



***Coatings
Science
International
2013***

Conference Program

Hotels van Oranje Noordwijk
24 – 28 June 2013
The Netherlands



Coatings Science International

This Conference is sponsored by:



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Mission Statement

The Coatings Science International Conference strives to be the leading European Conference on the Science and Technology of Coatings. By creating strong international bonds and by inviting top-notch speakers from around the world, we want to create a high-quality platform for free exchange of scientific knowledge between both academic and industrial scientists that will strengthen the innovation power of the global coatings community.

Just another Coatings Conference?

No, where other Conferences primarily try to reach a broad public and focus on commercial applications of new technologies, this Conference intends to focus on the scientific backgrounds of the newest technological developments relevant to Coatings. In the convenient setting of 5-star hotel on the North Sea beach and with a maximum of 120 participants, Coatings Science International 2013 will breathe the atmosphere of a Gordon-type conference, reminiscent of the famous Athens Conferences (1974-2003). High-quality speakers, ample time for scientific discussions, and every opportunity to establish rewarding contacts are Conference values we want to uphold.

Organizing Committee COSI 2013

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|----------------------------|--|
| Prof. Dr. Rolf van Benthem | Chair, TU/e, The Netherlands |
| Dr. Keimpe van den Berg | AkzoNobel, The Netherlands |
| Prof. Dr. Gordon Bierwagen | North Dakota State University, USA |
| Prof. Dr. Wolfgang Bremser | University of Paderborn, Germany |
| Dr. Catherine Dekerckheer | Institut Meurice-HELdB, Belgium |
| Dr. Horst Hintze-Bruening | BASF Coatings GmbH, Germany |
| Prof. Dr. Mats Johansson | Royal Institute of Technology, Sweden |
| Prof. Dr. Joseph L. Keddie | University of Surrey, UK |
| Dr. Matthew Gebhard | DSM NeoResins, The Netherlands |
| Dr. Marcel Piens | Coating Research Institute (CORI), Belgium |
| Anna Saar McGonigle | Elsevier, USA |
| Prof. Dr. Masamitsu Shirai | Osaka Prefecture University, Japan |
| Dr. Bettina Vogt | Dupont Performance Coatings, Germany |
| Prof. Dr. Dean C. Webster | North Dakota State University, USA |
| Prof. Dr. Bert de With | TU/e, The Netherlands |
| Prof. Dr. Limin Wu | Fudan University, P.R. China |
| Imanda Scholten-Kamstra | Secretary, TU/e, The Netherlands |

Monday 24 June 2013

Arrival

20:00 – 22:00 hrs Registration / Reception



Weathering & Degradation

Chair: Bettina Vogt

- 8:45 – 9:00 Opening
- 9:00 – 9: 45 Kevin Ogle, Ecole Nationale Supérieure Chimie Paris, Paris, France,
New insights into conversion coating stability and polymer delamination mechanisms.
- 9:45 – 10:15 Stuart Croll, North Dakota State University, Fargo, USA,
Coarse-grained molecular dynamics study of the degradation of crosslinked polymer networks.
- 10:15 – 10:45 Matthias Wanner, Fraunhofer IPA, Stuttgart, Germany,
Effects of the elution of waterbased corrosion protection primers on their protective properties.
- 10:45 – 11:15 Break

Applied Coatings

Chair: Matthew Gebhard

- 11:15 – 11:45 Wayne Hayes, University of Reading, Berkshire, UK, *Branched comb polyesters: Application in fast drying solvent-borne coating formulations.*
- 11:45 – 12:15 Silfredo J. Bohórquez, Nuplex Resins B.V., The Netherlands,
Efficient strategy for nano-hard-sphere usage: Boosting the performance of waterborne coatings.
- 12:15 – 12:45 Ralf Müller, University of Cologne, Cologne, Germany,
CVD of metal oxide nanowires: Growth, applications and devices.
- 12:45 – 14:30 Buffet Lunch

Characterization & Modelling

Chair: Catherine Dekerckheer

- 14:30 – 15:00 José A. Olivares, Centro de Investigación en Polímeros, COMEX, Lomas de Chapultepec, México DF ,
Drying dynamics of latex polymers by interferometric technique.
- 15:00 – 15:30 Günter Wuzella, Kompetenzzentrum Holz GmbH - W3C, Sankt Veit an der Glan, Austria, *Influence of thermoanalytical and rheological properties of an epoxy powder coating resin on quality of coatings using in-mold technology.*
- 15:30 – 16:00 Önder Pekcan, Kadir Has University, Istanbul, Turkey,
Fluorescence study of film formation from PS/Al₂O₃ nanocomposites.
- 16:00 – 16:30 Break
- 16:30 – 17:00 Viktor Baukh, Eindhoven University of Technology, The Netherlands,
Understanding water uptake in multilayer coatings: The roles of composition and temperature.
- 17:00 – 17:30 Ronald Tennebroek, DSM Coating Resins, Waalwijk, The Netherlands,
Towards a better understanding of polyurethane particles using self-consistent field computations.
- 19.00 – 22:00 Conference Barbecue

Corrosion

Chair: Mats Johansson

- 8:45 – 9:15 Michiel van Soestbergen, Eindhoven University of Technology, Eindhoven, The Netherlands, *Release of low-soluble cerium corrosion inhibitors from organic coatings.*
- 9:15 – 9:45 Alexandros Kakaroglou, Vrije Universiteit Brussel, Brussels, Belgium, *Study of the effect of C=C bonds in organic coatings deposited with atmospheric plasma.*
- 9:45 – 10:15 Patrick Keil, BASF Coatings GmbH, Münster, Germany, *Influence of water uptake characteristics on functional properties of protective coatings: A combined EIS and SKP study.*
- 10:15 – 10:45 Break
- 10:45 – 11:15 Ulrich Tromsdorf, BASF SE, Ludwigshafen, Germany, *Zero-VOC binders for industrial metal coatings.*
- 11:15 – 11:45 Niels Meis, Eindhoven University of Technology, The Netherlands *Extreme wet adhesion of a novel epoxy-amine coating on aluminum alloy 2024-T3.*
- 11:45 – 12:15 Lina Martinsson, KTH Royal Institute of Technology, Stockholm, Sweden, *The effect of superhydrophobic wetting state on corrosion protection - the AKD example.*
- 12:15 – 13:35 Buffet lunch

Social Program

- 13:35 - 13:40 Arrival coaches at Hotels van Oranje
- 13:40 - 13:45 Departure to Amsterdam for the **social program**
- 14:40 - 14:45 Arrival at Van Gogh museum, Amsterdam
- 15:00 - 16:00 Guided Tour of Van Gogh Museum
- 16:00 - 17:00 Visit Van Gogh Museum
- 17:00 - 21:00 Freetime in Amsterdam
- 17:00 - 17:10 Departure first bus back to Noordwijk, arrival around 18:00 hrs.
- 21:00 - 21:10 Departure second bus back to Noordwijk
- ~21:45 Arrival Hotels van Oranje Noordwijk

Chemistry & Photochemistry

Chair: Masamitsu Shirai

- 8:45 – 9:30 Patrice Roose, Cytec Surface Specialties, Drogenbos, Belgium, *UV-Nanospheres: Photopolymerized polymer colloids from aqueous dispersions of acrylated oligomers.*
- 9:30 – 10:00 José M. Martín-Martínez, University of Alicante, Alicante, Spain, *Coatings properties obtained with waterborne polyurethane dispersions prepared with polycarbonates of 1,6 hexane diol of different molecular weights.*
- 10:00 – 10:30 Camille Carcouët, Eindhoven University of Technology, The Netherlands, *Nature inspired raspberry-like silica nanoparticles for superhydrophobic coatings*
- 10:30 – 11:00 Break
- 11:00 – 11:30 Céline Croutxé-Barghorn, University of Haute-Alsace, Mulhouse Cedex, France, *Nanocomposite coatings by UV driven sol-gel process and photopolymerization.*
- 11:30 – 12:00 Claudia Philipp, Fraunhofer-Institute for Wood Research, Braunschweig, Germany, *Unsaturated polyesters in aqueous miniemulsion.*
- 12:00 – 12:30 Mariëlle Wouters, TNO, Eindhoven, The Netherlands, *Biobased binders for coating application.*
- 12:30 – 14:00 Buffet Lunch
- 14:00 – 15:30 **Poster Session I** [odd numbers]
- 15:30 – 16:00 Break

Flame Retardant & Intumescent Coatings

Chair: Keimpe van den Berg

- 16:00 – 16:30 Kristian Nørgaard, Technical University of Denmark, Lyngby, Denmark, *Performance of epoxy primers in intumescent coating system.*
- 16:30 – 17:00 Weiyi Xing, State Key Laboratory of Fire Science, Hefei, P.R. China, *Synthesis, thermal behavior and combustion of the novel UV-cured flame retardant coatings.*
- 17:00 – 17:30 Worawan Bhanthumnavin, Chulalongkorn University Bangkok, Thailand, *Graft copolymerization coating of methacryloyloxyethyl diphenyl phosphate flame retardant onto silk surface.*
- 17:30 – 18:00 Mats Johansson, KTH, Royal Institute of Technology, Stockholm, Zweden *Photopolymerization of Biobased Monomer Systems*
- 18:30 – 20:00 **Poster Session II**, [even numbers] including drinks
- 20:15 – 22:00 Buffet Dinner

Self-Healing & Functional Coatings

Chair: Horst Hintze-Bruening

- 8:45 – 9:15 Alexander Kröger, Universität Paderborn, Paderborn, Germany,
Layer by layer assembly of aqueous graphene dispersions.
- 9:15 – 9:45 Tom Hauffman, Vrije Universiteit Brussel, Brussels, Belgium,
*Study of molecular glues for coating adsorption on aluminium oxides: self-
assembling of organic "mono"-layers of phosphonic acids.*
- 9:45 – 10:15 Akshya Kumar Guin, Tata Steel Limited, Jamshedpur, India,
*Development and performance evaluation of corrosion resistance self-
healing coating.*
- 10:15 – 10:45 Break
- 10:45 – 11:15 Mina Abdolazadeh, Delft University of Technology, Delft, The
Netherlands, *Intrinsic self-healing sol-gel coatings based on epoxy
alkoxysilanes containing dynamic di-sulfide bonds.*
- 11:15 – 11:45 Mélanie D'Almeida, UCBL, Villeurbanne, France, *A new biomaterial for
dental implants obtained by coating of chitosan via silanation: biological
and mechanical performance.*
- 11:45 – 12:15 Stefan Holberg, Danish Technological Institute, Aarhus, Denmark,
Application of a repellent urea-siloxane hybrid coating in the oil industry.
- 12:15 – 13:00 Closing and Awards Presentation
- 13:00 – 14:15 Buffet Lunch



Coatings Science International

Local Organization:

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