

**Overview of the PhD student activities in the Chemistry program in the field of Environmental Chemistry:
2014/15**

Student (given name and surname)	Krzysztof Okonski
Supervisor (given name and surname)	Jana Klanova
Consultant (given name and surname)	Lisa Melymuk
Beginning of the study (month/year)	May 2011
Form of study (delete where appropriate)	Combined

Summary of yearly research results (15 lines maximum)

The research of Krzysztof was to do with atmospheric aerosols, namely how does the distribution of certain chemicals (mainly persistent organic pollutants) on size-specific aerosols influence their fate in the ambient air and risk they might pose to the human health. It was found that majority of POPs were associated with the smallest particles. Even though it is known that on the one hand smallest particles can stay longer in the atmosphere and on the other inhalation exposure is a function of particle size, up till now estimates of wet and dry deposition removal and human risk assessment have been usually using bulk-aerosol concentrations. This research helped to better understand long range atmospheric transport potential of POPs and importance of using cascade impactor as applied to the human risk assessment. 3 articles have been written based on these results. 2 have been already published, one will be submitted shortly. Krzysztof is currently working on the last manuscript to be submitted later this fall.

Internship abroad (place, start date, duration)

National Research Centre for Environmental Toxicology (ENTOX), Brisbane, Australia
1.09.2014 – 28.11.2014

Publication activities

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

The most important results (5 maximum, show the impact factor of the journal):

1	Okonski, K., Degrendele, C., Melymuk, L., Landlová, L., Kukučka, P., Vojta, Š., Kohoutek, J., Čupr, P., Klánová, J.: Particle size distribution of halogenated flame retardants and implications for atmospheric deposition and transport ENVIRONMENTAL SCIENCE & TECHNOLOGY 48 (14426-14434) 2014, IF = 5.33
2	Degrendele, C., Okonski, K., Melymuk, L., Landlová, L., Kukučka, P., Čupr, P., Klánová, J.: Size specific distribution of the atmospheric particulate PCDD/Fs, dl-PCBs and PAHs on a seasonal scale: Implications for cancer risks from inhalation ATMOSPHERIC ENVIRONMENT 98 (410-416) 2014, IF = 3.28
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