




ATV JORD OG GRUNDVAND

In Situ Remediation Reagents
International ATV Soil and Groundwater Seminar

MONDAY MARCH 2, 2020, Vingsted Hotel and Conference Center, Bredsten near Vejle, Denmark

ATV Soil and Groundwater is pleased to invite you to a 1-day seminar to discuss status and the innovations in the field of remediation reagents. The meeting aims to provide an overview of the state of the art practice for the most common in situ reactants such as zero valent iron, injectable activated carbon and ISCO reagents based on presentations from some of the most recognized scientists, practitioners and consultants in the field.

Aside from designing a correct injection/delivery protocol, the properties of the reactants are also critical for successful remediation. Vendors are constantly coming up with new innovations trying to optimize the desirable processes, which is combining high and specific reactivity/sorption capacity with appropriate transportability and longevity. It can be difficult for remediation practitioners and authorities to understand the different reactants strengths and weaknesses.

The seminar will address these issues and provide the opportunity to discuss and exchange lessons learnt from research and application.

Invited keynote speakers:

Dr. Dimin Fan, Geosyntec, USA: *Dimin is an Environmental Scientist with Geosyntec Consultants. He has over ten years of experience in researching & developing, evaluating, and applying innovative technologies and solutions for soil and groundwater remediation across academia, regulatory agency, and private sector. His technical expertise mainly includes the fundamental and applied aspects of both active and passive iron-based remediation technologies, including abiotic natural attenuation. He is a widely-recognized lead researcher/ practitioner in developing and applying sulfidated ZVI technology for in situ remediation of metals and chlorinated solvents. He has also led the technology evaluation of in situ activated carbon-based amendments during his fellowship with EPA Superfund Technology Office.*

Dr. Jan Slunsky, *Nanoiron Ltd, Czech Republic: Jan is currently director of the NANO IRON company. He received his MSc degree in mechanical engineering from Brno University of Technology. He practiced mechanical engineering as production manager at LAC prior to his transition to the NANO IRON company in 2009 to develop business with nanoscale Zero-Valent Iron (nZVI), which is used for groundwater remediation. In his role as director of the NANO IRON company, Jan provides technical support in preparation for also during commercial and scientific projects utilizing nZVI products. He is also responsible for development of new products and processes. NANO IRON company has been involved in a large EU FP project called NanoRem with the aim of "Taking Nanotechnological Remediation Processes from Lab Scale to End User Applications for the Restoration of a Clean Environment".*

Dr. Michelle Crimi, Associate Professor, Clarkson University, USA: *Michelle has been working with in situ chemical oxidation for more than 20 years. Her research interests include the development of in situ remediation technologies for treating contaminated groundwater, chemical oxidation of organic contaminants and the integration of treatment technologies for optimized risk reduction. She is co-author of the first reference text on in situ chemical oxidation: Principles and has Practices of In Situ Chemical Oxidation Using Permanganate, and co-edited a book in the SERDP/ESTCP Remediation Technology Monograph Series: In Situ Chemical Oxidation for Groundwater Remediation.*

Organizing committee:

Nina Tuxen, Chief Consultant, Capital Region of Denmark
Lars Nissen, Business Development Manager, COWI A/S
Anders G. Christensen, Expertise Director, NIRAS A/S
Katerina Tsitonaki, International Project Manager, Orbicon|WSP

The seminar takes place back-to-back with the ATV Soil and Groundwater winter meeting, an annual conference with more than 300 participants working with groundwater and contaminated sites. The conference is a 35- year old tradition and provides an excellent opportunity for knowledge exchange and networking between authorities, consultants, researchers and the industry. You can participate in the seminar without signing up for the entire conference.

Price for seminar : DKK 2.800 (excl. VAT and accommodation) (approx. € 374)

Sign up here for the seminar: www.atv-jord-grundvand.dk

Social programme:

An informal get-together buffet dinner with the opportunity to network and socialize will take place at the conference venue on Sunday March 1 at 18:00. Please sign up separately
Price for buffet dinner: DKK 390 (excl. VAT) (approx. € 52)


ATV Jord og Grundvand




Venue, accommodation and transport:

The seminar will take place in *Vingsted Hotel and Conferencecenter, Vingsted Skovvej 2, Bredsten, 7100 Vejle, Denmark*
Accommodation is available at the conference venue - please book separately - https://atv-jord-grundvand.nemtilmeld.dk/8/ - when you sign up for the seminar.

The closest airports are Billund and Copenhagen. From Copenhagen there is a good train connection to the closest train station (Vejle Railway Station). Transfer to/ from the train station in Vejle can be arranged upon request, please indicate when signing up.

Conference Programme:

09.00 Registration and coffee

10.00 Seminar begins:

Welcome /Introduction
by/ Nina Tuxen, Chief Consultant, PhD, Capital Region of Denmark

Zerovalent Iron for In Situ Remediation: A Snapshot of 30-year Research and Application
by/ Dimin Fan, Environmental Scientist, PhD, Geosyntec

Testing and Selection of Iron Reactants for Use in Soil Mixing
by/ Klas Arnerdal, Project Manager, Geological Survey of Sweden (SGU)

Discussion

Break

Sulfidised Zerovalent Iron as New Reductant Material for Chlorinated Solvent Degradation: pros and cons
by/ Dominique Tobler, Associate Professor, Copenhagen University

Sulfidated ZVI Nanoparticles (Innovation and Application)
by/ Jan Slunsky, Director, MSc, NANO IRON

Discussion

Lunch

GreenCat – Biochar Turns Green Rust into a Powerful Reductant for Chlorinated Solvents
by/ Hans Christian Bruun Hansen, Professor, Copenhagen University

Current State of In-Situ Groundwater Remediation by Activated Carbon Based Amendments
by/ Dimin Fan, Environmental Scientist, PhD, Geosyntec

Break

ISCO State of the Art/ Polymer Amended and SlowRrelease Oxidants
by/ Michelle Crimi, Associate Professor, Clarkson University

Testing and Selection of Oxidants and Binder for Use in Soil Mixing
by/ Torben Højbjerg Jørgensen, Chief Consultant, COWI A/S

Discussion

Wrap-up
by/ Katerina Tsitonaki, Project Coordinator, PhD Orbicon |WSP

17.00 End of day