexation of alkali cations with phenanthridine derivatives chalcis[4]arene. XXIII. Croatian meeting of chemists and chemical engineers, Book of abstracts, Zagreb, Croatia
- 2012 **Jadreško D.** Theory of cyclic normal pulse voltammetry for kinetically controlled electrode processes, Book of abstracts of 3rd Day of Electrochemistry, Zagreb, Croatia
- 2012 **Jadreško D.**, Zelić M. Theory of Cyclic Differential Pulse Voltammetry of quasi-reversible electrode processes, The 63rd Annual Meeting of the International Society of Electrochemistry. Electrochemistry for Advanced Materials, Technologies and Instrumentation. Prague, Czech Republic

- 2010 **Jadreško D.**, Zelić M., Lovrić M. A formal scan rate in staircase and square-wave voltammetry, Book of Abstracts of the 13th International Conference on Electroanalysis. Gijon, (Asturias) Spain
- 2009 **Jadreško D.**, Zelić M. The influence of hidden parameters on the results of voltammetric measurements, XXI. Croatian meeting of Chemists and chemical engineers – book of abstracts, Zagreb, Croatia
- 2008 **Jadreško D.**, Zelić M., Lovrić M. Square wave voltammetry of surface-active, electroinactive compounds, Book of Abstracts of the 1st Regional Symposium on Electrochemistry of South-East Europe. Zagreb, Croatia
- 2008 Zelić M., Lovrić M., **Jadreško D.** Current components in differential pulse polarography. Book of Abstracts of the 1st Regional Symposium on Electrochemistry of South-East Europe, Zagreb, Croatia
- 2007 **Jadreško D.**, Tranfić M., Frkanec L., Galić N., Tomišić V. Preparation and properties of new calix[4]arenes with phenanthridine subunits, XX. Croatian meeting of chemists and chemical engineers, Book of abstracts, Zagreb, Croatia

ORGANIZATION OF CONFERENCES

- 2014 Member of the scientific committee of the „4th Day of Electrochemistry“, Ruđer Bošković Institut, Zagreb, Croatia
- 2012, 2011 Organizer of the one-day symposium "*ISE Satellite Student Regional Symposium on Electrochemistry (ISE-SSRSE)*"(), Institut Ruđer Bošković, Zagreb, Croatia

MEMBERSHIP IN PROFESSIONAL ASSOCIATIONS/SOCIETIES

- 2007 – 2018 International Society of Electrochemistry