



**Coatings  
Science  
International  
2007**

**Conference Program**

Hotels van Oranje Noordwijk  
25 June – 29 June 2007  
The Netherlands



**Coatings Science International**

**This Conference is sponsored by:**



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## Mission Statement

The Coatings Science International Conference strives to become 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 2007 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 2007

Prof. Dr. Rolf van Benthem	Chair, TU/e, The Netherlands
Dr. Johannes Benkhoff	CIBA, Switzerland
Prof. Dr. Gordon Bierwagen	North Dakota State University, USA
Prof. Dr. Wolfgang Bremser	Universität Paderborn, Germany
Dr. Catherine Dekerckheer	Institut Meurice-Heldb, Belgium
Dr. Piet van Hensbergen	Akzo Nobel N.V., The Netherlands
Prof. Dr. Mats Johansson	Royal Institute of Technology, Sweden
Dr. Joseph L. Keddie	University of Surrey, UK
Drs. Ad Overbeek	DSM NeoResins, The Netherlands
Dr. Wolfgang Paulus	BASF Coating AG, Germany
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
Dr. Douglas A. Wicks	The University of Southern Mississippi, USA
Prof. Dr. Bert de With	TU/e, The Netherlands
Imanda Scholten-Kamstra	Secretary, TU/e, The Netherlands

**Monday 25 June 2007**

### Arrival

20:00- 22:00 hrs      Registration / Reception



**Polymer Chemistry I: Controlled properties**

Chair: B. Vogt

- 08:45 – 09:00      Opening
- 09:00 – 09:45      J. Omeis, BYK-Chemie, Germany  
*The evolution of structured copolymers for coating applications*
- 09:45 – 10:15      S. Ma, DuPont, Germany  
*Structured acrylic polymers and their use in coating applications*
- 10:15 – 10:45      M. Groenewolt, BASF Coatings AG, Germany  
*Highly scratch resistant coatings for automotive applications*
- 10:45 – 11:15      Break

**Polymer Chemistry II: New polymers**

Chair: M. Johansson

- 11:15 – 11:45      R. Jans, AkzoNobel Decorative Coatings Europe, The Netherlands  
*A new reactive diluent for decorative paints in view of 2010*
- 11:45 – 12:15      M. Plehiers, Sigma Coatings, Belgium  
*Synthesis of silyl acrylates for marine coatings*
- 12:15 – 12:45      L. Molhoek, DSM Resins, The Netherlands  
*Amorphous polyamide resins: new versatile binders for fast curing powder coatings*
- 12:45 – 14:30      Buffet Lunch

**Polymer Chemistry III: UV and radical reactions**

Chair: W. Paulus

- 14:30 – 15:15      W. Shi, University of Science and Technology of China, China  
*Hyperbranched acrylate prepolymers and their potential applications for UV powder coatings*
- 15:15 – 15:45      K. van der Berg, AkzoNobel Car Refinishes, The Netherlands  
*Development of waterborne UV-A curable clear coat for car refinishes*
- 15:45 – 16:15      A. Matsumoto, Kansai University, Japan  
*Design of network polymers based on the mechanistic discussion of multivinyl crosslinking polymerization*
- 16:15 – 16:45      Break
- 16:45 – 17:15      K. Studer, Ciba Specialty Chemicals Inc, Switzerland  
*Novel curing agents: Thermal radical initiators as viable alternatives to peroxides*
- 18:00 – 22:00      Poster session + drinks
- 20:00 – 22:00      Buffet Dinner

**Weathering**

Chair: C. Dekerckheer

- 08:45 – 09:30 M. Akahori, Nippon Paint Co. Ltd, Japan  
*A new test method for weatherability prediction of coatings: Radical shower technique using a remote plasma reactor*
- 09:30 – 10:00 J. Mallégo, Arcelor Research, University of Liège, Belgium  
*UV weathering of prepainted steel: Influence on corrosion resistance*
- 10:00 – 10:30 S. Croll, North Dakota State University, USA  
*The interplay of physical aging and degradation during weathering for two crosslinked coatings*
- 10:30 – 11:00 Break

**Hybrid and filled systems**

Chair: P. v. Hensbergen

- 11:00 – 11:30 M. Špírková, Institute of Macromolecular Chemistry, Czech Republic  
*The view from the core onto the surface of self-assembled nanocomposite coatings*
- 11:30 – 12:00 N. Verghese, DOW Automotive, USA  
*The effect of rigid inorganic fillers on the mechanical and thermo-mechanical properties of epoxy thermosets: experimental and theoretical considerations*
- 12:00 – 12:30 M. Klanjšek Gunde, National Institute of Chemistry, Slovenia  
*Dispersions of carbon black pigments in epoxy-based medium*
- 12:30 – 13:00 F. Maile, Merck KGaA, Germany  
*Orientation of transparent effect pigments and its influence on their appearance in polymer films*
- 13:00 – 14:00 Buffet Lunch
- 14:15 – 14:15 Arrival coaches at Hotels van Oranje
- 14:30 – Departure to Amsterdam for the **social program**,
- 15:30 – 18:00 Visit Van Gogh museum, Amsterdam
- 21:00 Return trip from Amsterdam to Noordwijk

**Characterization I: Waterborne systems**

Chair: A. Overbeek

- 8:45 – 9:30 J. Stubbs, DSM NeoResins, USA  
*The dynamics of morphology development in multi-phase latex particles*
- 9:30 – 10:00 F. Brouwer, Van 't Hoff Institute for Molecular Sciences, The Netherlands  
*Real-time imaging of film formation using fluorescence spectroscopy*
- 10:00 – 10:45 D. Johannsmann, Clausthal University of Technology, Germany  
*Maps of the stress distributions occurring during drying of latex dispersions*
- 10:45 – 11:15 Break

**Characterization II: Methods**

Chair: J. Keddie

- 11:15 – 11:45 I. Alig, Deutsches Kunststoff-Institut, Germany  
*Microcalorimetry for characterization of film formation and cure of Coatings and adhesives*
- 11:45 – 12:15 R. Bao, Fusion UV Systems Inc. USA  
*A new method of analyzing double bond conversion as a function of film thickness*
- 12.15 – 12:45 A. Brun, Formulacion, France  
*Film formation of coatings studied by diffusing wave spectroscopy*
- 12:45 – 14:30 Buffet Lunch

**Surface properties**

Chair: J. Benkhoff

- 14:30 – 15:15 A. Kharitonov, Russian Academy of Sciences, Russia  
*Enhancement of commercial properties of polymeric articles by direct fluorination*
- 15:15 – 15:45 E. Malmström, KTH, Sweden  
*Covalent surface modification by controlled polymerization*
- 15.45 – 16.15 T. Inaba, Chuo University, Japan  
*Bonding adhesive strength due to pre-treatment on metal surface for plasma spray with cathode spots of low pressure arc after grit blasting*
- 16:15 – 16:45 Break

**Photochemistry**

Chair: J. Benkhoff

- 16:45 – 17:30 R.Nothelfer-Richter, Forschungsinstitut für Pigment und Lacke, Germany  
*Investigations of the photo catalytic activity of pigments and pigmented organic coatings using the reactor method*
- 17:30 – 18:00 D. Wu, Eindhoven University of Technology, The Netherlands  
*Nature-inspired Superhydrophobic Coating*
- 19:00 – 22:00 Conference Dinner

**Corrosion I: New concepts**

Chair: W. Bremser

- 08:45 – 09:30 H. Adler, Technische Universitaet Dresden, Germany  
*Ultrathin layers as new concepts for corrosion inhibition and adhesion promotion*
- 09:30 – 10:00 S. Lamaka, University of Aveiro, Portugal  
*Hybrid organic-inorganic sol-gel films as anticorrosion coatings for magnesium alloy AZ31B*
- 10:00 – 10:30 W.J. Soer, Eindhoven University of Technology, The Netherlands  
*Novel crosslinking systems for surfactant-free latexes based on maleic anhydride containing polymers*
- 10:30 – 11:00 Break

**Corrosion II: Methods**

Chair: W. Bremser

- 11:00 – 11:45 D. de la Fuente, Max Planck Institute for Iron Research, Germany  
*Fundamental investigation on the stability of the steel/coating interfaces contaminated by submicroscopic salt particles*
- 11:45 – 12:15 M. Dornbusch, BASF Coatings, Germany  
*The use of modern electrochemical methods in the development of corrosion protective coatings*
- 12:15 – 12:45 J. Tardiff, Ford Motor Company, USA  
*Automotive pretreatment – limitations of existing technology and enablers for future technology*
- 12:45 – 13:00 Closing, Awards Presentation
- 13:00 – 14:00 Buffet lunch



**Coatings Science International**

**Local Organization:**

Eindhoven University of Technology  
Department of Chemical Engineering and Chemistry  
Laboratory of Materials and Interface Chemistry  
The Netherlands

**Contact:**

[congressoffice@tue.nl](mailto:congressoffice@tue.nl)

[www.coatings-science.com](http://www.coatings-science.com)

