



***Coatings
Science
International
2012***

Conference Program

Hotels van Oranje Noordwijk
25 – 29 June 2012
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 2012 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 2012

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	Universität 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
Drs. Ad Overbeek	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 25 June 2012

Arrival

20:00 – 22:00 hrs Registration / Reception



Polymer Chemistry

Chair: Bettina Vogt

- 8:45 – 9:00 Opening
- 9:00 – 9: 45 Cor Koning, Eindhoven University of Technology / DSM Coating Resins, Netherlands, *Novel coating resins based on poly(ester)carbonates made by catalytic chain growth polymerization of epoxides, anhydrides and CO₂*
- 9:45 – 10:15 Gary Craun, AkzoNobel Packaging Coatings, Ohio, USA, Polyether polyols and water borne acrylic *grafted polyether polyols synthesized with epoxidized soy bean oil*
- 10:15 – 10:45 Mark D. Soucek, University of Akron, College of Polymer Science and Polymer Engineering, USA, *Self-Stratifying Coatings*
- 10:45 – 11:15 Break
- 11:15 – 11:45 Dogan Gunbas, Eindhoven University of Technology, The Netherlands, *PDMS-modified poly(styrene-alt-maleic anhydride) as waterborne coating based on surfactant-free latex*
- 11:45 – 12:15 Mogens Hinge, Aarhus University, Denmark, *Organic coatings based on aryldiazonium salts*
- 12:15 – 12:45 Vanesa García-Pacios, University of Alicante, Spain, *Incidence of the polyol nature used in the synthesis of waterborne polyurethane dispersions intended for use as coatings*
- 12:45 – 14:30 Buffet Lunch

Corrosion

Chair: Horst Hintze-Bruening

- 14:30 – 15:00 Elisa Campazzi, EADS Innovation Works, Metallic Technologies and Surface Engineering, France, *Alternatives to chromate systems for corrosion protection in aerospace: Study of "green"-inhibitor loaded spheres in model sol-gel coatings*
- 15:00 – 15:30 Thomas Stimpfling, Université Blaise Pascal, France, *EDTA interleaved LDH as efficient epoxy coating pigment for aluminum corrosion protection*
- 15:30 – 16:00 Te-Hui Wu, Eindhoven University of Technology, Netherlands, *Conductive composite coatings; an alternative for corrosion inhibition on aluminium alloys.*
- 16:00 – 16:30 Break
- 16:30 – 17:00 Sviatlana Lamaka, Instituto Superior Tecnico, Lisbon, Portugal, *Fault-Tolerant Hybrid Epoxy Silane Coatings for Corrosion Protection of Mg Alloys*
- 17:00 – 17:30 Mina Abdolah Zadeh, Delft University of Technology, Netherlands, *Corrosion triggered self-healing sol-gel coatings*
- 19.00 – 22:00 Conference Barbecue

Wednesday 27 June 2012

Weathering & Photocure

Chair: Catherine Dekerckheer

- 8:45 – 9:15 Kimihiro Matsukawa, Osaka Municipal Technical Research Institute, Japan, *Photo-cured organic-inorganic hybrid thin films with controlled refractive index*
- 9:15 – 9:45 Søren Kiil, Technical University of Denmark, Denmark, *Quantitative analysis of photoinitiated coating degradation at constant artificial exposure conditions*
- 9:45 – 10:15 Marc Entenmann, Fraunh. Inst. for Manufacturing Engineering and Automation, Germany, *Monitoring of degradation process in automotive - multilayer coatings using photooxidation index*
- 10:15 – 10:45 Break

Curing & Chemistry

Chair: Keimpe van den Berg

- 10:45 – 11:15 Zbigniew Boncza-Tomaszewski, Industrial Chemistry Research Institute, Department of Polyesters, Epoxides and Polyurethanes, Poland, *New toxicologically-safe cross-linkers for powder coatings*
- 11:15 – 11:45 Worawan Bhanthumnavin, Chulalongkorn University, Thailand, *Aromatic phosphorodiamidate curing agent for epoxy resin coating with flame-retarding properties*
- 11:45 – 12:15 Jesús M. Vega, TU Delft, The Netherlands, *Ionomers as self-healing coatings for metal protection*
- 12:15 – 13:35 Buffet lunch
- 13:35 – 13:40 Arrival coaches at Hotels van Oranje
- 13:40 – 13:45 Departure to Haarlem for the **social program**
- 14:40 – 17:00 Visit Frans Hals Museum, De Hallen Haarlem
- 17:00 – 21:00 Freetime in Haarlem
- 21:00 Return trip from Haarlem to Noordwijk

Functional Coatings I

Chair: Dean Webster

- 8:45 – 9:30 Limin Wu, Fudan University, PR China, *Preparation and properties of self-cleaning coatings based on poly(fluoro)siloxane/TiO₂ nanocomposites*
- 9:30 – 10:00 Celine Falentin, University of Liège, Belgium, *A water-based antibacterial nanohybrid solution for coatings on steel*
- 10:00 – 10:30 Eriko Sato, Osaka City University, Japan, *Reversible volume changes of polymer thin films and their application to wettability control*
- 10:30 – 11:00 Break
- 11:00 – 11:30 Maude Jimenez, Université Lille Nord de France, France, *Protective coatings for reaction and resistance to fire of materials*
- 11:30 – 12:00 Joëlle Levalois-Grützmacher, Swiss Federal Institute of Technology, ETH Hönggerberg, Switzerland, *Flame-retardant finishing by a low pressure plasma process on cotton textiles in combination with dyeing*
- 12:00 – 12:30 Mohor Mihelčič, National Institute of Chemistry, Slovenia, *Electrochromic TiO₂ pigment coating and plastic film-based NiO/TiO₂ device with transmissive light modulation*
- 12:30 – 14:00 Buffet Lunch
- 14:00 – 15:30 **Poster Session I** [odd numbers]
- 15:30 – 16:00 Break

Functional Coatings II

Chair: Joseph Keddie

- 16:00 – 16:30 Lars Wågberg, Royal Institute of Technology, KTH, Sweden, *Tailoring of adhesion using the Layer-by-Layer technology*
- 16:30 – 17:00 Karuppiyah Murugan, International Advanced Research Center for Powder Metallurgy and New Materials, India, *Synthesis, characterization and demonstration of self-cleaning TiO₂ coatings on glass and glazed ceramic tiles*
- 17:00 – 17:30 Shujuan Tan, Nanjing University of Aeronautics and Astronautics, PR China, *Preparation and properties studies of paraffin/high density polyethylene composites and phase-change coatings*
- 17:30 – 18:00 Madeleine Tchoquessi Diodjo, Université du Sud Toulon Var, France, *Influence of silane-based treatment on adherence and wet durability of fusion bonded epoxy/steel joints*
- 18:30 – 20:00 **Poster Session II**, [even numbers] including drinks
- 20:15 – 22:00 Buffet Dinner

Material Properties

Chair: Mats Johansson

- 8:45 – 9:15 Yutao T. Pei, University of Groningen, The Netherlands, *Flexible protective diamond-like carbon films on rubbers*
- 9:15 – 9:45 Artur Siwek, ABB Corporate Research, Krakow, Poland, *Adhesion of epoxy resin to a low friction coatings and its correlation with tribological properties*
- 9:45 – 10:15 Ingo Alig, Deutsches Kunststoff-Institut, Germany, *Film formation, curing and properties of carbon nanotube-modified coatings for aircraft applications and electrical industry*
- 10:15 – 10:45 Wilhelm Schabel, Karlsruhe Institute of Technology, Thin Film Technology, Germany, *Drying of Thin Films –structure and morphology formation with processing related aspects*
- 10:45 – 11:15 Break

Waterborne

Chair: Limin Wu

- 11:15 – 11:45 Alexander Routh*, University of Cambridge, UK, *Evaporation mediated self assembly of nanoparticles: Watching paint dry*
- 11:45 – 12:15 Joseph L. Keddie, University of Surrey, UK, *Bespoke patterned coatings via infrared radiation-assisted evaporative lithography*
- 12:15 – 12:45 Bas Lohmeijer, BASF SE, Germany, *Prefered partitioning: the influence of coalescents on the build-up of mechanical properties in acrylic core-shell particle*
- 12:45 – 13:15 Closing and Awards Presentation
- 13:15 – 14:15 Buffet Lunch



Coatings Science International

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