



**Coatings
Science
International
2010**

Conference Program

Hotels van Oranje Noordwijk
28 June – 2 July 2010
The Netherlands



Coatings Science International

This Conference is sponsored by:



ELSEVIER



AkzoNobel
Tomorrow's Answers Today



BOSCH

Invented for life



BYK

Additives & Instruments



DPI

DUTCH POLYMER INSTITUTE

TU/e



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 2010 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 2010

Prof. Dr. Rolf van Benthem	Chair, TU/e, The Netherlands
Dr. Keimpe van den Berg	AkzoNobel, USA
Prof. Dr. Gordon Bierwagen	North Dakota State University, USA
Prof. Dr. Wolfgang Bremser	Universität Paderborn, Germany
dr. Horst Hintze-Bruening	BASF Coating AG, Germany
Dr. Catherine Dekercckheer	Institut Meurice-HELdB, Belgium
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. 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. Bert de With	TU/e, The Netherlands
Imanda Scholten-Kamstra	Secretary, TU/e, The Netherlands

Monday 28 June 2010

Arrival

20:00- 22:00 hrs Registration / Reception



Tuesday 29 June 2010

Weathering and Degradation

Chair: Masamitsu Shirai

- 08:45 – 09:00 Opening
- 09:00 - 09:45 Tinh Nguyen, NIST, USA
Degradation and nanoparticles release of nanocomposite coatings exposed to UV radiation
- 09:45 - 10:15 Xinyi Liu, Loughborough University, UK
Modelling the mechanical response of Urushi lacquer under changing environmental conditions
- 10:15 - 10:45 Sudeshna Saha, University of Quebec a Chicoutimi, Canada
Effect of Nano Particles on Penetration Characteristics of Acrylic Polyurethane Coating and Coating Thickness Change with Weathering
- 10:45 – 11:15 Break

Hybrid Materials and Nanocomposites

Chair: Keimpe van den Berg

- 11:15 - 11:45 Zbigniew Boncza-Tomaszweski, ICRI, Poland
Novel nanocomposite binders for powder coatings
- 11:45 - 12:15 Jorge González, Instituto de Tecnología Cerámica, Universitat Jaume I. Castellón, Spain
Correlation between the wear resistance, and the scratch resistance, for nanocomposite coatings
- 12:15 - 12:45 Shuxue Zhou, Fudan University, P.R. China
Preparation of transparent UV-curable nanocomposite coatings containing Zirconia nanocrystals
- 12:45 – 14:00 Buffet Lunch
- 14:00 – 15:30 Poster Session I
- 15:30 – 16:00 Break

Material Characterization and Modelling

Chair: Bettina Vogt

- 16:00 - 16:30 Andreas Kandelbauer, Reutlingen University, Germany
Optimization of powder coating using isoconversional kinetic analysis of thermochemical data
- 16:30 - 17:00 Søren Kiil, Technical University of Denmark, Denmark
Mathematical modeling of simultaneous solvent evaporation and chemical curing in thermoset coatings: A parameter study
- 17:00 - 17:30 Stephane Marais, University of Rouen, France
Diffusion in polyamide 12/montmorillonite nanocomposite films
- 17:30 – 18:00 Funda Tihminlioglu, Izmir Institute of Technology, Turkey
Mechanical and barrier properties of bilayer Corn-Zein nanocomposite coated polypropylene films
- 18:30 - 20:00 Poster Session II + Drinks
- 20:15 – 22:00 Buffet Dinner

Pigments and Colorants

Chair: Ad Overbeek

- 8:45 - 9:30 Limin Wu, Fudan University, P.R. China
Self-assembly of nanocomposite polymer latex and structural color coatings
- 9:30 - 10:00 Jochen Manara, Bavarian Center for Applied Energy Research, Germany
Polymer-based pigment coatings on flexible substrates with spectrally selective characteristics to improve the thermal properties
- 10:00 – 10:30 Paul Steeman, DSM Research, The Netherlands
The effect of surface topography on the optical properties of powder coatings
- 10:30 – 11:00 Break

Corrosion Protection

Chair: Horst Hintze-Bruening

- 11:00 - 11:30 Sergej Toews, University of Paderborn, Germany
Smart functionalized polymer dispersion for effective mapping of heterogeneous metal surfaces: new concepts for corrosion protection
- 11:30 - 12:00 Arjan Mol, Delft University of Technology, The Netherlands
The characterization and performance of Ce(dbp)₃-inhibited epoxy coatings
- 12:00 - 12:30 Jesus Manuel Vega, Degradation and Durability National Centre for Metallurgical Research (CENIM/CSIC), Spain
Corrosion inhibition of aluminum by alkyd paints formulated with anion-exchange hydrotalcite
- 12:30 - 13:00 Stuart Croll, North Dakota State University, USA
Multiphysics model for the deterioration of corrosion protection provided by barrier coatings
- 13:00 – 14:00 Buffet Lunch
- 14:15 – 14:15 Arrival coaches at Hotels van Oranje
- 14:30 – 14:40 Departure to Amsterdam for the **social program**
- 15:20 – 15:30 Arrival at museum
- 15:30 – 18:00 Visit museum Hermitage (museum is open until 20:00 hrs)
- 18:00 – 21:00 Free time in Amsterdam
- 21:00 – 21:10 Return trip from Amsterdam to Noordwijk
- 22:00 – 22:10 Arrival Hotels van Oranje

Functional Coatings I

Chair: Mats Johansson

- 8:45 - 9:30 Helmut Möhwald, Max Planck Institute of Colloids and Interfaces, Germany
Intelligent polymeric and hybrid coatings with multifunctionality
- 9:30 - 10:00 Aharon Gedanken, Bar-Ilan University, Israel
Coating a large variety of surfaces by sonochemical methods: Anti-bacterial, anti-viral, anti-biofilms and anti-fungai coatings on textiles and glasses
- 10:00 - 10:30 Mariëlle Wouters, TNO Science and Industry, Eindhoven, The Netherlands
Surface modification and coatings for medical devices
- 10:30 – 11:00 Break

Functional Coatings II

Chair: Catherine Dekercckheer

- 11:00 - 11:45 Christine Jérôme, CERM, University of Liège, Belgium
Biomimetic coatings with robust antibacterial properties
- 11:45 - 12:15 Volkmar Stenzel, IFAM, Germany
Drag-reducing paints for the reduction of fuel consumption in aviation and shipping
- 12:15 - 12:45 Nagahiro Saito, EcoTopia Science Institute, Nagoya University, Japan
Surface characteristics of super hydrophilic polyelectrolyte brush
- 12:45 – 14:30 Buffet Lunch

Waterborne Systems

Chair: Joseph Keddie

- 14:30 - 15:15 Masahiro Ito, DIC corporation, Japan
Performance of innovative hybrid waterborne resins for special coatings applications
- 15:15 - 15:45 Dirk Mestach, Nuplex Resins BV, The Netherlands
Synthesis and coating applications of alkyd-acrylic hybrid polymer dispersions
- 15:45 - 16:15 Martin W. Murray, AkzoNobel Colloids and Complex Fluids, UK
Cracking of colloidal coatings upon drying
- 16:15 – 16:45 Break
- 16:45 - 17:15 Tanzeela N. Raja, University of Amsterdam, The Netherlands
Real time imaging of film formation of acrylic latex emulsions
- 17:15 - 17:45 Ingo Alig, Deutsches Kunststoff-Institut, Germany
Deformation mechanisms during latex film formation: Combination of unilateral NMR and NIR
- 19:00 – 22:00 Conference Barbeque

Friday 2 July 2010

Textured Coatings

Chair: Wolfgang Bremser

- 8:45 - 9:30 Joseph L. Keddie, University of Surrey, UK
Patterned polymer coatings via evaporative lithography
- 9:30 - 10:00 Horst Hintze-Bruening, BASF Coatings AG, Germany
Layered particle based polymer composites for coatings: Part III – Textured coatings obtained via lyotropic liquid crystals
- 10:00 - 10:30 Marcella Gagliardo, AkzoNobel Car Refinishes, The Netherlands
Embossing textures into coatings by selective UV-radiation
- 10:30 – 11:00 Break

Applied Coatings

Chair: Wolfgang Bremser

- 11:00 - 11:30 Gustavo L. Guerriero, Delft University of Technology, The Netherlands
Thermotropic Liquid Crystalline Polymers as Protective Coatings for Aerospace
- 11:30 - 12:00 Hossain Yari, Amirkabir University of Technology, Iran
A study of biological resistance of an automotive acrylic-melamine clearcoat exposed to bird droppings and tree gums
- 12:00 - 12:30 Guang-Ling Song, Chemical Sciences and Materials Systems Laboratory, USA
A dipping e-coating for Mg alloys
- 12:30 – 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

www.coatings-science.com

