



## CURRENT ISSUE

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## Content

### Editor's Note

#### The Future of Smart Coatings and Functional Coatings

— Prof. Long Lin

Although the names "smart coating" and "functional coating" have not yet made their way into the Cambridge (English) Dictionary, as individual entries, there do exist various definitions of varying details of these names.

### Additives

#### The Use of Levulinates as Coalescing Agents in Water-Based Coatings

— Steve Block, NXTLEVEL Biochem, USA

The need to develop and implement affordable and sustainable large-scale operations for the conversion of renewable resources to chemical building blocks is becoming increasingly urgent and essential in reducing global dependence on fossil fuels, including the critical aspect of minimising the carbon footprint of the chemical industry.

### Powder Coatings

#### Functional Powder Coatings via Isocyanate-Cured Phenolics and Benzoxazines

— Weih Lee, Robert Polance, and Hart Haugen, The Sherwin-Williams Company, USA

In this work centring around phenolic chemistry, we investigated isocyanate and benzoxazine modified phenolic powder coatings aimed to better address a couple of industrial needs proposed. Allied polyurethane formulations were developed using phenolic hydroxyl-isocyanate reactions and shown to outperform conventional aliphatic polyol-isocyanate coatings for graffiti resistant applications.

### Fillers

#### Sol-Silicate Paint for Restoration and Decoration of Building Walls

— Prof. Oleg L. Figovsky, Polymate Ltd - Israel Research Center, Israel; Loganina VI., Penza State University of Architecture and Construction, Penza, Russia

The influence of fillers on the properties of sol-silicate paints has been established. The interaction between the polysilicate binder and the pigment (filler) has been evaluated. It is shown that the use of microcalcite as a filler in sol-silicate paints contributes to achieving a higher cohesive strength of coatings, due to an increase in the contribution of dispersion forces in the "filler-binder" system.

### Regular Columns

#### Product Literature

- Stahl Polymers launches Relca® PD-805 matting resin to tackle environmental and supply-side challenges
- Archroma introduces new eco-advanced wood protection technology Siligen® MIH liq developed with Unipers
- Polychem Powder Coatings launch the Effects Collection
- Evonik launches new processing aids for improving the performance of photovoltaic wafer cutting
- Covestro presents new polyurethane coating systems and films at Techtextil in Frankfurt, Germany
- Hempel launches new fast-drying CUI coating
- SABIC's new NORYL™ resin offers exceptional CTI and FR properties for ultrathin-wall insulation film in high-voltage EV batteries

#### Industry News

#### Global Trade Shows, Conferences & Forums

#### Advertisers' Index



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