

Magyar Kemikusok Egyesulete

28th FATIPEC Congress 2006

“International Congress for
Paint Scientists and Engineers”

June 12-14, 2006
Budapest, Hungary

Volume 1 of 2

Printed from e-media with permission by:

Curran Associates, Inc.
57 Morehouse Lane
Red Hook, NY 12571
www.proceedings.com

ISBN: 978-1-60560-406-0

Some format issues inherent in the e-media version may also appear in this print version.

Copyright (2006) by the Magyar Kemikusok Egyesulete

All rights reserved.

For permission requests, please contact the Magyar Kemikusok Egyesulete at the address below.

Magyar Kemikusok Egyesulete

Fo utca 68

H-1027 Budapest, Hungary

Phone: 36-1-201-6883

Fax: 36-1-201-8056

mail@fatipec2006.hu

Magyar Kemikusok Egyesulete

28th FATIPEC Congress
2006

TABLE OF CONTENTS

Volume 1

"Effect Coatings" by Morphological Design of Polyurethane Dispersions	1
<i>Schoondermark, M.C.</i>	
Solvent-Free Secondary Dispersions for Waterborne 2K PUR Coatings	10
<i>Münzmay, Thomas</i>	
Prepolymer Mixing Process for Making NMP-Free, High-Quality PUDs	17
<i>Gertzmann, Rolf</i>	
Effects of the European Legislation on the Future of the Paint Industry	29
<i>Warnon, Jacques</i>	
Implications of VOC and Chemicals Legislation on Coatings Technology Development Trends	38
<i>Busato, Franco</i>	
Resins and Additives for Alkyd Paints and Powder Coatings, Based on Renewable Resources	43
<i>van Haveren, Jacco</i>	
Al₂O₃/ZrO₂ Nanocomposites for Paint Industry	58
<i>Tolnai, Gyula</i>	
Nanocomposite Dispersions - An Innovative Technology for Water-Based Coatings	63
<i>Tiarks, Franca</i>	
Inorganic/Organic Core/Shell Nanoparticle Dispersions to Improve Scratch Resistance of Coatings	80
<i>Hajas, Janos</i>	
Plenary 1: Use of Spiro-Ortho Silicates as Blocked Polyols/Reactive Diluents in High Solid PUR Clear Coats for Car Refinish Application	91
<i>van den Berg, Keimpe</i>	
New Waterborne Acrylic Binders for Zero VOC Paints	102
<i>Geurts, John</i>	
Structure Development in Polyurethane Networks Based on Star-Like Precursors	111
<i>Vlasak, Petr</i>	
Accuracy of the Weathering of Paints Containing Titanium Dioxide	117
<i>Schmelzer, Josef</i>	
New Methodology for the Determination of the Photocatalytic Stability and Activity of Pigments and Organic Coatings	136
<i>Eisenbach, C.D.</i>	
Durability Assessment Methods to Evaluate the Service Life of External Walls Paints	143
<i>Daniotti, Bruno</i>	
Optimised Network Structures for High Performance Coating Systems	157
<i>Flosbach, Carmen</i>	
Hybrid Polymer Dispersions for Coatings	165
<i>Kozakiewicz, Janusz</i>	

How to Improve the Performance of UV Cured Wood Coatings	177
<i>Poitoux, Mariane</i>	
Synthesis and Characterisation of New Epoxy Binders for Coatings.....	184
<i>Rucinska, Katarzyna</i>	
High Solids Transportation Primer Based on New Phenalkamine Epoxy Curing Agents	187
<i>Dallons, Jean-Luc</i>	
New Cycloaliphatic Epoxides for Photocationic Curing.....	198
<i>Boncza-Tomaszewski, Zbigniew</i>	
The Particles Fineness Effect on the Optical Efficiency and Colour of Chromatic Pigments	203
<i>Indeikin, Eugene A.</i>	
What Colour is My House Going to Be? Relationship Between the Colour and the Structure of Plasters.....	210
<i>Molnár-Nagy, Livia</i>	
New Technology for Advanced Drying Analysis of Coatings	223
<i>Brun, Alice</i>	
Conducting Polypyrrole Particle Composites	229
<i>Adler, Hans-Jürgen</i>	
Fluorinated UV-Curable Coatings on Polyolefins: Properties and Adhesion.....	233
<i>Bongiovanni, Roberta</i>	
Graffiti Resistant Waterborne 2K Polyurethane Coatings	243
<i>Melchior, Martin</i>	
Corrosion Inhibitors.....	254
<i>Gichuhi, Tony</i>	
Introduction of a Voluntary Mark Entitled “Excellent Construction Product” in Hungary.....	278
<i>Pálvölgyi Tamás</i>	
A 25/2006-Os Kormányrendelet (Voc-Rendelet) Lényegi Elemei	280
<i>Sándor, Gáborné</i>	
Plenary 2: Metal Oxides as Potential Active Fillers for Polymers: Concepts and Challenges From Coatings Perspective	284
<i>Kijenski, Jacek</i>	
High Chroma Pearlescent Pigments Designed By Optical Simulation	293
<i>Shiomi, Hiroyuki</i>	
Novel Mechanisms of Matting and the Properties of Matted Coatings.....	306
<i>Fletcher, Tim</i>	
Improved Performance of Waterborne Coatings Through Polymer-Pigment Composite Particle Formation.....	334
<i>Rosano, William</i>	
Protective Ability of Organic Coatings for Concrete Under Chloride Attack	350
<i>Creazzi, Luigi</i>	
Water Uptake/Release of Waterborne Paint Resin Films as Studied By Impedance Spectroscopy and Gravimetry.....	361
<i>Lendvay-Györök, Gabriella</i>	
Investigation of the Epoxy Curing Process on Mild Steel Via Electrochemical Impedance Spectroscopy	372
<i>Attar, M.M.</i>	
Powder Coating and Coil Coating - a Possible Wedding?	376
<i>Pierre, David</i>	

Compositional Gradients in Acrylic/Epoxy Blended Film: Computer Simulation	380
<i>Okamoto, Yoshihiro</i>	
Effect of Nano Layered Silicates on Automotive Refinish Clear Coat Based on Polyurethane	388
<i>Ahmadi, B.</i>	
HEUR Thickeners - Their Interaction with Other Ingredients of Formulations in Emulsion Systems	393
<i>Kirchner, Jürgen</i>	
Combined Perfluoroalkyl and Siloxane Modified Polyacrylates as High Performance Slip, Flow and Levelling Additives	402
<i>Noordam, Arend</i>	
Coatforce Fibres: A New and Versatile Coating Additive	408
<i>Janssen, Frank</i>	
Can the Stability of Water-Based Pigmented Paint Systems Be Predicted?.....	415
<i>Frischmann, Lutz</i>	

Volume 2

Possibilities of the Climatic Test Stations Network for Solution of Coating Durability Problems	437
<i>Karpov, Valery</i>	
Scientific Evaluation of Test Methods to Assess the Durability of Organic Polymers	444
<i>Halliant, Olivier</i>	
Silyl-Based Technology for Marine and Protective Coatings.....	454
<i>Plehiars, Mark</i>	
Photocatalytical Effects on Masonry Coatings.....	456
<i>Then, Dirk</i>	
Silicone Water Repellents and Paints. New Developments and Application Results	459
<i>Zielecka, Maria</i>	
Plenary 3: Solvent Retention During Cure of High Solids Polyurethane Coatings	466
<i>Duskova-Smrckova, Miroslava</i>	
Novel Defoamers and FDA Compliance for Food Contact Printing Inks and Over Print Varnishes	475
<i>James, Vicky</i>	
Corrosion Inhibitors for the Future	486
<i>Gichuhi, Tony</i>	
New Manganese Complexes as Potential Driers for Alkyd Paints	499
<i>Bouwman, Elisabeth</i>	
A Systematic Examination of Factors Affecting Internal Stress of Coatings.....	520
<i>Lewin, Laura</i>	
Investigation of Internal Stresses in Inorganic-Organic Hybrid Coatings	546
<i>Jürgens, Eberhard</i>	
Microbial Contamination in Water Based Polymer Emulsions: An Approach Through Biomolecular Analysis	557
<i>Abbá, Fabio</i>	
Studies on Anticorrosive Properties of Thermally Sprayed Pigmented Polyethylene Coatings.....	565
<i>Singh, Shailesh Kumar</i>	
Precursors for Acrylic Clearcoats.....	582
<i>Snuparek, Jaromir</i>	

The Optimization of Latex Paint Formulations with Carbonate Extenders	590
<i>Zubielewicz, Malgorzata</i>	
Resinous Coatings for Ship Decks	599
<i>Delucchi, Marina</i>	
Organic Coatings for Cheeses	605
<i>Golikov, Igor V.</i>	
Stability, Particle Size and Surface Charge of Nanoparticles	608
<i>Schwarz, Simona</i>	
Accelerated Testing of Different Binder Types Waterborne Coating Systems	613
<i>Fekete, Éva</i>	
Analysis of Weathering Effects in Automotive Coatings By Thermoluminescence	620
<i>Krueger, Simone</i>	
Screening the Weathering Stability of Automotive Coatings By Chemiluminescence	629
<i>Krueger, Simone</i>	
Influence of Fluorescent Polymer Materials Composition on the Optical Properties	637
<i>Kulikova, Olga A.</i>	
Influence of Titanium Dioxide on the Hardening of Epoxy Oligomeres with the Amine Hardeners	642
<i>Manerov, Vladimir B.</i>	
Use of Synergetic Methods in Management of Steady Functioning of the Coating Materials Manufacturing Plant	647
<i>Gladilovich, Vladimir</i>	
Plenary 4: Inorganic Nanoparticles: a New Revolution in the Coatings Industry	652
<i>Sawitowsky, Thomas</i>	
Hydroxyphenyl Triazines: Advanced Multi-Purpose UV Absorber	655
<i>Schaller, Christian</i>	
Application of Biocides and Silver Preparations in Architectural Interior Paints	669
<i>Slusarczyk, Anna</i>	
New Alternatives for Dry-Film Preservation in Coatings	676
<i>Wood, Paul</i>	
Relating the Performance of One-Component Acrylic Coatings with Fundamental Mechanical Properties	691
<i>Mestach, Dirk</i>	
Surface Structure Analysis of Substrates and Coatings	710
<i>Osterhold, Michael</i>	
Morphology and Electrical Conductivity Behaviour of Electro-Deposited Conductive Carbon Black-Filled Epoxy Dispersions Near the Insulator-Metal Transit	720
<i>Ranjbar, Zahra</i>	
Nano Grinding in Agitator Bead Mills	744
<i>Kißwetter, Hans-Georg</i>	
New Corrosion Protection Nanocoatings: Principles, Application and Case Studies	749
<i>Wagner, Georg</i>	
Silicone-Containing Polymer Matrices as Coating Materials	758
<i>Zielecka, Maria</i>	
Shapable Weather-Resistant Low Temperature Thermosetting Urethane Powder Coating Prototypes	768
<i>Gedan-Smolka, Michaela</i>	

Ionomeric Powder Coating Binders with Improved Storage Stability and Reactivity	781
<i>ten Cate, Tessa</i>	
A New Class of Tailor Made Hydroxy Acrylate Copolymers for Fast Drying, Low VOC Polyurethane Clear Coats	786
<i>Heymans, Denis</i>	
Fundamentals of Electrostatic Charging of Polymers	801
<i>Simon, Frank</i>	
Forensic Examination of Car Paints	810
<i>Milczarek, Jakub M.</i>	
International Cooperation Through Research Networks: Case Study of WAITRO	816
<i>Werblinski, Wieslaw</i>	
The Relationship Between the Italian Antifouling Coating Market and Customer Expectations in the Yachting Field	825
<i>Trentin, Ilva</i>	
Goethe's Theory of Colours	842
<i>Voutsinas, John</i>	

Author Index