



EUROPEAN

COATINGS SHOW 2019

daily 1

The Show and Conference Daily 1 – www.european-coatings-show.com – 19 March 2019

ALL THE SIGNS ARE GOOD

Optimistic outlook for the European Coatings Show and Conference 2019

Source: NürnbergMesse/Thomas Geiger



Specially trained "SignSpinners" kicked off the plenary session of the ECS Conference yesterday.

Up to the very last minute, booth builders were working feverishly on erecting the myriad colourful stands – 14 of which are two-storey "double-deckers" – in the various exhibition halls to ensure that the European Coatings Show (ECS) 2019 could open its doors today in time for another global meeting of the coatings community.

While the EC Show gets underway today, the ECS Conference is already in full swing. The plenary session of the conference kicked

off yesterday with an acrobatic performance by a specially trained trio of "SignSpinners". These three young men impressively twirled arrow-shaped printed signs through the air, promoting buzzwords such as "Trends" and "Networking" that apply equally well to the EC Show: coatings experts from all over the world not only gather in Nuremberg to expand their specialist knowledge about the formulation of coatings, paints, adhesives, sealants, printing inks and construction chemicals. They are also here for the no less important tasks of creating

networks, catching up with old contacts and establishing new partnerships. An exciting novelty at the ECS is the joint stand for start-up companies in Hall 1, Stand 1-646 ("Start-up Area"), where new, small, innovative companies are availing of the opportunity to take part in the show as well. "With 1,157 exhibitors, the European Coatings Show has set a new record and is living up to its reputation as the world's foremost event in this sector: the participating companies from a total of 48 countries are

even more representative of the market than ever before," says Alexander Mattausch, director European Coatings Show, NürnbergMesse. Amanda Beyer, director event management at Vincentz Network, which is co-organiser of the show and conference, adds: "Together with trade visitors from all around the world, companies from six continents make the ECS 2019 a truly global event."

Please find more information at www.european-coatings-show.com

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NOVEL FEATURE

FOCUS ON START-UPS

New joint stand at the ECS

Among the new features of the European Coatings Show 2019 is the new joint stand for start-up companies.

The coatings industry does not necessarily have the reputation of being particularly fast or disruptive. That's no wonder, after all, it's an old industry - people have painted and varnished since the dawn of mankind. But this bad reputation

is not justified. Although the industry has to live with high entry hurdles, there is a whole series of start-ups that develop exciting technologies for the paint and coatings industry. Nine of them will present their solutions at this year's European Coatings Show. At the Start-Up Area, companies that are no older than five years and employ fewer than 35 people will be presenting their products and services for the first time

at the trade fair. You will find the following start-ups at the joint stand 1-646 in hall 1:

- > Othrys Technologies www.kinaltek.com
- > RusTec www.rustec-msk.com
- > Alina www.alina-premium.com
- > Group Eurasia www.eurasiaindex.com
- > Bio-Fence www.bio-fence.com
- > Basca www.basca.tech
- > Greenovoc Specialty Coatings www.greenovoc.com
- > Hexigone Inhibitors www.hexigone.com
- > Chemovator www.chemovator.com



Source: Filippo Romeo - fotolia

EUROPEAN COATINGS SHOW CONFERENCE

KNOWLEDGE BOOST

Once again, Nuremberg becomes the meeting point for experts in the paints and coatings industry and allied sectors

In addition to the trade show, the European Coatings Show Conference offers a comprehensive and varied programme.

With over 140 presentations, it will again be divided into 24 sessions spanning a wide variety of topics presented by leading experts from industry and academia.

The sessions on Protective Coatings, Polyurethanes, Epoxy Coatings, Architectural coatings, Water-borne Coatings, Wood Coatings, Roof & Facade paints, Powder Coatings and Pigments will bring you up to speed in these classic coating topics. Other sessions will include Construction Chemicals, Testing and Measuring, Adhesives and Sealants, Printing Inks, Radiation Curing, 2K Industrial Coatings and Dispersing Technology. New additions to the conference will be sessions on TiO₂ & Opacification, Microbial Protection, and the Foulprotect project.

Often among the most popular sessions is "Science Today - Coatings Tomorrow" that give insights into the current focus of academ-



Source: Heliko Stahl

ic research in the field of paints and coatings while offering a sneak peek into the future of coatings science.

EUROPEAN COATINGS SHOW AWARD

The most outstanding conference paper will receive the prestigious European Coatings Show Award, sponsored by the European Coatings Journal. The award will be handed over dur-

ing the plenary session. Another highlight of the plenary session will be the keynote, to be given this year by Prof. Markus Antonietti, Managing Director at the Max Planck Institute of Colloids and Interfaces. Prof. Antonietti will discuss modern approaches and processes for creating monomers, solvents, plasticisers, and even fully curable oligomer systems from wood-like waste products.

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AT A GLANCE: WHAT, WHEN, WHERE

TODAY'S SHOW AND CONFERENCE HIGHLIGHTS

European Coatings Show

Product presentations

Hall 1, Stand 1-131, 9.50-16.50 h

Hall 4, Stand 4-214, 9.50-16.50 h

Hall 9, Stand 9-544, 9.50-16.50 h

European Coatings Show Conference

Conference Centre NCC Ost

Morning sessions 9.00-12.30 h

Adhesives & Sealants · Construction Chemicals I · Polyurethanes I · Protective Coatings I · Testing & Measuring I · Architectural Coatings

Afternoon sessions, 13.30 - 17.00 h

Epoxy Coatings · Construction Chemicals II · Polyurethanes II · Protective Coatings II · Testing & Measuring II · TiO₂ & Opacification



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PLENARY SESSION

HUGE POTENTIAL FOR SUBSTITUTION

Keynote speech focuses on affordable sustainable coatings

The first conference day kicked off with the plenary session. This year, Prof. Markus Antonietti, director colloid chemistry at the Max Planck Institute of Colloids and Interfaces, delivered a keynote entitled "Making coatings more sustainable and affordable: Biorefinery approaches to monomers, solvents and polymers".

Antonietti started by discussing the environmental issues caused by micro-plastics, a problem which underlined our responsibility to take care of the planet. He then presented his approach for utilising waste biomass, which is not only waste, but can be found in abundance. Hydrothermal reforming and refining afforded a way to convert this into monomers and polymers. We spoke to Prof. Antonietti about his findings and the potential for the coatings industry.

What would you say are the main obstacles preventing the coatings industry from becoming more sustainable? Coatings are linked to the micro-plastics problem through the processes of abrasion and mechanical wear. To deal with this, polymers should be degradable into natural compounds, and should preferably be equipped with a trigger mechanism. The second problem is the metal-based additives used for curing or other purposes: tin-based systems, for example, should be replaced completely. Both of these are feasible, nowadays.

R&D into bio-based raw materials for coatings is focusing on lignin. How would you describe its potential? At least 10 Gt/year lignin is produced by terrestrial biomass, with 50 Mt/year considered "stranded" as secondary products of the modern paper industry. Biorefining is a primary technology devised by mankind and the latest versions of it are capable of delivering sustainable monomers, e.g., phenolics. The potential here

is the size of the phenol market (about 1 Mt/year). Phenols of course offer huge potential for substitution, for instance in plasticisers, antioxidants and even in isocyanate and epoxy resins.

You talked about biorefinery approaches to monomers, solvents, and polymers. Could you expand on these approaches? We already talked about phenol-based monomers earlier, but there are others, such as methyl-ene-valerolactone, which yields a high-Tg thermoplastic polymer. Bio-based solvents, such as gamma-valerolactone and dimethyl-furan, have the advantage of being sustainable and fairly inexpensive, while also possessing surprisingly low toxicity. In fact, across the whole polarity scale, we can come up with solutions made from biomass – even if this is only for the purpose of addressing sustainability issues.

Could you elaborate on the approach to source fully-curable oligomer from wood-like waste products? In the chem-

istries I just discussed, curability resides in the polyfunctionality of the as-made monomers. Polyphenols can be cured by oxidative coupling or free-radical processes, and biological vinyl esters can be coupled by thermal transesterification. The underlying concept of "orthogonal chemistry" enables polymerisation and crosslinking in two separate steps.

The industry is reluctant to use sustainable raw materials because of the costs involved. How can biorefinery approaches help solve this? This issue is usually difficult for people outside the industry to understand. But, based on the current prices for lignin or high fructose corn syrup, all conversions to elemental products are so simple that, in principle, the platform chemicals made from them cost less than 1 EUR/kg, bioethanol, for instance, costs around 0.75 EUR/kg. I regard the argument that massive penetration into the markets can only occur when the price is more than competitive to be something of an urban myth. ☺



The keynote speech was presented by Prof. Markus Antonietti, Max Planck Institute of Colloids and Interfaces.



ECS GOES SOCIAL MEDIA

The European Coatings Show is also active on multiple social media accounts. During the show we will regularly post information, tips and more on Instagram, Facebook and LinkedIn.

You can also be part of the ECS online community.

Just use the hashtag #ECS2019

www.facebook.com/EuropeanCoatingsShow

www.linkedin.com/showcase/ec-show

www.instagram.com/europeancoatingsshow

EUROPEAN COATINGS SHOW AWARD

AND THE WINNER IS...



Dr. Sonja Schulte, Editor-in-Chief, European Coatings Journal, hands over the ECS Award to Dr. Christopher Miller, Arkema.

Another highlight of yesterday's plenary session was the presentation of the European Coatings Show Award.

The winner of the European Coatings Show Award for the best paper at the 2019 European Coatings Show Conference was Dr. Christopher Miller of Arkema. The title of his paper was "Developing a Deeper Understanding of the Effect of Latex Design Parameters on Final Coating Film Properties." The paper, written by Miller and his colleague Dr. Wenjun Wu of Arkema, takes a fresh look at a number of familiar standard test protocols used for assessing

in-service performance, such as stain resistance, stain removability, block and print resistance, by considering the root causes of coatings failures.

A better understanding of the mechanisms underlying these phenomena is achieved through the complementary use of mechanical testing and analytical techniques, such as confocal raman microscopy and dynamic mechanical analysis. The paper details three case studies which show how this mechanistic approach significantly improves the understanding of failure mechanisms and accelerates the development of emulsion polymers that possess improved performance properties.

It therefore serves as a source of encouragement for taking a closer look at familiar testing methods with a view to developing a better understanding of the fundamental mechanisms involved. This approach can be applied across the full spectrum of water-borne coatings. The European Coatings Show Award is sponsored by the European Coatings Journal. It consists of EUR 2,000 in prize money and a trophy.

SAVE THE DATE

Chris Miller will present his findings in Session 23 Testing & Measuring II at 13:30 h in room Shanghai. ☺

SURVEY

NO SURPRISES AT THE AUDIENCE POLL

Importance of eco-friendly and sustainable solutions top the list

It has become a tradition to invite the audience at the plenary session to participate in a short survey. Attendees are asked to share their opinion on various topics, e.g. key markets today and in the future, as well as activities in R&D and sustainability.

Attendees had to wait only a couple of seconds to see how the plenum answered each question. As before, the more than 150 coatings experts in attendance were able to cast their votes via smart-phone and could see the results immediately as they appeared live on the big screen. The questions which they were asked revolved around the major topics that preoccupy the indus-

try, such as important markets, technologies, and drivers of R&D activities and sustainability. Multiple answers were permitted for each question.

WESTERN EUROPE TODAY, ASIA-PACIFIC TOMORROW

More than two-thirds of respondents considered Western Europe to be the most important market at present. Asia-Pacific and North America both ranked second in importance, with each scoring 33 %. South America was only a focus region for 8 %, while Africa came in last, garnering just 1 % of votes. The picture changed, however, when it came to the future. For 67 %, Asia-Pacific will be the most important market. Western Europe

will remain the focus market for just 30 %, while 26 % will still concentrate on North America. The audience believed that the emerging regions of South America (19 %) and Africa (7 %) will become increasingly important in the future.

WATER-BORNE, CUSTOMERS AND SUSTAINABILITY

There were no surprises when it came to voting on the most important future technologies in the sector. Two-thirds of voters believed that water-borne will retain their high significance for the coatings industry. Almost half voted for functional and smart technologies. High-solids were an important technology for 19 %. Bottom of the list came

UV/EB (16 %) and powder (11 %). The customer-centric nature of the industry was underlined by the responses to the question as to what drives R&D activities. For 62 %, customer requests were the top answer, with market competition (38 %) receiving the second-highest number of votes. Sustainability ranked third at 30 %, closely followed by legislation and regulations (29 %). Cost reductions received 27 % of votes cast. Some 56 % indicated that responsibility for the planet and mankind was driving sustainability activities. For 46 %, it was customer demand, while for 27 % it was competitiveness. Surprisingly, as many as 6 % signalled that they did not engage in any sustainability activities at all.



“It was a nice survey. My opinion reflected the general results of the peer survey here at the plenary session.”

Carlos Lopez de Laorden, Hispanamer



“The results were not surprising: growing awareness of the environment, increasing significance of water-borne coatings and the fact that APAC will be the most important region in the future.”

Alessandro Napoli, Huntsman



“I expected the results – everybody is working on sustainable solutions. The customers are asking for it and that is where we really can have an impact.”

Gillian Ross, Lion Brothers



“The ECS is the perfect place to get to know about new trends and technologies. I am particularly interested in water-borne technologies.”

Jan Chrominski, Dow Chemical Iberica



“The presentations are really excellent. I love them. The technical presentations are just what I need for my work. So that’s why I’m here.”

Rosa M. Macchi, Akapoli



“I came here to attend the show and found it was a great opportunity to attend the ECS Conference, too. I am interested in coatings innovations.”

Mohammad Abuajmah, Aseeb Trading Industrial & Contracting

TITANIUM DIOXIDE

"KEEPING THE INDUSTRY ON ITS TOES"

Smart coatings will be one area in which titanium dioxide will continue to play a significant role

Titanium dioxide is a key raw material in the formulation of paints and coatings. Dr Steve Ashdown of Venator expects continuing growth in pigmentary and protective applications of titanium dioxide across all segments, especially paints, coatings and printing inks. Smart coatings in particular will become an important area for TiO₂. The recent discussions on classifying the raw material are worrying an entire industry. A looming classification could affect hundreds of other large-volume substances that are similar to TiO₂.



Dr Steve Ashdown
Venator
Hall 9, Stand 9-211

What are the current challenges when it comes to titanium dioxide? All industries face the challenge of keeping pace with regulatory changes and the titanium dioxide industry is no different. It is important that we keep abreast of these changes, and that we anticipate future developments and shape our innovation strategies accordingly. The end-users of titanium dioxide are incorporating it into ever more sophisticated and challenging applications, and the world of surface coatings is foremost in this respect. This provides great opportunities for innovation and development for a multi-functional material like titanium dioxide, whilst keeping the industry on its toes with respect to the traditional demands of cost-effective opacity, whiteness and longevity.

What trends will dominate in the titanium dioxide segment in the near future from your point of view? We expect to see continuing growth in pigmentary and protective applications of titanium dioxide across all segments, especially paints, coatings and printing inks, and as global innovation trends drive the demand for more "intelligent" materials, we expect to see growth in applications that exploit its properties beyond visible light scattering. So-called "smart" coatings will be one area where titanium dioxide will continue to play a significant role, coatings that provide more than the traditional aesthetic or protective effect. Hy-



Source: eyegehb - adobeistock.com

gienic coatings based on titanium dioxide functionality are becoming established, and we see other "smart" applications that will be enabled by its unique properties, for instance, surfaces that probe and report their environment.

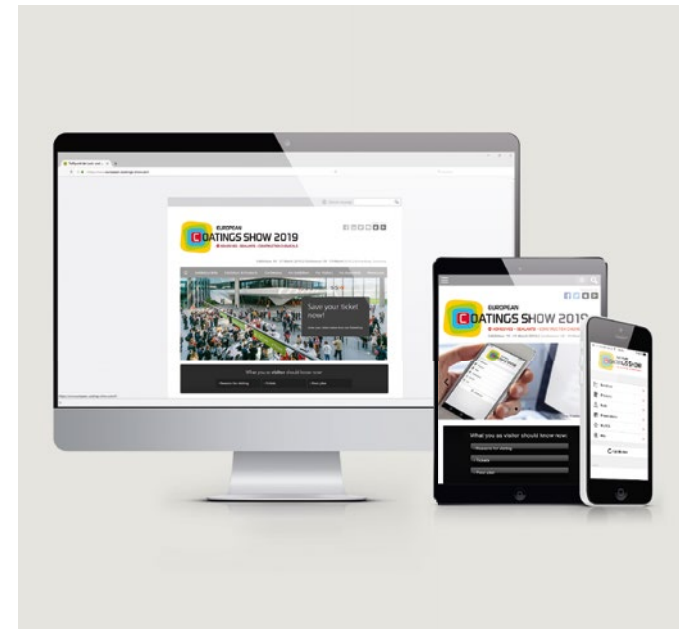
How do you rate the proposed classification for titanium dioxide in Europe?? Venator, as a part of the Titanium Dioxide Manufacturers Association (TDMA), has been engaging constructively with the EU Authorities in the regulatory discussion on the proposal to classify TiO₂ as a suspected carcinogen (category 2) by inhalation under the EU's classification and labelling (CLP) Regulation. TiO₂ is not hazardous in itself, as the suspected

hazard relates to the possibility of respirable dust (irrespective of substance) being inhaled at extreme concentration over an extended period of time, which the EU Authorities recognise. The classification could therefore affect hundreds of other large volume substances that are similar to TiO₂. The TiO₂ industry agrees with many EU Member States and interested parties that the classification is not an appropriate measure to address the potential general dust concerns described for TiO₂. We stand behind the safety of TiO₂ in all known applications and we're fully committed to working with the EU Authorities to find a proportionate and effective regulatory resolution as soon as possible.

ECS APP

DIGITAL SUPPORT

A companion on the go



Use the European Coatings Show website to plan your visit to the ECS. Then, when you get there, navigate your way around both the show and the conference with the handy ECS App. The free ECS App contains a complete list of all exhibitors and a digital map of all stand locations. Its advanced search function allows you to search by exhibitor and product and to list them alphabetically and by country, category, and hall. The interactive floor plan helps you to navigate through the show and gives you a perfect overview of the halls and exhibitors. With the ECS App, you can keep track of the presentations you are interested in.

The app is also a nifty little helper for conference attendees because it contains a digital timetable for the European Coatings Show Conference. You can also browse all the abstracts and brief CVs of the speakers and put together your own personal conference agenda. Stay current with the ECS App – it features an in-app newsfeed that will keep you informed of the latest developments at the ECS. It is free of charge and available for download to iPhones, iPads, and Android devices.

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www.european-coatings-show.com/app

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Reasons why the big players are visiting the European Coatings Show



Øyvind Willumsen Haugå
Group Purchasing Director
Jotun

“As both established players and newcomers within specialty chemicals and equipment manufacturers are present at the ECS, Jotun finds it to be a great venue for exploring new opportunities. Meeting up with existing as well as new potential business partners in a cross-functional setting may very well spur new innovation and concept ideas – which are important focus areas for us. The show is also an excellent opportunity for both formal and informal discussions with long term partners to ensure we stay in close touch with the latest developments and trends in the industry.”



Morten Schaarup
Project Manager in
Group Supply Chain & Industrial
Hempel

“Being a leader in the coatings industry, the ECS is not something Hempel wants to miss out on. Personally, I am looking forward to meeting existing and new stakeholders within the coatings business, and I expect to find a lot of inspiration at the show in Nuremberg. What I take home with me from the show will subsequently be part of my contribution to our continuous growth.”



João Machado
Technical Director
CIN

“The ECS is the largest and most important coatings event in Europe and offers us the chance to contact with numerous worldwide suppliers and recognised international researchers. The conference is a great opportunity to get an overview of the latest developments in coatings and market trends that we can then work on in our laboratories and incorporate into our products. At the exhibition we can meet face to face with many suppliers from different areas (raw materials, testing, measuring and manufacturing equipment, software, etc.) and arrange some solutions for our needs. On the other hand, we have several opportunities for networking and develop partnerships. So, I highly recommend this event to all professionals in the coatings industry.”

MASTHEAD

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BASICS OF COATINGS TECHNOLOGY

BRUSHING UP ON THE OLD AND GETTING TO KNOW THE NEW

Huge interest in pre-conference tutorials

As in previous years, numerous tutorials were held a day ahead of the official start of the ECS Conference. Their purpose was to give attendees a brief summary of the key points of various important coatings aspects. Once again, many attendees eagerly availed of this opportunity in 2019.

As conference organiser Vincentz Network revealed, some 100 attendees took the opportunity to dive right into the material before the start of the European Coatings Show Conference 2019. The tutorial topics were wide-ranging: from architectural coatings to biocides and directives through to polyurethanes.

The attendees had the opportunity not only to refresh their knowledge and get to know new things, but also to share ideas with each other and become acquainted with many different points of view. The total of 10 tutorials proved to be hugely popular and attracted lively interest.

THE BASICS

Markus Vogel, Evonik Industries, covered the basics of architectural coatings. He therefore talked about weatherability, which is a big issue for outdoor coatings, along with corrosion resistance, UV resistance and other performance issues. Different substrates, such as metals, wood and concrete, make the world of architectural coatings a diverse one. Vogel explained the basics of each surface, as well as the different testing methods. He also discussed future developments in architectural coatings. Prof. Robert Akid, University of Manchester, also talked about basics, namely the basics of anti-



corrosive coatings. Every year, millions are spent on protecting metal structures. If damage was to be prevented, he said, the anti-corrosive coatings protecting the structures need to be effective. Prof. Akid presented the various testing methods with which the performance of anti-corrosive coatings can be predicted. He delivered information on the most important corrosion testing methods and their usefulness.

Further topics covered were polyurethanes, biocides and the latest regulations, as well as adhesives and sealants.

Dr Ulrich Freudenberg, Covestro, gave an overview of polyurethanes in his tutorial. He discussed the standard polyisocyanates employed in coatings and their characteristic properties. He also talked about the characteristic features of polyol components for use in coatings applications and how these components influence the coatings' performance.



"The tutorial on dispersing pigments and fillers was very educational. Everything was very well explained. The content was useful to me."

Thijs Paquay, Polyscope



"The tutorial provided interesting views on the resins, curing agents and the various components of adhesives and sealants. It was very interesting."

Jeanette Schjøth-Eskesen, Teknologisk Institut

BIOCIDES AND THE LATEST REGULATIONS

Biocides and the latest regulations are a huge issue in paints and coatings. Keeping track of the latest requirements can sometimes prove to be a challenge, given the large number of regulations. This tutorial covered all the basics of biocides usage. Additionally, attendees learned about the current changes that have been made to the Biocides Directive in Europe. This tutorial was held by Dr Annette Bitsch, Fraunhofer ITEM.

THE WORLD OF ADHESIVES AND SEALANTS

Dr Matthias Popp, Fraunhofer IFAM, talked about the major topic of bonding. Bonding is part and parcel of everyday life. Hardly any other area is as chemically and technically diverse as that of adhesives. This tutorial familiarised attendees with the key types, focusing on the composition and ingredients of the different kinds of adhesive, their chemical

structures and functional groups. Attendees were shown how to clearly deduce the resulting properties.

DISPERSING PIGMENTS AND FILLERS

A further tutorial dealt with dispersing pigments and fillers. In it, Frank Kleinsteinberg, Evonik Industries, offered an overview of all interrelated factors and showed how they can be manipulated to yield perfect results. There was no disputing, he said, that paint-making hinges on the dispersing process, which was the most important and most complex aspect of the process. Optimal dispersing was essential for a high quality paint that delivered optimum gloss and high tinting strength. The success of dispersing depended on many factors, he noted.

FUNCTIONAL COATINGS

Functional coatings are a further exciting topic. Gesa Patzelt, Fraunhofer IFAM, presented

anti-scratch, easy-to-clean and many other possible add-ons for coatings. She explained the technological details behind the different specialties of the best-known chemistries, such as the fundamentals of nanomaterials. She also provided her outlook on special performance enhancements of functionalities for the coatings industry.

Other tutorials focused on UV-curing systems, epoxy coatings and environmentally benign coatings. Other tutorials focused on UV-curing systems, epoxy coatings and environmentally benign coatings. She explained the technological details behind the different specialties of the best-known chemistries, such as the fundamentals of nanomaterials. She also provided her outlook on special performance enhancements of functionalities for the coatings industry. Other tutorials focused on UV-curing systems, epoxy coatings and environmentally benign coatings. She explained the technological details behind the different specialties of the best-known chemistries, such as the fundamentals of nanomaterials. She also provided her outlook on special performance enhancements of functionalities for the coatings industry.

ENVIRONMENTALLY BENIGN COATINGS

Prof. Mark Soucek, University of Akron, talked about coatings which are benign to the environment. This was a perfect course for technicians or professionals who have recently entered the coatings field or need a primer on where benign coatings are headed. Prof. Soucek presented the basics of environmentally benign coatings and technology, including a comparison of water-borne, powder, and UV-curable coatings. He then compared these technologies with other types of coatings such as high-solids and water-reducible coatings. He also commented on catalyst and pretreatment replacements.



"I attended the tutorial on formulating adhesives and sealants. It's a huge topic and covered a lot of the technologies, such as epoxies and polyurethanes. It was very helpful."

Camilo Ramirez, Global Latexes

CONFERENCE DAY 2

HIGHLIGHTING POLYURETHANES, EPOXIES AND MORE

ECS Conference ends today with another twelve sessions

Attendees at the second ECS Conference day can expect numerous highlights. Sessions on offer today are Adhesives & Sealants, Construction Chemicals I and II, Polyurethanes I and II, Protective Coatings, Testing & Measuring I and II, Architectural Coatings, Epoxy Coatings, TiO₂ & Opacification.

A small selection of presentations is highlighted below. "Pushing boundaries - Lifting polyurethane chemistry to the next level" is the rather ambitious title of a presentation to be given by Dr Florian Golling, Covestro, in the Polyurethanes 1 session. He will describe new polyisocyanurate-based coatings and adhesives that can be obtained using well-designed and controlled trimerisation of isocyanate groups. The astonishing properties that can be harvested from the isocyanate building

blocks behind this new technology will be discussed in detail. Dr Gregory Delmas, Arkema, will introduce "New very high solids acrylic polyol binders for low-VOC direct-to-metal two-component systems" in the Protective Coatings I session.

With a view to lowering the levels of volatile organic compounds, a new very-high-solids solvent-borne acrylic technology has been developed that provides high protection against corrosion. This new binder can be used as single DTM coating and supports paint formulations containing less than 250g/l of VOCs. In the Epoxy Coatings session, Dr Bingquan Li, Dow Chemical, will focus on "Advances in water-borne acrylic-epoxy hybrid technology for industrial coating applications". This paper will describe the significant advances made in novel acrylic-epoxy hybrid (AEH) technol-

ogy, and its application to ultra-low-VOC concrete flooring. Compared to other floor-coating systems, e.g. epoxy dispersions and high-solids epoxy, the new AEH-polymer-based coating offers some distinctive advantages, says Li; for example a long pot-life, fast drying rate, good weatherability and good adhesion.

TITANIUM DIOXIDE - A BURNING ISSUE

Titanium dioxide and its potential replacement are a burning issue in the paints and coatings industry. In the TiO₂ & opacification session, Dr Jitte Flapper, Akzo Nobel, will present a theoretical study of the hiding power of white TiO₂-free coatings. Pigments that can replace titanium dioxide are desired, but they are not easy to identify. In this work, alternatives were evaluated in silico (by computer simulation) rather than in paint.

Flapper claims that the simulations show TiO₂ to still be the most effective opacifier by far. A coating layer would have to be at least four times as thick to achieve comparable hiding power at the same PVC and without additional labelling. That would lead to a considerable increase in labour, raw materials consumption and ecological footprint.

Reducing the cost of corrosion is the aim of many projects in coatings, one of which will be addressed in Protective Coatings II. "One step closer to the replacement of solvent-borne coatings for 1K corrosion protection" is the title of a presentation by Christophe Baude, Omnova. His paper will focus on water-borne binders, developed from hydrophobic dispersion technology, for the protection of metal. It describes the design of these polymers and their performance in DTM formulations and anticorrosion

primers. Specific attention will be paid to the impact of critical formulation ingredients and their appeal for the development of 1K water-borne industrial coatings.

NEW DEVELOPMENTS IN CONSTRUCTION CHEMICALS

Apart from novel solutions for the paints and coatings industry, the conference programme also features new developments in construction chemicals. Andreas Eisenreich, Imerys, will give a presentation on "Sodium aluminate for reducing the content of lithium salts in building chemistry applications".

Lithium salts are additives which are regularly used in construction chemical applications based on calcium aluminate

cements (CACs). The overall properties which the use of a sodium aluminate-based additive in addition to a lithium salt confers in terms of mechanical properties, size variations and abrasion resistance make this additive an alternative that can slash the content of lithium salts in CAC-rich mortars, says Eisenreich.

Presentations take place from 9.00 to 17.00 h, with a lunch break from 12.30 to 13.30 h. Venue is the Exhibition and Convention Center Nürnberg NCC Ost.

MORE INFORMATION AT

www.european-coatings-show.com/conference

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Hall E4

ZONE 5 UV/EB Technology & Products

Hall E3

ZONE 6 International Machinery, Instrument & Services

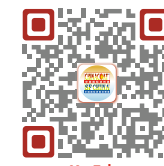
Hall E3

ZONE 7 China Machinery, Instrument & Services

Halls E4, E5, E6, E7, W1, W2 & W3

ZONE 8 China & International Raw Materials

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INTERVIEWS

NEW TO ECS?

There are many exhibitors that take part in the European Coatings Show for the first time

We asked first time exhibitors about their reasons to take part in the ECS, what they will present to visitors and what they are expecting from the world's biggest coatings show.

Questions:

1. Please describe your company in a few words. How is your enterprise related to the paint and coatings industry?
2. What products will your company present in Nuremberg?
3. What are you looking forward to doing/seeing at the ECS?



Geoffrey Bruno
Enovasense
Hall 5, Stand 5-257

1. Enovasense is an innovative company providing a non contact and non destructive technology for the control of the thickness of coatings and surface treatments. The device we will present at the ECS is able to measure all kinds of coatings (paint, polymers, organic, ceramic, metal, clearcoat, glue, etc) on all kinds of substrates. Validated applications include in-line measurement of thermal sprayed steel inside aluminum cylinder blocks (common patent with Renault Group), in-line automated measurement of wet and dry paint on glass or metal-

lic panels, robotic arm for large paint on composites aircraft panels measurement, control stations for aluminum anodising.

2. With a very compact, light and plug and play design, our laser measuring head is able to be integrated at the heart of most coatings processes to measure up to 100% of the coated parts. The non contact measurement allows to have a real-time feedback of the deposition process, even on parts on which the coating is for example still wet, not polymerised, hard to reach, or on parts that are moving in the production line, still hot, etc. Complete automatic control stations are also available for lab or by-the-line measurements.

3. We are looking at ECS for industrial customers who have coatings processes and aim at adding or increasing the thickness control step.



Anders L. Østergård
Fluidan ApS
Hall 5, Stand 5-128

1. Fluidan is a Danish startup offering a groundbreaking new measurement technology to the paints- and coatings industry. Our technology – "RheoStream" – will make a difference in many industry sectors, but most of all in the manufacture of paints/coatings. It makes it possible to streamline the paint manufacturing process, saving time, increasing capacity and saving resources.

2. We – proudly! – present our new technology. The first in-process rheometer for the paint- and coatings industry. All paint manufacturers take great care to make sure the rheological parameters are correct, before shipping the

paint. This is done by manual analysis in the QC lab, and very often paint batches need one or more adjustments/corrections to get the rheology in spec. By measuring in the process while mixing, it is possible to eliminate most of the batch corrections.

3. Customers! We hope that all the main manufacturers of paints and coatings will find us in Hall 5 and discuss with us how in-process rheology may boost their profits. We are at ECS to learn and to create connections. But most of all, we are here to make sure that the European coatings industry all know about the new possibilities offered by our new technology.

1. Icap-Sira Chemicals & Polymers has been active for over 70 years in the production of acrylic and styrene-acrylic polymer dispersions. Many of these products are dedicated to the use as binders for water-based coatings and represent a significant part of our turnover. Besides that, we offer specially designed polymers for the use in wood coatings as well as polymers for cement and mortar modifications and well suitable for waterproofing applications. With more than 10% of the workforce dedicated to R&D and tech service we are constantly supporting our customers with innovative products and application suggestions. Four production sites backing-up each other assure security of supply.

2. At the ECS we will focus on two of the three business units of the company: Coatings and PSA. Products for coatings include water-based emulsions for the formulation of decorative, architectural and wood paints. In particular, we will present our range of styrene acrylic binders for universal use, with excellent adhesion and scrub resistance. For PSA sector we produce water-based and solvent-based resins for various application, such as labels, harnessing tapes, tapes for building sector and graphic arts. We will concentrate on our ability to develop tailor made products according to the specific needs of the customers in this field.

3. Even if we have been active since many years in the European market, especially for the PSA sector, we are still looking forward to better introducing our company



Dr Stefano Martina
Icap-Sira
Hall 7, Stand 7-530

to potential customers active in both PSA and coatings markets. Also, being a manufacturer company with various production sites, we will focus on our flexibility and on our capacity to support our customers with a reliable and qualified service.

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HALL 7, STAND 345

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EMERGING MARKET

INCREASING DEMAND EXPECTED

Overview of the Middle Eastern and African coatings market. By José Boltino, IRL

The Middle Eastern and African regions are relatively small in terms of coating consumption compared to Europe, the Americas and the APAC regions. Sales have grown rapidly in recent decades as these economies continue to evolve and as strong population growth boosts demand.

In 2017, however, sales of coatings in the region fell slightly, with the market being dragged down by a drop in sales of architectural coatings in Saudi Arabia and by declines in protective coatings in most oil-producing countries. This trend started in 2015 when the slump in oil prices put on hold many investments in the sector. Overall consumption was estimated at 3.5 million metric tonnes in 2017, equivalent to a market value of EUR 7.6 billion at manufacturers' selling prices.

In terms of the different paint sectors, IRL divides the market into architectural, general industrial, protective, automotive OEM, automotive refinishes, marine and industrial wood and, by analysing each country and sector, we are able to provide an overview of the region as a whole.

ARCHITECTURAL

The Middle Eastern and African region represents the smallest market for architectural coatings worldwide. In Africa, the region is characterised by a large number of countries with small markets; the largest and most influential market in the region is Egypt, followed by South Africa. By contrast, in the Middle East, the leading architectural coatings market – by far – is Saudi Arabia, although in recent years this market has suffered declines as a result of some austerity measures. In most Middle Eastern and Af-

rican countries, the architectural coatings industry has been growing rapidly over the last few years. Strong economic growth in some African countries, such as Nigeria, is creating a platform for the growing and expanding markets on the African continent. The trend towards urbanisation is entrenched in this region, with emerging markets being a positive factor for the development of urban construction.

GENERAL INDUSTRIAL

The Middle Eastern and African general industrial coatings market is quite small compared to the other regional markets and occupies only a small share of the global market. It is estimated that this market is split roughly 50/50 between the two sub-regions of the Middle East and Africa, with the former accounting for a slightly larger share of demand. The Middle East boasts two outstanding markets with appreciable demand. These are the Iranian and Saudi Arabian markets, each estimated to account for roughly one third of total Middle Eastern demand for coatings.

PROTECTIVE

The greatest demand for protective coatings in Africa and the Middle East originates from the civil engineering sector. The emerging economies within the Middle East and Africa have been pivotal to the rise in construction productivity, fuelling demand for construction materials, including

protective coatings. Industrial end-use sectors also constitute a large share of the market in the region, as the extraction of natural resources in both the Middle East and Africa is an important revenue-generating industry.

MARINE

Demand for marine coatings in Middle Eastern countries stems mainly from ship repair and maintenance, as the maritime industry is largely connected to exports and imports for the oil and gas industry, which sees large numbers of vessels visiting the countries each year. In Africa, the ship repair and maintenance sector is the largest end-use sector for marine coatings, but it has suffered a moderate decrease in some influential markets over the years. For instance, the market in South Africa has been affected by changes in trading patterns and the availability of cheaper repairs in other parts of the world.

AUTOMOTIVE OEM

In South Africa, the automotive industry is the most important manufacturing industry and it contributes massively to the country's exports, making South Africa the most attractive hub for the consumption of coatings. Lower production costs, an attractive labour market and its geographical location have played a part in the development of the Moroccan automotive industry, creating demand for automotive OEM coatings estimated at one

third of the African market. Notably, Iran enjoys the largest share of the Middle Eastern automotive OEM industry.

AUTOMOTIVE REFINISHES

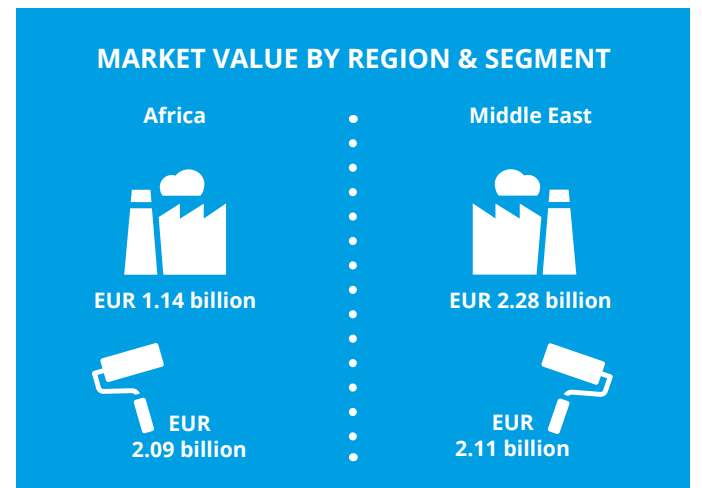
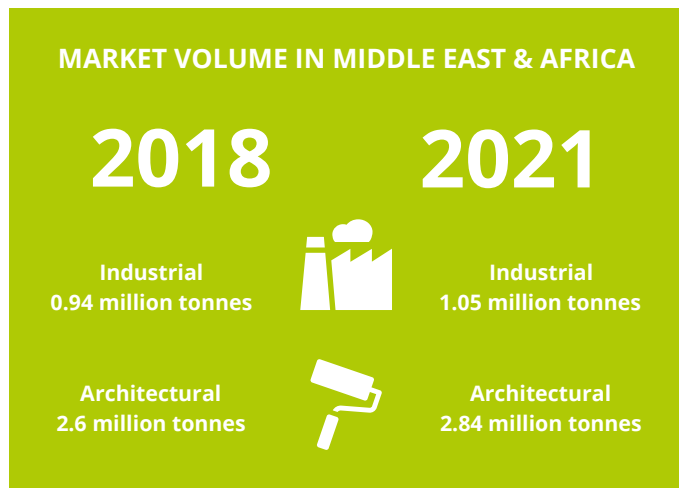
The larger domestic markets of the Middle Eastern market are Iran and Saudi Arabia, each holding roughly one third of the market. The large number of refinish sales in Iran is underpinned by the large size of the population and of the local automotive industry. The thriving status of the Saudi Arabian market is supported by the wide fleet of registered vehicles there, and a general trend among consumers towards refurbishing vehicles as opposed to purchasing new ones.

INDUSTRIAL WOOD

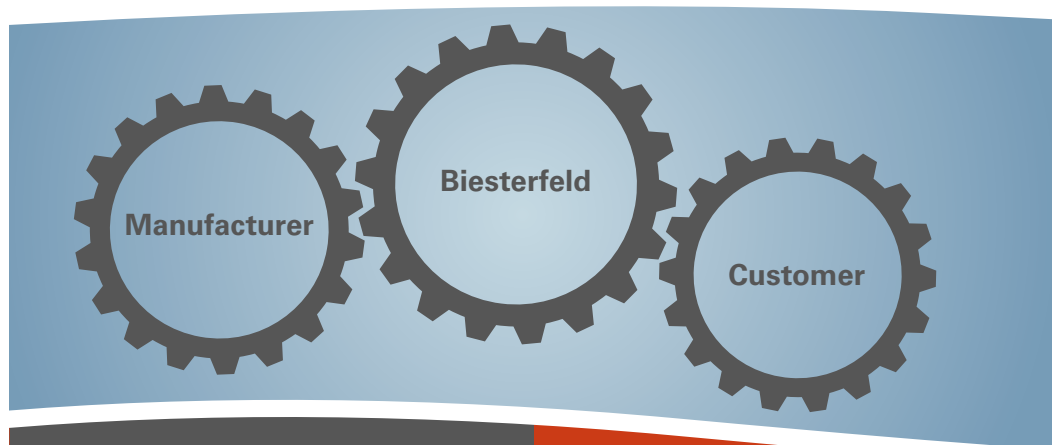
The largest consumer countries within the African region are Egypt, Nigeria and South Africa.

The South African market is reviewed in depth in this report, and it has been shown that demand for industrial wood coatings there is low, as determined by the small size of local furniture production and of other end-use segments.

The most influential market in the Middle East is Iran, followed by Saudi Arabia and the UAE. In Iran, there has been a rise in demand for industrial wood coatings from applications relating to the construction industry and furniture. The Saudi Arabian market has benefited from continuous government spending on infrastructure, hospitality and housing projects. In the UAE, demand for furniture coatings is low, as the local furniture industry is characterised by small manufacturers. In the UAE, the greatest demand is for joinery coatings, with sales in outdoor structures and parquet flooring being on the low side.



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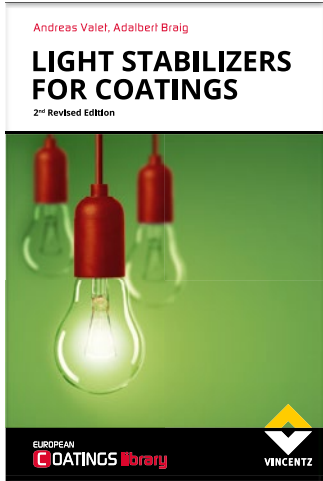
European Coatings Show, booth 4-339

TEXT BOOKS

A GOOD READ

The European Coatings Library offers a wide selection of titles on almost all topics

The titles available in the European Coatings Library offer a wealth of useful advice for daily practice whilst also providing a theoretical background. The information is available in printed or e-book form. A small selection of our titles is presented for you below. Our titles are available in our web shop at www.european-coatings.com/shop and are on display at the ECS - just visit us in hall 4, stand 4-360.



LIGHT STABILISERS FOR COATINGS

Andreas Valet, Adalbert Braig

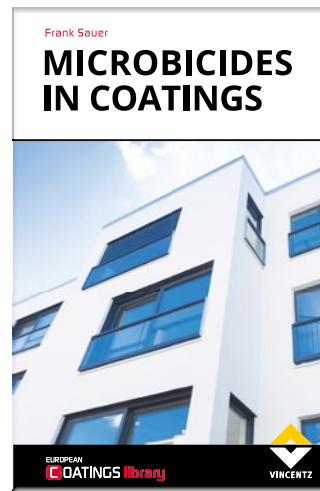
Paint flaking off an object is a serious concern in the coatings industry. Now in its 2nd edition, this book explains how paint finishes can be efficiently stabilised and protected. The authors illustrate the underlying principles of paint degradation clearly and highlight the functions and possible applications of common light stabilisers with the help of numerous practical examples. This is an invaluable guide for formulators seeking to expand and consolidate their knowledge in the field of light stabilisation.



POLYURETHANES

2nd Revised Edition
By Karsten Danielmeier, Peter Kruppa and Ulrich Meier-Westhues

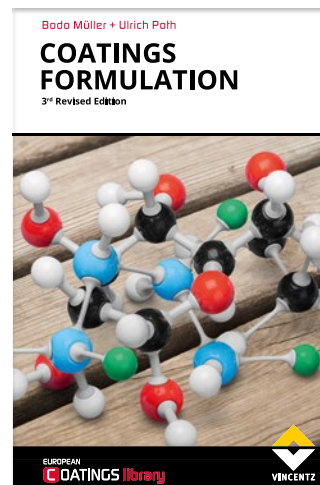
This book has been fully revised and updated to reflect the latest scientific knowledge. Polyurethane chemistry is hugely important in many applications around the world. Moreover, its development potential is by no means exhausted yet. New applications are continually being identified and the product range further expanded. This fully updated version of the first edition starts by exploring the principles behind polyurethane chemistry that enable the reader to understand the current significance of the various applications, special developments and future prospects discussed in subsequent chapters. Newcomers will find the information within this book extremely useful for familiarising themselves with the key concepts behind polyurethanes. And, for specialists, it will be invaluable for updating their knowledge of current developments and future prospects.



MICROBICIDES

By Frank Sauer

All about biocides for coatings: When it comes to protecting coatings, it is essential to strike the right balance between controlling germs in order to avoid economic damage on one hand and to tolerate microbial life where it is necessary and useful on the other. Frank Sauer's book provides a comprehensive overview of the working mechanisms and possible applications of microbicides for coatings - invaluable for formulators and technicians as well as for business people with a basic knowledge of chemistry and biology.



COATINGS FORMULATION

3rd Revised Edition
By Bodo Müller and Ulrich Poth

This reference work provides a comprehensive knowledge base for the formulation of paints and coatings. Now in its 3rd edition, it clearly reveals the composition of coatings, placing special emphasis on the base binder for each type. Tips for specific formulations are shared and formulation guidelines are analysed. It also features examples of how to develop a real-life paint formulation.



WOOD COATINGS

By Jorge Prieto and Jürgen Kiene

Tap into the wealth of knowledge underpinning industrial wood coatings! This comprehensive standard work from Jorge Prieto and Jürgen Kiene focuses on interior and exterior coatings for wood and wood-based materials. It compares classic solvent-borne wood coatings with modern UV-curing and water-borne systems. Guide formulations and actual coatings procedures are shown in detail. In summary, this book provides a comprehensive overview of the topic and contains practical solutions and support for everyone involved in industrial wood coatings.

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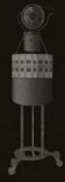


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ISOCYANATES

“REQUIREMENT THAT EVERY EMPLOYEE EXPOSED TO DIISOCYANATES RECEIVE TRAINING”

The proposed restriction by the ECHA may have further effects on the coatings industry

In March 2018, the European Chemicals Agency (ECHA) submitted the dossier on the restriction of the placing on the market and use of diisocyanates to the EU Commission. The Restriction Dossier proposes training courses for the industrial and professional use of diisocyanates that go beyond the REACH registration dossier. Jörg Palmersheim, secretary general at Isopa (European Diisocyanate and Polyol Producers Association), expects a decision from the Commission in 2019 or 2020.



Jörg Palmersheim
Isopa
(European Diisocyanate and Polyol Producers Association)

The European Chemicals Agency (ECHA) submitted a dossier on the proposed restriction on diisocyanates under REACH. How will this restriction affect coatings and adhesives

producers? The coatings and adhesives sector will be required to ensure that every employee potentially exposed to diisocyanates at work receives training on diisocyanates. This covers the majority of product/use combinations in this sector. However, there will be products of simple requirements which will not require such a specialised training on diisocyanates. The distinction between those two groups of products is well accepted by the authorities. There is still a need to develop a legal/technical process on how such a distinction can be made in an acceptable and pragmatic manner.

What deadlines have to be considered during the legislative process? The proposed restriction is currently being discussed

by the so-called REACH Committee. This committee is steered by the EU Commission and consists of all member states. There is no timeline on how long the discussion in this REACH Committee will go on, as there are no legal binding timelines. Nevertheless, we expect a decision in 2019 or 2020.

To what extent will the new legislation affect the availability of polyurethanes (and PUR products) in the market? This is a very important question and although it is called “restriction”, it is important to state that all types of diisocyanates remain available without restriction in the market for the production of all kinds of polyurethanes. 



DO YOU WANT TO LEARN MORE ABOUT THIS TOPIC?

Attend today's presentation by
Jörg Palmersheim
at the ECS Conference:
Session 15.3
10.00 - 10.30 h

“Proposed restriction on diisocyanates under REACH”



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NEW PRODUCTS

ON DISPLAY

Plenty of novelties to launch at the ECS

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CLIQ SWISSTECH

NL-Groningen, www.cliqswiss.com, Stand 4-504

NEW PIGMENTS FOR CENTENNIAL CELEBRATIONS

Celebrating 100 years of innovation, Ferro has a diverse array of products to showcase at this year's ECS. The latest additions to the vast "Cool Color" pigments portfolio include ultramarine blues such as "Nubi-coat HRD" (PB29). Combined with the high-performing cool black "Chrome Iron Brown Hematites" (PBr29 and PG17), it provides them with a very bluish undertone whilst retaining their cool properties.

Other innovations are:

- > "PS24-3950" (PBr 29), a new IR black pigment.
- > new colours in the azo-pigment "Lysopure" range and "Eco-Lysopac" range for lead chrome replacement.
- > a unique violet shade "PV62" (28-5333) with excellent fastness properties.
- > These are just a selection of the new improved pigments Ferro will present.

FERRO PERFORMANCE PIGMENTS SPAIN

ES-Barcelona, www.ferro.com, Stand 1-416

EXPANDED PORTFOLIO OF ADDITIVES AND SELECTED RAW MATERIALS

At this year's ECS, Biesterfeld will present a significantly expanded portfolio of additives and raw materials for paints/coatings, adhesives and sealants, construction chemicals and polyurethanes as part of its partnership with Evonik. The company will present the Evonik Interface & Performance portfolio for the adhesives industry and construction chemicals. Adhesive additives include "Tegopren" and "Tego" products, in particular with food contact approvals. The showcased construction chemicals will include innovative "Sitren" shrinkage reducing agents and "Sitren AirVoid" air-entraining agents.

BIESTERFELD SPEZIALCHEMIE

DE-Hamburg, www.biesterfeld.com, Stand 4-339

PIGMENT PASTES GOING GLOBAL

ACC Kimya will present its "PRPColor" brand – pigment pastes used as colourants.

Its products are suitable for water-based, solvent-based, universal, tinting, polyurethanes, epoxy and liquid masterbatch systems for a variety of industries. Constantly adding new products, the company conducts studies for its customers as well as meeting market demand and helps their customers lead their sector.

The "PRPColor" brands enjoys success in the Turkish market and the company looks forward to introducing the range to a wider international market at the ECS 2019.

ACC KIMYA

TR-Istanbul, www.acckimya.com, Stand 4-506

FROM IDEAS TO PRODUCTS

Custom manufacturing of specialty chemicals is a great way to complete projects more quickly, enlarge capacity or outsource procedures that are outside of your core competencies. The company's technical and commercial experts provide dedicated support, giving feedback and ideas on your product and process. Confidentiality and transparency is guaranteed, and forms the basis of every single custom manufacturing project. If requested, Connect Chemicals will provide support for strategic raw material supply chain analysis, and be there personally when the first batch of your product is produced. No need to worry about the logistics or transportation, your idea can finally become your product.

CONNECT CHEMICALS GROUP

DE-Ratingen, www.connectchemicals.com, Stand 4-547

ADVANCED AND COMPLIANT COLOURANTS

The specialist for pigment preparations will showcase "Vocafil-FC" and "Vocafil-FD" water-based pigment preparation developed for direct and indirect food contact applications. Further new developments are the isothiazolinone-free preservation of "Vocaflex-EN" to comply with the toy safety directive and the MI-free preservation of the "Vocaflex-LF" series, including a line that is particularly suitable for high pH applications.

Resin-based pigment preparations include:

- > "Vocaplast-UV" and "Vocaplast-L", primarily used for wood coatings and stains
- > "Aricolor-N" for colouring 2K-PU foamed or cast polyurethane parts and „green" paints such as wood oils.
- > "Heliocolor-W", a series based on plasticisers with or without phthalates to colour PVC plastisols, MMA or ABS etc.

ARICHEMIE

DE-Eppstein, www.arichemie.com, Stand 7-240

Source: Arichemie



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NEW PRODUCTS

ON DISPLAY

Plenty of novelties to launch at the ECS

REACH-COMPLIANT KETAMINES



raphen" phenolic polymers. Specialist low free formaldehyde resins within the "Curaphen" range have been sold to the packaging sector at a level of more than 5,000 tonnes. These products are now gaining traction in other coatings businesses across the globe.

The company aims to push chemical boundaries to provide the paints, coatings and adhesives industry with innovative solutions and to fill the gap provided by products that have been withdrawn from the market due to regulatory reform.

BITREZ

UK-Wigan

www.bitrez.com

Stand 7-335

The British specialist polymer and chemical manufacturer Bitrez offers a range of services from R&D to toll conversion and technical support. It has just launched the world's first REACH-compliant ketamine epoxy curing agent with extended pot-life and improved surface appearance.

Other products in the Bitrez range include "Cu-

INNOVATIVE AND GREEN RESIN SOLUTIONS

The leading supplier of coating resins will showcase its dedication to innovation and sustainability at the ECS. The latest customer-focused innovations include:

- > recent additions to its "Radcure" portfolio including resins for 3D printing
- > low temperature cure enabling powder coating resins and liquid crosslinking resins
- > formaldehyde-free crosslinkers
- > phenolics enabling the formulation of BPA non-intent packaging coatings
- > solutions to address pot-life and cure-speed

balance for 2K systems with "ACURE" and fast cure acrylic polyols

- > water-borne solutions for wood, and
 - > direct adhesion to untreated polypropylene with modified acrylic binders.
- Allnex will also be hosting its "Primavera Day" launch event at the show on March 20, to demonstrate how sustainability is lived and breathed by all employees worldwide.

ALLNEX NETHERLANDSNL-Bergen op Zoom, www.allnex.com, Stand 1-532

SUSTAINABLE RESINS FOR DECORATIVE PAINTS AND COATINGS

DSM, will reveal their sustainable strategy, targets and will showcase their highly innovative, sustainable coating resins solutions for the decorative paints and coatings market during the European Coatings Show (ECS).

In line with the company's commitment to supporting healthier living, combating climate change and creating circular solutions, spotlight products are bio-based, contain no substances of concern and contribute zero VOC emissions. DSM will launch their latest additions to their "Discovery" portfolio at the show.

"Discovery" is a family of eco-friendly coating res-

in solutions with a difference: it's plant-based. It reduces the environmental impact and sets new standards for protecting the natural beauty of materials. As such it raises the bar of total performance. A second new addition to the "Discovery" family is a durable and multipurpose acrylic resin. This is opening up new coating horizons thanks to its very high water and humidity resistance combined with very good elastic properties and minimum water uptake.

DSM RESINS & FUNCTIONAL MATERIALSNL-AC Waalwijk, www.dsm.com/paint, Stand 4A-430

NEW RANGES FOR THE ARCHITECTURAL AND INDUSTRIAL COATINGS MARKET

Visitors to this year's ECS can watch a demo of the latest version of Chromaflo's "Innovatint" software, part of a fully integrated approach to tinting. The capability to match and predict total solar reflectance (TSR) is just one of the benefits of Version 4.

Novel products include the biocide-free "Colortrend Pearls 2020" – a solid colorant concept for water-borne architectural and industrial applications.

Along with the new "Solvasperse" IND line, designed specifically for industrial, in-plant tinting

systems, the company will also introduce the "Tint-Ayd" toners range. These toners enhance white coatings by reducing yellowness or increasing hiding power.

The company now offers high jet black colorants with bluish undertones in its "Temacolor" T and HP colorant ranges, and "Temacolor" W and "Chroma-Chem" WAB are excellent solutions for industrial water-borne applications.

CHROMAFLO TECHNOLOGIES EUROPENL-Sittard, www.chromaflo.com, Stand 7-167

NEW POST-ADDITION SYNERESIS CONTROL AND LOW-COST KAOLIN EXTENDER PIGMENT

"Min-U-Gel 400" thixotropic thickener provides multiple benefits in a wide variety of coatings, such as very good flow and levelling, syneresis control and in-can stability. An advanced technology, "Acti-Gel 208" additive provides superior suspension and an increase in solids without a rise in viscosity. Its low dosage and easy dispersion makes it an ideal post-addition fix for syner-

esis and stability problems without changing rheology. "Acti-Min PG" air-float kaolin extender pigment can replace a greater quantity of TiO₂ at a lower cost than some standard water-washed kaolins.

ACTIVE MINERALS INTERNATIONALUS-Sparks, www.activeminerals.com, Stand 7A-301

RAPID DISPENSING SYSTEM

At this year's ECS, Inkmaker will showcase its "Easypaint" automatic dispensing system. It has been specifically designed to resolve the issues related to the production of small and medium batches and increases productivity while reducing operating costs.

"Easypaint" enables unlimited colours and because they are available in the required quantity, this results in no waste, no overmakes and reduced stock. Every system is designed to cus-

tom requirements and guarantees precise colour matching, which eliminates off-shades.

The software-controlled system can be used to boost in-can or in-batch production and provides a highly accurate, reliable and rapid dispensing system for water-based and solvent-based products.

INKMAKERIT-San Gilio, www.inkmaker.com, Stand 6-149**Lonza**

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www.lonza.com
materialsprotection@lonza.com



THE HIGH-PERFORMANCE BEAD MILL FOR HIGHLY VISCOUS PRODUCTS

Source: Bühler



The company recently launched its new bead mill "Visconomic+", developed specifically to process highly viscous and temperature-sensitive products. The grinding media are separated by a dynamic gap, which together with the aggressive pin arrangement ensure maximum flow resistance at high throughputs and optimum grinding. Its rotor and stator cooling also ensures optimum temperature control. Efficient cooling is critical for energy-curing systems such as UV inks and the equipment prevents product overheat-

ing even at higher power input, which enables better dispersion quality. At the ECS, visitors will see the "Visconomic+" is user-friendly in terms of working height and accessibility for cleaning and maintenance. It also offers four different control options from push button to touchscreen control with various integrations.

BÜHLER
CH-Uzwil, www.buhlergroup.com, Stand 6-211

BULK PACKAGING FOR HIGHLY VISCOUS LIQUIDS

IBC Store will present its bag-in-box product range for highly viscous applications. These are developed for the easiest discharge with a minimum of waste. The "Central" container, with its conical base and 6-inch reclosable valve, has proven to be the perfect single trip solution for highly viscous products. A modular multi-trip container will also be pre-

sented, the "Central-Steel" that can offer flexible packaging volumes of up to 2,000 litres designed with the same easy discharge, minimum-waste considerations.

IBC STORE
NL-Maarseveen, www.ibcstore.com, Stand 6-241

INSTITUTES AND UNIVERSITIES

MEET THE SCIENTIFIC COMMUNITY

The European Coatings Show 2019 will also welcome representatives from several institutes and universities

The ECS 2019 once again offers an opportunity for universities, institutes and industry to establish or to strengthen existing ties amongst themselves.

Some of the universities and institutes attending the ECS 2019 are well known within the coatings industry. And this will not be their first appearance at the ECS. They include the University of Applied Sciences Niederrhein, the University of Paderborn, the University of Esslingen, the Institute for Wood Technology in Dresden, the Fraunhofer Institute for Manufacturing Technology and Applied Materials Research (IFAM) and the Fraunhofer Institute for Silicate Research (ISC).

NOVELTIES IN MATERIALS AND DIGITISATION

The Institute for Coatings and Surface Chemistry at the University of Applied Sciences Niederrhein will be presenting its latest developments in research in coating chemistry and coating technology at the ECS. In addition to developments in materials, these will include the latest activities in the field of digitisation - Coating 4.0. The training of coating engineers is

a high priority at the institute. An in-house institute of the chemistry department at the University, it fully supports the training of paint engineers as a way of counteracting the loss of skilled workers. While the dual education system for students enjoys high priority, but field experience in the paint industry is most important of all. In the chemistry department, paint engineers are trained in bachelor's and master's degree courses, and cooperative doctorates are awarded in the field of paint chemistry and paint technology.

ANTI-FOULING AND SELF-REPAIR PROPERTIES

The University of Paderborn will be presenting on the following topics: microphase-separating block copolymers with anti-fouling properties, the development of coatings with self-repair properties, hierarchically structured coatings, structured coatings with barrier effect, and bio-based and bio-inspired coatings. Esslingen University of Applied Sciences is also well known in the sector. It will be presenting its bachelor's course in chemical engineering/paints and coatings. Interested parties will be able to find out more about

the course and receive detailed information at first-hand. The Institute for Wood Technology in Dresden will be presenting on a number of topics, including: development of an NIR-based method for rapidly predicting the weatherability of wood coatings in outdoor areas (SurveNIR Coating), development of a method for the early detection of weather-induced failure of plastic coatings, and natural binders.

FUNCTIONAL AND BIO-BASED COATINGS

The Fraunhofer IFAM will present on the following topics: development of functional coatings: anti-ice, anti-fouling, anti-drag, micro- and nanostructured coatings, self-healing coatings, erosion protection systems, corrosion protection systems, application technology and process engineering services, coating testing, standard testing, tailored test methods, bioresources, aging, resins for 3D printing, general adhesive assistance. Topics of the Fraunhofer ISC will include multifunctional as well as bio-based and biodegradable multifunctional coatings, additives, design-for-dispersion and pilot syntheses of nanoparticles.



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Hall 7, Booth 346



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THINKING OF TOMORROW

BINDERS

“COST SAVINGS CAN ALSO BE ACHIEVED BY REDUCING THE NUMBER OF COATINGS LAYERS”

Current trends in binders

Lowering the VOC and solvent content of a formulation truly is a global trend, stresses Gunda Kuhlmann. The R&D manager coatings EMEA at Hexion provides insights into trends in binders.



Gunda Kuhlmann
Hexion
Hall 7A, Stand 7A-525

What is binder R&D currently focusing on? The focus of our R&D programmes is on providing customers with a tool box of water-borne epoxy resins and curing agents that meet VOC regulations and performance

requirements at lower overall costs. Apart from the coating's sales price (euros/litre), lower cost means formulations that deliver lower application costs, a faster return to service and a longer overall service life. Cost savings can also be achieved by reducing the number of coatings layers – so we are seeing significant growth in DTM coatings as well as increased use of hybrid systems such as epoxy/polysiloxane coatings and less-yellowing epoxy systems.


Where do you see trends in customer wishes? Innovative coating companies are developing lower-VOC formulations that offer a reduced hazardous substances content, higher performance and lower costs. This is a challenging combination, but

new water-borne epoxy systems enable formulators to develop novel coatings that achieve this “magic triangle” of added value. Hexion supplies new epoxy resin dispersions and water-borne curing agents that combine all these important attributes for metal coatings.

How would you describe the architectural coatings market at the moment? Current trends in metal coatings are focused on lower VOC and on improvements in the long-term sustainability of coating formulations. My personal view is that “it is not a matter of IF the regulations will move lower but WHEN the regulations will require lower solvent levels and thus lead the way to more sustainable coatings solutions.” This trend is truly



Source: kasto - Adobe Stock

a global one. Recent changes in customer expectations of lower air emission limits in China are actually accelerating changes in VOC in other regions too. 



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ADVANSIX

ADDITIVES

SUBSTANTIAL INFLUENCE ON THE LONGEVITY

Current trends in additives


Dr Stefan Scholz, research and development additives at Worlée-Chemie, provides insights into trends in additives and in how far they can contribute to more sustainable coatings.

What do you expect additives R&D to focus on in upcoming years? Availability of raw materials will no doubt keep us busy for a while yet. Whether this is due to REACH, to market scarcity, or to re-classifications and all the labelling that comes with them. The goal has to be to provide customers with secure supplies of products that possess the efficacy that they need and have come to expect.

Do you see any potential in the development of multi-functional additives? Multi-functional additives represent a compromise in respect of efficacy in the various application areas. There is a demand for them on the market because the multiple effects can pay dividends for the user, such as simplified logistics and the option of procuring a single additive instead of several. Interesting products of this kind include additives that are effective, for example, in respect of surface finish, substrate

wetting and deaerating or which, as dispersing additives, make an additional contribution to improved anticorrosion protection.

In how far can additives contribute to more sustainable coatings? There is no doubt that, when it comes to the best-possible performance of the overall formulation, additives exert a substantial influence on the longevity of a coating and thus also on the sus-

tainability of the system. However, as they constitute only a small proportion of the overall formulation, their effect on the overall eco-balance (in the sense of renewable raw materials content, for example) is only slight. Nevertheless, our goal is to develop and produce active ingredients that have the lowest-possible impact. 

Worlée, Hall 9, Stand 9-352



Source: kwanchait - Fotolia.com



VISIT US AT BOOTH # 360 IN HALL 4!

TIME TO RELAX

THE GREEN LUNGS OF NUREMBERG

Get to know the ECS city from its beautiful side

Normally, it is difficult to get to know the city hosting a show or conference. However, you should take the opportunity to take a closer look at Nuremberg if the opportunity presents itself. Nuremberg is not only a city steeped in history, where you could get lost in the numerous museums, but also has a lot to offer in the way of unwinding a little after a strenuous day at the show.

The numerous parks and gardens invite you to linger and relax. The "Kontumazgarten", for example, offers such an opportunity. It is located in front of the "Haller-tor", a historic pedestrian gate in the west of Nuremberg's old town. The green area covers 1.7 hectares and is an oasis of peace close to the old town.

EXTENSIVE PARK LANDSCAPE

The "Luitpoldhain" is located east of Nuremberg's old town. In 1906, the then nameless grove was cleaned up for an industrial exhibition in order to present Nuremberg as a flourishing industrial city. It boasts an extensive park landscape, interrupted by Art Nouveau buildings, a lighthouse and an exhibition hall for machines. Some time later, the "Luitpoldhalle" was built and is named after the Bavarian Prince Regent Luitpold. The "Luitpoldhain" is connected to the much larger "Volkspark Dutzendteich" by a foot bridge. The "Volkspark Dutzendteich" is the local recreation area where the Nuremberg residents prefer to spend their leisure time. Today's Volkspark, with its idyllic ponds and extensive green spaces, has been a popular

excursion destination since the 16th century. Lake Dutzendteich, which was formed around 1430 by the damming of small streams, no longer exists. Located in the middle of the "Reichparteitagsgelände", it was considerably reduced in size during the Nazi era and the granite-paved "Aufmarschstraße" has since divided it into the "Großer" and "Kleiner Dutzendteich ponds". Here you can relax or, if you're feeling more active, take a ride on a pedalo.

RELAX AND ENJOY

Nuremberg's City Park ("Stadt-park") covers an area larger than 25 football pitches. There is therefore enough space to relax or to take a stroll in the secluded garden courtyards. There is also a restaurant - "the Parks" - in the City Park. It was

redesigned in 2001 and has become the meeting place for Nuremberg residents. The main attraction in the City Park is the famous Neptune Fountain. Only the Schiller monument and two mighty marble vases, erected as a memorial to the singing festivals in the city park, remain of the monument park which was laid out after the foundation of the German Reich. Another park right next to Nuremberg's old town is the "Rosenau-park" or simply "Rosenau". It is an approx. 3-hectare park located in the Kleinweidenmühle district west of the Fürther Tor and in front of the walls of the old town. Its landmark feature is the Minnesänger fountain designed by the sculptor Philipp Kittler.

BE ENCHANTED

The Lorenz Forest is a forest to the south of the Pegnitz

and east of Nuremberg's city centre. It invites you to go for a walk.

NUREMBERG ZOO

Nuremberg also has something for animal and nature lovers. The "Tiergarten" (Zoo) is definitely worth a visit. Besides the dolphin lagoon and the Manatee house, it boasts an extensive forest park that will entice you to relax and stay a while. Nuremberg Zoo is also located in the Lorenz Forest and is one of the largest zoos in Europe. The old tree population, idyllic mixed forests and natural pond landscapes probably make it also one of the most beautiful zoos in Europe. The dolphin lagoon, opened in 2011, acts as a magnet for the public thanks to its unique outdoor facilities. Twice a day, the mammals, considered by many to be very clever, perform tricks

for visitors to the zoo. Why not let the marine mammals cast their spell over you, too. The visitor centre "Bionicum Ideenreich Natur" invites you to get to know and understand bionics within the zoo. Questions such as "Why can a lizard swim so effortlessly in the sand?" or "How does the spider spin its impressive web?" will be answered. The Café Restaurant "Waldschänke" and the "Bistro Lagunenblick" will cater to your physical well-being.

SPECIAL TIP

The more inquisitive among you might be interested in purchasing a travel card, called the NÜRNBERG CARD + Fürth. This gives you free entry to more than 40 museums and attractions and you can use the NÜRNBERG CARD for unlimited travel in Zone A on 2 consecutive days.



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RESTAURANTS

EATING AND DRINKING IN NUREMBERG

Tips for a relaxed evening

After a strenuous day at the show, do you fancy relaxing a bit and eating well?

The numerous restaurants in Nuremberg will make it difficult for you to make up your mind. There is something for every taste. So why not take the chance and combine the pleasant with the productive? Among the many restaurants in Nuremberg you're bound to find a place to network.

"HEILIG-GEIST-SPITAL"

The "Heilig-Geist-Spital" was originally built to care for the sick and the elderly and was donated by Konrad Groß. It is located directly on the Pegnitz River and is one of Nuremberg's historic buildings. Today it offers upmarket Franconian cuisine and international dishes in historical rooms as well as a rich selection of Franconian wines.

Spitalgasse 16,
90403 Nürnberg,
www.heilig-geist-spital.de

"ZUM GULDEN STERN"

The historic bratwurst kitchen "Zum Gulden Stern" is home to Nuremberg's culinary speciality: "original Nuremberg sausages", served up in late-mediaeval ambience. This restaurant is Nuremberg's oldest bratwurst kitchen to still be operating on the original site. The restaurant's speciality, the "Original

Nuremberg Sausages", are freshly grilled every day on a beechwood grill. The food is prepared exclusively from fresh ingredients and without the use of any convenience products.

Zirkelschmiedgasse 26,
90402 Nürnberg,
www.bratwurstkueche.de

"GASTHAUS ROTTNER"

The chef in "Gasthaus Rottner" hotel serves upmarket, yet down-to-earth cuisine. It has been a popular destination for day-trippers and aficionados of Franconian cuisine for centuries. The dishes in Gasthaus Rottner are made with organic ingredients. The restaurant has been ABCERT-certified since 2015.

Winterstraße 15/17,
90431 Nürnberg,
www.rottnet-hotel.de

"ETZERDLA"

"Etzerdla" combines modern ambience with Franconian co-siness. It lies, in the shadow of St. Sebald's Church in the heart of the old Sebald quarter. It was first documented in 1541 as the "Wirtsbehausung" and then in 1552 as "Rotes Rösslein". It offers Franconian delicacies, hearty snacks and a large selection of regional beers, wines and "ghosts".

Weinmarkt 16,
90403 Nürnberg,
<http://etzerdla-nbg.de>

"KUHMUHNE"

The "Kuhmuhne" serves only the best and freshest ingredients of the highest quality. The meat is supplied by farmers from the region, the rolls are freshly baked and vegetables and salad come from nearby "garlic country". In the open kitchen, you can watch the burgers being grilled.

Weintraubengasse 2,
90403 Nürnberg,
<http://kuhmuhne-nuernberg.de>

"BURGERISTA"

At "Burgerista", every burger is freshly prepared in front of the customer's eyes and according to their wishes. Homemade lemonades and iced tea are also available. The meat for the burgers is fresh and sourced regionally.

Königsstraße 55,
90402 Nürnberg,
www.burgerista.com

"HEMPELS BURGER"

You will find "Hempels Burger" joint on Petra-Kelly-Platz, tucked away in the trendy Gostenhof area, a small alternative district on the edge of Nuremberg city centre.

The burgers are made with fresh regional ingredients and certified, fairly produced meat from species-appropriate animal husbandry. Handmade brioche rolls are sourced from the local bakery. The range is rounded out by beers from

small regional breweries, tasty side dishes and homemade sauces.

Gostenhofer Hauptstraße 58,
90443 Nürnberg,
www.hempelsburger.de

"1515 RHINOCERUS RESTAURANT"

This small restaurant offers a good view of the famous Johannisfriedhof cemetery. It serves up an interesting mixture of seasonal, regional cuisine with a Brazilian touch, as the cook hails from Rio de Janeiro. Although classic Brazilian dishes such as skewered fish and steaks feature on the menu, vegetarians and game lovers will also get their money's worth.

Rohlederstraße 1,
90419 Nürnberg,
<http://1515rhinocerus.de>

"EINZIMMER KÜCHE BAR"

The restaurant "Einzimmer Küche Bar" ("one room - kitchen - bar") offers regional and high-quality produce. It is located in the middle of Nuremberg's old town, near the St Sebald Church. The lunch menu changes regularly and in the evening you can look forward to exciting food combinations.

Schusterstraße 10,
90403 Nürnberg,
<http://einzimmerkuechebar.de>

"TAJ MAHAL"

The "Taj Mahal" is recommended for lovers of Indian cuisine. It has been offering its guests Indian specialities for 30 years, with an infinite variety of lovingly matched dishes and aromas ranging from sweet to spicy-burny and a selection of different savories. The menu also includes a large choice of vegetarian dishes.

Johannisstraße 10,
90419 Nürnberg,
www.nbg-taj-mahal.de

"HOT TACOS"

Whether taco, burrito or quesadilla, the food is prepared directly in front of the customers, with the freshest regional ingredients only and spiced according to their wishes. On request, everything is also available to suit vegetarian and vegan tastes.

Fürther Straße 66,
90429 Nürnberg,
www.hottacos.de

"AROOI DII"

The "Arooi Dii" offers spicy Thai cuisine. You can choose between different degrees of spiciness: "standard spicy" or "European spicy". A reservation is recommended.

Gabelsbergerstraße 76,
90459 Nürnberg,
www.arooi-dii.de

"PROVENZA"

"Provenza" prides itself on the high quality and originality of its ingredients along with loving and traditional preparation. Located in the centre of the city, Provenza is not only a pizzeria, but also a restaurant, café and vinothèque all in one. Here you will find oven-fresh pizza and selected pasta - along with typical Italian meat dishes and seafood from all over the world. Italian sausage and cheese specialities as well as tramezzini, paninis and cakes round out the offer.

Hauptmarkt 6-8,
90403 Nürnberg,
[https://provenza.de](http://provenza.de)

"RISTORANTE MINNECI LEONARDO"

"Ristorante Minneci" offers regional and selected products. Opened in 2003, the restaurant is located in an original 16th century building. The finest Italian delicacies are served in this stylish ambience. The dishes are lovingly prepared at the last minute with seasonal and regional ingredients. The hand-picked wine list offers great names from the Italian wine scene - with famous vineyards ranging from Piedmont to Sicily.

Zirkelschmiedgasse 28,
90402 Nürnberg,
<http://minneci-ristorante.de>

See you at our booth:
Hall 4, booth 656

European Coatings Show
March 19-21, 2019



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NEW PRODUCTS

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Plenty of novelties to launch at the ECS

PHOTOCATALYSTS FOR POLYMER CROSSLINKING AND UV MODIFICATION

At the ECS, Fujifilm will be presenting its WPBG range of photo base generators. These products have been developed for electronics as well as other industries. They allow anionic UV curing to remedy the problems associated with free-radical processes, such as metal corrosion caused by acids. Their advantages include long stability, excellent solubility and compatibility with a wide range of curing system combinations, such as hybrid UV

curing with anionic and radical curing. These photo base generators can help customers, for instance, that require industrial sol-gel for hard coating and resin glazing or epoxy polymerisation for UV adhesives and sealants.

FUJIFILM WAKO CHEMICALS EUROPE
DE-Neuss, www.fujifilm.com, Stand 7-551

FUNCTIONAL FILLERS EXPAND PERFORMANCE SPECTRUM OF PAINTS, VARNISHES AND ADHESIVES

High performance fillers from HPF The Mineral Engineers, give polymer systems amazing functional or optical properties. At the ECS 2019 in Nuremberg, Germany, HPF The Mineral Engineers will show current additions to its filler portfolio. By using the high-performance fillers „Tremin“, „Sikron“ and „Silbond“, the company has succeeded in developing the basis for a resistant coating against rain erosion. The specific surface treatment of the functional fillers can further increase the resistance. The „Silatherm“ product family is an effective

solution based on mineral fillers for improving the thermal conductivity of adhesives, coatings and plastics, while at the same time providing insulation against electric current and improving mechanical strength. In addition to the broad product portfolio, test results of mineral fillers in the field of flame retardancy will be presented.

QUARZWERKE
DE-Frechen, www.hpminerals.com, Stand 7A-113

HIGH-PERFORMING, BIO-BASED COATINGS

At the ECS, Stahl will showcase C18-based coatings with an emphasis on leather and performance coatings for various markets, including the demanding automotive segment. Its new supply agreement with Elevance Renewable Sciences enables Stahl to commercialize new coatings, polyurethane dispersions (PUDs), and polyols based on Elevance's C18 technology.

C18 polyester polyols are a new class of bio-based, high-performing polyurethane building blocks that enable the development of hydrophobic and crystalline bio-based coatings with improved hydrolytic stability and optimum flexibility.

STAHL HOLDINGS
NL-Waalwijk, www.stahl.com, Stand 7-458

NETWORKS TO FUEL INNOVATION AND GROWTH

Cluster Nanotechnology promotes collaboration in its various networks and supports the efficient transfer of R&D&I results into marketable products. The "nanolnk" network focuses on the formulation and further development of special inks, industrial inkjet printing systems and inkjet-related process technologies. The resulting nanoinks enable new applications and products with decorative and special optical, conductive, fluorescent and/or magnetic properties.

"NanoAnalytics and nanomeasurement technol-

ogy in production" (NAMiP) offers a platform to discuss analytics and measurement issues in the production of nanostructured systems and results in more effective, more environmentally friendly, more reproducible and more responsible manufacturing at an industrial level.

NANOINITIATIVE BAYERN/CLUSTER NANOTECHNOLOGIE
DE-Würzburg, www.nanoinitiative-bayern.de, Stand 1-518

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ON DISPLAY

Plenty of novelties to launch at the ECS

OPTIMUM OPERATIONAL HYGIENE

Increasing requirements for industrial hygiene and a desire to reduce preservatives led to the development of "Ecoline Pipe Purification". This innovative pipe cleaning process allows fast and thorough cleaning and can be used as a stationary or as a mobile unit. In conjunction with "Vinkocide SR1" and "Vinkocide SR3" system cleaners, it effectively removes biofilms and product buildup in production and bottling plants. As a result,

industrial hygiene improves, contamination and product defects decrease significantly, and longer product shelf life can be achieved.

VINK CHEMICALS
DE-Kakenstorf
www.vink-chemicals.com
Stand 1-248

HIGH-PERFORMANCE ORGANIC PIGMENTS

Heubach will be presenting a number of extensions to its product portfolio at the ECS including its well-established "Tico" products. They offer ecological and economic advantages when replacing pigments that contain lead chromate and selected products have now been modified in an N-series to meet global requirements. The new "Monolite Red 316802" is a high-performance organic pigment designed for automotive, industrial and architectural coating applications. Even at very low concentrations it exhibits very good light

and weather fastness, as does "Monolite Blue 515100". Combined with its migration fastness and high heat stability, this blue pigment is the ideal choice for all kinds of paints, including automotive OEM and refinish application and industrial coatings.

HEUBACH
DE-Langelshelm
www.heubachcolor.com
Stand 7A-324

COLUMN AGITATOR FOR PAINTS AND PLASTERS



The new "VJ405" column agitator from Visco Jet is ideally suited to agitating and tinting paints and plasters in oval and round containers in continuous operation, for long or short runs. The specially developed pyramid impeller ensures effective agitation of products from low to high viscosities and also prevents sedimentation and air inclusions. Visco Jet agitator systems excel with their short mixing times, low energy demand and benefits including fast release coupling to change mixing elements and integration with automatic roller conveyors.

VISCO JET RÜHRSYSTEME
DE-Küssaberg
www.viscojet.com
Stand 6-238

MULTIFUNCTIONAL BENCHTOP SPECTROPHOTOMETER FOR COLOUR MEASUREMENT

The benchtop spectrophotometer "Color-Tube" is a standard two-channel system suitable for solid samples. A third measuring channel is available to measure transparent samples if required. ColorLite will present its one easy-to-use measuring system (400–700 nm, spectral scanning 3.5 nm) to reduce lab equipment and offer flexible application. The integrated gloss trap offers measurements with and without gloss exclusion and the optional integrated

infrared thermometer closes a big gap in colour measurement methodology enabling the accurate analysis and evaluation of colour deviations caused by thermochromatic effects.

COLORLITE
DE-Kaltenburg-Lindau
www.ColorLite.de
Stand 5-347

DRIVING FUTURE GROWTH BY CHALLENGING THE STATUS QUO

With chemistry ranging from water-based acrylic emulsion technology, tailored cellulose ethers and redispersible powder to silicones, Dow is entering a new era and looking for partners to help it continue to challenge the status quo. The company will highlight its latest innovations, including new acrylic polyurethane binders for roof waterproofing membranes. It will present advances in paint and construction product functionality for applications such as formaldehyde-abatement paints, gypsum finishing compounds and cement-based tile adhesives as well as the latest developments in biocide-free formulations. The company will be looking to the future at the ECS 2019 with a call to customers and industry partners to 'Shape Tomorrow. Together'.



DOW EUROPE
CH-Horgen
www.dow.com
Stand 4A-206

INNOVATIVE COOL BLACK PIGMENT

Al-Farben – Torrecid Group will present a pioneering cool black pigment (PBr29) "AL-82601 Black" for all kinds of coatings. It provides enhanced colour strength, higher jetness, and a super-high IR reflectance, with a total solar reflectance in 5–10 % higher in masstone than other standard grades on the market. This IR reflectance allows dark coatings to stay cool

during hot seasons and is a perfect solution for all decorative, industrial, or coil coatings that require this benefit.

TORRECID GROUP – AL-FARBEN
ES-Alcora
www.alfarben.com
Stand 7A-111

A Flawless Finish Begins Here

K-FLEX® Low-VOC Coalescents enable excellent performance for coatings, including **increased scrub resistance, even at ultra low VOC**. Visit us at ECS to learn about **K-FLEX PG**, a coalescent for **Ecolabel paints** with no hazard communication labelling requirements.

EMERALD KALAMA CHEMICAL
KFLEX®
Plasticizers & Coalescents

NEW
VITROFLEX® Plasticisers are safer solutions for polysulphide sealants with low fogging & high permanence.

ECS Hall 1, Stand 246
www.emeraldkalama.com


HALL 1
BOOTH
356

NOVELTIES

TODAY'S PRODUCT PRESENTATIONS

Speakers offer insights into their latest developments

HALL 1, STAND 1-131
9:50 - 10:10
Surfynol surfactants and Tego antifoam grades – together you can achieve more

Roland Sucker, Evonik Industries, DE

10:10 - 10:30
Optimise catalyst selection for coil coatings

Marcel Groenewoud, King Industries, US

10:30 - 10:50
Easy-to-Disperse (E2D) fumed oxides

Dr Günther Michael, Evonik Industries, DE

10:50 - 11:10
Bermocoll for multicolour paint

Dr Helena Wassenius, Nouryon, SE

11:10 - 11:30
Revacryl UG 1876 - Next generation styrene-acrylic for biocide-free paints

Thomas Bernhofer, Synthomer Deutschland, DE

11:30 - 11:50
Syloid MX products – solutions for difficult to matt coatings systems

Dr Uwe Ferner, Grace, DE

11:50 - 12:10
New high colour carbon black

Dr Richard Abbott, Birla Carbon Europe, DE

12:10 - 12:30
KronoMatt paint different – formulate the future

Sebastian Hanrieder, Kronos International, DE

13:10 - 13:30
Luvotix Atac and Luvotix Atur, a modular system of synthetic associative thickeners for water-based formulations

Dr Eva-Maria Kutschmann, Lehmann & Voss, DE

13:30 - 13:50
A new versatile, cost efficient dispersant for solvent-borne general industrial coatings

Marco Yann Heuer, Evonik Industries, DE

13:50 - 14:10
Introduction of bio-based polycarbonatediols for high chemical resistant polyurethane

Hayato Yabuki, Asahi Kasei, JP

14:10 - 14:30
Ultra-matte coatings using controlled texturing effects

Björn Tiede, Deuteron, DE

14:30 - 14:50
Enhancing performance of water-borne industrial coatings

Martinez Castro Nemesio, Solvay, FR

14:50 - 15:10
Innovative polymers for bonding of plastics and hybrid materials

Nick Dewingaerden, Kaneka Belgium, BE

15:10 - 15:30
High-performance oligomers and amine modified solutions for reactivity

Kevin Demoulin, Sartomer, Arkema France, FR

15:30 - 15:50
Start-up Session

Bio-Fence, IL

15:50 - 16:10
Start-up Session

Basca, IT

16:10 - 16:30
Start-up Session

Group Eurasia, TR

16:30 - 16:50
Start-up Session

Alina, LV

HALL 4, STAND 4-214
9:50 - 10:10
New ways to ultra-fast flooring installation

Contardo Pafumi, Covestro Deutschland, DE

10:10 - 10:30
Noval Next: A novel anti-skinning agent

Thomas Schollaert, Umicore Specialty Materials Brugge, BE

10:30 - 10:50
Formulation of high-performance pressure-sensitive adhesives

Dr Katja Greiner, Synthomer Deutschland, DE

10:50 - 11:10
Evaluation of coatings by modern testing and analysis methods such as rheology

Thomas Mezger, Anton Paar Germany, DE

11:10 - 11:30
Highly effective aqueous silicone defoamers range for spray applied systems

Carsten Nagel, Byk-Chemie, DE

11:30 - 11:50
BTX-free high-dispersable silicone gums for slipping agents

Kazuhiro Tsuchida, SE Tylose/Shin Etsu Silicones, DE

11:50 - 12:10
Sustainable high performance light stabiliser solutions for water-based wood coatings

Jean-Yves Desrats, Clariant, DE

12:10 - 12:30
Paint pots from 100 % post consumer plastic

Tarquim Crouch, Imerys Minerals, GB

13:10 - 13:30
Bayhydrol UV toolbox for UV-curable water-borne systems

Dr Matthias Wintermantel, Covestro Deutschland, DE

13:30 - 13:50
Sustainable wax solutions for wood, powder and plastic coatings as well as printing inks

Tobias Niederleitner, Clariant, DE

13:50 - 14:10
Advantages of using Neuburg Siliceous Earth in coatings – an overview

Dr Reimund Pieter, Hoffmann Mineral, DE

14:10 - 14:30
Saving titanium dioxide by vacuum inline dispersion

Dr Hans-Joachim Jacob, Ystral, DE

14:30 - 14:50
Novelution N – a new generation of emulsifiers for waxes and carbon black

Ulrike Fischer, Sasol Performance Chemicals, Germany, DE

14:50 - 15:10
For adhesive formulators: new hydrogenated hydrocarbon resins made in Germany

Dr Jun Liu, Rütgers Germany, DE

15:10 - 15:30
Discover 3 in 1 with Cardura glycidyl ester

Erik Pras, Hexion, NL

15:30 - 15:50
New water-based acrylic for low VOC DTM coatings

Pablo Brega, Lubrizol Deutschland, DE

15:50 - 16:10
New renewable products – for future sustainable growth

Anna Berggren, Perstorp, SE

16:10 - 16:30
Dispersants for the stabilisation of aluminum effect pigments

Heiko Alzer, Evonik Industries, DE

16:30 - 16:50
The latest OH-functional acrylic acrylate, to enhance the mechanical & chemical resistances performance of your dual cure system

Kevin Poelmans, Allnex Netherlands, NL

HALL 9, STAND 9-544
9:50 - 10:10
Comparison of UV and EB curing of oligomers and monomers, our latest recommendations for high-performance EB curing systems

Dr Xavier Drujon, Sartomer, Arkema France, FR

10:10 - 10:30
Solutions for industrial preservation in a dynamic regulatory environment

Johannes Koehler, Lonza, US

10:30 - 10:50
Exolit 855, halogen-free fire protection ingredient for transparent intumescent wood coatings

Klaus Bender, Clariant, DE

10:50 - 11:10
WorléePur Si - silane functional polyurethane-urea resins in ultra-high-solid coatings

Lars Ossenschmidt, Worlée Chemie, DE

11:10 - 11:30
Addressing global food contact compliances for packaging – Tego Wet & Surfynol surfactants as well as Atrase and Tego Foamex defoamers

Thorsten Schierle, Evonik Industries, DE

11:30 - 11:50
Biolin 100 – a bio-based alternative to polybutadiene

Dr Jan Klesing, ASK Chemicals, DE

11:50 - 12:10
Novel dispersants for tricky pigments in water-based pastes

Dr Stefan Scholz, Worlée Chemie, DE

12:10 - 12:30
Si/PUR – hybrid crosslinkers: one step ahead of high performance

Tobias Unkelhäußer, Evonik Industries, DE

13:10 - 13:30
Relca HY-288 is a new water-based super hydrophobic resin developed to provide excellent resistance to satins such as coffee, red wine and mustard

Sara Roig, Stahl Holdings, NL

13:30 - 13:50
Desmophen NH 1423 – the next generation Pasquick – polyaspartics technology

Thomas Schüttler, Covestro Deutschland, DE

13:50 - 14:10
Thiocure – pimp your system with polythiols

Dr Tom Beyersdorff, Worlée Chemie, DE

14:10 - 14:30
UV resistant epoxy systems in coatings and floorings applications

Alex Dureault, Huntsman Belgium, BE

14:30 - 14:50
The new Bio-loop dispersing agents: for aqueous, UV and solvent pigment dispersions

Sean Hodgkinson, Lankem, GB

14:50 - 15:10
MES control center: end-to-end plant and process transparency combined with advanced analytics for the coatings industry

Andreas Brülls, ProLeiT, DE

15:10 - 15:30
Aspanger – the European mica source

Dr Georg Partlic, Omya, DE

15:30 - 15:50
Novel renewable resource-based resin for VOC-free, UV-stable aliphatic polyurethane systems: Albodur 1055 VP

Jessica Hoffmann, Alberdingk Boley, DE

15:50 - 16:10
Importance of field testing in dry-film preservative evaluations


Dr Thomas Heuer, Troy Chemical Company, NL

16:10 - 16:30
New innovative PCC product Nordkalk Enrich C for substituting titanium dioxide and binder

Matti Lammela, Nordkalk, FN

16:30 - 16:50
Inherent matt polyurethane dispersions as versatile tool for paints, varnishes and inks

Markus Dimmers, Alberdingk Boley, DE

The background of the advertisement is a scanning electron microscope (SEM) image showing a dense field of irregular, light-colored mineral particles against a dark blue background. In the lower-left quadrant, a traditional Japanese pagoda with three tiers and a dark roof is superimposed, appearing to sit on a small island of the same mineral particles. The overall aesthetic is scientific and traditional.

NINE DYNASTIES LEAVE
THEIR MARK. AND FOUR
HOFFMANN GENERATIONS
PRESERVE THEM.

FUNCTIONAL FILLERS FOR COATINGS

AKTISIL WW will open up a whole new range of properties for your products. It is ideal as a matting filler in dispersion-based clear wood varnishes. You can use AKTISIL WW alone as well as in combination with other matting agents. AKTISIL WW provides enormous advantages as a functional filler: it can be easily dosed and mixed to facilitate your varnish production, it provides high transparency even on dark wood types, it has a good matting effect and very good resistance to water and stains, which together give your product a completely new profile of properties. AKTISIL WW is one of our surface-treated Neuburg Siliceous Earth products. We have the know-how. Use it.

PLEASE VISIT US
AT BOOTH 4-614

HOFFMANN
MINERAL

We supply material for good ideas