Program

4th International Conference on Electrophoretic Deposition: Fundamentals and Applications

October 2-7, 2011
CasaMagna Marriott Hotel, Puerto Vallarta, Mexico

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. Rolf Clasen
Department of Powder Technology
University of Saarland, Saarbrücken, Germany

Prof. James Dickerson
Department of Physics and Astronomy
Vanderbilt University, USA
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Sunday, October 2, 2011

16:00 – 18:00  Registration
18:00 – 20:00  Welcome Reception and Dinner

Notes

- Technical sessions will be in the Vallarta IV.
- Poster Sessions will be in the Vallarta V
- Meals will be held in the:
  - Breakfast – Restaurant Champions & Main Garden (will advise on site each day’s location)
  - Lunch – Mikado Restaurant
  - Dinner:
    - Sunday – Beach Patio
    - Monday – El Patio
    - Tuesday – Beach Patio
    - Wednesday – Vallarta VI-VIII
    - Thursday – Las Casitas Garden
- 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.
Monday, October 3, 2011

07:30 – 08:30  Breakfast

08:30 – 08:45  Conference Introduction

**SESSION I: ADVANCED EXPERIMENTAL TECHNIQUES I**

**Session Chair:** Omer van der Biest

08:45 – 09:05  ELECTROPHORETIC MICRO DEPOSITING
Rolf Clasen
Saarland University, Saarbrücken, Germany

09:05 – 09:25  DEPOSITION OF METAL AND METAL-OXIDE COATINGS USING NANOFUID PRECURSORS
Vahid Firouzdor
Department of Engineering Physics, University of Wisconsin-Madison, USA

09:25 – 09:45  HYBRID ELECTROPHORETIC DEPOSITION WITH ANODIZING PROCESS FOR SUPERHYDROPHILIC SURFACES ENHANCING CRITICAL HEAT FLUX IN POOL BOILING
Young Soo Joung
Massachusetts Institute of Technology, USA

09:45 – 10:05  THE ORIENTATION OF BARIUM FERRITE FILMS: APPLIED MAGNETIC FIELD VERSUS ELECTROPHORETIC DEPOSITION
Darja Lisjak
Jozef Stefan Institute, Slovenia

10:05 – 10:25  TEXTURED Ti₃SiC₂ BY EPD IN A STRONG MAGNETIC FIELD
Mrinalini Mishra
National Institute for Materials Science, Japan

10:25 – 11.00  Coffee Break

**SESSION II: ADVANCED EXPERIMENTAL TECHNIQUES II**

**Session chair:** Jan Ma

11:00 – 11:20  ORIENTATION CONTROL OF HEMATITE VIA TRANSFORMATION OF TEXTURED GOETHITE PREPARED BY EPD IN A STRONG MAGNETIC FIELD
Tetsuo Uchikoshi
National Institute for Materials Science, Japan

11:20 – 11:40  GROWTH DYNAMICS OF CDS-PAMAM DENDRIMERS NANOCOMPOSITES STUDIED IN THE PRESENCE AND THE ABSENCE OF AN ELECTRIC FIELD
Perla Méndez
Centro de Investigación y Desarrollo Tecnológico en Electroquímica S.C., Mexico

11.40 – 12:00  PULSE PULSE/REVERSE ELECTRIC FIELDS FOR EPD OF THERMAL BARRIER COATINGS
Heather McCrabb
Faraday Technology, Inc., USA

12:30 – 14:00  Lunch

14:00 – 16:30  Ad hoc sessions and/or free time
Monday, October 3, 2011 (continued)

16:30 – 17:00  Afternoon Coffee

SESSION III: EPD IN CERAMIC PROCESSING
Session chair: Jan Talbot

17:00 – 17:30  Keynote
ELECTROPHORETIC DEPOSITION OF CERAMIC COMPACTS FROM AQUEOUS SUSPENSIONS
Rolf Clasen, University of Saarland, Germany

17:30 – 17:50  FLY ASH/RARE EARTH OXIDE COATINGS BY EPD: PROCESSING AND CHARACTERIZATION
Ana Maria Arizmendi-Morquecho
Centro de Investigacion en Materiales Avanzados, S.C. Unidad Monterrey, Mexico

17:50 – 18:10  ELECTROPHORETIC DEPOSITION OF THIN-FILM ENERGY-STORAGE DEVICES
Diana Golodnitsky
Tel Aviv University, Israel

18:10 – 18:30  CATODIC ELECTRODEPOSITION AND CHARACTERIZATION CERIA STABILIZED ZIRCONIA FILM USING XPS, TEM, SEM AND AFM
M. Eugenia Contreras Garcia
FIQ Universidad Michoacana de San Nicolas de Hidalgo, Mexico

19:00 – 20:30  Dinner

20:30 – 21:30  Social Hour
SESSION IV: NANOSTRUCTURED MATERIALS AND FILMS I
Session chair: James Dickerson

08:30 – 09:00  Keynote
ASSEMBLING AND PACKING OF NANOSTRUCTURES UNDER AN ELECTRIC FIELD
Begoña Ferrari, Instituto de Ceramica y Vidrio, CSIC, Spain

09:00 – 09:20  HIGH VOLTAGE ELECTROPHORETIC DEPOSITION OF VERTICALLY-ALIGNED
NANOFORESTS FOR SCALABLE NANOMANUFACTURING OF ELECTROCHEMICAL
ENERGY STORAGE DEVICES
Dennis Desheng Meng
Multi-Scale Energy Systems (MuSES) Laboratory, Michigan Technological University, USA

09:20 – 09:40  THIN FILMS OF EUROPİUM(III) DOPED-TİO2 PREPARED BY ELECTROPHORETIC
DEPOSITION FROM NANOPARTICULATE SOLS
Mario Borlaf
Instituto de Cerámica y Vidrio, Spain

09:40 – 10:00  OPTIMIZATION OF AQUEOUS ELECTROPHORETIC DEPOSITION OF NANO-
STRUCTURED TITANIA FILMS FOR DYE-SENSITIZED SOLAR CELL APPLICATION
Nima Parsi Benehkohal
McGill University, Montreal, Canada

10:00 – 10:20  TUNABLE SURFACE WETTING IN TRANSFERABLE FILMS OF GRAPHENE OXIDE
James H. Dickerson
Vanderbilt University, USA

10:20 – 11:00  Coffee Break

SESSION V: NANOSTRUCTURED MATERIALS AND FILMS II
Session chair: James Dickerson

11:00 – 11:20  FUNCTIONALLY GRADED, NANOSTRUCTURED MATERIALS VIA PATTERNED
ELECTROPHORETIC DEPOSITION
Andrew J. Pascall
Lawrence Livermore National Laboratory, USA

11:20 – 11:40  FABRICATION OF 2-DIMENSIONAL IRON OXIDE NANOPARTICLE SUPERLATTICES
BY ELECTROPHORETIC DEPOSITION
Alex Krejci
Vanderbilt University, USA

11:40 – 12:00  ASSEMBLING OF ZNO NANOFİLAKES WITHIN ORGANISED THİCK FILMS
Maria Verde
Instituto de Cerámica y Vidrio, CSIC, Spain

12.00 – 12.20  EPD OF METAL OXIDE NANOPARTİCLES FROM POLYOL-BASED COLLOIDAL
SUSPENSIONS
Carmen Galassi
CNR-ISTEC, Faenza, Italy
Tuesday, October 4, 2011 (continued)

12:20 – 12:40 MECHANICAL PROPERTIES OBTAINED BY NANOINDENTATION OF NANOSTRUCTURED TITANIA-ALUMINA FILMS
María Eugenia Contreras-García
IIM, UMSNH, Mexico

13:00 – 14:30 Lunch

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

16:30 – 17:00 Afternoon Coffee

SESSION VI: NANOSTRUCTURED MATERIALS AND FILMS III
Session Chair: James Dickerson

17:00 – 17:20 ELECTROPHORETIC ASSEMBLY OF TiO₂ NANOCRYSTALS IN NON POLAR-SOLVENTS
Maria Isabel Gonzalo-Juan
Vanderbilt University, USA

17:20 – 17:40 ZN BASED STRUCTURES THROUGH HOMOGENEOUS PACKING AND SEEDING OF ZNO NANOPARTICLES BY EPD
Amador Caballero
Instituto de Ceramica y Vidrio, Madrid, Spain

SESSION VII: NOVEL APPROACHES AND MODELLING
Session chair: Rodrigo Moreno

17:40 – 18:00 DIRECT NUMERICAL SIMULATIONS OF ELECTROPHORETIC DEPOSITION OF CHARGED COLLOIDAL SUSPENSIONS
David Saintillan
University of Illinois at Urbana-Champaign, USA

18:00 – 18:20 FUNDAMENTALS OF ELECTROPHORETIC INFILTRATION FOR COMPOSITE MATERIAL FABRICATION
Cullen Buie
Massachusetts Institute of Technology, USA

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

19:30 – 21:00 Dinner

21:00 – 22:00 POSTER SESSION I (continued) and Social Hour
Wednesday, October 5, 2011

07:30 – 08:30 Breakfast

SESSION IX: EPD INTEGRATED MANUFACTURING TECHNOLOGIES AND INDUSTRIAL APPLICATIONS I
Session Chair: Rolf Clasen

08:30 – 09:00 Keynote
EPD OF PHOSPHORS FOR DISPLAY AND SOLID STATE LIGHTING TECHNOLOGIES
Jan B. Talbot
University of California, San Diego, USA

09:00 – 09:20 MACRO- AND MICROSCALE FABRICATION BY FIELD ASSISTED NANOPARTICLE ASSEMBLY – THE CHALLENGING PATH FROM SCIENCE TO ENGINEERING
Guido Falk
Saarland University, Saarbruecken, Germany

09:20 – 09:40 ELECTROPHORETIC FABRICATION OF RECHARGEABLE MICRO LITHIUM-ION BATTERY WITH 3D CONFIGURATION
Hirokazu Munakata
Tokyo Metropolitan University, Japan

09:40 – 10:00 EPD OF REVERSE MICELLE PALLADIUM OR PLATINUM NANOPARTICLES ONTO INDIUM PHOSPHIDE OR GALLIUM NITRIDE FOR HIGH-RESPONSE HYDROGEN SENSORS
Karel Zdansky
Institute of Photonics and Electronics, Academy of Sciences, Czech Republic

10:00 – 10:20 ELECTROPHORETIC DEPOSITION OF POLYARYLETHERETHERKETONE (PEEK) FROM A MATCHING DENSITY SOLVENT MIXTURE
Janet Hope
LVH Coatings Ltd., UK

10:20 – 10:40 DIELECTRIC MULTILAYER THICK FILMS OF BAO-LN2O3-TIO2 (LN = ND, LA) PREPARED BY ELECTROPHORETIC DEPOSITION
Paula M. Vilarinho
University of Aveiro, Portugal

10:40 – 11:00 Coffee Break

SESSION X: COATINGS AND COMPOSITES
Session Chair: Tetsuo Uchikoshi

11:00 – 11:30 Keynote
THE ELECTRODEPOSITION OF METAL-MATRIX NANOCOMPOSITES: A PATENT REVIEW
Gregorio Vargas-Gutiérrez
Cinvestav-Unidad Saltillo, Mexico
Wednesday, October 5, 2011 (continued)

11:30 – 11:50  INfiltration of 3D Fabric Preform for the fabrication of SICF/SIC Composite
Aljaž Ivekoviæ
Jožef Stefan Institute, Slovenia

11:50 – 12:10  ElectroPhoretic Deposition on non-conducting Substrates for Solid Oxide Fuel Cell Application
Laxmidhar Besra
Institute of Minerals & Materials Technology (IMMT), India

12:10 – 13:30  Lunch

13:30 – 16:30  Ad hoc sessions and/or free time

16:30 – 17:00  Afternoon Coffee

SESSION XI: EPD OF BIOMATERIALS AND BIOLOGICAL ENTITIES I
Session chair: Aldo R. Boccaccini

17:00 – 17:20  ELECTROPHORETIC DEPOSITION OF BIOMOLECULES: FUNDAMENTALS AND APPLICATIONS
Omer Van der Biest
K.U.Leuven, Belgium

17:20 - 17:40  ALTERNATING CURRENT ELECTROPHORETIC DEPOSITION (AC-EPD) OF LIVING CELLS
Bram Neirinck
K.U.Leuven, Belgium

17:40 – 18:00  DESIGN OF EXPERIMENTS (DOE) APPROACH FOR THE ELECTROPHORETIC DEPOSITION OF PEEK COATINGS
Sigrid Seuss
Institute of Biomaterials, University of Erlangen-Nuremberg, Germany

18:00 – 18:20  ANTIBACTERIAL PROPERTIES OF NANOSTRUCTURED TITANIA-CERIA FILMS ON E-COLI
Marí a Eugenia Contreras-García
Instituto de Investigaciones Metalúrgicas, UMSNH, Mexico

18:20 – 18:40  ELECTROPHORETIC DEPOSITION OF BIOMEDICAL COATINGS BASED ON CHITOSAN/BIOACTIVE GLASS COMPOSITES
Aldo R. Boccaccini
Imperial College London, United Kingdom

20:00 – 22:00  Conference Banquet
Thursday, October 6, 2011

07:30 – 08:30  Breakfast

**SESSION XII: FUNCTIONAL FILMS AND DEPOSITS**

*Session chair:* Paula M. Vilarinho

08:30 – 09:00  **Keynote**

STABILITY AND EPD OF CONCENTRATED SUSPENSIONS OF ALUMINA WITH NANOSIZED TITANIA

Rodrigo Moreno
Instituto de Cerámica y Vidrio, CSIC, Spain

09:00 – 09:20  **ELECTROPHORETIC DEPOSITION OF POLYETHER ETHER KETONE (PEEK) FROM AN AQUEOUS SUSPENSION.**

Beata Zalinska
Materials Science and Engineering, University of Sheffield, United Kingdom

09:20 – 09:40  **PREPARATION OF PEROVSKITE-TYPE OXIDE THICK-FILM BY EPD METHOD AND ITS APPLICATION FOR ELECTROCHEMICAL ION-SENSOR DEVICE**

Youichi Shimizu
Kyushu Institute of Technology, Japan

09:40 – 10:00  **FABRICATION OF BARIUM FERRITE FILMS WITH A HIGH DEGREE OF MAGNETIC ORIENTATION USING ELECTROPHORETIC DEPOSITION**

Simona Ovtar
Jozef Stefan Institute, Slovenia

10:00 – 10:30  Coffee break

10:30 – 10:50  **HYBRID SUPERCAPACITOR SYSTEMS VIA EPD**

Jan Ma
Nanyang Technological University, Singapore

10:50 – 11:10  **GROWTH OF TITANIA MESOPOROUS COATINGS INDUCED BY ELECTROPHORESIS**

Yolanda Castro
Instituto de Cerámica y Vidrio, CSIC, Spain

11:10 – 11:30  **MULTI-WALLED CARBON NANOTUBE AND HEXAMETHYLENE DIISOCYANATE COMPOSITE COATING ON COPPER SUBSTRATE BY EPD**

Laxmidhar Besra
Colloids & Materials Chemistry Department, India

11:30 – 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
Thursday, October 6, 2011 (continued)

**SESSION XIII: EPD INTEGRATED MANUFACTURING TECHNOLOGIES AND INDUSTRIAL APPLICATIONS II**

**Session Chair:** Begona Ferrari

**17:00 – 17:30**  
**Keynote**  
ELECTROPHORETIC DEPOSITION ON NON CONDUCTING SUBSTRATES: A NEW APPROACH AND DEVICE APPLICATION DEMONSTRATION  
Paula M. Vilarinho  
University of Aveiro, Portugal

**17:30 – 17:50**  
EXAMPLES OF EPD PROCESS APPLICATIONS IN THE ELECTRONIC INDUSTRY AND THEIR CHARACTERISTICS  
Rolf Clasen, N.J.M. van Leth  
Philips, The Netherlands

**17:50 – 19:30**  
**SESSION XIV: POSTER SESSION II**

**19:30 – 21:00**  
Dinner

**21:00 – 22:00**  
**POSTER SESSION II (continued) and Social Hour**
Friday, October 7, 2011

07:30 – 08:30 Breakfast

SESSION XV: ADVANCED EXPERIMENTAL TECHNIQUES & NOVEL APPROACHES
Session chair: Gregorio Vargas-Gutiérrez

08:30 – 08:50 THE ROLE OF TRIETHANOLAMINE IN THE ELECTROPHORETIC DEPOSITION OF DIELECTRIC THICK FILMS
Paula M. Vilarinho
University of Aveiro, Portugal

08:50 – 09:10 CHARACTERIZATION OF A CERAMIC POWDER SURFACE BY CONTACT ANGLE MEASUREMENTS AND INFRARED SPECTROSCOPY
Bram Neirinck
K.U.Leuven, Leuven, Belgium

09:10 – 09:30 AC ELECTROPHORESIS, A NEW TECHNIQUE FOR DEPOSITION OF CERAMIC NANOPARTICLES; INTRODUCTION, APPLICATION AND MECHANISM
Babak Raissi
Materials and Energy Research Center, Iran

09:30 – 10:30 Conclusions (NEXT EPD CONFERENCE, INDUSTRIAL INVOLVEMENT, SCIENTIFIC NETWORK ON EPD, EUROPEAN PROJECTS, INCREASE PARTICIPATION OF “ELECTROCHEMISTRY COMMUNITY”, EDUCATIONAL MATTERS, ETC.)

Adjournment
POSTERS

1. AQUEOUS EPD OF BIMODAL TITANIUM OXIDE SUSPENSIONS
   Rodrigo Moreno
   Instituto de Cerámica y Vidrio, CSIC, Spain

2. ELECTROPHORETIC DEPOSITION OF PEEK-TIO2 COMPOSITE COATINGS ON STAINLESS STEEL
   Sigrid Seuss
   Institute of Biomaterials, University of Erlangen-Nuremberg, Germany

3. ELECTROPHORETIC DEPOSITION OF BIODEGRADABLE POLYESTER COMPOSITE COATINGS WITH BIOACTIVE GLASS NANOPARTICLES
   Sigrid Seuss
   Institute of Biomaterials, University of Erlangen-Nuremberg, Germany

4. ELECTROPHORETIC DEPOSITION AND DIELECTRIC PROPERTIES OF BI1.5ZN1.0NB1.5O7 THICK FILMS
   Paula M. Vilarinho
   University of Aveiro, Portugal

5. MECHANICAL AND TRIBOLOGICAL PROPERTIES OF AL2O3-ZRO2 COMPOSITES PREPARED BY EPD
   Pavol Hvizdos
   Institute of Materials Research, Slovak Academy of Sciences, Slovakia

6. DEGRADATION OF THE BACTERIUM E. COLI THROUGH THE FILM OF TIO2-CEO2
   M. Eugenia Contreras Garcia
   FIQ Universidad Michoacana De San Nicolas De Hidalgo, Mexico

7. ELECTROPHORETIC DEPOSITION OF BIOGLASSES COATINGS ON TI12MO5TA ALLOY
   J. Faure
   University of Reims, INSERM UMR-S926, France

8. DEVELOPMENT AND CHARACTERIZATION OF COMPOSITE CERAMIC-POLYMER MEMBRANE
   Gilat Ardel
   Tel Aviv University, Israel

9. ELECTROPORETIC DEPOSITION OF YBA2CU3O7-X ON METALLIC SUBSTRATES:
   INFLUENCE OF THE SHAPE OF THE ELECTRODES
   Rudi Cloots
   University of Liege, Belgium
10. ELECTROPHORETIC DEPOSITION OF YBA2CU3O7-X SUPERCONDUCTING POWDERS ON BUFFERED NICKEL SUBSTRATES
Frédéric Boschini
University of Liege, Belgium

11. ELECTROPHORETIC DEPOSITION OF CADMIUM SULFIDE NANOPARTICLES: ELECTRIC FIELD AND PARTICLE SIZE EFFECTS
Israel López
Facultad de Ciencias Químicas, Universidad Autónoma de Nuevo León, Mexico

12. CADMIUM SULFIDE AND ZINC SULFIDE NANOSTRUCTURES FORMED BY ELECTROPHORETIC DEPOSITION
Alejandro Vázquez
Facultad de Ciencias Químicas, Universidad Autónoma de Nuevo León, Mexico

13. A PHYSICOCHEMICAL AND ELECTRICAL STUDY OF PZT (1-X)/X SOL-GEL BASED PRECURSORS
Suárez-Gómez
Universidad de Guadalajara-Cuvalles, Chile

14. ELECTROCHEMICAL FUNCTIONALIZATION OF SINGLE-WALLED CARBON NANOTUBES FILMS OBTAINED BY ELECTROPHORETIC DEPOSITION
Luisa Pilan
Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest, Romania

15. FABRICATION OF POLYANILINE/CARBON NANOTUBES COMPOSITES USING CARBON NANOTUBES FILMS OBTAINED BY ELECTROPHORETIC DEPOSITION
Mariana Ionita
Faculty of Applied Chemistry and Materials Science, University Politehnica of Bucharest, Romania

16. A STUDY OF YTTRIA STABILIZED ZIRCONIA PARTICLES' BEHAVIORS IN ALCOHOLIC SOLVENTS FOR ELECTROPHORETIC DEPOSITION APPLICATIONS
Iman Azarian Borojeni
Materials and Energy Research Center, Iran

17. AN INVESTIGATION OF YTTRIA STABILIZED ZIRCONIA PARTICLES BEHAVIORS IN KETONE BASED SOLVENTS FOR ELECTROPHORETIC DEPOSITION APPLICATIONS
Iman Azarian Borojeni
Materials and Energy Research Center, Iran

18. FABRICATION OF HIGH PRECISION ELECTROPLATED DIAMOND TOOLS FOR OPTICAL MANUFACTURE
Luis Álvarez
Instituto de Astronomia Universidad Nacional Autonoma de Mexico, Mexico

19. AN AFM STUDY OF NANOPARTICLE ARRANGEMENT WITH DEPOSITION TIME
Juan Escribano
Instituto de Ceramic a y Vidrio (CSIC), Spain

20. NI-BASED FILMS BY ELECTROPHORETIC DEPOSITION OF NICKEL HYDROXIDE NANOFLOWERS AND NANOFLAKES
Sandra Cabanas-Polo
Instituto de Ceramic a y Vidrio (CSIC), Spain

21. FUNCTIONALIZING TI-SURFACES THROUGH EPD OF HAP/Y2O3 COATINGS
Paola Parente
Instituto de Ceramic a y Vidrio (CSIC), Spain
22. **EPD AND COMBUSTION SYNTHESIS: TWO POTENTIALLY COMPLEMENTARY TECHNIQUES**
   Aldo Boccaccini
   Department of Materials and Environmental Engineering, University of Modena and Reggio Emilia, Italy

23. **CONTROL OF ELECTROPHORETIC DEPOSITION KINETICS FOR PREPARATION OF LAMINATED ALUMINA/ZIRCONIA CERAMIC COMPOSITES**
   Hynek Hadraba
   Institute of Physics of Materials, Academy of Sciences of the Czech Republic, Czech Republic

24. **CONTROLLED DEVELOPMENT OF INTERNAL STRESSES OF ALUMINA-ZIRCONIA LAMINATED STRUCTURES**
   Zdenek Chlup
   Institute of Physics of Materials, Academy of Sciences of the Czech Republic, Czech Republic

25. **FABRICATION OF ZNO NANOWIRE ARRAYS BY ELECTROPHORETIC DEPOSITION**
   Mónica Tirado
   Laboratorio de Propiedades Dieléctricas de la Materia, Dep. de Física, Universidad Nacional de Tucumán, Argentina

26. **PEEK-BIOGLASS®-TIO$_2$ COMPOSITE COATINGS FOR ORTHOPEDIC APPLICATIONS GROWN BY EPD**
   Silvia C. Clavijo
   Facultad Ciencias Aplicadas a la Industria, Universidad Nacional de Cuyo, Argentina

27. **ELECTROPHORETIC COATINGS ON CERAMICS**
   Rolf Clasen
   Institute for Powder Technology of Glass and Ceramics, Saarland University, Germany

28. **ELECTROPHORETIC DEPOSITION ONTO IONIC LIQUID LAYERS**
   Bram Neirinck
   K.U.Leuven, Leuven, Belgium

29. **THE ROLE OF DEPOSITION PARAMETERS ON THE CHAIN FORMATION BEHAVIOR OF ZNO NANOPARTICLES UNDER THE APPLICATION OF LOW FREQUENCY ELECTRIC FIELDS**
   B. Raissi
   Materials and Energy Research Center, Iran

30. **ELECTROCHEMICAL STUDIES ON THE STABILITY AND CORROSION RESISTANCE OF ELECTROPHORETICALLY DEPOSITED HYDROXYAPATITE COATINGS FOR IMPLANT APPLICATIONS**
   Aldo R. Boccaccini
   University of Erlangen-Nuremberg, Germany

31. **INFLUENCE OF DOLAPIX AS A DISPERSANT IN DEPOSITION PATTERN FOR FAST FABRICATION OF ELECTRONIC DEVICE BY USING LOW FREQUENCY ALTERNATIVE CURRENT ELECTROPHORETIC DEPOSITION (LFACEPD)**
   B. Raissi
   Material & Energy Reaserch Center, Iran

32. **FABRICATION OF NI/AL$_2$O$_3$ FUNCTIONALLY GRADED INTER-LAYERS USING ELECTROPHORETIC DEPOSITION**
   Hyungsub Kim
   Hanyang University, Korea