

## **CURRICULUM VITAE**

### **CONTACT INFORMATION**

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### **PERSONAL**

Date of birth: 23-June-1983 (Varaždin, Croatia)  
Citizenship: Croatian  
Married; mother of two children

### **EMPLOYMENT AND PRESENT POSITION**

2018 - Professional advisor  
Laboratory for Physical Chemistry of Traces  
Division for Marine and Environmental Research  
Ruder Boskovic Institute, Zagreb, Croatia

2012 -2018 Higher research assistant  
Laboratory for Physical Chemistry of Traces  
Division for Marine and Environmental Research  
Ruder Boskovic Institute, Zagreb, Croatia

2006 - 2012 Research assistant  
Laboratory for Physical Chemistry of Traces  
Division for Marine and Environmental Research  
Ruder Boskovic Institute, Zagreb, Croatia

### **EDUCATION**

2006 - 2011 Ph.D. in Chemistry, University of Zagreb, Zagreb  
2001 - 2005 B.Sc. in Chemistry, University of Zagreb, Zagreb  
1997 - 2001 High-school education in Varaždin, Croatia

Ph.D. Thesis: "Voltammetry of iron(III) complexes with organic ligands involved in natural processes", Mentor: Marina Mlakar, Ph.D.

B.Sc. Thesis: "Voltammetric determination of metal complexing capacity in model solutions and natural waters", Mentor: Dario Omanović, Ph.D.

### **AWARDS**

2015 Annual award of Ruder Boskovic Institute for publication of scientific paper with high impact factor in 2014  
2005 Award of the Department of Chemistry (University of Zagreb) for excellent success during study

### **SCIENTIFIC AND RESEARCH INTERESTS AND ACTIVITIES**

Current research interests are mainly focused on influence of nanoparticles (especially nanoplastics) on microalgae and their exudates (Extracellular Polymeric Substances, EPS) by applying various microscopy techniques, including Atomic Force Microscopy, AFM.

Previous research interest was characterisation of the trace metals in natural water samples, as well as in model solutions applying voltammetric and UV/Vis

spectrophotometric techniques. Characterisation included determination of the metal speciation in natural waters or model aqueous solutions, determination of stability constants of the metal complexes, as well as metal complexing capacity of natural water samples. Especially was involved in investigations of Fe(III) complexes with natural organic ligands.

**TEACHING ACTIVITIES:**

2007. - 2012. Assistant in exercise education at Physical Chemistry Department at Faculty of Science, University of Zagreb, Croatia.

**ATTENDED WORKSHOPS:**

1. 2020- 2023 Several Bruker's webinars on AFM application.
2. *Marine Chemistry- Analytical methods, trace elements and organic matter in marine environment* (Norwegian Cooperation Program on Research and Higher Education with the Countries on the Western Balkans), 11.-17. November 2007., Zagreb, Croatia.
3. TAQC-WFD workshop (*Training Course on Analytical Quality Control and method validation in support to the Water Framework Directive*), 02. - 04. November 2006., Budapest, Hungary.

**LIST OF PUBLICATIONS:**

***Scientific papers in Journals indexed in Current Contents***

1. **P. Vukosav**; L. Pašalić; D. Bakarić, D. Domazet Jurašin, T. Mišić Radić  
*Interaction of silica nanoparticles with microalgal extracellular polymers. **Water** 15 (2023) 519.*
2. A. Bačinić; **P. Vukosav**; I. Kero; M. Mlakar:  
*Study of the surface interactions of Co(II) with phospholipids from the marine environment. **Journal of marine science and engineering** 10 (2022), 1261-1273.*
3. T. Mišić Radić; **P. Vukosav**; B. Komazec; C. Formosa-Dague; D. Domazet Jurašin; P. Peharec Štefanić; A. Čačković; K. Juraić; N. Ivošević DeNardis  
*Nanoplastic-induced nanostructural, nanomechanical and antioxidant response of marine diatom *Cylindrotheca closterium*. **Water** 14 (2022); 2163.*
4. M. Mlakar, S. Pavković, L.- M. Tumir, **P. Vukosav**, B. Gašparović  
*Electrochemical characterization of biochemically active Cu(II) mixed ligand complex with histidine and cysteine **Electroanalysis** 29 (2017) 392-397*
5. **P. Vukosav**, M. Mlakar, A. Selmani, N. Bregović, B. Gašparović  
*Electrochemical characterization of Zn(II) complexes with D-mannosamine and Glycine in aqueous solutions, **Electrochim Acta** 188 (2016) 671-678*
6. D. Omanović, I. Pižeta, **P. Vukosav**, E. Kovács, S. Frančišković-Bilinski, J. Tamás,  
*Assessing element distribution and speciation in a stream at abandoned Pb-Zn mining site by combining classical, in-situ DGT and modelling approaches **Sci tot Environ** 511 (2015) 423-434.*
7. **P. Vukosav**, M. Mlakar  
*Speciation of biochemically important iron complexes with amino acids: L-aspartic acid and L- aspartic acid - glycine mixture **Electrochim Acta** 139 (2014) 29-35*

8. **P. Vukosav**, M. Mlakar, N. Cukrov, Ž. Kwokal, I. Pižeta, N. Pavlus, I. Špoljarić, M. Vurnek, A. Brozinčević, D. Omanović,  
*Heavy metal contents in water, sediment and fish in a karst aquatic ecosystem of the Plitvice Lakes National Park (Croatia)*, **Environ Sci Poll Res** 21 (2014) 3826-3839
9. **P. Vukosav**, L. Frkanec, M. Mlakar,  
*Voltammetric investigation of iron(III) complexes with siderophore Chrysobactin in aqueous solution*, **Electrochim Acta** 59 (2012) 479-484.
10. **P. Vukosav**, M. Mlakar, V. Tomišić  
*Revision of iron(III)-citrate speciation in aqueous solution. Voltammetric and spectrophotometric studies*, **Anal Chim Acta** 745 (2012) , 1; 85-91.
11. **P. Vukosav**, V. Tomišić, M. Mlakar  
*Iron(III)-complexes engaged in the biochemical processes in seawater. II. Voltammetry of Fe(III)-malate complexes in model aqueous solution*, **Electroanalysis** 22 (2010) 2179-2186.
12. **P. Cmuk**, I. Piantanida, M. Mlakar,  
*Iron(III)-complexes engaged in the biochemical processes in seawater. I. Voltammetry of Fe(III)-succinate complexes in model aqueous solution*, **Electroanalysis** 21 (2009) 2527-2534.
13. N. Cukrov, **P. Cmuk**, M. Mlakar, D. Omanović,  
*Spatial distribution of trace metals in the Krka River, Croatia. An example of the self-purification*, **Chemosphere** 72 (2008) 1559-1566.
14. Y. Louis, **P. Cmuk**, D. Omanović, C. Garnier, V. Lenoble, S. Mounier, I. Pižeta,  
*Speciation of trace metals in natural waters: The influence of an adsorbed layer of natural organic matter (NOM) on voltammetric behaviour of copper*, **Anal Chim Acta** 606 (2008) 37-44.

#### **Scientific conference papers with international peer-review**

1. T. Mišić Radić; **P. Vukosav**.  
*Nanoplastics in the marine environment: effect of microalgal extracellular polymers studied by AFM.*  
Microscopy Conference 2021 Joint Meeting of Dreilandertagung & Multinational Congress on Microscopy: Proceedings, online, 2021. 304 (poster).
2. **P. Vukosav**, M. Mlakar,  
*Iron(III)-organic complexes dissolved in seawater: characterization of iron(III)-succinate and iron(III)-malate complexes in aqueous solution*, Rapp. Comm. int. Mer Médit., Brian, Frederic (ed.), Monaco: CIESM, 2010. 321-321. (oral presentation).
3. **N. Cukrov**, **P. Cmuk**, Ž. Kwokal, D. Marguš, M. Mlakar, D. Omanović, Dario.  
*Ecotoxic trace metals in waters of "Krka" National Park - Croatia*, Proceedings of Second International Conference on Waters in Protected Areas, Zoran Nakić (ed.), Zagreb : Croatian Water Pollution Control Society, 2007. 226-229. (poster).
4. **Ž. Kwokal**, N. Cukrov, **P. Cmuk**, M. Mlakar, D. Omanović,  
*Distribution of mercury, cadmium, lead, copper and zinc in sediments of the Rijeka harbour as record of pollution*, Proceedings of 2nd International Conference on Ports and Waterways, N. Jolić(ed.).  
Zagreb : Faculty of traffic sciences, 2007, 158-164 (predavanje).
5. **Y. Louis**, **P. Cmuk**, R. Nicolau, D. Omanović, V. Lenoble, I. Pižeta, S. Mounier,  
*Pseudopolarography as a tool for complexation studies of trace metals with dissolved*

*natural organic matter*, 38th CIESM Congress Proceedings, J. Mascle (ed.).  
Monte Carlo: CIESM, 2007, 285 (poster).

6. Y. Louis, **P. Cmk**, D. Omanović, C. Garnier, V. Lenoble, I. Pižeta, S. Mounier,  
*Electrochemical behavior of copper complexes in model electrolyte solutions and  
natural waters*, 38th CIESM Congress Proceedings, J. Mascle (ur.).  
Monte Carlo: CIESM, 2007, 284 (oral presentation).

7. D. Omanović, Ž. Kwokal, N. Cukrov, **P. Cmk**, M. Mlakar, I. Pižeta, N. Pavlus, I.  
Špoljarić, M. Stojanovska,  
*Spatial Distribution of Ecotoxic Trace Metals in Waters of "Plitvička Jezera" National  
Park - Croatia*, Proceedings of Second International Conference on Waters in  
Protected Areas, Z. Nakić (ed.).  
Zagreb: Croatian Water Pollution Control Society, 2007, 217-221 (poster).

- **Several Other refereed conference papers**

**MISCELLANEOUS:**

2014. Organization of the "4th ISE Satellite Regional Symposium on Electrochemistry".

Member of the Organising Committee of the "4th Day of Electrochemistry" (April, 2014).

Editor of the "Book of Abstracts of the 4th Day of Electrochemistry".