

**Overview of the PhD student activities in the Chemistry program in the field of Environmental Chemistry:  
2016/17**

<b>Student</b> (given name and surname)	Miroslav Brumovský
<b>Supervisor</b> (given name and surname)	Luca Nizzetto, Ph.D.
<b>Consultant</b> (given name and surname)	prof. RNDr. Ivan Holoubek, CSc., prof. RNDr. Jana Klánová, Ph.D.
<b>Beginning of the study</b> (month/year)	July 2013
<b>Form of study</b> (delete where appropriate)	Present (internal)

**Summary of yearly research results** (15 lines maximum)

In the past year, the student has successfully produced a first-author paper focused on emerging marine contaminants based on results obtained in the campaigns conducted in 2014 in the Mediterranean Sea. This study, entitled "Contaminants of emerging concern in the open sea waters of the Western Mediterranean", was submitted to the impacted journal Environmental Pollution. The student already resubmitted the paper after minor revision and the study is expected to be accepted soon.

The student was involved in a follow-up study to his first paper in which ships of opportunity (e.g. ferries and container ships) equipped with remotely controlled automatic water samplers were used for the first time to monitor marine pollutions in the North sea. The student participated in preparing the campaign in a larger marine area (encompassing the North Sea, Norwegian Sea and the western part of the Baltic) and contributed to sample extraction and analysis using solid phase extraction and LC-MS. During this campaign, data on a number of emerging contaminants were collected, including current use pesticides, pharmaceuticals (with a special emphasis on antibiotics), personal care products and artificial sweeteners.

The student presented (as a platform presentation) the results of his work focused on the occurrence, distribution and fate of per- and polyfluoro alkyl substances at the international conference Dioxin 2016 held in Florence, Italy.

As one of 25 young scientists working in the field of sustainability research from the entire world, the student won the Green Talents 2016 Award organized by the German ministry for Education and Research. The student also won the Dean's Award for his research achievements.

**Internship abroad during past year** (place, start date, duration)

The student spent two months (August-September 2016) in Norway visiting the Norwegian University of Life Sciences and Norwegian Institute for Water Research where he learned more about unmanned sampling technologies and was working on writing papers and dissertation.

**Publication activities during Ph.D. studies**

Number of peer-reviewed articles in impacted journals	2 accepted +1 submitted
Number of conference (oral/poster) presentations	3
Number of other publishing activities (books, book chapters, patents etc.)	0
Public lecture in English (delete where appropriate)	yes (4x)

**The most important results during Ph.D. studies** (5 max, show the IF of the journal, conferences, awards):

1	Brumovský, M., Bečanová, J., Kohoutek, J., Thomas, H., Petersen, W., Sørensen, K., Sáňka, O., Nizzetto, L., 2016: Exploring the occurrence and distribution of contaminants of emerging concern through unmanned sampling from ships of opportunity in the North Sea. <i>Journal of Marine Systems</i> 162: 47–56. ISSN 0924–7963. (IF 2.508)
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2	Brumovský, M., Karásková, P., Borghini, M., Nizzetto, L., 2016: Per- and polyfluoroalkyl substances in the Western Mediterranean Sea waters. <i>Chemosphere</i> 159: 308–316. ISSN 0045–6535 (IF 3.698)
3	Grant EHP-CZ07-INP-3-195-2015, Emerging contaminants in marine waters, two-month mobility grant to visit the Norwegian University of Life Sciences and Norwegian Institute for Water Research (August-September 2016).
4	Oral presentation, Brumovský, M., Karásková, P., Borghini, M., Nizzetto, L. Per- and polyfluoroalkyl substances in the Western Mediterranean Sea waters. DIOXIN 2016, 28 <sup>th</sup> August – 2 <sup>nd</sup> September 2016, Florence, Italy.
5	Winner of Green Talents 2016 Award