

IAP 2022 program

Sunday 18 September, Antwerpen Stadhuis, Grote Markt 1, 2000 Antwerpen		
17:00 – 19:00	Welcome reception	
Monday 19 September, s.KS building, Kattenstraat 10, 2000 Antwerpen		
	s.KS, first floor	
08:30 – 09:15	welcome coffee, set up posters	
	s.KS.203	s.KS.204
	Chair: Raewyn M. Town	
09:15 – 09:30	Opening of IAP2022	
09:30 – 10:15	Plenary: Tamar Kohn, EPFL, CH Aerosol pH is an overlooked driver of airborne influenza- and coronaviruses inactivation	
10:15 – 10:45	Keynote: Vera Slaveykova, Université de Genève, CH Effect of titanium oxide nanoparticles on the bioaccumulation of mercury species by crustacean <i>Daphnia magna</i>	
10:45 – 11:05	coffee break, first floor s.KS	
	Chair: Vera Slaveykova	Chair: Jérôme F.L. Duval
11:05 – 11:25	Gunter Flipkens, Universiteit Antwerpen, BE Deriving nickel (Ni(II)) and chromium (Cr(III)) based environmentally safe olivine guidelines for coastal enhanced silicate weathering	Nirrit Cohen, Technion, IL Retention and abrasion of microplastic fibers in sandy soil
11:25 – 11:45	Takumi Saito, University of Tokyo, JP Origin and ion binding properties of dissolved organic matters in deep sedimentary groundwater	Michael Sander, ETH, CH Enzymatic hydrolysis of biodegradable polyester as assessed by co-hydrolysis of an embedded fluorogenic probe
11:45 – 12:05	Chunnan Ni, Huazhong Agricultural University, CN Effect of land use pattern on the bioavailability of heavy metals: a case study with a multi-surface model.	Ali Dhaini, University of Montpellier/CNRS, FR Hydrophobic dyes removal from effluent wastewater using selective cavity of hybrid imogolite
12:05 – 14:00	lunch, first floor s.KS	
	Chair: Jose-Paulo Pinheiro	Chair: Silvia Ahualli
14:00 – 14:20	Kento Murota, University of Tokyo, JP Unique sorption of Cs and Sr onto mesoporous silicas	Neriya Perez-Lapid, Technion, IL Amorphous iron-oxide montmorillonite composite for phosphate adsorption and reuse

14:20– 14:40	Andreas Voegelin, EAWAG, CH Thallium adsorption onto phyllosilicate minerals in soils and sediments	Bram Geysels, Wageningen University and Research, NL Glyphosate adsorption to ferrihydrite: batch experiments and interpretation with CD-MUSIC modelling
14:40 – 15:00	Anil Can Yildirim, University of Tokyo, JP Modelling of Cs ⁺ , Sr ²⁺ and Eu ³⁺ sorption to sodium-activated metakaolin-based geopolymers	Mikhail Borisover, The Volcani Center, IL The concept of gate-sorption site coupling for understanding time-independent desorption hysteresis observed in solution experiments
15:00 – 15:20	Angel Delgado, University of Granada, ES Electrokinetics and stability of silica/clay mixtures at high copper concentration. Environmental and technical implications.	
15:30 – 16:30	Poster session with refreshments, first floor s.KS	
Tuesday 20 September, s.KS building, Kattenstraat 10, 2000 Antwerpen		
	s.KS.203	s.KS.204
	<i>Chair: Takumi Saito</i>	
09:00 – 09:45	Plenary: Guillaume Morin, IMPMC, FR Chemical speciation changes in the environmental cycles of metal contaminants. Inputs from field studies	
09:45 – 10:15	Keynote via MS Teams: Songhu Yuan, China University of Geosciences, CN Ligand facilitates electron extraction from solid Fe(II) for hydroxyl radical production and contaminant attenuation CTRL+click to join online	
10:15 – 10:35	<i>coffee break, first floor s.KS</i>	
	<i>Chair: Michael Sander</i>	<i>Chair: Raewyn M. Town</i> MS Teams session , CTRL+click to join online
10:35 – 10:55	Szimana Zarzsevskij, Czech University of Life Sciences, CZ The use of composted sewage sludge in brownfield soil remediation	Jingtao Hou, Huazhong Agricultural University, CN Observing higher As(III) adsorption on ferrihydrite than As(V): a non-ignorable role of micropore sites
10:55 – 11:15	Veronica Baldasso. University of Reims, FR Sorption of metformin and lamotrigine in a digestate-amended soil in the presence of metal contamination	Juan Xiong, Huazhong Agricultural University, CN Quantitative characterization of the site density and charged state of functional groups on biochar
11:15 – 11:35	Nenonen Ville, EAWAG/ETH, CH Effects of dissolved organic compounds on the structure, colloidal stability and phosphate uptake of Fe(III)-precipitates formed by Fe(II) oxidation in oxygenated anoxic groundwater	Zhenglun Yang, Huazhong Agricultural University, CN Assessment of cadmium bioavailability and stabilization strategies guidance in rice-soil system based on multi-surface speciation
11:35 – 11:55	Kyle Chardi, University of Vienna, AT The role of competing cations in ligand-induced U mobilization: comparisons from biogenic non-crystalline U(IV) and a bio-reduced field sediment	Jiezi Jin, Huazhong Agricultural University, CN Generic CD-MUSIC-eSGC model parameters for proton binding by iron (hydr)oxides

11:55 – 12:15	Mingkai Ma, Utrecht University, NL Kinetic model development for coupled processes: a study of phosphate release during sulfidation of iron (hydr)oxides	Wenfeng Tan, Huazhong Agricultural University, CN Impact of soil active components on heavy metal speciation and an advanced model through soil-plant continuum model.
12:15 – 13:45	<i>lunch, first floor s.KS</i>	
	<i>Chair: Josep Galceran</i>	<i>Chair: Luuk Koopal</i> MS Teams session, CTRL+click to join online
13:45 – 14:05	Walter Schenkeveld, Wageningen University and Research, NL Specificity of metallophores in metal mobilization	Marcelo Avena, Universidad Nacional del Sur, AR Desorption kinetics of glyphosate by phosphate from goethite. ATR-FTIR experiments and modelling
14:05 – 14:25	Juan Antelo, University of Santiago de Compostela, ES Trace metal binding to organic reactive (bio)surfaces at the solid/solution interface	Li Yan, Zhejiang Academy of Agricultural Sciences, CN Enzyme interacting with soil components and its conformational change investigation by spectroscopic techniques
14:25 – 14:45	Quynh Nguyen-Phuong, University of Reims, FR Geochemical modelling of Cu(II) and Pb(II) adsorption onto humin using NICA-Donnan	Linchuan Fang, Chinese Academy of Sciences/Ministry of Water Resources, CN Sequestration of heavy metals in soil aggregates induced by glomalin-related soil protein: a five-year phytoremediation field study
14:45 – 15:15	<i>coffee break, first floor s.KS</i>	
15:20	<i>departure of shuttlebus to Steenplein for boat trip</i>	
16:00 – 18:00	<i>boat trip along Scheldt River</i>	
19:00 – 23:00	<i>conference dinner, Felix Pakhuis, Godefriduskaai 30, 2000 Antwerpen</i>	
Wednesday 21 September, s.KS building, Kattenstraat 10, 2000 Antwerpen		
	s.KS.203	s.KS.204
	<i>Chair: Alberto Tiraferri</i>	
09:00 – 09:45	Plenary: Jean-François Dufreche, University of Montpellier/CNRS, FR How molecular simulation can be used to understand interfaces for the environment	
09:45 – 10:15	Keynote via MS Teams: David Waite, University of New South Wales, AU Integrated suspension anode and ultrafiltration system for defluorination of perfluorooctanoic acid (PFOA) CTRL+click to join online	
10:15 – 10:35	Silvia Ahualli. University of Granada, ES Capacitive deionization of solutions using functionalized carbon electrodes	
10:35 – 10:55	<i>coffee break, first floor s.KS</i>	

	<i>Chair: Jean-François Dufreche</i>	<i>Chair: Yael Mishael</i>
10:55 – 11:15	Adi Radian, Technion, IL Superior surface reactivity of montmorillonite decorated with amorphous, nano-sized iron-oxides makes for excellent fenton-like catalyst	Jose-Paulo Pinheiro, Université de Lorraine/CNRS, FR New insights on the estimation of chemical/electrostatic parameters for humic nanoparticles reactivity from NICA-SPBT-based modelling of proton titration curves: benefits of singular value decomposition and Tikhonov regularization steps in model-independent parameter estimation
11:15 – 11:35	Sonya Altziter, Hebrew University of Jerusalem, IL. Characterizing organic pollutant oxidation processes on manganese bearing colloids by a geoelectrical method.	Josep Galceran, Universitat de Lleida, ES Kinetics of the dissolution of In ₂ O ₃ nanoparticles followed with the electroanalytical technique AGNES
11:35 – 11:55	Yael Zvulunov, Technion, IL Encapsulation of biogenic Mn oxides for improved oxidation of glyphosate	Elise Rotureau, Université de Lorraine/CNRS, FR Unravelling the electrostatic and chemical components of the stability of indium-nanoparticulate humics complexes
12:00 – 12:15	Closing ceremony	
12:15 – 13:30	<i>lunch, first floor s.KS, and departure</i>	