

Speakers for Technical Symposium NVVT/ATIPIC April 21st

NVVT/ATIPIC: Recent developments towards more sustainable coatings

Start 10.00, finish 17.00

Sebastian Weiss (BYK)

Title: From Classical Architectures to Controlled Polymerization: Advancing Wetting & Dispersing Additives for Coatings

A wide range of wetting and dispersing additive architectures has been developed over the past decades, including low-molecular surfactants, polyester and polyether-based structures, hyperbranched polymers, and modern comb-type systems. A brief overview of these established classes will be provided to contextualize current developments before focusing on the role of controlled polymerization. Across all classes, the central function of wetting and dispersing additives remains the stabilization of pigment and filler particles in liquid media through polymers that combine pigment-affine groups with binder-compatible segments. The specific polymer architecture—linear, block-type, or branched—strongly influences dispersion stability, making structural control a key performance lever. Controlled radical polymerization techniques enable this level of precision by allowing narrow molecular-weight distributions, defined chain lengths, and tailored copolymer designs. As the coatings industry increasingly demands such customization, the challenge shifts toward translating laboratory-scale synthesis into economically viable and regulatory-compliant industrial production. Recent development work focused on RAFT polymerization in the aqueous phase, combining a state-of-the-art technology with a sustainable production process. The developed dispersing additives deliver superior pigment stabilization, higher color strength, reduced viscosity, and improved flow behavior while supporting higher pigment loadings and a significant increase of the overall performance of coating systems.

Laurence Gallez (DOW)

Title: New generation of slip and mar resistance additive enabling the formulation of scuff resistant paints

Our innovative solution focuses on silicone additives that significantly enhance mar resistance and slip in waterborne systems. By utilizing ultra-high molecular weight silicone dispersion, we deliver excellent slip, abrasion resistance, scratch resistance, and anti-blocking properties in waterborne paints, inks, and coatings. As part of our commitment to safer formulations, we have eliminated substances of concern such as BTX (Benzene, Toluene, Xylene), which required the development of a new intermediate based on novel chemistry. While the removal of such substances often compromises performance, our technology maintains the effectiveness of previous generations and even introduces additional benefits. Additionally, our new silicone additives have been proven to efficiently improve the scuff resistance of architectural paints, providing extra durability and longevity.

1 Content in these substances is below detection limits of 0.0001%.

Koen Burger (Cabot)

Title: CABOSIL® MT-6460 fumed silica matting agent for wood coatings.

This presentation will give an introduction to the fumed metal oxides (FMO) portfolio in coatings. We will specifically focus on the function of our fumed silica matting agent (MT-6460) for wood coating applications. Waterborne wood coatings are becoming increasingly popular due to their lower environmental impact compared to traditional solvent-based solutions. In recent years, advances in the waterborne manufacturing process have resulted in coatings that can meet the strict industry requirements for deep-matte and natural-looking surfaces.

In this presentation, Cabot Corporation will introduce a new matting agent, CAB-O-SIL® MT-6460 fumed silica, positioned to meet the demand for high matting efficiency, transparency, and a balanced gloss at 60° and 85° angles. The matting performance of CAB-O-SIL MT-6460 fumed silica in 1K waterborne acrylic and polyurethane dispersion formulations will be discussed.

Michela Aspes (OMYA)

Title: Advanced solutions driving sustainability across CASE applications

Omya, a leading global producer of essential minerals and distributor of specialty materials, supports the transition toward a more sustainable CASE industry through innovative solutions. Its portfolio includes advanced technologies that enhance application performance and formulation efficiency through improved opacity, comfort, rheology control, lightweighting and cost optimization, while simultaneously reducing the environmental footprint by lowering carbon emissions and contributing to more energy efficient buildings and transportation.

Beyond performance, these solutions deliver greater durability and robust formulation stability across diverse systems. They also support improved processing behavior and alignment with evolving regulatory requirements. By leveraging the functionality of natural and engineered minerals, Omya enables manufacturers to meet key market expectations in health and safety, sustainability, advanced functionality and productivity, while contributing to broader industry goals such as decarbonization, hazard reduction and circularity throughout the value chain.

Pricilla Marck-Moerland (Ashland)

Title: Sustainability in motion: Biodegradable additives for modern coatings

Taking biodegradability as a guiding principle, this presentation explores additive selection for waterborne coatings from a regulatory perspective, with attention to microplastics and persistent chemicals. Different additive types, including surface wetters, neutralizing agents, and polyether thickeners are discussed, highlighting biodegradable solutions and their role in enabling more sustainable, future-proof formulations.

Dr. Frank J. Maile (Schlenk Metallic Pigments)

Title: Ultra-thin effect pigment technology: latest developments & applications into the red color space

Ultra-thin metallic effect pigments are well known for their improved hiding power, brightness and metallic appearance, enabling coatings of bright and high chromatic color shades.

Schlenk has taken on the technically demanding challenges and has now successfully created a unique effect pigment in the red color space using the sophisticated ultra-thin pigment (UTP) technology.

However, a precise control of the layered structure in the nanoscale is crucial for tailor-made coloristic properties comprising exceptionally unique color saturation, chroma and color travel control in the red color space. We will show how state of the art research methods like artificial intelligence (AI), design of experiment (DOI) and in-line analytics during pigment synthesis facilitate this task. Due to its hazard-free powder delivery form the resulting bright and chromatic pigment offers completely new design opportunities in the red color space.

Dave Dijkhuis (Relement)

Title: Bio-MPA, discovering unusual combination of properties for coatings

Relement is commercializing our launch product bio MPA (3-methylphthalic anhydride). First application research yielded very promising results. Bio MPA can improve performance of coatings in an unexpected way. It is not only greener. Relement delivers better aromatics for a better world.

Hartmut Ottensmann (Altropol)