

## Final Program

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| Time                   | Sunday, August 6, 2017      Time: 17:30-20:00      Location: EV building, Second floor              |   |
| 17:30-20:00            | <b>Registration</b>   |   |
|                        |   |   |
|                        | Day: 1 Monday, August 7, 2017      Time : 7:30-12:00      Location: EV building, Second floor       |   |
| 7:30-15:00             | <b>Registration</b>   |   |
|                        | Day 1: Monday, August 7, 2017      Time : 8:00-8:30      Location: EV.2.260                         |   |
| 8:00-8:30              | <b>Opening Ceremony</b>   |   |
|                        | <b>Day 1 Opening talk - Electrokinetics from historical perspective</b>                             |   |
| Time/<br>location      | Authors   | Title   |
| 8:30-9:00<br>EV.2.260  | Thomas Zimmie   | Electro-osmosis-the beginnings in civil engineering, including U-boat pens and spies                      |
|                        | <b>Technical Sessions</b>   |   |
|                        | Session 1      Day 1: Monday, August 7, 2017      Chair: Pernille E. Jensen      Location: EV.2.260 |   |
| 9:05-9:25<br>EV.2.260  | Bente H. Hyldegaard, Rasmus Jakobsen, Eline Weeth, Niels Overheu, David Gent, Lisbeth Ottosen       | Challenges in electrochemical remediation of chlorinated solvents in natural groundwater aquifer settings |
| 9:30-9:50<br>EV.2.260  | Matteo Masi, Alessio Ceccarini, Renato Iannelli   | Model-based optimization of field-scale electrokinetic remediation of marine sediments                    |
| 9:55-10:15<br>EV.2.260 | Ljiljana Rajic, Noushin Fallahpour, Roya Nazari, Akram N. Alshawabkeh                               | Electrochemical degradation of trichloroethylene in aqueous solution by bipolar graphite electrodes       |

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|                                 | <b>Day 1: Monday, August 7, 2017</b>   |   | <b>Time : 10:15-10:45</b>             | <b>Location: EV.2.309</b> |
| <b>10:15-10:45<br/>EV.2.309</b> | <b>Coffee Break and Poster Presentations</b>   |   |                                       |                           |
|                                 | <b>Session 2 Day 1: Monday, August 7,</b>  |   | <b>Chair: Chair: Gordon C.C. Yong</b> | <b>Location: EV.2.260</b> |
| <b>10:50-11:10<br/>EV.2.260</b> | <b>Gustavo Acosta-Santoyo, Jesús Cárdenas,<br/>Claudia Ríos, Zsuzsanna Plank, Erika Bustos</b>                     | <b>Analysis of the biological recovery of soils contaminated with hydrocarbons using an electrokinetic treatment</b>  |                                       |                           |
| <b>11:15-11:35<br/>EV.2.260</b> | <b>Gunvor M. Kirkelund , Pernille E. Jensen, Kristine B. Pedersen, Lisbeth M. Ottosen</b>                          | <b>Comparison of two- and three-compartment cells for electro-dialytic removal of heavy metals from contaminated material suspensions</b>                                       |                                       |                           |
| <b>11:40-12:00<br/>EV.2.260</b> | <b>Krishna R. Reddy, Ozgur Karaca,<br/>Claudio Cameselle</b>   | <b>Electrokinetic treatment of acid lake sediments and mine tailings: Characterization and remediation possibilities</b>  |                                       |                           |
|                                 | <b>Day 1: Monday, August 7, 2017</b>   |   | <b>Time : 12:00-13:30</b>             | <b>Location: EV.2.309</b> |
| <b>12:00-13:30<br/>EV.2.309</b> | <b>Lunch</b>   |   |                                       |                           |
| <b>13:00-13:30<br/>EV.2.309</b> | <b>Poster Presentation</b>   |   |                                       |                           |
|                                 | <b>Session 3 Day 1: Monday, August 7, 2017</b>   |   | <b>Chair: Pedro E. Arce</b>           | <b>Location: EV.2.260</b> |
| <b>13:30-13:50<br/>EV.2.260</b> | <b>Ana Rita Ferreira, Nazaré Couto, Paula Guedes,<br/>Joana Pinto, Eduardo P. Mateus,<br/>Alexandra B. Ribeiro</b> | <b>Electrodialytic 2-compartment cells for PPCPs removal from municipal effluent</b>  |                                       |                           |
| <b>13:55-14:15<br/>EV.2.260</b> | <b>Yuwei Zhao, Ljiljana Rajic, Shirin Hojabri, Wei Zhou, Akram N. Alshawabkeh</b>                                  | <b>Electro-Fenton reaction: Performance under flow conditions</b>   |                                       |                           |
| <b>14:20-14:40<br/>EV.2.260</b> | <b>Alberto Alejandro Pujol Pozo, Fabiola Monroy Guzmán, Erika Bustos</b>   | <b>Electrocoagulation in the treatment of steel parts contaminated with UO<sub>2</sub> (NO<sub>3</sub>)<sub>2</sub> at laboratory level, use of different cell arrangements</b> |                                       |                           |
| <b>14:45-15:05<br/>EV.2.260</b> | <b>Gordon C. C. Yang, Yu-Sheng Jen</b>   | <b>Remediation of polycyclic aromatic hydrocarbons in river sediment by novel Fenton-like process coupled with electrokinetic process</b>                                       |                                       |                           |
|                                 | <b>Day 1: Monday, August 7, 2017</b>   |   | <b>Time : 15:05-15:35</b>             | <b>Location: EV.2.309</b> |
| <b>15:05:15:35<br/>EV.2.309</b> | <b>Coffee Break and Poster Presentation</b>  |   |                                       |                           |

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|                         | <b>Session 4 Day: Monday, August 7, 2017</b>  | <b>Chair: Thomas Zimmie</b>  | <b>Location: EV.2.260</b>        |
| 15:35-15:55<br>EV.2.260 | Yue Song , Long Cang, Hongting Xu, , Song Wu, Dongmei Zhou  | Transport and electrochemical degradation of metal-EDTA complexes during electrokinetic remediation process        |                                  |
| 16:00-16:20<br>EV.2.260 | Gry Skibsted, Lisbeth M. Ottosen, Maria Elektorowicz, Pernille E. Jensen  | Effect of long-term electrodynamic soil remediation on Pb removal and soil weathering                              |                                  |
| 16:25-16:45<br>EV.2.260 | Esmaeel Kariminezhad, Maria Elektorowicz  | Phase separation of oil sludge by the influence of different electrokinetic methods                                |                                  |
| 16:50-17:10<br>EV.2.260 | Wing-Ping Liaoa, Po-Chi Lai   | Effect of surfactant and sodium hydroxide on remediation of biphenyl-A contaminated soil by electrokinetic process |                                  |
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|                         | <b>Day 1: Monday, August 7, 2017</b>  | <b>Time : 18:30-21:00</b>  | <b>Location: Le Nouvel Hotel</b> |
| 18:30-21:00             | <b>Social Diner</b><br>Le Nouvel Hotel (1740 René-Lévesque Blvd W, Montreal, QC H3H 1R3)                        |  |                                  |
|                         |   |  |                                  |
|                         | <b>Day 2: Tuesday, August 8, 2017</b>   | <b>Location: EV.2.260</b>  |                                  |
|                         | <b>Day 2 Opening talk – Electrokinetics from advanced perspectives</b>  |  |                                  |
| 8:30-9:00<br>EV.2.260   | A. Nastasia Allred, Samantha M. Blanton, J. R. Sanders and P. E. Arce   | Electrokinetics-Hydrodynamics (EKHD): An efficient framework for learning electrokinetics                          |                                  |
|                         | <b>Technical Sessions</b>   |  |                                  |
|                         | <b>Session 5 Day: Tuesday, August 8, 2017</b>   | <b>Chair: Akram N. Alshwabkeh</b>  | <b>Location: EV.2.260</b>        |
| 9:05-9:25<br>EV.2.260   | Samantha M. Blanton, A. Nastasia Allred, J. R. Sanders and P. E. Arce   | Modeling the drug delivery by electrokinetic-based methods in cancer tumor treatment                               |                                  |
| 9:30-9:50<br>EV.2.260   | Matteo Masi, Juan Manuel Paz-Garcia, Cesar Gomez-Lahoz, Maria Villen-Guzman, Alessio Ceccarini, Renato Iannelli | Influence of chemical reaction kinetics on electrokinetic remediation modelling results                            |                                  |
| 9:55-10:15<br>EV.2.260  | A. Nastasia Allred, Samantha M. Blanton, J. Robby Sanders, and Pedro E. Arce                                    | Role of electrokinetics in the cleaning efficiency of a dialyzer: toward an artificial kidney                      |                                  |
|                         | <b>Day 2: Tuesday, August 8, 2017</b>   | <b>Time : 10:15-10:45</b>  | <b>Location: EV.2.309</b>        |
| 10:15-10:45<br>EV.2.309 | <b>Coffee Break and Poster Presentation</b>   |  |                                  |

|                                 | <b>Session 6 Day 2: Tuesday, August 8, 2017</b>   |  | <b>Chair: Shadi W. Hasan</b>    | <b>Location: EV.2.260</b> |
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| <b>10:50-11:10<br/>EV.2.260</b> | <b>Victor Wei, Tanner Devlin, Xugang Zhang, Jan Oleszkiewicz</b>  | <b>Removal of phosphorus and COD from hog manure by enhanced electro-Fenton process</b>                            |                                 |                           |
| <b>11:15-11:35<br/>EV.2.260</b> | <b>Sharif Ibeid, Maria Elektorowicz, Jan A Oleszkiewicz</b>   | <b>Building up anammox bacteria using an electro-bioreactor</b>  |                                 |                           |
| <b>11:40-12:00<br/>EV.2.260</b> | <b>Lisbeth M. Ottosen, Cláudia S.V. Crespo, Pernille E. Jensen, Gunvor M. Kirkelund, &amp; Alexandra B. Riberio</b> | <b>Electrodialytic phosphorous recovery from suspended sewage sludge ash – continuous or periodically stirring</b> |                                 |                           |
|                                 | <b>Day 2: Tuesday, August 8, 2017</b>   |  | <b>Time : 12:00-13:30</b>       | <b>Location: EV.2.309</b> |
| <b>12:00-13:30<br/>EV.2.309</b> | <b>Lunch</b>  |  |                                 |                           |
| <b>13:00-13:30<br/>EV.2.309</b> | <b>Poster Presentation</b>  |  |                                 |                           |
|                                 | <b>Session 7 Day 2: Tuesday, August 8, 2017</b>   |  | <b>Chair: Alexandra Ribeiro</b> | <b>Location: EV.2.260</b> |
| <b>13:30-13:50<br/>EV.2.260</b> | <b>Nancy A. ElNaker, Shadi W. Hasan, Ahmed F. Yousef</b>  | <b>Impact of electric field on the function and microbial community structure in electro-bioreactors</b>           |                                 |                           |
| <b>13:55-14:15<br/>EV.2.260</b> | <b>Elektorowicz Maria, Jitaru Bianca, Elham Safaei, Jiaru Luo</b>   | <b>BioElectro system for sludge disinfection</b>   |                                 |                           |
| <b>14:20-14:40<br/>EV.2.260</b> | <b>Tanner R. Devlin, Efren Pagaduan, Xugang Zhang, Maciej S. Kowalski, Victor Wei, Jan Oleszkiewicz</b>             | <b>Electrokinetically enhanced primary treatment</b>   |                                 |                           |
| <b>14:45-15:05<br/>EV.2.260</b> | <b>Maria Elektorowicz, Seyedehfatemeh Hosseini, Sharif Ibeid</b>  | <b>Innovative SMEBR-Anammox system</b>   |                                 |                           |
|                                 | <b>Day 2: Tuesday, August 8, 2017</b>   |  | <b>Time : 15:05-15:35</b>       | <b>Location: EV.2.309</b> |
| <b>15:05-15:35<br/>EV.2.309</b> | <b>Coffee Break and Poster Presentation</b>   |  |                                 |                           |
|                                 | <b>Session 8 Day 2: Tuesday, August 8, 2017</b>   |  | <b>Chair: Henrik K. Hansen</b>  | <b>Location: EV.2.309</b> |
| <b>15:40-16:00<br/>EV.2.260</b> | <b>Arash Fella Jahromi, Alexandre Belanger, Maria Elektorowicz</b>  | <b>Electrokinetic assisted oil-water phase separation in oily sludge with implementing novel controller system</b> |                                 |                           |

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| 16:05-16:25<br>EV.2.260 | Paula Guedes, Nazaré Couto, Joana Almeida, António M. Rodrigues, Eduardo P. Mateus, Alexandra B. Ribeiro | Electrodialytic treatment of sewage sludge: Influence on microbiological community  |
| 16:30-16:55<br>EV.2.260 | Mousa Bani Baker, Maria Elektorowicz, Adel Hanna, Raed Abendeh, Taher Ayadat                             | Electrokinetic Nondestructive In-situ Technique for Rehabilitation of Damaged Liner   |
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|                         | <b>Day 2: Tuesday, August 8, 2017</b>  | <b>Time : 17:00-17:30</b> <b>Location: EV.2.260</b>   |
| 17:00-17:30<br>EV.2.260 | <b>Plenary session</b>   |   |
|                         |  |   |
|                         | <b>Poster presentation</b>   |   |
|                         | <b>Day 1: Monday, August 7, 2017</b>   | <b>Time: 10:15-10:45 &amp; 13:00-13:30 &amp; 15:05-15:35</b> <b>Location: EV.2.309</b>  |
|                         | <b>Author</b>  | <b>Title</b>  |
| 7/8/2017<br>EV.2.309    | Amel Bessila, Noemi Colozza, Danila Moscone, Fabiana Arduini, Djamal Eddine Akretche                     | Electrochemical techniques to remediate and monitoring lead and zinc ions in ore  |
| 7/8/2017<br>EV.2.309    | Zohrab Keropian and Maria Elektorowicz   | An Ex-situ electrokinetic remediation of Li contaminated by heavy metals inside a quasi-reclaimed tailings matrix: An ab initio analytical assessment                   |
| 7/8/2017<br>EV.2.309    | Shadi Hamdan, Akram Alshwabkeh, Bart Van der Bruggen   | The potential of using an electro-migration barrier to control seawater intrusion   |
| 7/8/2017<br>EV.2.309    | Xuhui Mao, Boxue Lv, Jiaying Cui, Yanfeng Zhuang, Hua Zhu  | Electrokinetic remediation of heavy metal-contaminated dredged sediments with polymer-graphite composite electrodes: from bench-scale experiments to field applications |
| 7/8/2017<br>EV.2.309    | Lazar Stevanovic, Maria Elektorowicz   | Potential phenol treatment by electrochemical oxidation enhanced with polyelectrolytes  |
| 7/8/2017<br>EV.2.309    | Cátia Magro, Eduardo P. Mateus, Alexandra B. Ribeiro   | Assessment of emergent contaminants removal from wastewater by electrokinetics  |
| 7/8/2017<br>EV.2.309    | Abdelmajeed Adam, Maria Elektorowicz   | Low-temperature treatment of municipal wastewater in bio-electrochemical reactor  |

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| 7/8/2017<br>EV.2.309   | Rodrigo Ortiz, Daniela Leal, Claudia Gutierrez,<br>Alvaro Aracena, Adrian Rojo, Henrik K. Hansen               | Electrokinetic remediation of manganese and zinc in copper mine tailings  |
| 7/8/2017<br>EV.2.309   | Shirin Hojabri, Ljiljana Rajic, Akram N. Alshawabkeh   | Modeling of reactive species transport and transformation in batch and flow-through electrochemical systems                           |
| 7/8/2017<br>EV.2.309   | Liming Hu , Lin Zhang, Hui Wu  | Consolidation and remediation of clay with different ions through electro-kinetic technique   |
| 7/8/2017<br>EV.2.309   | Jih-Hsing Chang, Shan-Yi Shen  | The lead contaminated land treated by the circulation-enhanced electrokinetics and phytoremediation                                   |
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| <b>Day 2: Tuesday, August 8, 2017    Time: 10:15-10:45 &amp; 13:00-13:30 &amp; 15:05-15:35    Location: EV.2.309</b> |  |   |
| 8/8/2017<br>EV.2.309   | Hongting Xu, Yue Song, Long Cang,<br>Dongmei Zhou  | Effects of ion-exchange membrane on S2O8 <sup>2-</sup> migration and oxidation of PAHs in soil during electrokinetic remediation      |
| 8/8/2017<br>EV.2.309   | Adrián A. Rojo, Henrik K. Hansen, Paulina S. Santis  | Frequency filters presence in EKR of copper mine tailings   |
| 8/8/2017<br>EV.2.309   | Abdelmajeed Adam, Elektorowicz Maria   | Investigation of fouling mitigation under low-temperature conditions using electro-bioreactor   |
| 8/8/2017<br>EV.2.309   | Sebastián Franco Peña, Henrik K. Hansen,<br>Claudia Gutiérrez, Andrea Lazo, Pamela Lazo,<br>Lisbeth M. Ottosen | Selenium removal from petroleum refinery wastewater using an electrocoagulation technique   |
| 8/8/2017<br>EV.2.309   | Nadezda Zhukowskaya, Maria Elektorowicz  | Enhanced electrokinetic process for treatment of industrial effluent containing a high concentration of Total Kjeldahl Nitrogen (TKN) |
| 8/8/2017<br>EV.2.309   | Ana Rita Ferreira, Paula Guedes, Eduardo P. Mateus, Nazaré Couto, Alexandra B. Ribeiro                         | Cell design in electrokinetic process: Influence on PPCPs removal from slurry soil  |
| 8/8/2017<br>EV.2.309   | Esmaeel Kariminezhad, Maria Elektorowicz   | Effect of various oil sludge treatment methods on solids surface properties and thermal behavior                                      |
| 8/8/2017<br>EV.2.309   | Lobs A., Mauric Comans; Qiang Cai; Fei Xuei;<br>Cong Bao   | Electro-kinetic Reclamation demonstration project in China  |
| 8/8/2017<br>EV.2.309   | Nazanin Motevali, Maria Elektorowicz   | Impact of temperature on centrifugal water removal from oily sludge   |
| 8/8/2017<br>EV.2.309   | Korolev V.A., Nesterov D.S.  | Regulation of clay particles charge for design of protective elektrokinetical barriers  |

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| <b>8/8/2017<br/>EV.2.309</b> | <b>Chih-Huang Weng, Ming-Chien Hsu</b> | <b>An novel electrokinetic process for simultaneously<br/>regeneration of powder activated carbon and metal recovery</b>      |
| <b>8/8/2017<br/>EV.2.309</b> | <b>Sakellariou L., Papassiopi N</b>    | <b>Electrokinetic removal of Cr(VI) from contaminated soil<br/>matrices: a comparative study with soil and kaolin samples</b> |