



Program | Symposium 2019

Selb (Germany), 20th - 22nd May 2019



What you should know about



With the aid of paints and coatings and impact and non-impact inks, various functionalities are often presented simultaneously.

Coatings serve to protect against corrosion, have an antistatic effect, are turned into simple, printed electronic components or indicate shelf life on packages of preserved products.

When we're driving, reflective or luminescent elements show us the way. Glass coatings automatically provide UV protection and will even act as generators for solar energy in the future.

Colors can completely change the visual appearance as well as the tactile properties of products. Materials are found in buildings today that look like marble, granite or wood, but are actually ceramic tiles.

Functional coatings require the formulation of colored organic or inorganic pigments and preferably ecological solvents, binders and fillers.

In the textiles sector, it is also required that they be antiallergenic. In addition, mixing and dispersing machines, along with agitator bead mills of various designs, are required for the production of these dispersions.

For development and quality assurance, the characterization of particle size, color intensity, transparency or gloss is essential.

Paints, Coatings & Inks ...

Without colors our everyday life would be dull and boring.
There is a lot more to colors than you might think at the first sight.

Would you like to learn more about developments and trends, collect and discuss new ideas? Then do not hesitate to sign up for the event!



The Institute for Particle Technology (IPAT), the European Center for Dispersion Technologies (EZD), Malvern Panalytical GmbH, Evonik Resource Efficiency GmbH and NETZSCH-Feinmahltechnik GmbH invite you to participate at the Dispersion Days 2019 in Selb.

During the Dispersion Days symposium, we would like to discuss various developments and trends as well as the needs for the practice of the future. The meeting should help to bring experts in various fields from universities and colleges, institutes and industry closer together.

We look forward to you!



To sign up please use the QR code or the following link:
www.dispersion-days.de
Please note the **deadline for registration (30.04.2019)**



Fees and discount structure	Universities, colleges, research facilities etc.	Industry
Attendance fee	450.00 €	900.00 €
Corporate discount 15 % > 10 persons of one company	382.00 €	765.00 €

Prices per person

MONDAY
20th May 2019

TUESDAY
21st May 2019

18.00 **START REGISTRATION**

19.00 **WELCOME DINNER**

Session I – Roland Dorschner Hall PRODUCTION AND PROCESSING OF PAINTS, COATINGS AND PRINTING INKS	Session II – Room Erwin Weber CHARACTERIZATION AND PARTICLE SIZE DISTRIBUTION FORMULATIONS, FUNCTIONALIZATION THROUGH ADDITIVES	Session III – Roland Dorschner Hall Restaurant BASIC COURSES & WORKSHOPS
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08.00 **ENTRY & START REGISTRATION**

08.30 **OPENING & WELCOME**
Short welcoming speech (D. Makrakis, Dr. M. Wingfield, Prof. Dr. A. Kwade, Dr. Wolff-Fabris)

08.50 **IMPULS LECTURE „DIGITAL TRANSFORMATION“**
Dr. Jörg Karas, Schwan-Stabilo Cometics

09.30 **COFFEE BREAK**

10.00 Use of jet grinding for the production of matting agents	Knowledge based strategy to improve efficiency and quality of dispersion processes	Influence of operating parameters in wet grinding processes
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10.45 Titanium dioxide dispersion fundamentals	High throughput experimentation for efficient optimization of grinding steps	Mechanisms of particle stabilization in coating formulations
11.15 Optimization of ink production processes with the combination of the inline-disperser <i>EPSILON</i> and the recirculation mill <i>NEOS</i>	A new approach to the determination of the size, shape and chemical structure of particles in a multi component mixture	

11.45 Optimization of the ink dispersion process	Selection criteria of wetting & dispersing additives beyond coloristic properties	A basic guide to particle characterization
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12.15 **LUNCH TIME**

13.15 The influence of dispersion and surface treatment on properties of TiO ₂ pigments	How to improve development and quality control of dispersion paints by using particle size characterization and image analysis instruments	Flow and deformation of elastic liquids and viscous solids: the basics of rheology
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13.45 Principles in nanoparticulate dispersing – Effect of viscosity	Assessing stressing conditions by single particle probes	Optimizing rheology for paint and coating applications
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14.15 Mirror and chrome finishes – Solutions and challenges with metallic effect pigments	Productivity increase in the dispersion process through efficient process control with liquid paint color measurement	Use of additives from the perspective of a coatings producer
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14.45 **COFFEE BREAK**

15.15 APPtec - A new generation of spray pyrolysis to generate advanced powder materials	Rapid and high resolution particle size distribution measurement and chemical analysis with electron microscopy	Pre-dispersing processes of high viscose mill bases with large batch sizes
15.45 Advanced dispersibility test for fillers with three roll mills and realtime process analysis	Wet measurements with laser diffraction: Suitable for ink jet inks and agglomerate detection?	

16.15 New technology for high viscous and heat sensitive products	Life cycle of nanoparticle sols in the industrial SolGel coating process	Seriously, always those beadmills! „A blessing and a curse!“
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16.45 **VISITING TOURS OF EZD**

19.00 **GET TOGETHER – BAVARIAN EVENING**

PRODUCTION AND PROCESSING OF PAINTS, COATINGS AND PRINTING INKS

- 10.00 - 10.45 Use of jet grinding for the production of matting agents
Thomas Klotzbach | Evonik Resource Efficiency GmbH
- 10.45 - 11.15 Titanium dioxide dispersion fundamentals
Martin Sandrock | Kronos International, Inc.
- 11.15 - 11.45 Optimization of ink production processes with the combination of the inline-disperser *EPSILON* and the recirculation mill *Neos*
Alex Lauke | NETZSCH Grinding & Dispersing
- 11.45 - 12.15 Optimization of the ink dispersion process
Dr. Hans-Henning Stender | Siegwirk Druckfarben AG & Co. KGaA
- 13.15 - 13.45 The influence of dispersion and surface treatment on properties of TiO₂ pigments
Nika Veronovski | CINKARNA Celje d.d.
- 13.45 - 14.15 Principles in nanoparticulate dispersing – Effect of viscosity
Benedikt Finke | IPAT – Institute for Particle Technology
- 14.15 - 14.45 Mirror and chrome finishes – Solutions and challenges with metallic effect pigments
Peter Wissling | ECKART GmbH
- 15.15 - 15.45 APptec - A new generation of spray pyrolysis to generate advanced powder materials
Dr. Thomas Jähnert | Glatt Ingenieurtechnik GmbH
- 15.45 - 16.15 Advanced dispersibility test for fillers with three roll mills and realtime process analysis
Ulf Köpke | EXAKT Advanced Technologies GmbH
- 16.15 - 16.45 New technology for high viscous and heat sensitive products
Norbert Kern | Bühler AG

CHARACTERIZATION AND PARTICLE SIZE DISTRIBUTION - FORMULATIONS, FUNCTIONALIZATION THROUGH ADDITIVES

- 10.00 - 10.45 Knowledge based strategy to improve efficiency and quality of dispersion processes
Prof. Dr. Arno Kwade | IPAT – Institute for Particle Technology
- 10.45 - 11.15 High throughput experimentation for efficient optimization of grinding steps
Dr. Claudia Bramlage | Evonik Resource Efficiency GmbH
- 11.15 - 11.45 A new approach to the determination of the size, shape and chemical structure of particles in a multi component mixture
Dr. Mark Wingfield | Malvern Panalytical GmbH
- 11.45 - 12.15 Selection criteria of wetting & dispersing additives beyond coloristic properties
Dr. Robin von Hagen | BYK-Chemie GmbH
- 13.15 - 13.45 How to improve development and quality control of dispersion paints by using particle size characterization and image analysis instruments
Lilian Arbenz | Micromeritics GmbH
- 13.45 - 14.15 Assessing stressing conditions by single particle probes
Dr. Stefan Romeis | Institute of Particle Technology Erlangen (LFG)
- 14.15 - 14.45 Productivity increase in the dispersion process through efficient process control with liquid paint color measurement
Hendrik Hustert | ORONTEC GmbH & Co KG
- 15.15 - 15.45 Rapid and high resolution particle size distribution measurement and chemical analysis with electron microscopy
Carsten Pape | LOT-QuantumDesign GmbH
- 15.45 - 16.15 Wet measurements with laser diffraction: Suitable for ink jet inks and agglomerate detection?
Andreas Ludwig | Malvern Panalytical GmbH
- 16.15 - 16.45 Life cycle of nanoparticle sols in the industrial SolGel coating process
Ottokar Klimm | GBneuhaus GmbH

BASIC COURSES & WORKSHOPS

- 10.00 - 10.45 Influence of operating parameters in wet grinding processes
Dr. Stefan Mende | NETZSCH Grinding & Dispersing
- 10.45 - 11.45 Mechanisms of particle stabilization in coating formulations
Frank Kleinsteinberg | Evonik Resource Efficiency GmbH
- 11.45 - 12.15 A basic guide to particle characterization
Dr. Mark Wingfield | Malvern Panalytical GmbH
- 13.15 - 13.45 Flow and deformation of elastic liquids and viscous solids: the basics of rheology
Dr. Christopher Giehl | Anton Paar GmbH
- 13.45 - 14.15 Optimizing rheology for paint and coating applications
Torsten Remmler | Malvern Panalytical GmbH
- 14.15 - 14.45 Use of additives from the perspective of a coatings producer
Udo Hautsch | NETZSCH Grinding & Dispersing
- 15.15 - 16.15 Pre-dispersing processes of high viscose mill bases with large batch sizes
Michael Rapp | NETZSCH Grinding & Dispersing
- 16.15 - 16.45 Seriously, always those beadmills! – „A blessing and a curse!“
Uwe Wolff | Uwe Wolff Engineering GmbH

	Session I – Roland Dorschner Hall	Session II – Room Erwin Weber	Session III – Roland Dorschner Hall Restaurant
	PRODUCTION AND PROCESSING OF PAINTS, COATINGS AND PRINTING INKS	CHARACTERIZATION AND PARTICLE SIZE DISTRIBUTION FORMULATIONS, FUNCTIONALIZATION THROUGH ADDITIVES	BASIC COURSES & WORKSHOPS
08.30	How simulations can assist the design and optimization of dispersion processes	Characterization of the particle size in submicron and nanometer range during dispersion processes	nanolnk - more than just colours
09.15	Versatile production of glass flakes in stirred media mills	Combination of laser diffraction and dynamic image analysis for size and shape characterization of dispersions and powders	Color measurement techniques
09.45	Selection of the optimum bead mill for paint production	Inline characterization of particle size and shape for process control using the example of battery slurries and cocoa liquor	
10.15	COFFEE BREAK		
11.00	Performance improvement of pigment preparations via intensified milling	Powder rheology as a method for development and quality control	Thermogravimetric investigation of particle size and dispersion of a flame retardant in epoxy resin samples
11.30	Fine ceramic beads to get nanoparticles - more than just an auxiliary good	A multi-method approach to quality control illustrated on the industrial powder coating process	
12.00	New media for ultra-fine dispersing and milling	Alternative route for incorporation of an ethanol-based silica suspension in epoxy resin by means of spray-drying technology	Pump Search 4.0 – SPA the new information platform for professional pump users
12.30	LUNCH TIME		
13.30	VISITING ASSEMBLY OR LABORATORIES WITH DEMONSTRATION (PRODUCTION, LABORATORIES, ANALYZING & TESTING)		
14.30	Possibilities and difficulties in using rCB (recycling carbon black)	Physicochemical characteristics of fine iron oxide-particles prepared via pulsation reactor and study the effect of the material processing parameter on the properties of the produced powder	Transition from regular to modular production concepts
15.00	Recycling of solvents using distillation – principle, profitability and integration	Dry powder measurements with laser diffraction on the example of pigments and extenders	Open discussion with experts
15.30	OPEN DISCUSSION TO DIGITAL TRENDS		

Modifications reserved.



Sponsoring Partners



PRODUCTION AND PROCESSING OF PAINTS, COATINGS AND PRINTING INKS

- 08.30 - 09.15 How simulations can assist the design and optimization of dispersion processes
Prof. Dr. Carsten Schilde | IPAT Institute for Particle Technology
- 09.15 - 09.45 Versatile production of glass flakes in stirred media mills
Julian Esper | Institute of Particle Technology Erlangen (LFG)
- 09.45 - 10.15 Selection of the optimum bead mill for paint production
Dr. Jan Berg | BASF Coatings GmbH
- 11.00 - 11.30 Performance improvement of pigment preparations via intensified milling
Dr. Stephan BlöB | Heubach GmbH
- 11.30 - 12.00 Fine ceramic beads to get nanoparticles - more than just an auxiliary good
Dr. Achim Müller | Sigmund Lindner GmbH
- 12.00 - 12.30 New media for ultra-fine dispersing and milling
David Bouttes | Saint Gobain Research Provence
- 14.30 - 15.00 Possibilities and difficulties in using rCB (recycling carbon black)
Christian Sieblist | Harold Scholz & Co. GmbH
- 15.00 - 15.30 Recycling of solvents using distillation – principle, profitability and integration
David Roth | OFRU Recycling GmbH & Co. KG

CHARACTERIZATION AND PARTICLE SIZE DISTRIBUTION - FORMULATIONS, FUNCTIONALIZATION THROUGH ADDITIVES

- 08.30 - 09.15 Characterization of the particle size in submicron and nanometer range during dispersion processes
Dr. Felipe Wolff-Fabris | European Centre for Dispersion Technologies (EZD)
- 09.15 - 09.45 Combination of laser diffraction and dynamic image analysis for size and shape characterization of dispersions and powders
Dr. Thomas Benen | Microtrac GmbH
- 09.45 - 10.15 Inline characterization of particle size and shape for process control using the example of battery slurries and cocoa liquor
Dr. Mirco Wegener | SOPAT GmbH
- 11.00 - 11.30 Powder rheology as a method for development and quality control
Daniel Freeman | Freeman Technology Ltd.
- 11.30 - 12.00 A multi-method approach to quality control illustrated on the industrial powder coating process
Dr. Timothy Aschl | Anton Paar GmbH
- 12.00 - 12.30 Alternative route for incorporation of an ethanol-based silica suspension in epoxy resin by means of spray-drying technology
Martin Müller | SKZ-KFE gGmbH / European Centre for Dispersion Technologies (EZD)
- 14.30 - 15.00 Physicochemical characteristics of fine iron oxide-particles prepared via pulsation reactor and study the effect of the material processing parameter on the properties of the produced powder
Prof. Dr. Tarek Khalil | IBU-tec advanced materials AG
- 15.00 - 15.30 Dry powder measurements with laser diffraction on the example of pigments and extenders
Andreas Ludwig | Malvern Panalytical GmbH

BASIC COURSES & WORKSHOPS

- 08.30 - 09.15 nanoInk - more than just colours
Dr. Justus Hermannsdörfer | Nanoinitiative Bayern GmbH
- 09.15 - 10.15 Color measurement techniques
Dr. Linda Mittelberg | SKZ-KFE gGmbH
- 11.00 - 12.00 Thermogravimetric investigation of particle size and dispersion of a flame retardant in epoxy resin samples
Dr. Ekkehard Füglein | NETZSCH Gerätebau GmbH
- 12.00 - 12.30 Pump Search 4.0 – SPA the new information platform for professional pump users
Kai Stegemann | Star Pump Alliance GmbH
- 14.30 - 15.00 Transition from regular to modular production concepts
Frank Kother | TMC Technology & Marketing Consulting
- 15.00 - 15.30 Open discussion with experts
Dr. Stefan Mende, Michael Rapp, Frank Kleinsteinberg, Dr. Ekkehard Füglein, Torsten Remmler, Kai Stegemann

Dispersion Days 2019 | An event of

NETZSCH

 **EVONIK**
POWER TO CREATE

iPAT
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**Malvern
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EZD
Das Dispergier-Zentrum