

Saša Marcinek

Date and place of birth: 19/01/1991, Zagreb, Hrvatska

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WORK EXPERIENCE

10/2017 - Present **Assistant** - Ruđer Bošković Institute, Division for Marine and Environmental Research, Laboratory for Physical Chemistry of Traces, Bijenička cesta 54, 10000 Zagreb

EDUCATION

2021 **PhD in Oceanology** - Faculty of Science, University of Zagreb
Doctoral thesis: Multimethodological study of trace metal speciation and organic matter in estuarine waters
Supervisor: Dr. Dario Omanović

2017 **MEng in Environmental Engineering** - Faculty of Chemical Engineering and Technology, University of Zagreb
Master thesis: Characterization of interaction between trace metals and organic ligands by UV/Vis spectrometry
Supervisor: Dr. Tomislav Bolanča; Co-supervisor: Dr. Dario Omanović

2015 **BSc in Environmental Engineering** - Faculty of Chemical Engineering and Technology, University of Zagreb
Bachelor thesis: Polytyramine as the basis of the sensory surface
Supervisor: Dr. Stjepan Milardović

RESEARCH FIELD

- Biogeochemical processes of trace metals and organic matter in coastal waters
- Trace metal speciation

RESEARCH PROJECTS

2018 - 2020 Croatian-Chinese Scientific and Technological Cooperation: The speciation of trace metals in seawater at phase boundaries - implementation of advanced methodologies (collaborator)

2015 - 2019 New methodological approach to biogeochemical studies of trace metal speciation in coastal aquatic ecosystems (MEBTRACE), Croatian Science foundation (PhD student; collaborator)

TRAININGS

- Virtual One Health International PhD and Postdoc Summer School 2021 Environmental pollution: from soils to human health; University of Bern (Switzerland), 9 - 13 August **2021**
- International Summer School GEOTRACES; Universidad de Cádiz - Buque Intermares, Cádiz (Spain), 23 - 29 September **2019**
- Scholarship of French embassy - one-month educational training on organic matter analysis; Université de Toulon, Institut Méditerranéen d'Océanologie, La Garde (France), 8 October - 3 November **2018**

LANGUAGES

- Mother tongue: CROATIAN
- Other languages: ENGLISH Speaking/Writing: Advanced (C1)
Reading/Listening: Proficient (C2)

TECHNICAL SKILLS AND COMPETENCES

- Three-electrode system (663 VA Stand) controlled by μ Autolab analyser (potentiostat/galvanostat) interfaced with a GPES software. Different voltammetric techniques: differential pulse anodic and cathodic stripping voltammetry, ac voltammetry, cyclic voltammetry
- Copper-ion selective electrode
- Analysis of organic matter and trace metal interactions with organic ligands by UV/Vis spectrophotometry and fluorescence spectrometry
- Sampling of natural waters (water column and surface microlayer), preparation and conservation of samples for analysis of trace metals and organic matter
- Microsoft Office™ (Word, Excel i PowerPoint), SigmaPlot, EndNote, Visual MINTEQ, Ocean Data View, ECDSOFT, ProMCC, ASFit, TreatEEM...

ORGANIZATIONAL SKILLS AND COMPETENCES

- Member of organizing committee of 10th ISE Satellite Student Regional Symposium on Electrochemistry, online event, 2 July **2021**
- Member of organizing committee of COST ACTION TD 1407 Final Meeting: “Technology critical elements - sources, chemistry and toxicology”, Zagreb, (Croatia) 2 - 3 April **2019**
- Member of organizing team of exhibition point at IRB Open House, Zagreb (Croatia), **2017 - 2020**

TEACHING AND SUPERVISION ACTIVITIES

- Co-supervision of master internship: Arnaud Chapoulie, ENSICAEN, Caen (France), Application of Cu(II) ion-Selective electrode (Cu-ISE) for Cu speciation in coastal waters, May - August **2019**

VISITS TO FOREIGN RESEARCH AND EDUCATION INSTITUTIONS

- Université de Toulon, Institut Méditerranéen d'Océanologie, La Garde (France), 25 November - 4 December **2019** and 5 - 12 December **2021**
- CNR - Istituto di Biofisica, Pisa (Italy), 18 - 30 March **2019** i 31 July - 10 August **2019** – Public presentation (29th March): *Trace metal speciation and organic matter characterisation by spectroscopic and electrochemical methods*
- First Institute of Oceanography, Ministry of Natural resources, Qingdao (China), 25 February - 1 March **2019** – Public presentation (27th February): *Seasonal characterization of coloured dissolved organic matter (CDOM) in the pristine Krka River estuary (Croatia)*

Memberships

2021 - Present International Society of Electrochemistry

List of Publications

Citations: 47 (Scopus); 41 (WoS); 52 (Google Scholar)

H-index: 5 (Scopus); 4 (WoS), 5 (Google Scholar)

1. **Marcinek, S.***, Chapoulie, A., Salaün, P., Smith, S., Omanović, D.* (2021). Revised application of copper ion selective electrode (Cu-ISE) in marine waters: a new meta-calibration approach. *Talanta* 226:122170, 10. doi:10.1016/j.talanta.2021.122170
2. Pađan, J., **Marcinek S.***, Cindrić, A. M., Santinelli, C., Retelletti Brogi, S., Radakovitch, O., Garnier, C., Omanović, D.* (2021). Copper speciation by anodic stripping voltammetry (ASV) in estuarine waters with high dissolved organic matter. *Frontiers in Chemistry* 8:628749, 16. doi:10.3389/fchem.2020.628749
3. **Marcinek, S.***, Santinelli, C., Cindrić, A. M., Evangelista, V., Gonnelli, M., Layglon, N., Mounier, S., Lenoble, V., Omanović, D. (2020). Dissolved organic matter dynamics in the pristine Krka River estuary (Croatia). *Marine chemistry*, 225:103848, 12. doi:10.1016/j.marchem.2020.103848
4. Cindrić, A. M., **Marcinek, S.**, Garnier, C., Salaün, P., Cukrov, N., Oursel, B., Leonble, V., Omanović D.* (2020). Evaluation of diffusive gradients in thin films (DGT) technique for speciation of trace metals in estuarine waters - A

Curriculum Vitae – January 2022

multimethodological approach. *Science of The Total Environment*, 721:137784, 15. doi:10.1016/j.scitotenv.2020.137784

- Pađan, J., **Marcinek, S.**, Cindrić, A. M., Layglon, N., Garnier, C., Garcia, A. C., Omanović, D.* (2020). Determination of sub-pico-molar levels of platinum in the pristine Krka River estuary (Croatia) using improved voltammetric methodology. *Environmental Chemistry*, 17 (2), 74-84. doi:10.1071/EN19157
- Pađan, J., **Marcinek, S.**, Cindrić, A. M., Layglon, N., Lenoble, V., Salaün, P., Garnier, C., Omanović D.* (2019). Improved voltammetric methodology for chromium redox speciation in estuarine waters. *Analytica Chimica Acta*, 1089C, 40-47. doi:10.1016/j.aca.2019.09.014
- Omanović, D., Santinelli, C., **Marcinek, S.**, Gonnelli, M. (2019). ASFit - An all-inclusive tool for analysis of UV-Vis spectra of colored dissolved organic matter (CDOM). *Computers & Geosciences* 133:104334, 9. doi:10.1016/j.cageo.2019.104334

CONFERENCES/MEETINGS

- Marcinek, S.**, Cindrić, A. M., Pađan, J., Omanović, D. Diel variability of iron in the estuarine surface microlayer – a preliminary study. *The Iron at the Air-Sea Interface Workshop*, Asheville, USA, **2021** (poster)
- Marcinek, S.**, Cindrić, A. M., Garnier, C., Pađan, J., Omanović, D. Copper speciation in the Krka River estuary (Croatia). *42nd CIESM Congress*, Cascais, Portugal, **2019** (poster, flash talk)
- Marcinek, S.**, Cindrić, A. M., Pađan, J., Garnier, C., Omanović, D. Copper speciation in natural waters by CLE-AdCSV - a methodological uncertainties. *Goldschmidt2019 Congress*, Barcelona, Spain, **2019** (poster, flash talk)
- Marcinek, S.**, Layglon, N., Pađan, J., Cindrić, A. M., Santinelli, C., Gonnelli, M., Garnier, C., Mounier, S., Omanović, D. Dissolved organic matter (DOM) dynamics in the pristine Krka River estuary (Croatia). *XV International Estuarine Biogeochemistry Symposium (IEBS)*, Vigo, Spain, **2019** (oral)
- Marcinek, S.**, Jadreško, D., Omanović, D. Development of voltammetric method for characterization and determination of surface active natural organic matter (humic substances), *MEBTRACE mini workshop*, Šibenik, Croatia, **2019** (oral)
- Marcinek, S.**, Layglon, N., Pađan, J., Cindrić, A. M., Santinelli, C., Gonnelli, M., Garnier, C., Mounier, S., Omanović, D. Dissolved organic matter (DOM) dynamics in the pristine Krka River estuary (Croatia), *MEBTRACE mini workshop*, Šibenik, Croatia, **2019** (oral)
- 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, **2019** (oral)
- Chapoulié, A., **Marcinek, S.**, Omanović, D. Application of Cu(II) ion-selective electrode (Cu-ISE) for Cu speciation in coastal waters. *9th ISE Satellite Student Regional Symposium on Electrochemistry*, Zagreb, Croatia, **2019** (oral)
- Pađan, J., **Marcinek, S.**, Cindrić, A. M., Layglon, N., Durrieu, G., Garnier, C., Cobelo-García, A., Omanović, D. Determination of sub-pico-molar levels of platinum in the Krka River estuary (Croatia). *COST ACTION TD 1407 Final Meeting*, Zagreb, Croatia, **2019** (poster)
- Marcinek, S.**, Layglon, N., Pađan, J., Cindrić, A. M., Santinelli, C., Gonnelli, M., Garnier, C., Mounier, S., Omanović, D. UV/Vis spektrofotometrijska karakterizacija kromoforne otopljene organske tvari (CDOM) u estuariju rijeke Krke. *Treći Simpozij studenata doktorskih studija PMF-a*, Zagreb, Croatia, **2019** (oral)
- Omanović, D., Santinelli, C., **Marcinek, S.** ASFit - an all-inclusive tool for analysis of UV-Vis spectra of colored dissolved organic matter (CDOM). *International Workshop on Organic Matter Spectroscopy 2018 (WOMS 2018)*, La Garde City, France, **2018** (oral)
- Marcinek, S.**, Layglon, N., Pađan, J., Cindrić, A. M., Santinelli, C., Gonnelli, M., Garnier, C., Mounier, S., Omanović, D. UV-Vis spectroscopic study of coloured dissolved organic matter (CDOM) in the pristine Krka River estuary (Croatia). *International Workshop on Organic Matter Spectroscopy 2018 (WOMS 2018)*, La Garde City, France, **2018** (oral)

Curriculum Vitae – January 2022

13. Pađan, J., **Marcinek, S.**, Cindrić, A.M., Layglon, N., Garnier, C., Omanović D. Determination of sub-pico-molar levels of platinum in the Krka River estuary (Croatia). *40th International Conference on Environmental & Food Monitoring*, Santiago de Compostela, Spain, **2018** (oral)
14. **Marcinek, S.**, Garnier, C., Pađan, J., Pižeta, I., Omanović, D. Segmented multi–detection window approach for organic speciation of trace metals – a model and experimental study in estuarine system. *40th International Conference on Environmental & Food Monitoring*, Santiago de Compostela, Spain, **2018** (oral)
15. Pađan, J., **Marcinek, S.**, Cindrić, A. M., Layglon, N., Garnier, C., Omanović, D. Determination of sub-pico-molar levels of platinum in the Krka River estuary. *5. Dan elektrokemije & 8th ISE Satellite Student Regional Symposium on Electrochemistry*, Zagreb, Croatia, **2018** (oral)
16. **Marcinek, S.**, Garnier, C., Pađan, J., Pižeta, I., Omanović, D. Teoretska i eksperimentalna razrada metodologije "multi–detection window" za specijaciju metala u tragovima u estuarijskom sustavu, *5. Dan elektrokemije & 8th ISE Satellite Student Regional Symposium on Electrochemistry*, Zagreb, Croatia, **2018** (oral)
17. Šipić, K., **Marcinek, S.**, Šuman, M., Kučić D. Removal of phenols from aqueous solution by adsorption on olive mill waste. *XI. Susret mladih kemijskih inženjera*, Zagreb, Croatia, **2016** (poster)