



Clear focus on scientific backgrounds

7th Coatings Science International Conference in Noordwijk, the Netherlands

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With a "warm welcome", *Prof. Rolf van Benthem*, Chair of the organising committee, greeted the attendees of the 7th Coatings Science International Conference (CoSi) in Noordwijk, the Netherlands, at the first conference day. With temperatures exceeding 35 °C at least on the first two conference days, this could be taken quite literally.

The conference that took place from 27 June to 1 July put a clear focus on the scientific backgrounds of the latest technological developments relevant to coatings. 34 lectures from both academia and industry were given during the conference, which the jury selected from 115 paper proposals submitted prior to the conference. All in all, 114 attendees from all over the world met in the Dutch seaside resort, a somewhat lower number of participants compared to 2010.



Prof. Rolf van Benthem chaired the 7th Coatings Science International Conference
Source: Gerard Scholten (3)

Growing interest in hybrid materials

The range of countries the speakers came from was especially wide, with lecturers from all over Europe, Israel, Iran, USA, Thailand and Australia among others. Traditionally, the conference focus was placed on organic coatings. But, as Prof. Benthem put it, the number of presentations on inorganic coatings and hybrids is growing. Thus, two sessions were solely dedicated to hybrid materials and nanocomposites.

Mohsen Mohseni of the Amirkabir University of Technology in Iran, for example, presented a paper on structural and morphological studies of scratch resistant sol-gel based UV cured nano composite films on polycarbonate. The other sessions dealt with functional coatings, characterization and modeling, weathering, colloids and interfaces, chemistry and photochemistry, material properties, and corrosion.

Functional coatings

Functional coatings were the opening topic of the plenary sessions. As one of the speakers, *Kostadinka A. Geshewa* from the Bulgarian Academy of Sciences talked about "Transition metal oxide films: technology and 'smart windows' electrochromic device performance". Transition metal oxides exhibit an electrochromic effect, she stated. Under a small voltage they change their optical transmittance from coloured to bleached state. They are envisaged for application as smart windows in future architectural low-energy buildings, as well as for windows in the car industry.

Colloids and interfaces

In the session on colloids and interfaces, *Dr. Audrée Andersen*, BASF Coatings, Germany, gave a presentation on adhesion of coatings – "an interfacial challenge", as she put it. In the field of coatings for the automobile industry, adhesion remains a crucial aspect which influences greatly the performance of a product. According to Andersen, the industrial experience shows that even if many parameters have been improved over the last decades, interfacial adhesion still remains challenging.

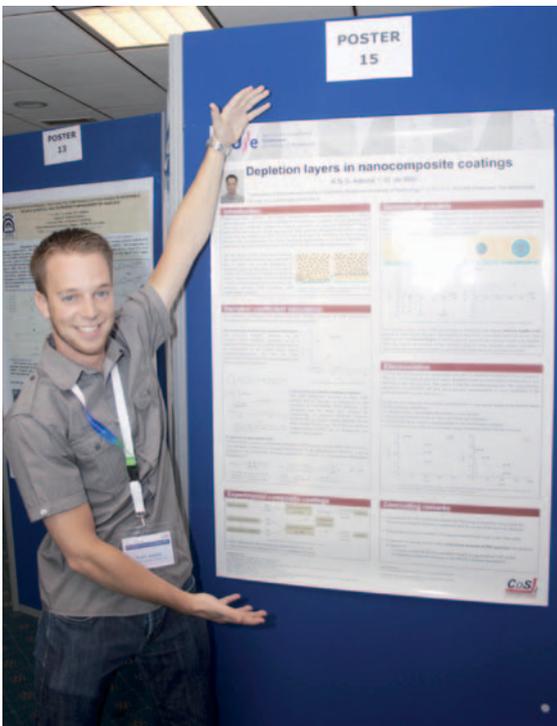
Weathering

Prof. Stuart Croll, North Dakota State University, USA, explained the significant influence of pigments on the



The conference schedule allowed enough time for lively discussions

long term durability of artists' oil paint in the weathering session. *Mark E. Nichols*, Ford Motor Company, presented a new accelerated weathering protocol that significantly improves the correlation between failure modes observed after Florida exposure and failure modes observed after accelerated artificial weathering exposure.



The poster sessions provided a good platform for exchanging information and experience

Discussions and poster sessions

The conference schedule allowed enough time for discussion which was well accepted by the audience. Thus speakers had to put up with critical and challenging comments and questions; all in all the conference was characterised by lively discussions. In addition, 45 posters were presented during two poster sessions on the third conference day. The stands were well-attended, again providing room for intensive exchange of ideas.

Award winning developments

CoSi 2011 ended with an award ceremony. As usual, prizes were awarded in the categories Science, Innovation, and Creativity. All oral presentations were judged by the organising committee under the following criteria: quality of research, originality and clarity of the oral presentation, graphical quality, and discussion with the audience. Organising committee member *Prof. Bert de With* presented the Science Award for the best scientific paper to *Prof. Martien Cohen Stuart*, Wageningen University, The Netherlands, for his research on chemistry and physics of associative thickeners.

Christoph Regula, Fraunhofer Institute for Manufacturing Technology and Applied Materials Research, Germany, received the Innovation Award for the most interesting new development presented at the conference, a lecture on corrosion protection of metal surfaces by atmospheric pressure plasma jet treatment.

The Creativity Award for the best poster went to *Koen Adema*, Eindhoven University of Technology, The Netherlands, for his presentation on depletion layers in nanocomposite coatings. ◀

More information: www.coatings-science.com



Watch our video interview with award winner *Christoph Regula*:
www.european-coatings.com/videos/