



EUROPEAN TECHNICAL COATINGS CONGRESS

**“COATINGS EVOLUTION”
DAILY PROGRAMME**

**ETCC2024 -European Technical Coatings Congress-
will take place on 23–24–25 September 2024
in the Palace of the Popes of Avignon (France).**

For all information and registration on line

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SUNDAY 22 SEPTEMBER 2024 - PM

PROGRAMME OF SUMMER SCHOOL

"SUMMER SCHOOL" is the seminar taking place in Room Cubiculaire, on Sunday, September 22 from 1.30 p.m. to 5.30 p.m. prior to the ETCC2024.

Lectures and presentations are dedicated mainly for young scientists, PhD students and students.

 Dr. Christel PIERLOT, Teacher Researcher, CENTRALE LILLE INSTITUT (Unité de Catalyse et de Chimie du Solide)

Experimental design in coatings

To develop coatings formulations, it is important to analyse the effect of several factors affecting their properties. Two standard two-level Hadamard and factoriaF designs will be presented pointing out effect of factor and benefits for coatings development.

 Jordan BASSETTI, 3rd year PhD Student, CENTRALE LILLE INSTITUT (Unité de Catalyse et de Chimie du Solide)

Particle wettability: Concepts, theoretical aspects, and application of the Washburn method

In a paint formulation, a pigment is a finely dispersed solid material that contributes color and opacity, with its wettability playing a crucial role in facilitating even dispersion and adhesion within the liquid medium. The Washburn method offers quantitative measurements of particle wettability, enabling the study of wetting kinetics, comparison of materials, and formulation optimization.

 Dr Thierry LACOUR, R&D Director & Company Manager, BIOPRESERV France

Biocides: an essential raw material for water-based formulations

Biocides are an essential molecules family permitting long life of water-based formulations such as paint, material, surfaces, cosmetics, detergents... In Europe, biocides are regulated by the Biocide Product Regulation (BPR). An overview of biocide application, product type based on BPR and efficacy testing will be shared.

 Dr Alain CARRE, Consultant, Teacher, AFPEV

Fundamentals of wetting and adhesion

Wetting and adhesion are of considerable importance to many aspects of industrial operations. We will recall the notions of surface tension for a liquid and surface energy for a solid. Knowledge of these parameters is valuable for understanding many surface/interface phenomena such as adhesive bonding. But the energy of rupture of an assembly is generally much greater than the reversible work of adhesion deduced from the surface energies. The rheological model of adhesion shows that the separation energy measured for example with a peel test depends on the reversible work of adhesion and on the energy dissipated by the adhesive. Continuing this theory, another dissipation phenomenon was then highlighted and will be explained. To finish, molecular orientation at polymer interfaces will be described. We will see how this phenomenon may contribute to the establishment of strong chemical bonds between a polymer and its substrate.

 Dr. Nicolas MOUGIN, Technical Manager and co-founder of RHEONIS

Coating product physical behaviour and challenges for predictive instrumental methods

Coating product research and development involves a broad variety of tools and methods, aimed at providing a full-spectrum overview of product behaviour in laboratory environment. Rudimentary technical apparatus neighbors sophisticated scientific instrumentation in order to provide a qualitative and quantitative determination of formula properties and behaviour. Nevertheless, predicting behaviour-in-use remains challenging in many contexts, especially in industrial contexts.

This conference intends to discuss such challenges in connection with instrumental methods and to provide guideline for questioning their predictive ability. What does it take for a measurement method to become predictive ? What is predicted ? Under which limits ? We will focus on product physical behaviour, related to rheological, interfacial and physico-chemical dynamical aspects.

MONDAY 23 SEPTEMBER 2024 - AM

	Room BENOIT 12	Room TRESORIER	Room GRAND PROMENOIR
09.00 - 09.45	OPENING CEREMONY		
09.45 - 10.30	PLENARY CONFERENCE 77 - Collaboration is the quickest way to sustainable coatings VAN LINDEN Andre AKZO NOBEL		
10.30 - 11.00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
	Session SMART COATINGS	Session BIOBASED SOLUTIONS	Session BUILDING MATERIALS
11.00 - 11.30	49 - Zeolite-supported TiO ₂ for acetone photo-oxidation: Kinetic insights DE GRAAF Mirjam UTRECHT UNIVERSITY	2 - Bio-based coatings applied to innovative mycelium materials for the fashion and automotive industry BEGUE Delphine ITECH	1 - Impregnation of oil on surfactant-clay particles: Solid/liquid interaction in geopolymers BASSETTI Jordan CENTRALE LILLE INSTITUT UCES
11.30 - 12.00	51 - Application of multi-functional poly(phosphorylcholine) coatings MÜNCH Alexander LEIBNIZ INSTITUTE OF POLYMERS	50 - Purely bio-based and sustainable binders A big challenge or a nice opportunity LUNDSTEN Gun CH-POLYMERS OY	21 - Silicone additives that enhance coating durability in ETICS TURGUT Hatice DOW CHEMICAL COMPANY
12.00 - 12.30		53 - Bio-based additives, sustainable solutions for coil coating DOS SANTOS Camila Helena DYNEA AS	24 - Protect your exterior façade coatings with quick set technologies - Improvement PETERS Oliver EVONIK COATING ADDITIVES
12.30 - 13.30	<i>Lunch Break</i>	<i>Lunch Break</i>	<i>Lunch Break</i>

MONDAY 23 SEPTEMBER 2024 – PM

	Room BENOIT 12	Room TRESORIER	Room GRAND PROMENOIR
	Session ADVANCES IN PROCESSING AND PRODUCTION	Session CORROSION PROTECTION	Session MEASURING AND TESTING
13.30 - 14.00	3 - One shot matte powder coatings BONGAERTS Jan COVESTRO	4 - Stable graphene dispersions: multi-properties anticorrosion additives BOTTEIN Thomas CARBON WATERS	33 - Wettability, contact angle, and surface energy: Do's and don'ts SEVENO David KU LEUVEN
14.00 - 14.30	29 - Process principles and formulation of redispersible powder coatings AGGEZ Okan DENMARK TECHNICAL UNIVERSITY	7- Eco-friendly corrosion inhibitors from fruit waste: A study on N-Doped carbon dots derived from pistachio shells for protecting carbon steel MARDANI Shiba INSTITUTE FOR COLOR SCIENCE & TECHNOLOGY	35 - How to qualify coating products and achieve a green card to market? DONG Qian DNV
14.30 - 15.00	30 - The upsides and challenges of overspray-free paint application BOSMA Martin ALLNEX	28 - Corrosion inhibiting coatings: Lignin phosphate as a bio-based alternative to zinc phosphate CHAUDHARI Tushar TECHNICAL UNIVERSITY OF DENMARK	41 - Thermographic method for evaluation of corrosion test panels DOESSEL Karl-F. ORONTEC
15.00 - 15.30	32 - Innovative powder airbrush technique opens new markets for solvent-free powder coating CUDAZZO Markus FRAUNHOFER IPA	56 - Corrosion behavior of electrocoated 6082-T6 & S500 dissimilar joints MUTLU Mirac FORD OTOSAN	42 - When additives go on a stroll – How to check for a stable formulation STALMACH Ulf ORONTEC
15.30 - 16.00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
	Session ADVANCES IN PROCESSING AND PRODUCTION	Session FORMULATION	Session ADVANCES IN SCIENCES OF PAINTS, ADHESIVES, INKS
16.00 - 16.30	116 - How biobased binders can leverage your decarbonization strategy? RHAZALI Sophia ECOAT	19 - How composite pigments improve coating opacity and ultimately result in improved sustainability WHITE Andy FP-PIGMENTS	6 - Silylated polyurethane resin systems New technology for PFAS free protective coating solutions CHERNYSHOV Dmitry MOMENTIVE
16.30 - 17.00	37 - Biocide-free concepts for in-can and film preservation SAUER Christopher BASF SE	36 - Polysiloxane wetting and defoaming additives for water-borne coatings LEVCHENKO Vladimir DYNEA AS	8 - Environmentally friendly low temperature cross-linking system MORIWAKI Yuya KYOEISHA CHEMICAL
17.00 - 17.30	45 - Excimer matting controlling the gloss of aqueous coating compositions VAN CASTEREN Ilse COVESTRO	46 - New functional silicone additive for architectural coatings CHEIKH Christophe WACKER CHEMIE	9 - Eco-friendly plasma polymerized PFAS-free icephobic coatings MOSTOFI SARKARI Navid KU LEUVEN
17.30 - 18.00		69 - Digital approach to formulation design using Monte Carlo simulation SÜTTERLIN Jan COVESTRO DEUTSCHLAND	11 - 1K crosslinking system for blends of polyurethane / polyacrylic dispersions PAULUS Wolfgang BASF SE

TUESDAY 24 SEPTEMBER 2024 - AM

	Room BENOIT 12	Room TRESORIER	Room GRAND PROMENOIR
09.15 - 10.00	<p align="center">PLENARY CONFERENCE 62 - Heat shielding and flame retardancy from polyelectrolyte-based nanocomposite coatings GRUNLAN Jaime C. TEXAS UNIVERSITY</p>		
	Session CARBON FOOT PRINT & DECARBONATION	Session CORROSION PROTECTION	Session MEASURING AND TESTING
10.00 - 10.30	<p>16 - Mass balance boosts sustainability of energy-curable PU dispersions TIELEMANS Michel ALLNEX</p>	<p>66 - Anticorrosion efficiency of zinc-filled epoxy ester coatings containing conducting polymer PANI-PTSA RAYCHA Yash UNIVERSITY OF PARDUBICE</p>	<p>63 - Optimize quality, reduce costs and save resources through efficient testing processes MÜLLENEISEN Jörg OPTISENSE</p>
10.30 - 11.00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
11.00 - 11.30	<p>38 - Advantages and issues of state-of-the-art methods to substitute fossil raw materials in coating and inks with renewable alternatives SLOOT Tim Frederic EVONIK OPERATIONS</p>	<p>67 - Hybrid coatings with hydrotalcites: a study on mechanical properties CALDERON PEREA Nataly Elizabeth UNIVERSIDAD CARLOS III OF MADRID</p>	<p>74 - Understanding and improving the water resistance of waterborne binders LOTTIER Simon ARKEMA</p>
11.30 - 12.00	<p>73 - Waterborne alkyd emulsion, a solution to decarbonize wall, wood and metal decorative paints DELMAS Grégory ARKEMA</p>	<p>70 - Project CoFoMag Part I: Magnesium surface pretreatment system SERAFIN Daria LUKASIEWICZ - WARSAW INSTITUTE OF TECHNOLOGY</p>	<p>78 - Changes in coating properties during aging tests depending on the type of pigment LANGER Ewa LUKASIEWICZ RESEARCH NETWORK</p>
12.00 - 12.30	<p>115 - Biobased tailor-made copolymers as performance additives in coatings industry RUBBERT Lea Viktoria NIEDERRHEIN UNIVERSITY OF APPLIED SCIENCES</p>	<p>71 - Project CoFoMag Part II: Flexible self-lubricating powder coatings GEDAN-SMOLKA Michaela IPF DRESDEN</p>	<p>99 - Analysis of TiO2 breakage in a bead mill-modelling and experiments KRZOSA Radoslaw WARSAW INSTITUTE OF TECHNOLOGY</p>
12.30 - 13.30	<i>Lunch Break</i>	<i>Lunch Break</i>	<i>Lunch Break</i>


TUESDAY 24 SEPTEMBER 2024 – PM

	Room BENOIT 12	Room TRESORIER	Room GRAND PROMENOIR
		Session COATINGS MARKET	Session ADVANCES IN SCIENCES OF PAINTS, ADHESIVES, INKS
13.30 - 14.00		124 - Global paint & coatings market update MATAYI Trevor ORR & BOSS CONSULTING	121 - Novel concepts of acrylic resin application in powder coatings formulation POJNAR Katarzyna RZESZOW UNIVERSITY OF TECHNOLOGY
	Session BUILDING MATERIALS	Session BIOBASED SOLUTIONS	
14.00 - 14.30	65 - How do intumescent coatings work to save lives? BAUDE Christophe SYNTHOMER	54 - Pentamethylene diisocyanate: a building block for sustainable PU coatings and adhesives EGGERT Christoph COVESTRO DEUTSCHLAND	108 - Evaluation of corrosion protection and antifouling efficiency of fouling release coatings on copper alloys TUBARO Erica UNIVERSITY OF UDINE
14.30 - 15.00	76 - Solar reflectivity of exterior architectural coatings FERNANDO Raymond CALIFORNIA POLYTECHNIC STATE UNIVERSITY	58 - Utilization of vegetable oils in the synthesis of latex coating binders KOLAR Martin UNIVERSITY OF PARDUBICE	27 - Alternatives to fluoro-based additives in coatings and inks REINARTZ Roger EVONIK OPERATIONS
15.00 - 15.30	90 - Thermal insulation paint formulation and its energy saving properties GHORBANI Fateme ALVAN PAINT AND RESIN MANUFACTURER	83 - Functionalized sustainable carbon materials and lignin derivatives for radical photopolymerization in coating sciences STREHMEL Bernd NIEDERRHEIN UNIVERSITY OF APPLIED SCIENCES	39 - Improvement of water resistance of latex coatings by various approaches MACHOTOVA Jana UNIVERSITY OF PARDUBICE
15.30 - 16.00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
16.00 - 16.30	110 - Effect of curing conditions and polymer-cement ratio on the properties of latex-modified cement coatings NANCEY Pierre-Marie UNIVERSITY OF TOULON	98 - Pine derivatives. Pioneering solution for a sustainable packaging industry ZILLI Dario LAWTER EUROPE	47 - Modified alpha-silane-terminated polyether A new hybrid binder for innovative surface protection ANDERS Udo WACKER CHEMIE
	Session WOOD AS SUBSTRATE		
16.30 - 17.00	44 - How to assess the cracking risk of coatings? PODGORSKI Laurence FCBA BORDEAUX	105 - Using Biopolymers in Green Paints and Coatings Development KARAVAYEV Taras STATE UNIVERSITY OF TRADE AND ECONOMICS	79 - Bio-based type I photoinitiator: Carbon dots with oxygen tolerance WANG Qunying NIEDERRHEIN UNIVERSITY OF APPLIED SCIENCES
17.00 - 17.30	64 - No need to sacrifice performance when formulating sustainable wood coatings with high-performance catalysts HELKER Dietmar BORCHERS	109 - Renewable dent corn as building block monomer and bio-solvent for the resin and coatings industry VAN WAES Patrick COVATIONBIO PDO	84 - Towards outperforming and more sustainable vinylic polymers MALAVOLTI Marino VINAVIL
17.30 - 18.00	68 - More sustainable WB binders and coatings from LIFE-WB BioPaint VITALE Marcello IVM CHEMICALS		96 - Opacifying silica microspheres for replacing titanium dioxide in paints TALBOTIER Gilles GAMMA TECH

WEDNESDAY 25 SEPTEMBER 2024 - AM

	Room BENOIT 12	Room TRESORIER	Room GRAND PROMENOIR
09.15 - 10.00	<p align="center">PLENARY CONFERENCE</p> <p align="center">12 - Emulsion of biobased alkyd resin, processes and concepts PIERLOT Christel CENTRALE LILLE INSTITUT UCCS</p>		
	Session ADVANCES IN SCIENCES OF PAINTS, ADHESIVES, INKS	Session SUSTAINABILITY	Session BUILDING MATERIALS
10.00 - 10.30	<p align="center">103 - Light triggered curing of pigmented alkyd paints using iron condensed arene complexes - The riskiest way to make paint TOLBOOM Jens UNIVERSITY OF AMSTERDAM</p>	<p align="center">55 - Sustainable emulsions as binder for paints and coatings KRIEGER Stephan CELANESE</p>	<p align="center">93 - Unlocking the potential of minerals to enhance the UV durability of exterior facade paints ESTEVA Hugo IMERYS</p>
10.30 - 11.00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
11.00 - 11.30	<p align="center">104 - Titanium Dioxide – A regulatory and innovational update WILKENHOENER Uwe KRONOS</p>	<p align="center">61 - Sustainable hydrocarbon solvents: Bio-sourced solutions and a carbon neutral offer BAUER Thorsten TOTALENERGIES FLUIDS</p>	<p align="center">94 - Latest innovation in the Low-Exudation-Binder (LEB) technology for masonry coatings SECHER Maurille SYNTHOMER</p>
11.30 - 12.00	<p align="center">17 - Properties of keratin particles as a functional filler WANNER Matthias FRAUNHOFER IPA</p>	<p align="center">86 - Sustainable solution for acrylic emulsions in ERC and ETICS TURGUT Hatice DOW CHEMICAL COMPANY</p>	<p align="center">97 - Shocking: Graphene enhances conductivity! MARTIN Ian FIRST GRAPHENE</p>
12.00 - 12.30	<p align="center">40 - Visible light active photocatalytic coatings for health care BAUDER Christina FRAUNHOFER IPA</p>	<p align="center">87 - Safe and sustainable by design replacement of PFAS in water and oil-repellent glass-like hybrid coatings POELMAN Mireille MATERIA NOVA</p>	<p align="center">101 - Incorporation of embedded materials for thermal regulation of buildings BOLAND Yann CENTRALE LILLE INSTITUT UCCS</p>
12.30 - 13.30	<i>Lunch Break</i>	<i>Lunch Break</i>	<i>Lunch Break</i>

WEDNESDAY 25 SEPTEMBER 2024 – PM

	Room BENOIT 12	Room TRESORIER	Room GRAND PROMENOIR
	Session ADVANCES IN SCIENCES OF PAINTS, ADHESIVES, INKS	Session SUSTAINABILITY	Session ADVANCES IN PROCESSING AND PRODUCTION
13.30 - 14.00	26 - Controlling the surface properties of LED and standard UV-curing coatings and inks STRUCK Susanne EVONIK OPERATIONS	102 - CNSL Oxycetic acid, a new binder for the formulation of waterborne paints LEMAIRE Marc UNIVERSITE CLAUDE BERNARD LYON 1	95 - Fouling behavior of aged fouling release coating in underwater cleaning LIN Shujie TECHNICAL UNIVERSITY OF DENMARK
		Session FORMULATION	
14.00 - 14.30	112 - Oleochemicals - Derivatives of fatty acid amides in alkyd-urethane coatings SUVOROVA Yuliia UKRAINIAN STATE UNIVERSITY OF CHEMICAL TECHNOLOGY	88 - Challenges for formulators in complying with product regulations SAUVAN Nancy FIPEC	15 - Barrier coating SCHEERDER Jurgen COVESTRO
	Session COLOR AND DYES		
14.30 - 15.00	92 - Improved dispersion and stability of natural hybrids pigments VOLLE Nicolas PIGM'AZUR	72 - High performances coating additives in different market applications: focus on Orgasol® & Rilsan® polyamides powders BASSET Maud ARKEMA	52 - Digitalization and the paint industry - Why do we need a smart paint factory alliance? STALMACH Ulf ORONTEC
			Session ADVANCES IN SCIENCES OF PAINTS, ADHESIVES, INKS
15.00 - 15.30	85 - Influence of modified oxidic pigments on photopolymerization of epoxidized plant oil STREHMEL Veronika NIEDERRHEIN UNIVERSITY OF APPLIED SCIENCES	75 - How to enhance paint properties with our latest innovations on polyurethane thickeners TRANG Yohann ARKEMA	14 - Development of a chemical-resistant coating: A comparative study REIAN Gard JOTUN
15.30 - 16.00	<i>Coffee Break</i>	<i>Coffee Break</i>	<i>Coffee Break</i>
16.00 - 16.30	20 - Using composite TiO ₂ pigments to reduce the use of coloured pigments and hence reducing cost and carbon footprint WHITE Andy FP-PIGMENTS	10 - Sustainable coatings solutions that make the difference MYLVAGANAM Sinthuya SYENSQO (SOLVAY)	107 - Covalently bound and environmentally friendly coatings for skis FAN Xin ZURICH UNIVERSITY OF APPLIED SCIENCES
16.30 - 17.00	PLENARY CONFERENCE 23 - Colours and cities NOURY Larissa COLOUR-SPACE-CULTURE		
17.00 - 17.30	CLOSING CEREMONY AND AWARDS 		

LIST OF POSTERS

AMIRKABIR UNIVERSITY OF TECHNOLOGY	DEHGHANI Emad	Electrospinning of double-layer Polyurethane / carboxymethyl chitosan sulfate mat
BYK CHEMIE	WEISS Sebastian	Novel amphiphilic block copolymers as dispersing additives
GROUPE BERKEM	MESSAOUDI Daouia	Potential of plant polyphenolic extracts from Berkem Biosolutions® as in-can preservatives for paints and coatings
IEPCO	FOAD Kazeli Madj	Coating maintenance of infrastructure
INSTITUTE FOR COLOR SCIENCE AND TECHNOLOGY	ALIYARI Donya	Leveraging a novel mixed-metal organic framework to enhance the corrosion protection potency of polymer coating
LECHLER SpA	ORTELLI Marzia	Synthesis of bio-inspired high solid hydroxylated acrylic castor oil-modified resin with applications to two-component polyurethane coatings
LEITAT	CABRER PALOMES Aina	Thermal curing versus machine learning infrared curing system for powder paint industrial coatings
LEITAT	PALMER Javier	Coatings with embedded microchannels for efficient cooling in electric cells
LUKASIEWICZ RESEARCH NETWORK	JURCZYK Sebastian	Formulation and characterization of bioactive camouflage paints
LUKASIEWICZ RESEARCH NETWORK	KAMINSKA-BACH Grazyna	Water-based zinc primers – The dependence of properties on the type of zinc pigment
LUKASIEWICZ RESEARCH NETWORK	ZUBIELEWICZ Malgorzata	Formulation and characterization of bioactive camouflage paints
MOMENTIVE	KENSBOCK Philip	New components for functional high-performance coatings
NANIZE	IWU Kingsley	Rapid curing of PFAS-free, non-stick, low-friction, transparent coatings based on polysilazane
RZESZOW UNIVERSITY OF TECHNOLOGY	PILCH-PITERA Barbara	Self-healing thermal reversible low-temperature polyurethane powder coatings based on Diels-Alder reaction
TECHNICAL UNIVERSITY OF MUNICH	SKOPP Amelie	Catalytic bio-hybrid coating-based degradation of haloalkanes in the gasphase
UMONS	MALEKKHOUYAN Roya	Corrosion protection of Mg alloy by LDH coating and anionic surfactant
UNIVERSITY OF PARDUBICE	FOLTYN Tomas	Catalytic activity of vanadium-based drier in air-drying paints
UNIVERSITY OF TEHERAN	HAFILI Fatemeh	Unveiling the synergistic corrosion protection mechanism of Zn-organic complex pigments
UNIVERSITY OF TOULON	PERRIN François-Xavier	The role of silica as a reinforcing agent in primer formulations for the adhesion of high consistency silicone rubber on metals