Preliminary Program

5th International Conference on

Electrophoretic Deposition: Fundamentals and Applications

October 5-10, 2014
Hernstein, Austria

Conference Chair
Prof. Aldo R. Boccaccini
Department of Materials Science and Engineering
University of Erlangen-Nuremberg, Germany

Conference Co-Chairs
Prof. Omer Van der Biest
Department of Metallurgy and Materials Engineering
Katholieke Universiteit Leuven, Belgium

Prof. James Dickerson
Center of Functional Nanomaterials
Brookhaven National Laboratory, USA

Dr. Tetsuo Uchikoshi
National Institute for Materials Science
Japan

Engineering Conference International
32 Broadway, Suite 314 - New York, NY 10004, USA
Phone: 1 - 212 - 514 - 6760, Fax: 1 - 212 - 514 - 6030
www.engconfintl.org – info@engconfintl.org
Sunday, October 5, 2014

16:00 – 18:00  Conference Check-in
18:00 – 20:00  Welcome Reception and Dinner

Notes

• Technical sessions will be in the (TBA).
• Poster Sessions will be in the (TBA).
• Meals will be held in the Panorama Restaurant.
• Audiotaping, videotaping and photography of presentations are prohibited.
• Speakers – Please have your presentation loaded onto the conference computer prior to the session start (preferably the day before).
• Speakers – Please leave at least 3-5 minutes for questions and discussion.
• Please do not smoke at any conference functions.
• Turn your mobile telephones to vibrate or off during technical sessions.
• Be sure to make any corrections to your name/contact information on the Master Participant List or confirm (by your initials) that the listing is correct. A corrected copy will be sent to all participants after the conference.

About Schlos Hernstein

Hernstein Castle stands at the base of a forested precipice, below the ruin of a 12th century defense tower. Today's castle was built between 1727 and 1730, when Count Karl Joseph von Heussenstein turned a manor house into a stately home with a chapel. In 1798 the estate passed to Baron Heinrich von Müller who created the park and built the dam to form the artificial lake with its island. Archduke Ludwig, a nephew of Emperor Franz II, commissioned Theophil von Hansen who, from 1856-1880, redesigned the castle to become one of the most important English gothic buildings in Austria. The wonderfully romantic appearance of the building with its four wings continues to delight and enthrall to the present day.

Since the 1960s, the castle has undergone extensive restoration and refurbishment and has been extended with modern, but unobtrusive buildings which today contain the seminar hotel. The historic rooms in the castle are mostly preserved in their original state and are today used as meeting and seminar rooms.
Monday, October 6, 2014

07:30 – 08:30  Breakfast buffet

08:30 – 08:45  Conference Introduction

SESSION I: FUNDAMENTALS OF EPD I
Session Chair: O. van der Biest

08:45 – 09:15  Keynote
FUNDAMENTALS AND ADVANCED APPLICATIONS OF ELECTROPHORETIC DEPOSITION (EPD)
Partha Sarkar
Environment and Carbon Management Division, Alberta Innovates-Technology Futures.
Edmonton, Alberta, Canada

09:15 – 09:35  SUBSTRATE SELECTION AND MANAGEMENT STRATEGIES FOR AQUEOUS EPD.
Peter Hope
LHV Coatings Ltd. Coleshill, UK

09:35 – 09:55  EFFECT OF ELECTRODE REACTIONS DURING AQUEOUS EPD ON BULK SUSPENSION PROPERTIES AND DEPOSITION QUALITY.
Laxmidhar Besra
Institute of Minerals and Materials Technology (IMMT), Bhubaneswar, India

09:55 – 10:15  THE USE OF IONIC LIQUIDS: A REAL GREEN CHEMISTRY ALTERNATIVE IN THE ELECTRODEPOSITION AND ELECTROPHORETIC DEPOSITION PROCESSES?
Gregorio Vargas
CINESTAV-Saltillo

10:15 – 10:35  EFFECT OF ELECTRIC DOUBLE LAYER CHARACTERISTICS ON CHAIN FORMATION OF CERAMIC NANOPARTICLES.
Babak Raissi
Materials and Energy Research Center (MERC), Iran

10:35 – 11.00  Coffee Break

SESSION II: FUNDAMENTALS OF EPD II
Session chair: Laxmidhar Besra

11:00 – 11:20  ELECTROPHORETIC (INFILTRATION) DEPOSITION OF THICK CONDUCTING SUBSTRATES
Aljaž Ivekovič
Jožef Stefan Institute, Slovenia

11:20 – 11:40  INFLUENCE OF LIGANDS ON THEMOMOBILITY OF NANOPARTICLES DURING THE ELECTROPHORETIC DEPOSITION.
Stephan Barcikowski
Technical Chemistry I, University of Duisburg-Essen, Germany

11:40 – 12:00  UNDERSTANDING THE COLLOIDAL BEHAVIOR OR BIOGLASS 45S5® TO OBTAIN BIOACTIVE-GLASS BASED SOFT COATINGS BY EPD
Sandra Cabanas-Polo
Institute of Biomaterials, Department of Material Science and Engineering, University of Erlangen-Nuremberg, Germany
12:00 – 14:00  Lunch
14:00 – 16:30  Ad hoc sessions and/or free time
16:30 – 17:00  Afternoon Coffee

**SESSION III: NOVEL APPROACHES AND MODELING**
*Session chair:* Stephan Barcikowski

17:00 – 17:30  **Keynote**
**ADVANCES IN MICROSCALE AND NANOSCALE MECHANISMS OF ELECTROPHORETIC DEPOSITION IN AQUEOUS MEDIA**
Guido Falk
University of Saarland, Structural and Functional Ceramics, Germany

17:30 – 17:50  **TOWARDS PHENOMENOLOGICAL UNDERSTANDING OF ELECTROPHORETIC DEPOSITION OF BRUSH-LIKE PARTICLES FOR SOLID POLYMER ELECTROLYTES**
Diana Golodnitsky
Tel Aviv University, Israel

17:50 – 18:10  **CELL ROTATION UNDER DIELECTROPHORETIC FORCES**
Guigen Zhang
Department of Bioengineering and IBOE, Clemson University, USA

18:10 – 18:30  **HYDRODYNAMIC MODELING OF ELECTROCODEPOSITION ON A ROTATING CYLINDER ELECTRODE**
Alexaner Vakhrushev
Institute of Mechanics, Ural Branch of the Russian Academy of Sciences, Russia

18:30 – 18:50  **PARTICLE-PARTICLE INTERACTION UNDER DIELECTROPHORESIS FOR RAPID PATTERNING**
Guigen Zhang
Department of Bioengineering and IBOE, Clemson University, USA

19:30 – 21:00  Dinner
21:00 – 22:00  Social Hour
Tuesday, October 7, 2014

07:30 – 08:30  Breakfast buffet

**SESSION IV: FUNCTIONAL FILMS AND DEPOSITS I**
**Session chair:** Tetsuo Uchikoshi

08:30 – 09:00  **Keynote**
ELECTROPHORETIC DEPOSITION OF COLLOIDAL NANOPARTICLES AND NANOSHEETS
Atsunori Matsuda
Toyohashi University of Technology, Japan

**PARALLEL SESSION A**

09:00 – 09:20  PIEZOELECTRIC ELEMENTS FOR MULTI-ELEMENT LINEAR-ARRAY TRANSDUCERS PREPARED BY ELECTROPHORETIC DEPOSITION
Danjela Kuscer
Jozef Stefan Institute, Slovenia

09:20 – 09:40  NICKEL OXIDE/ NICKEL COMPOSITE AS SUPERCAPACITOR ELECTRODE VIA ELECTROPHORETIC DEPOSITION
Zoilo González
Instituto de Cerámica y Vidrio (CSIC), Spain

09:40 – 10:00  NICKEL-COBALT DOUBLE HYDROXIDE AND OXIDE DECORATED CARBON NANOTUBES VIA AQUEOUS ELECTROPHORETIC DEPOSITION TOWARDS CATALYTIC APPLICATIONS
Desheng D. Meng
Multi-Scale Energy Systems (MuSES) Lab, Department of Mechanical and Aerospace Engineering, The University of Texas at Arlington, USA

10:00 – 10:20  NANOMANUFACTURED HYBRID CARBON NANOMATERIALS FOR IMPROVED ENERGY STORAGE DEVICES USING ELECTROPHORETIC ASSEMBLY
Cary Pint
Vanderbilt University, USA

10:20 – 10:40  ELECTROPHORETIC DEPOSITION OF APATITE TYPE LANTHANUM SILICATES FOR SOFC HALF-CELL PRODUCTION
Omer Van der Biezen
Katholieke Universiteit Lueven, Belgium

**PARALLEL SESSION B**

**SESSION V: EPD IN CERAMIC PROCESSING I**
**Session Chair:** Begoña Ferrari

09:00 – 09:20  ELECTROPHORETIC METHOD FOR FABRICATING POROUS CERAMICS – APPLICATION TO DIFFERENT OXIDE MATERIALS
Kirsten Moritz
Technische Universität Bergakademie Freiberg, Institute of Ceramics, Glass and Construction Materials, Germany

09:20 – 09:40  MICROSTRUCTURE AND DIELECTRIC PROPERTIES RELATIONSHIP OF SR4ND2Ti4Nb6O30TUNGSTEN BRONZE THICK FILMS PREPARED BY ELECTROPHORETIC DEPOSITION
Paula. M. Vilarinho
University of Aveiro, Portugal
09:40 – 10:00  FABRICATION AND CHARACTERIZATION OF 3-D PHOTONIC CRYSTALS OF VARIOUS MICROSPHERES BY ELECTROPHORETIC SELF-ASSEMBLY
Rong-Fuh Louh
Feng Chia University, Taiwan

10:00 – 10:20  MULTILAYERED CERAMIC CONSTRUCTS CREATED BY EPD
Carolina Mochales
“Charité” Universitaetmedizin, Germany

10:20 – 10:40  INFLUENCE OF FORMULATION ADDITIVES ON THE ELECTROPHORETIC MOBILITY AND CORROSION RESISTANCE ENAMEL VITREOUS COATING OBTAINED BY ELECTROPHORETIC DEPOSITION
Josemari Muñoz
Fundación CIDETEC, Spain

10:40 – 11:20  Coffee Break

SESSION VI: FUNCTIONAL FILMS AND DEPOSITS II
Session chair: Paula M. Vilarinho

11:20 – 11:50  Keynote
POROUS VANADIUM PENTOXIDE FILMS BY SOL ELECTRODEPOSITION FOR ENERGY STORAGE APPLICATION
Guozhong Cao
University of Washington, USA

11:50 – 12:10  ELECTROPHORETIC DEPOSITION OF LAYERED AND BLENDED PHOSPHORS FOR WHITE SOLID STATE LIGHTING
Jan Talbot
University of California-San Diego, USA

12:10 – 12:30  ELECTROPHORETIC DEPOSITION OF PHOSPHOR MATERIAL FOR WHITE LIGHT CONVERSION IN LEDS
Ion Stoll
OSRAM Opto Semiconductors GmbH, Germany

12:30 – 12:50  DEVELOPMENT OF THERMOELECTRIC FILMS BY ELECTROPHORESIS DEPOSITION
Daryoosh Vashaee
Oklahoma State University, USA

13:00 – 14:30  Lunch

14:30 – 18:00  Optional excursion to Vienna
Ad hoc sessions and/or free time

18:30 – 19:30  SESSION VII: POSTER SESSION I

19:30 – 21:00  Dinner

21:00 – 22:00  Social Hour
PARALLEL SESSION C

SESSION VIII-C: EPD OF BIOMATERIALS AND BIOLOGICAL ENTITIES I
Session Chair: Aldo R. Boccaccini

08:30 – 09:00  
**Keynote**

ALTERNATING CURRENT ELECTROPHORETIC DEPOSITION (AC-EPD) OF BIOMOLECULE COATINGS
Bram Neirinck
Katholieke Universiteit Leuven, Belgium

09:00 – 09:20  
ELECTROPHORETIC DEPOSITION OF POROUS Ti COATINGS FOR BONE IMPLANTS: IN VITRO AND IN VIVO EVALUATION
Annabel Braem
Katholieke Universiteit Leuven, Belgium

09:20 – 09:40  
ELECTROPHORETIC DEPOSITION OF HYDROXYAPATITE AND BIOACTIVE GLASSES COATINGS ON THE Ti6Al4V ALLOY SUBJECTED TO SURFACE MECHANICAL ATTRITION TREATMENT
Joel Faure
Reims University, France

09:40 – 10:00  
NOVEL BIOCOMPOSITE HYDROXYAPATITE/GRAPHENE COATINGS ON TITANIUM SUBSTRATE ASSEMBLED BY ELECTROPHORETIC DEPOSITION
Vesna Miskovic-Stankovic
University of Belgrade, Serbia and Montenegro

10:00 – 10:20  
SURFACE MODIFICATION OF BIODEGRADABLE Mg ALLOY BY ELECTROPHORETIC DEPOSITION OF DIOPSIDE/BREDIGITE/FLUORIDATED HYDROXYAPATITE NANOCOMPOSITE COATING TO IMPROVE ITS CORROSION RESISTANCE AND BIOCOMPATIBILITY
Lobat Tayebi
Oklahoma State University, USA

10:20 – 10:50  
Coffee Break

SESSION IX-C: EPD OF BIOMATERIALS AND BIOLOGICAL ENTITIES II
Session Chair: Bram Neirinck

10:50 – 11:10  
DEVELOPMENT AND CHARACTERISATION OF COMPOSITE BIOACTIVE COATINGS OBTAINED BY ELECTROPHORETIC DEPOSITION
Fatemehsadat Pishbin
Department of Materials, Imperial College London, UK

11:10 – 11:30  
ELECTROPHORETIC DEPOSITION OF NTIO2-NBG/ALGINATE COMPOSITE COATING FOR BONE REPLACEMENT APPLICATIONS
Luis Cordero-Arias
Institute of Biomaterials, Department of Material Science and Engineering, University of Erlangen-Nuremberg, Germany

11:30 – 11:50  
ELECTROPHORETIC DEPOSITION AS A BIOFABRICATION TECHNIQUE
Aldo Boccaccini
Institute of Biomaterials, Department of Material Science and Engineering, University of Erlangen-Nuremberg, Germany

12:30 – 14:00   Lunch
14:00 – 16:30   Ad hoc sessions and/or free time
16:30 – 17:00   Afternoon Coffee

**SESSION X-C: EPD OF BIOMATERIALS AND BIOLOGICAL ENTITIES III**

*Session chair:* Aldo R. Boccaccini

17:00 – 17:20  BIOGLASS®-TiO$_2$-Ag COMPOSITE COATINGS WITH ANTIBACTERIAL EFFECT OBTAINED BY ELECTROPHORETIC DEPOSITION
    María José Santillán
    National Cuyo University, Argentina

17:20 - 17:40  MECHANICAL AND BIOLOGICAL PROPERTIES OF REDUCED GRAPHENE OXIDE-HYDROXYAPATITE COMPOSITE COATING FABRICATED BY ELECTROPHORETIC DEPOSITION
    Saeid Baradaran
    University of Malaya, Malaysia

17:40 – 18:00  INFLUENCE OF ORGANIC MODIFIER LOADING ON PARTICLE DISPERSION OF BIODEGRADABLE POLYCAPROLACTONE/NATURAL MONTMORILLONITE NANOCOMPOSITES
    Onsy Dimitry
    Egyptian Petroleum Research Institute, Egypt

18:00 – 18:20  ELECTROPHORETIC DEPOSITION OF CHITOSAN-GRAPHENE OXIDE NANOCOMPOSITE COATINGS ON TITANIUM IMPLANTS
    Abdolreza Simchi
    Sharif University of Technology, Iran

18:30 – 20:15  **STUDENT CONTEST** (*Rapid firing presentations followed by poster session*)

List of participants:

Saeid Baradaran, HYDROXYAPATITE-GRAPHENE AND METAL DOPED COMPOSITES AND COATINGS FOR ORTHOPEDIC APPLICATIONS (*To be confirmed*)

Ivyleen Bernardo Arugay, SEPARATING NANOCLAY MINERALS VIA ELECTROPHORETIC DEPOSITION

Raymond Blanga, DEVELOPMENT OF COMPOSITE ELECTROLYTE FOR THE MICROBATTERY APPLICATION

Qiang Chen, BIOACTIVE GLASS-BIOPOLYMER MULTILAYER COATINGS FABRICATED BY ELECTROPHORETIC DEPOSITION COMBINED WITH LAYER-BY-LAYER ASSEMBLY

Luis Eduardo Cordero Arias, ELECTROPHORETIC DEPOSITION OF COMPOSITE BIOACTIVE COATINGS BASED ON CHITOSAN AND SOL-GEL DERIVED BIOACTIVE GLASSES
Ryan D. Corpuz, ELECTROPHORETIC FABRICATION OF SUPERHYDROPHOBIC SILICA-STAINLESS STEEL COMPOSITE

Sanjukta Dey, EFFECT OF ELECTRODE REACTION DURING AQUEOUS ELECTROPHORETIC DEPOSITION ON BULK SUSPENSION PROPERTIES AND DEPOSITION QUALITY

Pietro Galizia, THICK COMPOSITE MAGNETO-DIELECTRIC FILMS PRODUCED BY ELECTROPHORETIC DEPOSITION

Namir S. Jackoub Raddaha, STUDY OF THE ELECTROPHORETIC DEPOSITION FOR "CHITOSAN/HALLOYSITE NANOTUBES/TITANIUM DIOXIDE"COMPOSITE USING TAGUCHI EXPERIMENTAL DESIGN APPROACH

Sven Koenen, ELECTROPHORETIC DEPOSITION OF LIGAND-FREE NANOPARTICLE AS APPLICATION FOR THE NANOSTRUCTURING OF ELECTRODES FOR THE TREATMENT OF PARKINSON'S DISEASE.

Pai Liu, MECHANISM OF THE ELECTROPHORESIS DEPOSITION OF HIGHLY ORDERED SEMICONDUCTOR NANORODS IN DEVICE SCALE (To be confirmed)

Mehdi Mehralí, ELECTROPHORETIC DEPOSITION OF CALCIUM SILICATE–REDUCED GRAPHENE OXIDE COMPOSITES ON TITANIUM DENTAL IMPLANT

Carlos Mendoza Gallego, DISPERSION AND ELECTROPHORETIC DEPOSITION OF TIN AND TIC NANOPARTICLES

Farideh Ordikhani, ELECTROPHORETIC DEPOSITION OF CHITOSAN-GRAPHENE OXIDE NANOComposite COATINGS ON TITANIUM IMPLANTS (To be confirmed)

Wilián Jesus Pech Rodríguez, ELECTROPHORETIC CO-DEPOSITION OF COPPER AND CARBON ON A HIGH CARBON STEEL SUBSTRATE UNDER NON-ASYMMETRIC AC ELECTRIC FIELDS

Silvina Claudia Real, ELECTROPHORETIC DEPOSITION OF ZNO NANOSTRUCTURES: AU NANO-CLUSTER ON THE SUBSTRATES INDUCE NANOWIRE GROWTH

Christian Rodríguez Alemán, DEPOSITION OF ALUMINUM-CARBON COMPOSITES ON ALUMINUM SUBSTRATES BY ELECTROPHORETIC DEPOSITION PROCESS: EFFECT OF PULSED ELECTRIC FIELD

S. Farid S. Shirazi, IN VITRO AND MECHANICAL PROPERTIES EVALUATION OF NANO-WIRE CALCIUM SILICATE COATING ON TITANIUM SUBSTRATE VIA EPD METHOD

Stephen Tay, AN ENVIRONMENTALLY FRIENDLY SOLUTION PROCESSING OF EARTH-ABUNDANT AND NON-TOXIC MATERIALS FOR PHOTOVOLTAICS

Despoina Vriami, ALIGNMENT OF ZIRCONIA DURING ELECTROPHORETIC DEPOSITION IN A STRONG MAGNETIC FIELD

20:15 – 22:00 Dinner
PARALLEL SESSION D:

SESSION VIII-D: NANOSTRUCTURED MATERIALS AND FILMS I
Session Chair: James H. Dickerson

08:30 – 09:00 Keynote
ELECTROPHORETIC DEPOSITION AS A ROUTE TO FORMATION OF HIGHLY ORDERED SEMICONDUCTOR NANOROD ASSEMBLIES ON SUBSTRATES
Kevin M. Ryan
University of Limerick, Ireland

09:00 – 09:20 TOWARD THE FULL YIELD OF THE EPD PROCESS FOR SHAPING HIGHLY ORIENTED FILMS MADE OF PLATELET-LIKE NANOSTRUCTURES
Begoña Ferrari
ICV-CSIC, Spain

09:20 – 09:40 ELECTROPHORETIC DEPOSITION OF NANOPARTICLES: DESIGNING NANOSTRUCTURES
Alejandro Vázquez
Universidad Autónoma de Nuevo León, Mexico

09:40 – 10:00 TITANIA NANOPARTICLE FILM PREPARED BY ELECTROPHORETIC DEPOSITION WITH DC CONSTANT CURRENT CONDITION
Yasushige Mori
Doshisha University, Japan

10:00 – 10:20 ELECTROPHORETIC CO-DEPOSITION OF CdSe-TiO₂ NANOCOMPOSITE
Khatijah Yaacob
Universiti Sanis Malaysia, Malaysia

10:20 – 10:50 Coffee Break

SESSION IX-D: NANOSTRUCTURED MATERIALS AND FILMS II
Session Chair: Jan Talbot

10:50 – 11:10 EPD AS A POWERFUL TOOL TO CONTROL THE DEPOSITION PROCESS OF DENSE AND POROUS FILMS USING SOL-GEL TECHNOLOGY
Yolanda Castro
ICV-CSIC, Spain

11:10 – 11:30 ELECTROPHORETIC DEPOSITION OF NANOPARTICLES FOR CONTROLLED OPTICAL PROPERTIES
Guillaume Toquer
ENSCM, France

11:30 – 11:50 TOWARD DYNAMIC CONTROL OF NANOPARTICLE MONOLAYERS FABRICATED BY ELECTROPHORETIC DEPOSITION
James H. Dickerson
CFN-Brookhaven National Laboratory, USA

12:30 – 14:00 Lunch
14:00 – 16:30  
*Ad hoc* sessions and/or free time

16:30 – 17:00  
Afternoon Coffee

**SESSION X-D: NANOSTRUCTURED MATERIALS AND FILMS III**

*Session chair:* Alejandro Vazquez

17:00 – 17:20  
**ELECTROPHORETIC DEPOSITION OF NANOPARTICLES AS ELECTROCATALYSTS FOR ELECTROLYSIS IN THE SOLAR SULFUR AMMONIA HYDROGEN PRODUCTION CYCLE**

Jan Talbot  
University of California at San Diego, USA

17:20 - 17:40  
**ELECTROPHORETIC DEPOSITION OF MULTI-SIZED TITANIA NANOPARTICLES TO FABRICATE EXTREMELY ROBUST MESOPOROUS FILMS ON DIFFERENT SUBSTRATES WITHOUT BINDERS OR ADDITIVES-APPLICATION TO DYE-SENSITIZED SOLAR CELLS**

Nima Parsi Benehkohal  
McGill University, Canada

17:40 – 18:00  
**INFLUENCE OF MWCNT CONCENTRATION ON THE ELECTROCHEMICAL PERFORMANCE OF PULSE ELECTRODEPOSITED SN-NI-MWCNT COMPOSITE ANODE FOR LITHIUM-ION BATTERIES**

Hatem Akbulut  
Sakarya University, Turkey

18:00 – 18:20  
**SUSPENSION STABILIZATION AND ELECTROPHORETIC DEPOSITION OF MICROWAVE HYDROTHERMALLY SYNTHESIZED DOPED AND UN-DOPED BIFEO3 NANOPARTICLES FOR PHOTOCATALYTIC APPLICATIONS**

Chiara Ponzoni  
University of Modena and Reggio Emilia, Italy

18:30 – 20:15  
**STUDENT CONTEST (Rapid firing presentations followed by poster session)**

List of participants:

Saeid Baradaran, *HYDROXYAPATITE-GRAPHENE AND METAL DOPED COMPOSITES AND COATINGS FOR ORTHOPEDIC APPLICATIONS (To be confirmed)*

Ivyleen Bernardo Arugay, *SEPARATING NANOCLAY MINERALS VIA ELECTROPHORETIC DEPOSITION*

Raymond Blanga, *DEVELOPMENT OF COMPOSITE ELECTROLYTE FOR THE MICROBATTERY APPLICATION*

Qiang Chen, *BIOACTIVE GLASS-BIOPOLYMER MULTILAYER COATINGS FABRICATED BY ELECTROPHORETIC DEPOSITION COMBINED WITH LAYER-BY-LAYER ASSEMBLY*

Luis Eduardo Cordero Arias, *ELECTROPHORETIC DEPOSITION OF COMPOSITE BIOACTIVE COATINGS BASED ON CHITOSAN AND SOL-GEL DERIVED BIOACTIVE GLASSES*

Ryan D. Corpuz, *ELECTROPHORETIC FABRICATION OF SUPERHYDROPHOBIC SILICA-STAINLESS STEEL COMPOSITE*
Sanjukta Dey, EFFECT OF ELECTRODE REACTION DURING AQUEOUS ELECTROPHORETIC DEPOSITION ON BULK SUSPENSION PROPERTIES AND DEPOSITION QUALITY

Pietro Galizia, THICK COMPOSITE MAGNETO-DIELECTRIC FILMS PRODUCED BY ELECTROPHORETIC DEPOSITION

Namir S. Jackoub Raddaha, STUDY OF THE ELECTROPHORETIC DEPOSITION FOR "CHITOSAN/HALLOYSITE NANOTUBES/TITANIUM DIOXIDE"COMPOSITE USING TAGUCHI EXPERIMENTAL DESIGN APPROACH

Sven Koenen, ELECTROPHORETIC DEPOSITION OF LIGAND-FREE NANOPIRTICLE AS APPLICATION FOR THE NANOSTRUCTURING OF ELECTRODES FOR THE TREATMENT OF PARKINSON'S DISEASE.

Pai Liu, MECHANISM OF THE ELECTROPHORESIS DEPOSITION OF HIGHLY ORDERED SEMICONDUCTOR NANORODS IN DEVICE SCALE (To be confirmed)

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Carlos Mendoza Gallego, DISPERSION AND ELECTROPHORETIC DEPOSITION OF TIN AND TIC NANOPIRTICLES

Farideh Ordikhani, ELECTROPHORETIC DEPOSITION OF CHITOSAN-GRAPHENE OXIDE NANOComposite COATINGS ON TITANIUM IMPLANTS (To be confirmed)

Wilian Jesus Pech Rodriguez, ELECTROPHORETIC CO-DEPOSITION OF COPPER AND CARBON ON A HIGH CARBON STEEL SUBSTRATE UNDER NON-ASYMMETRIC AC ELECTRIC FIELDS

Silvina Claudia Real, ELECTROPHORETIC DEPOSITION OF ZNO NANO-STRUCTURES: AU NANO-CLUSTER ON THE SUBSTRATES INDUCE NANOWIRE GROWTH

Christian Rodriguez Alemán, DEPOSITION OF ALUMINUM-CARBON COMPOSITES ON ALUMINUM SUBSTRATES BY ELECTROPHORETIC DEPOSITION PROCESS: EFFECT OF PULSED ELECTRIC FIELD

S. Farid S. Shirazi, IN VITRO AND MECHANICAL PROPERTIES EVALUATION OF NANO-WIRE CALCIUM SILICATE COATING ON TITANIUM SUBSTRATE VIA EPD METHOD

Stephen Tay, AN ENVIRONMENTALLY FRIENDLY SOLUTION PROCESSING OF EARTH-ABUNDANT AND NON-TOXIC MATERIALS FOR PHOTOVOLTAICS

Despoina Vriami, ALIGNMENT OF ZIRCONIA DURING ELECTROPHORETIC DEPOSITION IN A STRONG MAGNETIC FIELD

20:15 – 22:00 Dinner
Thursday, October 9, 2011

07:30 – 08:30 Breakfast buffet

**SESSION XI: POLYMERS AND COMPOSITE COATINGS**
*Session chair: Kevin Ryan*

08:30 – 09:00 **Keynote**
**ELECTROPHORETIC DEPOSITION AT THE INTERFACE OF IMMISCIBLE LIQUIDS**
Cullen Buie
Massachusetts Institute of Technology, USA

**PARALLEL SESSION E**

09:00 – 09:20 **A NOVEL ELECTROPHORETIC DEPOSITION PROCESS TO PRODUCE DIELECTRIC AND ANTICORROSION EPOXY-SILICATE NANOCOMPOSITE FILMS.**
Ashok Kumar Shukla
MVJ College of Engineering, India

09:20 – 09:40 **ELECTROPHORETIC DEPOSITION OF LIGNIN REINFORCED POLYMER COATINGS**
M. Federica De Riccardis
ENEA, Italy

09:40– 10:00 **THICK COMPOSITE MAGNETOELECTRIC FILMS PRODUCED BY ELECTROPHORETIC DEPOSITION**
Carmen Galassi
CNR-ISTEC, Italy

**PARALLEL SESSION F**

**SESSION XII: EPD IN CERAMIC PROCESSING II**
*Session Chair: Andrew Pascall*

09:00 – 09:20 **Cu₃TeO₆ THICK FILMS: PROCESSING BY ELECTROPHORETIC DEPOSITION AND ELECTRICAL CHARACTERIZATION**
Paula M. Vilarinho
University of Aveiro, Portugal

09:20 – 09:40 **ELECTROPHORETIC CLASSIFICATION OF ULTRAFINE SILICA PARTICLES IN DILUTE AQUEOUS SUSPENSION**
Ryan D. Corpuz
Mindanao State University-Iligan Institute of Technology, Philippines

09:40 – 10:00 **ULTRA-LOW-POWER ELECTROPHORETIC DEPOSITION OF SILICA POWDER USING NONFLAMMABLE ORGANIC SOLVENT**
Hideyuki Negishi
National Institute of Advanced Industrial Science and Technology (AIST), Japan

10:00 – 10:20 **INSERTION OF BOEHMITE PARTICLES FROM AQUEOUS COLLOID SUSPENSION INTO ANODIC FILM SUPPORTED ON ALUMINIUM**
Florent Caubert
Centre Inter-universitaire de Recherche et d’Ingénierie des Matériaux, France

10:20 – 10:50 Coffee break
10:50 – 11:10 ELECTROPHORETIC DEPOSITION OF POLY-ETHER-ETHER KETONE (PEEK) FROM AQUEOUS SUSPENSIONS
Saša Novak
Jožef Stefan Institute, Slovenia

11:10 – 11:30 SURFACE MODIFICATION OF COMPLEX OXIDE POWDER WITH POLYELECTROLYTE LAYERS IMPROVING EPD CHARACTERISTICS
Tetsuo Uchikoshi
National Institute for Materials Science, Japan

11:30 – 11:50 THE ELECTROPHORETIC DEPOSITION OF TiO₂-ENHANCED COMPOSITE COATINGS ON RARE EARTH PERMANENT MAGNETIC MATERIALS
Zhenchen Zhong
School of Materials Science and Engineering, Nanchang Hangkong University, China

11:50 – 12:30 Ad hoc discussions

12:30 – 14:00 Lunch

14:00 – 16:30 Ad hoc sessions and/or free time

16:30 – 17:00 Afternoon Coffee

17.00 – 18.00 SESSION XIII: POSTER SESSION II

19:30 – 21:00 Conference Banquet

21:00 – 22:00 Social Hour
Friday, October 10, 2011

07:30 – 08:30  Breakfast buffet

**SESSION XIV: ADVANCED EXPERIMENTAL TECHNIQUES**

**Session chair:** Sasa Novak

08:30 – 08:50  PARTICLE ASSEMBLY OF MICRON AND NANO SCALE MATERIALS WITH PARTICLE-TO-PARTICLE PRECISION BY ELECTROPHORETIC DEPOSITION
Tammy Olson
Lawrence Livermore National Laboratory, USA

08:50 – 09:10  ELECTROPHORETIC DEPOSITION AS AN ADDITIVE MANUFACTURING TECHNIQUE
Andrew Pascall
Lawrence Livermore National Laboratory, USA

09:10 – 09:30  MECHANISM OF SONICATION-ASSISTED ELECTROPHORETIC DEPOSITION OF CARBON NANO-FIBERS ON CARBON FABRICS
Gengheng Zhou
KIMS, South Korea

09:30 – 09:50  CRYSTALLINE-ORIENTED BETA-SIALON:EU2+ PHOSPHOR DEPOSITS FABRICATED BY ELECTROPHORETIC DEPOSITION WITHIN A STRONG MAGNETIC FIELD: PREPARATION PROCESS AND PHOTOLUMINESCENCE PROPERTY DEPENDING ON ORIENTATION
Tetsuo Uchikoshi
National Institute of Materials Science, Japan

09:50 – 10:10  FABRICATION OF C-AXIS-ORIENTED ZEOLITE L SEED LAYER ON POROUS ZIRCONIA SUBSTRATE BY ELECTROPHORETIC DEPOSITION IN STRONG MAGNETIC FIELD
Chika Matsunaga
National Institute of Materials Science, Japan

10:10 – 11:30  **Conclusions** (NEXT EPD CONFERENCE, INDUSTRIAL INVOLVEMENT, SCIENTIFIC NETWORK ON EPD, EUROPEAN PROJECTS, INCREASE PARTICIPATION OF “ELECTROCHEMISTRY COMMUNITY”, EDUCATIONAL MATTERS, ETC.)

12:00   Lunch and departures