



EUROPEAN

# COATINGS SHOW 2023

preview

The Show and Conference preview – [www.european-coatings-show.com](http://www.european-coatings-show.com) – December 2022

## FACE TO FACE IN NUREMBERG!

Promising prospects for the European Coatings Show 2023

Source: Heiko Stahl



After a long period of uncertainties, the prospects are now looking good for another edition of the European Coatings Show (ECS), which will take place face to face from 28-30 March 2023 in Nuremberg.

The corona virus has had a deep impact on the whole world, and on-site trade shows have not been possible for a long time. The prospects are now looking good for another edition of the European Coatings Show (ECS) – on the exhibition grounds of Nürnberg-

Messe, with real exhibition halls and real stands.

The global coatings industry's flagship event will take place on 28-30 March 2023. As usual, the ECS in Nuremberg, Germany, will feature trends and technologies, covering all aspects of the production of paints, coatings, sealants, construction chemicals and adhesives.

The show and conference have now become the biggest and most important event in the world for the coatings industry. In 2019, at the last face-to-face edition, the show set new records with 1,156 exhibitors.

Coatings raw materials, printing inks raw materials, adhesives raw materials, intermediates for construction chemicals, laboratory and production equipment, testing and measuring equipment, application, environmental protection and safety at work, as well as services will all be discussed and on display.

At the ECS Conference, more than 140 speakers will present their latest findings for the coatings industry in twenty-four focused sessions. "We are very excited that the ECS will finally take place

again after such a long hiatus," says Kristina Wilger, Director Event Management at Vincentz Network, co-organiser of the show. Alexander Mattausch, Executive Director of Exhibitions at NürnbergMesse, adds: "I think we have all learned what is possible online, but also what is not: personal exchanges, efficient information gathering, discussion of problems and so on. All this will happen at ECS 2023!"

FOR MORE INFORMATION, PLEASE VISIT: [www.european-coatings-show.com](http://www.european-coatings-show.com)

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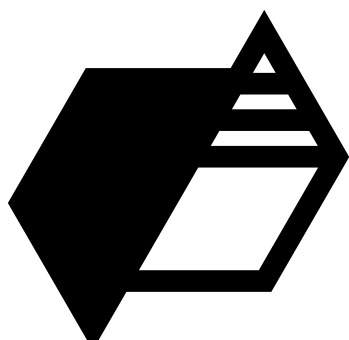
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## LATEST COATINGS RESEARCH

- The European Coatings Show Conference
- takes place on 27 and 28 March 2023
- consists of more than 140 presentations
- is clustered in 24 focused sessions
- offers 9 pre-conference tutorials on 26 March
- features a session on the EU project Decoat
- opens with a keynote from Wijnand Bruinsma, Akzo Nobel

More information can be found at: [www.european-coatings-show.com/conference](http://www.european-coatings-show.com/conference)



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# FINALLY LINKING UP AGAIN IN NUREMBERG

The organisers look forward to the European Coatings Show

After the hiatus due to the Covid-19 pandemic, in which the conference was held virtually, both the European Coatings Show and the associated conference will finally be held face-to-face in Nuremberg again. The organisers Vincentz Network and NürnbergMesse are delighted to welcome back the coatings industry to this great event and are looking forward to next March.



“The last planned edition of the world’s leading coatings show, the European Coatings Show, had to be cancelled due to the Covid pandemic. In March 2023, we will finally be able to meet partners, clients and friends from the coatings industry again after four years. We are already excited about it! I think we have all learned what is possible online, but also what is not: personal exchanges, efficient information gathering, discussions of problems and so on. All this will happen at ECS 2023!”

Alexander Malfausch, Exhibition Director  
NürnbergMesse



“We are very excited that the ECS will finally be taking place again after such a long hiatus. The exhibition and conference will present great networking opportunities, innovations and the latest research results. It’s fantastic that the international coatings industry will be linking up again in Nuremberg.”

Kristina Wilger, Director Event Management  
Vincentz Network

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## COATINGS CONSUMPTION IN 2021

01: Global



8.56 kg/  
person

02: Europe



12.62 kg/  
person

04: Asia-Pacific



8.24 kg/  
person

03: Americas



12.18 kg/  
person

05: Middle East and Africa



3.25 kg/  
person



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# INDUSTRY IN METAMORPHOSIS

Outlining current trends and challenges in the European coatings market



Julien Molina  
Mäder

**The world of coatings and composites in which Mäder operates is undergoing a metamorphosis, says managing director Julien Molina. The three crises that we have been through and are still going through have accelerated this metamorphosis incredibly and thus the need for coatings companies to accelerate their own.**

**W**e were already aware of these signals, but the urgency forces us to do in two years what we had planned to manage over five years.

This metamorphosis is mainly linked to

- > The climate emergency, that has been confirmed by the 2022 IPCC reports
- > Geopolitical tensions as well as supply shortages and difficulties which reinforce the 'Made in', competition and the need to save energy

> The new relationship of populations to work and the resulting labor shortages

In this context, markets continue, as in the past, to demand safe, robust and competitive products, but today demands are also shifting to other trends. Efficiency and energy consumption gains, waste management and the fine-tuning of carbon footprints and product life cycle analysis are key concerns. In addition, ensuring local production and supporting our customers in managing their processes is an important requirement. We must therefore address all these issues simultaneously and very quickly.

## FOCUS ON REDUCING CARBON FOOTPRINT

First of all, measuring and reducing our carbon footprint is an important focus for the Mäder Group. Our carbon footprint assessment on the three scopes, i.e. our direct emissions and our indirect emissions upstream and downstream, has shown us that raw materials are responsible for 75 % of our emissions. Our research efforts are therefore focused on replacing the most polluting raw materials with those that have a lesser impact on our carbon footprint and the environment. Biobased raw materials can represent an avenue for improvement, but it is essential to analyse their emission factors in detail. Indeed, they can sometimes have a carbon foot-



print equal or even higher than petro-sourced raw materials. Therefore, we are also investigating other avenues such as the circular economy or the use of recycled raw materials. Reducing the impact of our products on the environment must also be done at the customer's premises by developing products whose application and drying methods consume less energy and generate reduced VOC emissions. UV technology and the use of high-solids coatings are examples of this. The market is thus increasingly moving towards products that are cleaner for the environment but also cleaner for humans. The substitution of sensitive molecules remains a priority.

## INCREASING EFFICIENCY IS NECESSARY

The second trend we are seeing in the market is a demand for greater efficiency in our customers' processes. Reducing the drying time of the coating, reducing the number of layers and reducing the process time are important customer requirements. This search for efficiency also includes the proposal of complete paint systems, but also paints and composites, which represents a very strong element of differentiation for Mäder on its markets.


## MORE FUNCTIONALITIES

Finally, in addition to their aesthetic properties, the coat-

ings we develop must increasingly meet specific constraints through their functionalities. We are developing anti-graffiti coatings, reflective paints to lower the temperature and anti-virus and anti-bacterial coatings.

All these phenomena will force us to work differently. We are now required to offer markets not just products, but global paint and composites solutions that include a strong notion of service and support in the implementation of more efficient and environmentally friendly processes. In the same way, the way we formulate our products is evolving to integrate eco-design and carbon footprint dimensions. The digitisation of our innovation processes and

the integration of augmented intelligence into our research systems will enable us to accelerate formulation actions and reduce time-to-market.

Today we are between two worlds. The world of yesterday, where the choice of supplier was certainly based on product quality, but also on price, and the one of tomorrow, where awareness of the environmental impact of the product and the need for a global solution are becoming essential. The ecological transition will not be achieved without the industry and a great challenge lies ahead of us: to transform the chemical industry to make it sustainable and thus give meaning to the future generations that are joining us. 

## Discover our smart solutions for more Sustainable Paints & Coatings

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ECS Nürnberg, 2023



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## IN A NUTSHELL

Exhibitors introduce newest developments



As part of the ECS, visitors will again have the opportunity to learn about novel products on the market. The Product Presentations will be held on all three days of the show and will feature a number of speakers introducing their new products.

The Product Presentations sessions are intended to arouse visitors' interest by providing an overview of novel coating products. Exhibitors queue up to deliver short presentations on their latest offerings. The speakers only have a 15-minute time slot to present information about the development, performance and technology behind their products. Not only will

they focus on the new developments themselves, but they will also expound on market trends in their respective areas. After their presentations, they will be available for brief discussions with attendees.

### NO ADMISSION AND REGISTRATION NECESSARY

There is no admission charge to the Product Presentations, and ECS visitors are free to drop by at any time – registration is not necessary. An overview of the presentations will be posted shortly afterwards on the European Coatings Show website. Exhibition visitors will also be able to access them online after the exhibition.

## “A CENTRAL MEETING PLACE”

Voices of endorsement for the ECS 2023



“We will be at the ECS 2023 because it’s a great platform to engage face-to-face with partners along the value chain. Dow will focus on innovations and technologies for the construction chemicals market and how these can enable higher performance and a more sustainable future. We imagine a world where building better is enabled by collaboration – that’s what we want to discuss at ECS 2023!”

Ahmed El Zawahry, Dow Construction Chemicals

“We will be at the ECS 2023 because it is the leading global trade show for the coatings and printing inks industry, and it takes place on our own doorstep. We won’t miss the opportunity to meet our valued customers in person and proudly present our latest product innovations. See you in Nuremberg!”

Dr Frank Maile, Schlenk Metallic Pigments



“We will be at the European Coatings Show 2023 because it represents the central meeting place for the global coatings and paint industry and is one of the most important trade shows for us. It gives us the opportunity to present Helios Resins and our products, get together with existing and potential customers and discuss the latest developments with innovation leaders from all over the world.”

Dr Peter Venturini, Helios Resins

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## THE LATEST FROM THE LAB

A packed agenda at the conference



Source: Heiko Stahl

### The European Coatings Show Conference is set to open its doors once again.

With six parallel sessions all day long, the biggest coatings conference in Europe will kick off on Monday, 27 March 2023, giving you as much choice as ever. Over the course of two days, you can choose from a top selection of lectures and use the coffee breaks to meet again. 143 speakers will present the latest innovations and scientific findings for the coatings industry in twenty-four focused sessions. A special highlight will be the sequel to the 2021 session dedicated to the findings of a

major EU-funded international research collaboration, the De-coat project. Its goal is to enable circular use of textiles and plastic parts with (multilayer) coatings, which are typically not recyclable yet. The project is therefore looking into novel triggerable smart polymer material systems and is working on developing corresponding recycling processes. Of course, there will also be many more interesting sessions on typical industry segments, such as wood coatings, water-borne systems and polyurethanes, as well as sessions on hot topics, such as bio-based coatings, digital transformation and design of experiment.

The ECS conference will open with a keynote lecture from Wijnand Bruinsma, Director of Sustainability at Akzo Nobel. He will speak about circular economy and how it will impact the coatings industry. And, of course, the prestigious European Coatings Show Conference Award will be handed out to the presenting author who submitted the most innovative paper. Hygiene procedures in line with local government guidelines will be in place to ensure that the event is safe for all participants. Do check back on the website [www.european-coatings-show.com/conference](http://www.european-coatings-show.com/conference) as rules and regulations may change between now and March 2023. 📍



### Sunday, 26 March 2023

15.00 – 18.30 h Pre-conference tutorials  
19.00 h Welcome dinner, city centre

### Monday, 27 March 2023

8.30 – 09.45 h Plenary Session: Welcome address  
Conference introduction  
European Coatings Show Award  
Keynote presentation  
10.00 – 13.30 h Session 1: Project Decoat  
Session 2: Functional coatings  
Session 3: Radiation curing  
Session 4: Water-borne coatings I  
Session 5: Automotive coatings  
Session 6: Novel materials I  
13.30 – 14.30 h Lunch break  
14.30 – 18.00 h Session 7: DoE, HTE and modelling  
Session 8: Wood coatings  
Session 9: Printing inks  
Session 10: Water-borne coatings II  
Session 11: Novel materials II  
Session 12: Nanotechnology  
18.00 – 19.30 h After work reception

### Tuesday, 28 March 2023

9.00 – 12.30 h Session 13: Adhesives & sealants  
Session 14: Construction chemicals I  
Session 15: Polyurethanes I  
Session 16: Protective coatings I  
Session 17: Testing & measuring I  
Session 18: Architectural coatings  
12.30 – 13.30 h Lunch break  
13.30 – 17.00 h Session 19: Bio-based coatings  
Session 20: Construction chemicals II  
Session 21: Polyurethanes II  
Session 22: Protective coatings II  
Session 23: Testing & measuring II  
Session 24: Digitalisation



EUROPEAN  
**COATINGS SHOW 2023**  
ADHESIVES – SEALANTS – CONSTRUCTION CHEMICALS

Let's discuss your requirements at **ECS 2023!**

**28-30 March, Nuremberg, Germany**  
**Hall 1 / Booth 1-322**

## MOVING TOWARDS A CIRCULAR ECONOMY

Sustainability plays an essential role in all new developments of coatings and paints

In this year's keynote, **Wijnand Bruinsma from Akzo Nobel** will address what is required to become more sustainable as an industry - namely the need to significantly reduce carbon emissions throughout the value chain.

In his position as Director Sustainability, he is responsible for the development, implementation and positioning of the sustainability strategy at Akzo Nobel.

With his talk "The role of paints and coatings in a sustainable future", he will kick off Europe's largest coatings conference. He will give precise insights as well as his views on the importance of achieving a more circular economy. "We have identified three key topics - climate change, circularity, health and well-being - and made a commitment to future generations that we'll do everything we can to address them", says Wijnand. He will also talk about the collaboration between paint

manufacturers, customers, suppliers, academia and other stakeholders.



Wijnand Bruinsma  
Akzo Nobel

## COVER THE BASICS

Tutorials on 26 March will give a comprehensive introduction into important coatings topics

New to the coatings industry or planning a career change? **Nine pre-conference tutorials before the European Coatings Show Conference** give you the opportunity to learn all the important basics on multiple topics.

A set of pre-conference tutorials held on the Sunday before the

European Coatings Show Conference are a long-established and valuable tradition that will be continued this year.

The pre-conference tutorials, scheduled for Sunday 26 March, will cover functional coatings, adhesives and sealants, biocides and their legislation, polyurethane coatings as well as pigments and fillers. Moreover, you can opt for archi-

tectural coatings, fundamentals of colour and appearance, application technology and anti-corrosive coatings. The aim of the tutorials is to provide a comprehensive and deep overview of these topics in one afternoon and they will be hosted by experienced and well-known experts in their own fields. Space is limited so make sure you sign up online in advance.

## WHO HAS THE BEST PAPER?

ECS Award for the most outstanding conference paper

Every European Coatings Show Conference starts with the official prize-giving ceremony for the prestigious European Coatings Show Award for the most innovative paper. If you want to know who will be announced as the winner, make sure you attend the plenary session on Monday, 27 March.

The ECS Award 2023 brings with it not only prestige but also EUR 2,000 in prize money, alongside a commemorative trophy sponsored by the European Coatings Journal. Both will be handed over during the opening plenary session on the morning of 27 March. The paper itself will be presented in full during the conference programme. The winner of this award for the best submitted paper is selected by a jury of coatings experts on the basis of relevance, scientific content and degree of innovation.



The European Coatings Show Award for 2021 was won by Partha Majumdar and his team at Dow. Their paper described how big data, modelling, and

predictive tools could be used as a novel method for optimising formulations and reflected the increasing importance of digitisation in the laboratory.

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SUNDAY, 26 MARCH, 15:00 - 18:30 CET

**Tutorial 1: Functional coatings**

Dr Volkmar Stenzel, Fraunhofer IFAM

**Tutorial 2: Formulating adhesives and sealants**

Dr Matthias Popp, Fraunhofer IFAM

**Tutorial 3: Understanding biocides and the latest regulations**

Dr Annette Bitsch, Fraunhofer ITEM

**Tutorial 4: Polyurethane coatings**

Dr Ulrich Freudenberg, Consultant

**Tutorial 5: Dispersing pigments and fillers - theory to practise**

Frank Kleinsteinberg, Evonik

**Tutorial 6: Basics of architectural coatings**

Markus Vogel, Byk

**Tutorial 7: Fundamentals of colour and appearance**

Colin Wakeford, X-Rite

**Tutorial 8: Application processes in coatings**

Dr Oliver Tiedje, Fraunhofer IPA

**Tutorial 9: Anti-corrosive coatings**

Adil Bilici, Byk

Tutorial  
schedule



## A VERY COMPETITIVE MARKET

Taking a look at the current situation of the European paints and coatings market



Katarina Lindström  
Hempel

**Challenging - this is the best way to describe status quo of the European paints and coatings market. Katarina Lindström from Hempel provides an overview by addressing various factors that have an impact on the industry.**

In another year rocked by market challenges, Hempel has initiated activities to shore up its supply chain and focuses on risk mitigation. In Europe, the coatings industry faces its own challenges, like high in-

flationary rates, driven by war in Ukraine, high energy costs in some regions and energy limitations. Globally, inflationary cost pressures persist alongside raw material cost increases and uncertainties negatively impact consumer confidence.

### CURRENT MARKET CONDITIONS

The expectation is that the European paint and coatings market will grow in value during 2022. The growth is driven by price increases as a reaction to the huge increase in raw material cost during 2021 and 2022. These price increases are expected to be around 15-20 % across segments, though with significant volume decline in the coating market.

High inflation rates across Europe, driven by war in Ukraine has led to low consumer confidence, challenging the decorative segment. Energy and infrastructure segments are expected to show volume

growth in 2022, especially the wind coatings market, further strengthened by the energy crisis currently experienced in the region.

### SUPPLY CHAIN CHALLENGES

Global supply chains are challenged due to the many uncertainties in the world – unstable geopolitical situations, high inflation globally and energy limitation and high costs in some regions. At Hempel, we have initiated activities in our supply chain to mitigate for these challenges and we benefit from being a truly global company to be able to best serve our customers. We work with risk mitigation on a continuous basis throughout our complete supply chain. In collaboration with our third party risk engineering partners, we have a well-established loss prevention programme where we keep track, monitor and implement risk improvement measures related to protection of our assets, properties and business

from potential negative events, including Natural Hazards.

We have established an internal process for actively working with Business Continuity related risks, following the principles described in ISO 22301:2019 Security and resilience - Business continuity management systems - Requirements. This includes mapping our critical activities and resources and what potential events may render these impaired during a certain period of time. Mitigation actions and plans are set in place and implemented thereafter. The main purpose is to create robustness in our business should it be impacted by a negative external event.

### FOCUSING ON EUROPE

In general, the coating market is very competitive. To state that the European market is more competitive than other markets is difficult to say. Other regions (such as APAC, for example) are more fragmented from a cus-

tomers perspective with more local players in the market, which could influence the overall competitiveness and push down prices.

Hempel is primarily operating within a specified coatings market and our competition is primarily tier 1 international coating companies operating all over the globe, meaning that competition is based more on the bargaining power of each company within a region.


### R&D AND THE REGULATORY LANDSCAPE

Different countries and regions drive different agendas, so as a global coatings supplier, Hempel needs to have relevant R&D capabilities all around the world to innovate to meet different regional requirements or be able to adapt our global products to fit their needs.

For example, the regulatory landscape that drives the need for water-borne coatings in heavy duty applications has ar-

guably been greatest in China and US and hence the key technology development, formulating capabilities and know-how tends to sit predominantly in those regions.

Of course, Europe also has its own specific areas of focus, not least in the areas of protecting human health and the environment through the registration and restriction of hazardous chemical substances, as seen in the implementation of REACH in Europe several years ago and more recently in the Chemical Strategy for Sustainability. These initiatives are impacting the innovation priorities for paint and coatings companies especially those like ourselves with large exposure to European markets.

It is important to remember that within Europe we see different countries focusing on different themes so, for example, the Blue Angel ecolabel of the German federal government drives the development of biocide free wall paints for the DACH-region. 



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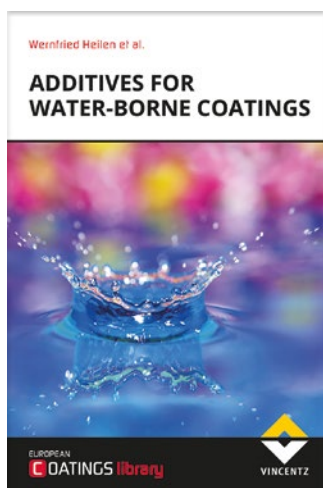
[vibrantz.com](https://vibrantz.com)



# DEEPEN YOUR COATINGS KNOWLEDGE

Plenty of new books in the field of coatings

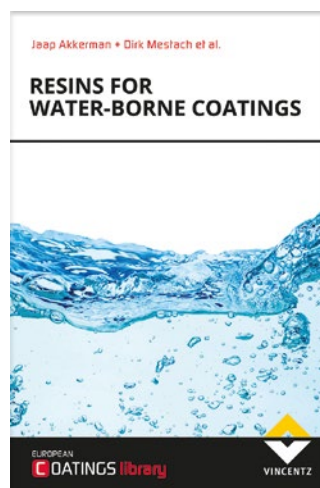
Books are a great way to extend your knowledge. Whether you are new to the industry or a long-time veteran, the European Coatings Library has got you covered. We offer an extensive range of titles spanning all kinds of topics in the paints and coatings industry. A small selection is presented below. You will also find more books and e-books at stand 3-454 in Hall 3 and in our online shop at [www.european-coatings.com/shop](http://www.european-coatings.com/shop).



## ADDITIVES FOR WATER-BORNE COATINGS

By Wernfried Heilen

Water-borne systems are the coatings of the future, with the market developing an insatiable appetite for ecologically sound coatings based on renewable raw materials. The demands imposed on coating performance are at least as high as those on environmental compatibility. Additives help to protect the environment by effectively reducing the use of organic solvents. Many of today's water-borne coatings could not be formulated without them. When incorporated into water-borne paints, coatings and printing inks, additives enhance both the production process and the performance of the applied inks and coating materials. "Additives for Water-Borne Coatings" is a must-read for formulators wishing to brush up on water-borne coating systems, as well as experts seeking to have detailed knowledge at their fingertips.



## RESINS FOR WATER-BORNE COATINGS

By Jaap Akkerman

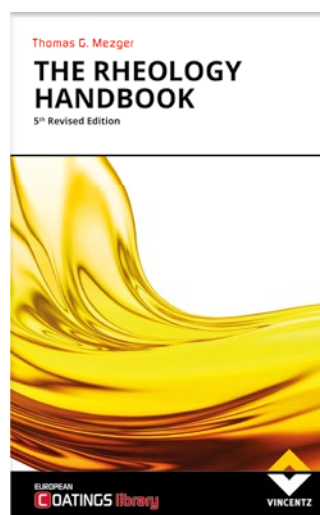
Expand your knowledge and become fully acquainted with the various aspects of water-borne coatings – from production to properties to special features of their use! Given the slow transition from solvent-borne resins and coatings to water-borne coatings, "Resins for Water-Borne Coatings" is essential reading for formulators wanting to expand their knowledge. The authors discuss important aspects of the "solvent-to-water-transition" of the past 40 to 50 years, take a deep dive into the key aspects and theories behind the production, properties and applications of these resins as well as provide an overview of how they are currently used in water-borne coatings.



## ELECTROCOAT

By Michael Brüggemann and Anja Rach

Electrophoretic paints, commonly known as electrocoats or electropaints, are organic coatings dispersed in water that carry an electric charge. This enables the paint to be deposited onto a metal carrying the opposite charge. This special application technique imposes specific demands on the coating formulation. This textbook presents the requirements and vagaries of the electrocoat process and how troubleshooting is done. It illustrates the theoretical basics of electro-deposition, paint formulation, manufacturing, and the application process, in addition to failures and the countermeasures to adopt. Newcomers and practitioners alike are given a comprehensive overview of the wide field of electrocoats, along with deeper insights into this technology.



## THE RHEOLOGY HANDBOOK

By Thomas Mezger  
5th edition

Already in its 5th edition, this standard work describes the principles of rheology clearly, vividly and in practical terms. The book also includes the rheology of additives in water-borne dispersions and surfactant systems. Not only is it a great reference book, but it can serve as a textbook for studying the theory behind the methods as well. The practical aspects of rheology are presented in the areas of quality control, production and application, chemical and mechanical engineering, materials science and industrial research and development. After reading this book, the reader should be able to perform tests with the aid of rotational and oscillatory rheometers and to interpret the results correctly.



## PAINT ANALYSIS

By Roger Dietrich

The market demands modern, high-performance, flawless paints that possess specific properties. So, when the results are not up to scratch, the cause must be investigated and the error remedied. What "standard methods" fail to disclose is why a particular coating either meets or fails to meet a given requirement. Here, the author presents modern analytical techniques and their applications in the coatings industry that answer these and further complex questions. The information in this book can help the reader to perform failure analysis, production control and quality control, while also meeting the requirements of modern high-level quality management. It offers an excellent combination of theory and practice for formulators, paint engineers and applied technologists seeking a sound basic introduction to instrumental paint analysis and concrete answers to everyday problems.



## WATERBASED ACRYLATES FOR DECORATIVE COATINGS

By Roland Baumstark and Roelof Balk  
2nd revised edition

Aqueous polyacrylates acting as binders, dispersing resins and thickening polymers are now indispensable raw materials in the paints and coatings industry. Since their introduction in the 1950s and 1960s, straight acrylic and styrene acrylic dispersions have established themselves as environment-friendly, high-performance alternatives to the solvent-borne, air-drying alkyd resin binders that were mostly in use up to then. The particularly wide performance spectrum and sheer versatility of polyacrylates are the reason why this class of product continues to undergo systematic, ongoing development as binders for coating materials. This book gives an overview of the preparation and properties of aqueous acrylic dispersions and the special features pertaining to their use in the architectural coatings sector. Following a general introduction to dispersions and emulsion paints manufacture at the beginning of the book, specialised chapters provide a deeper insight into the various products, such as primers, masonry paints, interior paints, plasters, wood coatings and gloss emulsion paints. The book also covers the preparation of acrylic binders and the formulation of architectural paints. It is aimed both at students and newcomers to the paints and coatings field as well as at experienced dispersion users and practitioners in the paints and coatings industry.

Just released!



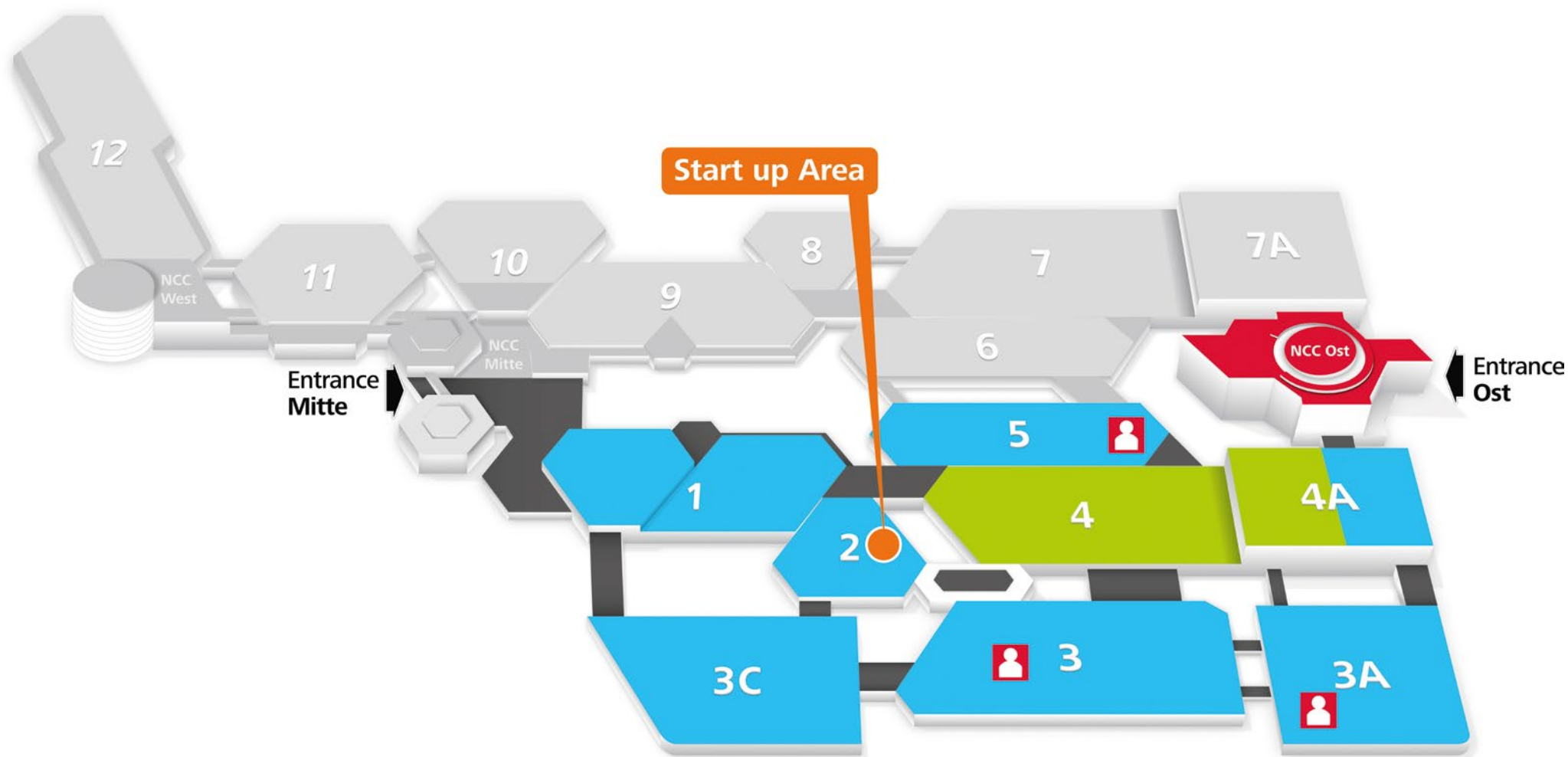
Gisela Gehrenkemper,  
Editor European Coatings  
Library

"Our wide-ranging catalogue enables you to plunge deep into the world of basic and expert knowledge and find out more about those topics which are currently making waves in the coatings arena."



# FINDING YOUR WAY AROUND THE SHOW

Plenty to see in Nuremberg



**NCC OST**

■ European Coatings Show Conference

**HALLS 1 / 2 / 3 / 3A / 3C / 5**

- Coating raw materials
- Adhesive raw materials
- Intermediates for construction chemicals
- Printing ink raw materials
- Services

**HALL 4**

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## INTERVIEW: "OPENNESS FOR FAILURES ON THE ROAD TO PERFECTION"

Digitisation in the paints and coatings industry



Alexander Madl  
Consultant

**"What we lack most in our industry when it comes to the digital transformation is something that we actually know best: experimentation,"** says consultant Alexander Madl. He expands on the status quo of digitalisation in the paints and coatings industry.

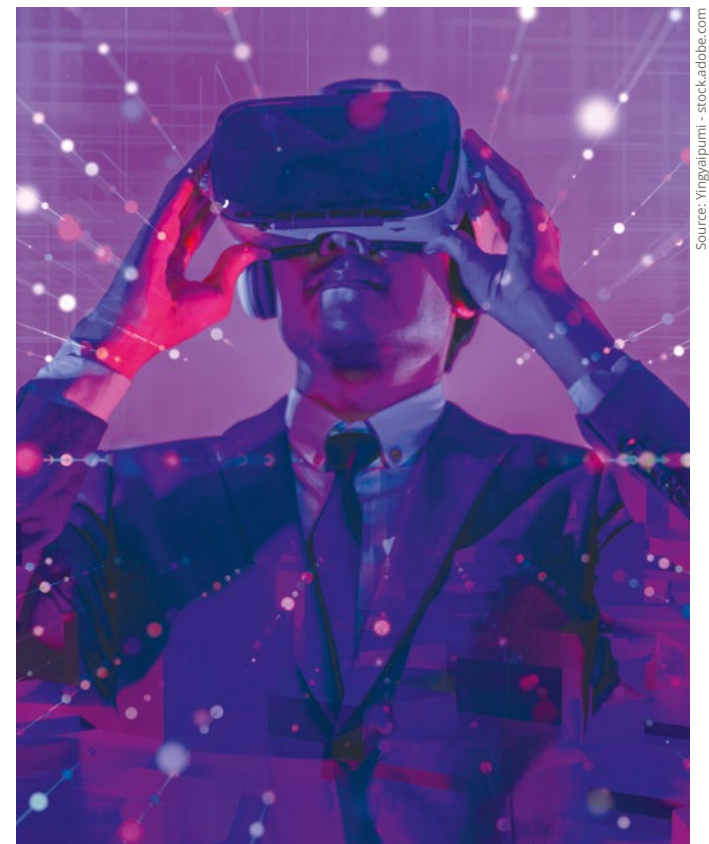
**How "digital" do you think the chemical industry is?** I think we cannot answer this question for the chemical industry as a whole. There are pioneers and laggards – and everything in between – when it comes to digitalisation. Also, within individual corporations, the degree of penetration of digital technologies and mindset can differ from function to function. I have seen companies that operate fully automated logistic centres, equipped with autonomous robots and the like, yet still conducting highly analogue, paper-based R&D. In general, I think we

as an industry do not lag as far behind as we might sometimes think we do. For instance, the use of sensors and data in production to digitally represent material processes has been around for decades in the form of DCS. That being said, of course, there is great potential to transform fully into a digital, data-based chemistry.

**What are some of the biggest potentials of digitalisation in the paints and coatings industry?** When I think about the paints and coatings industry, I am first struck by its complexity. This industry has such a diverse customer base, with a wide range of applications, such a diverse raw materials base, and highly complex formulations. Digitalisation or digital tools offer great potential for managing this complexity. From understanding the changing desires of a global

customer base, through procurement and supply chain to data or model-based R&D and new business development: digitalisation offers many opportunities to create value.

**What are some of the common mistakes that companies should avoid when moving towards a more digital business?** In my view, what we are lacking most in our industry when it comes to the digital transformation is something that we actually know best: experimentation! At one end of the spectrum of "mistakes" is an overly conservative approach: digitalisation is seen as another tool to save incremental costs. At the other end, there is too much perfectionism and too much impatience to obtain a direct, immediate impact on the balance sheet. Digital transformation is a slow, but continuous process.



Source: Yngyapumi - stockadobe.com

It will change the organisation itself; it requires new talents and, moreover, new ways of thinking on the part of the people within the organisation. What we can learn from the digital pioneers

such as Google, Vimeo, Amazon, etc., is an unconventional approach to learning and an openness for failures on the road to perfection.

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## AT A GLANCE TICKETS AND OPENING HOURS

### European Coatings Show: 28-30 March 2023

#### Opening hours

Tuesday and Wednesday	9:00 – 18:00 h
Thursday	9:00 – 17:00 h

#### ECS entrance tickets

1-Day ticket	60 EUR
3-Day ticket	80 EUR

Visitor tickets obtained in advance are automatically allocated a free VGN (Greater Nuremberg Area Transport Authority) combined ticket that enables the bearer to use all public transport in the Nuremberg/Fürth/Stein area free of charge.

Free admission for trainees and students from the coatings industry on presentation of suitable proof.

Visitor registration should be made in advance if possible. However, tickets may also be purchased on-site. Guest tickets and vouchers can only be redeemed online.

#### Online ticket shop

Entrance tickets can be ordered via the internet:

[www.european-coatings-show.com/tickets](http://www.european-coatings-show.com/tickets)

#### Visitor information

NürnbergMesse GmbH

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[visitorservice@nuernbergmesse.de](mailto:visitorservice@nuernbergmesse.de)

### European Coatings Show Conference: 27-28 March 2023

#### Opening hours

Sunday (pre-conference tutorials)	15:00 – 18:30 h
Monday	8:30 – 18:00 h
Tuesday	9:00 – 17:00 h

#### Registration fees (early bird available until 20 January 2023)

Early bird standard fee	1,750 EUR
Standard fee	2,200 EUR
Early bird exhibitor fee	1,600 EUR
Exhibitor fee	1,900 EUR
Academic	990 EUR
Conference speaker	580 EUR
University speaker	0 EUR
Student*	0 EUR

\*Full-time students only; students who fail to participate without notifying the organiser beforehand will be liable to pay a penalty of 200 EUR.

One-day standard pass (either day)	1,330 EUR
One-day exhibitor pass	1,180 EUR
One-day academic pass	620 EUR
Conference stream (includes 4 sessions chosen by the organiser)	1,190 EUR

#### Pre-conference tutorials

26 March 2023, 15:00-18:30 h 675 EUR

Register online [www.european-coatings-show.com/conference](http://www.european-coatings-show.com/conference)

Discounts: Companies exhibiting at the European Coatings Show 2023 or members of EuPIA and PRA will be given a 10 % discount off the standard fee

#### Fees are inclusive of 19% VAT and cover:

- Admittance on the conference day(s) booked
- Conference proceedings
- List of attendees
- Lunch & coffee breaks
- Permanent exhibition ticket
- After-work reception
- Welcome get-together

#### Information on the conference

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## INFORMATION BEFORE AND DURING THE ECS

Website and app offer plenty of information for your visit


Plan your visit to the ECS on the official website and use the app to make the most of your stay.

Are you planning to attend the European Coatings Show as a visitor? Check out the official website, which is packed with information, facts and figures on the show and conference. Plus, it has all the details on tickets, along with tips on accommodation and travel. Exhibitors, too, will find it has everything they

need to know before the show. For more information, visit: [www.european-coatings-show.com](http://www.european-coatings-show.com).

### FREE LITTLE HELPER

another great resource is the official European Coatings Show app. This free app contains a complete list of exhibitors as well as a digital map of the stand locations. What is more, the app's advanced search function allows you to browse by exhibitor and

product and to list them not only alphabetically but also by country, category, and hall. Perhaps you are attending the European Coatings Show Conference? If so, the app will be a great help here to you as well, as it contains a digital timetable for the conference. It also allows you to browse all the abstracts and to put together your own personal conference agenda. The app is free of charge and available for download to iPhones, iPads, and Android devices. 

## DOWNLOAD THE APP AND EASILY FIND OUT ALL ABOUT THE ECS!

The European Coatings Show App will support your visit with lots of convenient features.

Look forward to:

- Full list of exhibitors - Find exhibitors by product category, industry sector or country
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- Schedule of Product Presentations - Keep track of the presentations you are interested in
- Complete conference programme - All presentations including abstract and short CV of the speaker
- My ECS - Your personal section to manage your favourite exhibitors, presentations and contacts
- Get to know visitors and exhibitors with the same interests
- Get the latest news around the ECS directly in the App

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## "SUSTAINABILITY IS ONE OF THE BIGGEST TRENDS"

What's new in protective coatings?

Jonathan Bird, Global Marketing Manager for Resins & Polymers, The Performance Coatings Group, Lubrizol Advanced Materials, talks about trends in protective coatings and how the trend towards sustainability is shaping the sector.

**What is the current focus of R&D in raw materials for protective coatings?** Our R&D is focused on bringing performance, productivity and sustainable solutions to the protective coatings market. We are focused on high-solids water-borne resins for topcoats and DTM that increase film build and provide long term environmental protection. We are developing water-borne hyperdispersants which do not negatively impact corrosion resistance yet keep corrosion inhibitive pigments and fillers stable for DTM finishes. We are also focused on new high-solids reactive polyamides for solvent-borne polyure-



thanes and epoxies which improve performance and are inherently 80% renewable.

**How prevalent are water-borne systems in protective coatings?** While consumers want to make the switch to water-borne systems, technology has not fully enabled them to do so, except for in low-performance general industrial and DTM coatings. Historically, low-solids and low performance have hindered the acceptance of water-borne coatings in the more highly demanding environments which require higher film-build and long-term protection. This is why we are focused on high solids that actually build film and protection and high-performance hyperdispersants that enable longer-term corrosion protection. The only way to make water-borne systems more prevalent is to enable the technology to overcome existing water-borne deficiencies in performance and productivity compared to those of solvent.

**What trends do you expect to influence the protective coatings market in the upcoming years?** Sustainability is one of the biggest trends affecting all of our markets. Protective coatings are not immune to the continuous pressure to lower VOCs and to find renewable and sustainable alternatives to existing materials. I think the time people spent at home over the last few years has affected priorities at work and what people are focused on for the future. In protective coatings, the trends towards high-solids and 100% finishes, coupled with highly renewable options that don't sacrifice performance and can actually improve it in the toughest environments, will continue being driving forces in protective coatings over the next few years. Probably the second biggest trend in protective coatings is increases in productivity, especially on the job site. This can include making things easier, simpler, enabling a faster return to service, and anything that can help shorten labour time and reduce mistakes. 



Jonathan Bird  
Lubrizol Advanced Material

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# “GREAT OPPORTUNITY TO DEMONSTRATE THAT YOU ARE COMMITTED TO SUSTAINABILITY”

Paint producers should make their customers more aware of the steps they are taking



Andre van Linden  
Akzo Nobel

**Andre van Linden, Director Scientific Academic Partnerships at Akzo Nobel R&D, emphasises that “bio-based” doesn’t mean that a prod-**

**uct’s performance is less impressive.**

**The topic bio-based is on everyone’s lips, but what is the current status here?** We continue to see more and more bio-based products coming to the market. We see a lot of modern products where drop-in or new bio-based raw materials are used (to replace the old fossil-based raw materials). The cost price for bio-based materials is still higher, and this often hampers market roll-out, especially when other factors create economic pressure. In general, however, we are seeing growing environmental sav-  
viness and a focus on well-being,

with more and more customers willing to pay a little bit extra for that now.

**What steps are necessary for the companies to position themselves better here?**

What’s needed from the paint producers is to make customers more aware of the steps we’re taking. It’s sometimes very difficult to explain that “bio-based” doesn’t mean that a product’s performance is less impressive. The properties of the new products might be different, but they shouldn’t perform worse in practical applications. When this is properly understood, greater volumes will be sold, and the costs will move closer to the

prices that customers are used to. So, it’s a great opportunity to demonstrate that you’re committed to sustainability.

**How significant is the topic of the circular economy?**

The topic of the circular economy is important for everybody. But it

seems to become less important when prices are significantly higher. In addition, bad experiences with relatively old-fashioned technologies (promoted for their “sustainable” content) fail to help build trust with customers. Therefore, it’s really important that we help customers to understand the

advantages that modern technologies can offer. The need for a smaller carbon footprint (e.g. the difference between C14 and mass balance) is sometimes difficult to grasp when you want the best protection and functionality from your paint. So, clear explanations are needed.



Source: malp - stock.adobe.com

## Masthead

### European Coatings Show Preview

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# NUREMBERG IMPRESSIONS

The second largest city in Bavaria is full of attractions

Even though Nuremberg is the second largest city in Bavaria with more than half a million inhabitants, you can easily forget how large the city is when the picturesque Old Town is right in front of you.

The Imperial castle Kaiserburg is in parts almost a thousand years old. The

famous painter Albrecht Dürer born in 1471 is inextricably linked with Nuremberg and you can visit his home and workshop in the old town which remains unchanged from its original state.

There are many other attractive sights to discover: the picturesque Old Town with its historic building ensembles, the imposing Old Town churches (most no-

tably St. Lorenz church) and romantic winding alleys, the deeply hidden rock passages as well as the famous St. John's Cemetery which dates back to the early 16<sup>th</sup> century or the Nuremberg Zoo. On this page we can only show you a small selection of sights.

Visit [www.tourismus.nuernberg.de/en](http://www.tourismus.nuernberg.de/en) for more information.



The Blue Salon at the Nuremberg Zoo.



Nuremberg former wine depot - Weinstadel.



The Kaiserburg castle.



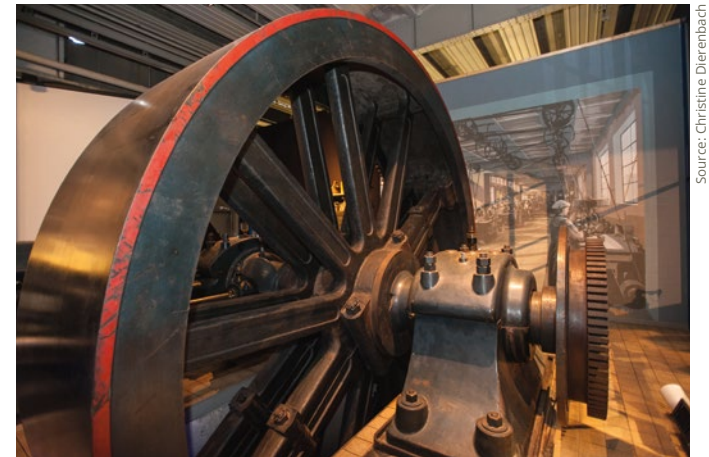
The historic streetcar depot Nuremberg.



Three in a bun - the popular Nuremberg sausages.



The Albrecht Dürer House in Nuremberg.



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## GETTING THERE

### How to travel in comfort to Nuremberg

**Nuremberg has always been a central transport hub in Europe. You can get there by train, plane or car – take your pick.**

#### BY TRAIN

Travel comfortably by rail: fast trains such as the ICE, IC and EC regularly call at Nuremberg Central Station in the heart of the city.

How to get from the central station to the exhibition centre:

From Central Station, take the U1 underground line towards Langwasser-Süd and get out at "Messe" after just eight minutes.

You can easily view these and all other local transport connections to the Nuremberg exhibition centre by visiting:

[www.vgn.de/en/getting-around/exhibition-center/](http://www.vgn.de/en/getting-around/exhibition-center/)

#### BY PLANE

Nuremberg's Albrecht Dürer Airport is among the best in Germany. Frequent fliers value the fast check-in, security and customs clearance as well as the short distances and good transport connections to the city centre and Nuremberg exhibition centre.

How to get from the airport to the exhibition centre:

By public transport (journey time approx. 25 minutes):


The U2 underground line towards Röthenbach takes you directly from the terminal to Nuremberg Central Station. From there, take the U1 underground line towards Langwasser-Süd and get out at "Messe".

#### BY CAR

From the motorways A3, A6, A9 and A73, a well-developed net-



Source: Sergey - stock.adobe.com

work of feeder roads will take you straight to the exhibition centre. Simply enter "Messe" or "Karl-Schönleben-Strasse, 90471 Nürnberg" as the address into your navigation system. There are plenty of parking spaces available. An integrated parking-space management system will be in operation that responds dynamically to demand and the current parking situation. 



## HOTELS AND ACCOMMODATION IN NUREMBERG

There is a wide selection of 2-star to 5-star hotels in Nuremberg, the metropolitan region and the surrounding area. NürnbergMesse operates an online booking service that provides a convenient way to find hotels in all categories.

#### Partner Hotels for Exhibitors

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#### Warning about fake hotel offers

More and more travel agencies, especially English-speaking ones from the UK, have recently been approaching our exhibitors to offer fake discounts on hotel accommodation. Please be aware that we have NOT commissioned any travel agencies to act on our behalf. Exercise caution if you are contacted by callers claiming to be acting on behalf of the event team. If approached, do not book hotel rooms or divulge payment details over the phone.



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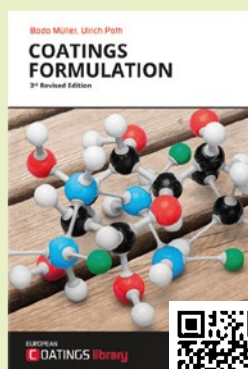
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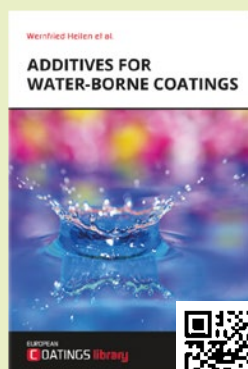
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## 18 INTERVIEW

# “METALLIC PIGMENTS IN INKS ARE GAINING MORE ACCEPTANCE”

Trends and challenges in pigments for printing inks



Yvonne Plitzko  
Eckart

**Yvonne Plitzko, Head of Technical Marketing Graphic Arts at Eckart, gives an insight into the current trends in pigments for printing inks and the challenges entailed in pigments for water-borne inks.**

**What are the current trends in pigments for printing inks?**


General trends, such as upgrading the appearance of metallic pigments towards whiter or darker rooms and flexibility in gloss levels to obtain smooth to high-gloss premium looks, will always be the main task of a metallic pigments producer. Regulatory trends, such as national and international regulations (e.g. Reach, K-Reach, Meti), market regulations (e.g. Swiss list for food packaging) or the forthcom-

ing implementation of mineral oil limits in France for inks in general, which will have an impact on the global market, count among the stronger trends we have been noticing in recent years. The use of metallic pigments in inks is gaining more and more acceptance and thus, more requirements have to be met, e.g. stricter demands on tinting properties, adhesion, and overprintability.

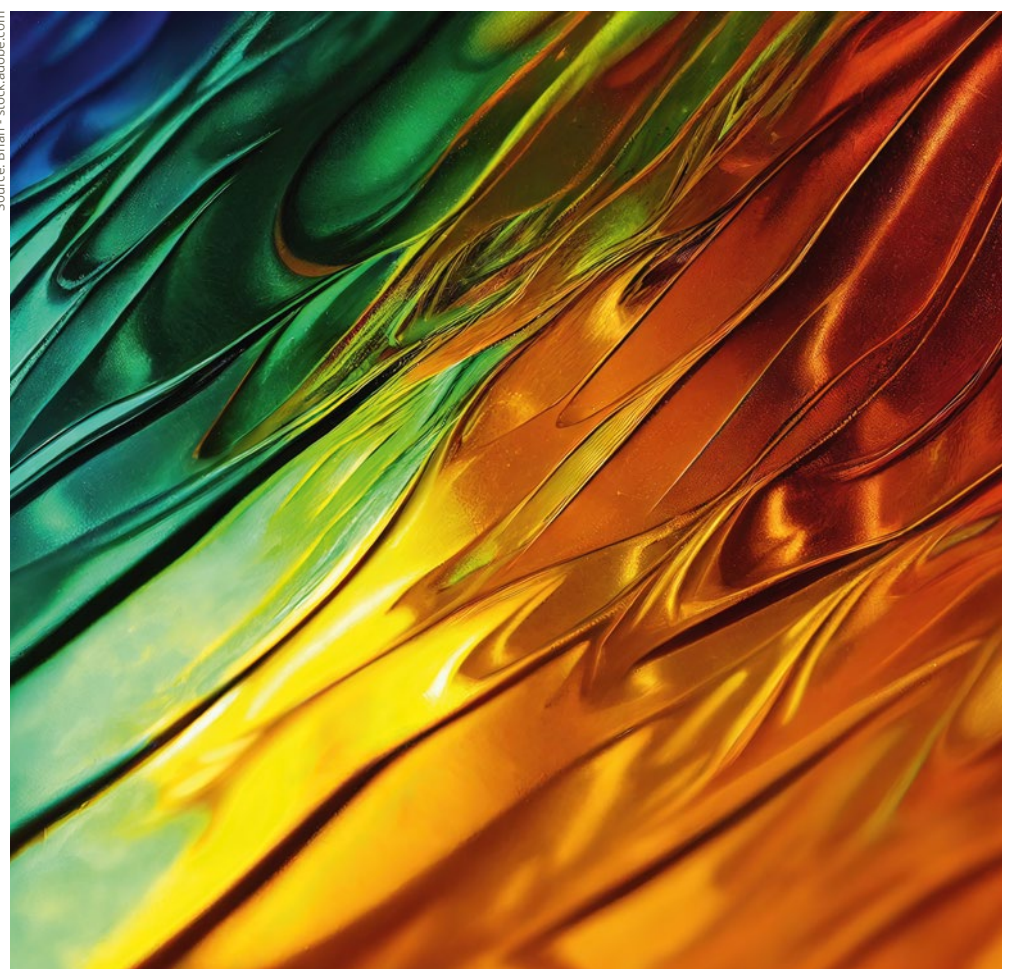
**What are the challenges entailed in developing pigments for water-borne inks?**

Metal and water tend to react with each other. For this reason, well-designed protection of the pigment to avoid the reaction between water and metal is essential for a good water-borne ink. Well-designed protection keeps the pigment stable in aqueous media without reducing the gloss level too much. Besides regulations, one of the challenges for water-borne inks is finding optimal binder suspensions. The optimal binder offers a combination of good flow after breaking of the suspension and drying to avoid scattering interfaces on one and good storage stability on the other. For good printability, low pigmentation is preferable, and this requires a pigment with good hiding power and an addi-

tive mix that will ensure perfect dispersion and orientation in the ink film.

**You specialise in metallic inks for packaging. What are the requirements of the packaging industry here?** Rising paper prices and governmental regulations, such as taxes on plastics, are putting pressure on material usage and the recyclability of packaging materials. In general, inks incorporating metallic pigments do not behave much more differently than those incorporating toners or dyes when it comes to deinkability and recyclability, the extent of the difference depending on curing and application technology and full layer build-up. As metallic inks can be printed exactly wherever metallic effects are required, the printed area can be adjusted to suit the scanning technologies used for sorting packaging waste – with good results. Additionally, there is increasingly talk about bio-borne raw materials which can make up more than 70 % of the content of offset inks, for example. The most important thing is to find the ideal balance between appearance, sustainability, regulatory requirements and machine setup – to obtain the best results for your project. 

Source: Brian - stock.adobe.com



The use of metallic pigments in inks is gaining more and more acceptance.



# “CONTROLLED CONDITIONS ARE PREFERABLE, BUT NOT ABSOLUTELY ESSENTIAL”

Trends in water-borne coatings

**Dominique Vandenberghe, Technical Service Manager Epoxy Coatings, Fibres & Textiles at Westlake, expands on trends and challenges in water-borne coatings.**

**What is the current focus of research and development in water-borne coatings?** A key driver within Westlake Epoxy R&D is the development of new products that have more sustainable attributes and are safer to use. For coating applications, reducing VOC emissions to improve air quality remains a major focus area, with the ultimate aim of eliminating those emissions entirely. This is what we are targeting in our “Aquareous” epoxy range. In addition, we are continuously striving to develop water-borne epoxy systems that offer enhanced performance and functionalities to enable coating manufacturers produce paints with a longer service life, a faster return to service and a higher level of protection. This will ultimately lead to improved efficiency and a reduction in demand for material and energy. In the current commercial environment, another important element is cost reduction and improved security of supply. Consequently, there is a strong focus on local production, establishing alternative production sites, and secondary supply options.

**What would you say are the final hurdles in the switch from solvent-borne systems to water-borne alternatives?** Water-borne epoxy performance

has advanced significantly over the past forty years and can certainly match or even outperform traditional solvent-borne systems. True, some challenges still remain in the transition from solvent-borne to water-borne. These challenges fall into two primary categories: formulation development and application properties. In formulation development, the main challenges are robustness, cost, user-friendliness and ease of formulation. Water-borne paints often have more complex formulations and so good formulation knowledge is critical for developing stable paints that can be easily applied and show superior film performance. To this end, we are developing products, such as our new enabling curing agent, that help to reduce the number of components in the final paint and thus to simplify formulation. As for application properties, water-borne epoxy coatings face challenges when uncontrolled harsh conditions are present. This is the case where the end-use requires application at low temperatures (<10 °C) and high relative humidity (>80 % rh). Under these conditions, the reactivity of the two-part epoxy/amine system is retarded, and the high relative humidity makes it more difficult for the water to evaporate from the coatings. While all these challenges have been recognised, they are often compensated for by the advantages that water-borne systems bring, such as low VOC levels, improved worker safety and high performance. Also, water-borne



Dominique Vandenberghe  
Westlake Epoxy

epoxy systems are ideal for application in confined spaces, for shop primers, etc. This shows that controlled conditions are preferable but not absolutely essential.

**How would you describe the market for water-borne coatings raw materials at the moment?** Demand for water-borne systems in both the medium and the long terms keeps increasing. This trend is clearly linked to the ongoing transition from solvent-borne systems, mainly in the transportation and general industrial coatings segments. That being said, raw materials and logistical constraints, combined with price volatility and higher energy costs, had a significant impact on water-borne epoxy supply in 2021 and 2022. However, epoxies are not the only materials affected by this situation. To an extent depending on the recovery of global economy, we are expecting an improvement by the end of 2023 at the earliest, but most likely during the first half of 2024.



Water-borne solutions have been one of the key trends in recent years.

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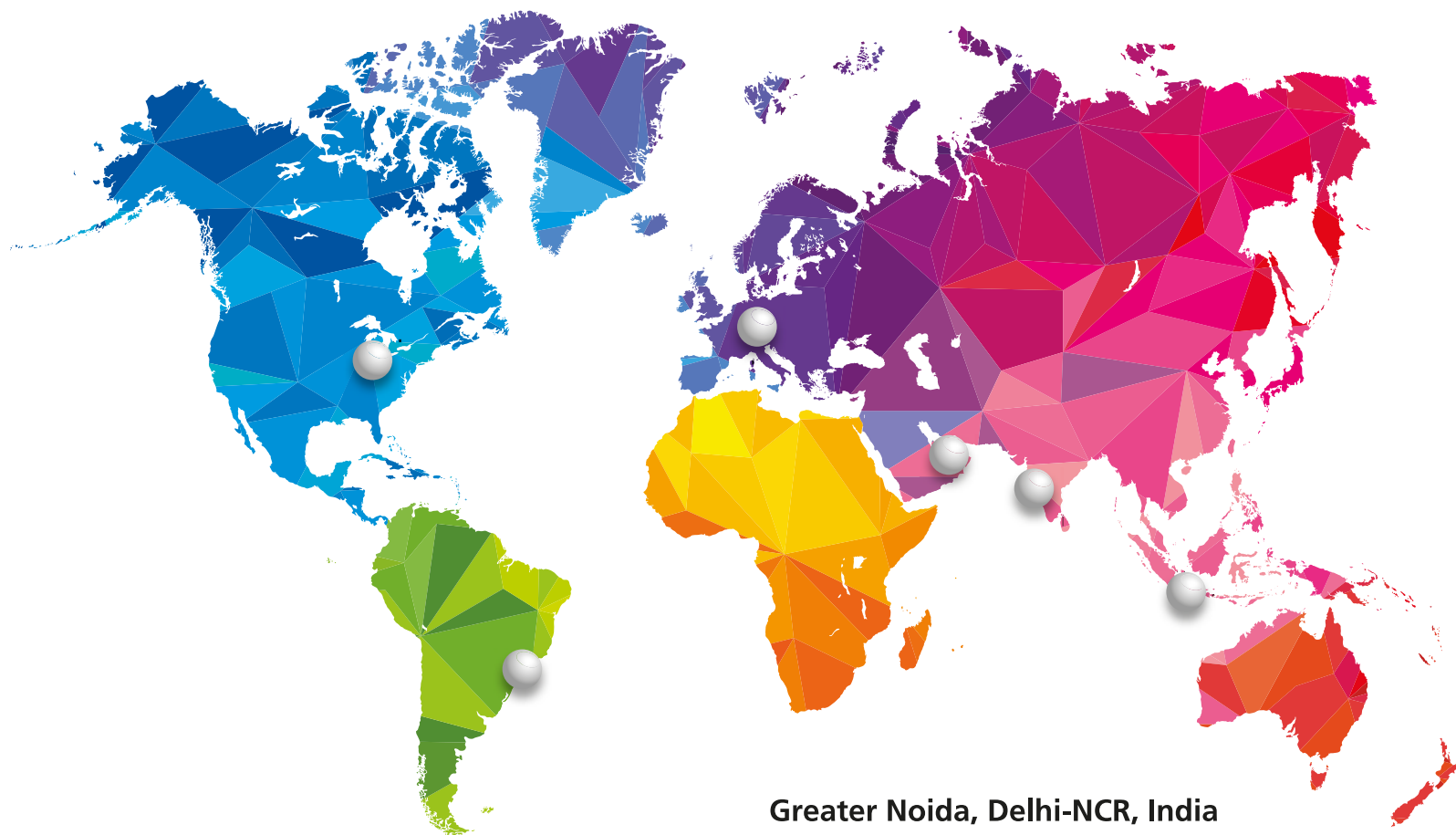
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