

Program

Electrophoretic Deposition VIII: Fundamentals and Applications

October 12 - 16, 2025

Grand Hotel San Michele
Cetraro (Calabria), Italy

Conference Chair

Aldo R. Boccaccini, University of Erlangen-Nuremberg, Germany

Conference Co-Chairs

Begoña Ferrari, Institute for Ceramic and Glass, Spanish Research
Council, Spain

Andrew J. Pascall, Lawrence Livermore National Laboratory, USA

Fabien Grasset, IRL LINK, CNRS, France

Kiyofumi Katagiri, Hiroshima University, Japan



Engineering
Conferences
International

Engineering Conferences International

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Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program, originally established in 1962, that provides opportunities for the exploration of problems and issues of concern to engineers and scientists from many disciplines.

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Previous conferences in this series

International Conference on Electrophoretic Deposition: Fundamentals and Applications

August 18-22, 2002

Banff, Alberta, Canada

Conference Chairs:

Aldo R. Boccaccini, Imperial College of Science, London, UK

P.S. Nicholson, McMaster University, Canada

Omer Van der Biest, Katholieke Unviersiteit Leuven, Belgium

2nd International Conference on Electrophoretic Deposition: Fundamentals and Applications

May 29-June 2, 2005

Barga, Italy

Conference Chairs:

Aldo R. Boccaccini, Imperial College of Science, London, UK

Omer Van der Biest, Katholieke Unviersiteit Leuven, Belgium

Rolf Clasen, University of Saarland, Saarbrücken, Germany

3rd International Conference on Electrophoretic Deposition: Fundamentals and Applications

October 5-9, 2008

Awaji Island, Japan

Conference Chairs:

Aldo R. Boccaccini, Imperial College of Science, London, UK

Omer Van der Biest, Katholieke Unviersiteit Leuven, Belgium

Rolf Clasen, University of Saarland, Saarbrücken, Germany

T. Uchikoshi, National Institute of Materials Science, Tsukuba, Japan

4th International Conference on Electrophoretic Deposition: Fundamentals and Applications

Oct. 2-7, 2011

Puerto Vallarta, Mexico

Conference Chairs:

Aldo R. Boccaccini, Imperial College of Science, London, UK

Omer Van der Biest, Katholieke Unviersiteit Leuven, Belgium

Rolf Clasen, University of Saarland, Saarbrücken, Germany

James Dickerson, Vanderbilt University, USA

***5th International Conference on Electrophoretic Deposition:
Fundamentals and Applications***

October 5-10, 2014

Hernstein, Austria

Conference Chairs:

Aldo R. Boccaccini, Imperial College of Science, London, UK

Omer Van der Biest, Katholieke Unviersiteit Leuven, Belgium

T. Uchikoshi, National Institute of Materials Science, Tsukuba, Japan

James Dickerson, Vanderbilt University, USA

***6th International Conference on Electrophoretic Deposition:
Fundamentals and Applications***

October 1 - 6, 2017

Gyeongju, South Korea

Conference Chairs:

Aldo R. Boccaccini, Imperial College of Science, London, UK

Omer Van der Biest, Katholieke Unviersiteit Leuven, Belgium

T. Uchikoshi, National Institute of Materials Science, Tsukuba, Japan

James Dickerson, Vanderbilt University, USA

***7th International Conference on Electrophoretic Deposition:
Fundamentals and Applications***

Oct. 30 – Nov. 3, 2022

Santa Fe, New Mexico, USA

Conference Chairs:

Aldo R. Boccaccini, Imperial College of Science, London, UK

Begoña Ferrari, Institute for Ceramic and Glass, Spanish Research Council, Spain

T. Uchikoshi, National Institute of Materials Science, Tsukuba, Japan

Andrew Pascall, Lawrence Livermore National Laboratory, USA

Society Endorsements

JECs
Trust



**SOCIEDAD ESPAÑOLA
DE CERAMICA Y VIDRIO**

Sunday, October 12, 2025

| | |
|---------------|----------------------------------|
| 17:30 – 18:30 | Conference Check-in (Great Room) |
| 18:30 – 19:30 | Welcome Reception |
| 19:30 – 21:00 | Dinner |

Locations and Notes

- *Technical Sessions will be in the Conference Center*
- *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.*
- *After the conference, ECI will send an updated participant list to all participants. Please check your listing now and if it needs updating, you may correct it at any time by logging into your ECI account.*
- *Audiotaping, videotaping and photography of presentations are prohibited*

Monday, October 13, 2025

- 07:30 – 08:55 Breakfast (Breakfast Room)
- 08:55 – 09:00 **Opening remarks** (Begoña Ferrari and Aldo R. Boccaccini)
- Session 1: Fundamentals**
Chair: Aldo R. Boccaccini
- 09:00 – 10:00 **Keynote: Using electricity to cue biological assembly mechanisms**
Greg Payne, University of Maryland, USA
- 10:00 – 10:30 **EPD and Electrospinning: Controlled deposition of ultrahigh-performance continuous nanofibers**
Yuris Dzenis, University of Nebraska-Lincoln, USA
- 10:30 – 11:00 **Simulating EPD: Linking process parameters to deposit microstructure**
Rémi Martin, Université de Toulouse, France
- 11:00 – 11:30 **Preparation of structurally colored coatings with electrochromic properties via electrophoretic deposition**
Kiyofumi Katagiri, Hiroshima University, Japan
- 11:30 – 12:00 Coffee Break (Patio)
- Session 2: Protective and Thermal Barriers**
Chair: Fabien Grasset
- 12:00 – 12:30 **Development of dual-layer protective coatings for solid oxide cell interconnects using electrophoretic and electrolytic deposition**
Sebastian Molin, Gdańsk University of Technology, Poland
- 12:30 – 13:00 **Electrophoretic deposition of thick zirconia thermal barrier coatings: Multilayer deposition mechanism via in-situ mass measurements, process robustness**
Alexandre Bareille, Université de Toulouse, France
- 13:00 – 13:30 **Electrophoretic deposition of tin nanoparticles**
A. Javier Sanchez-Herencia, Institute for Ceramic and Glass ICV-CSIC, Spain
- 13:30 – 15:00 Lunch
- 15:00 – 17:00 Networking / Free-time
- 17:00 – 17:30 **Combating biofilm formation on titanium implants via alternating current electrophoretic deposition of modified chitosan**
Merve Kübra Aktan, KU Leuven, Belgium
- 17:30 – 18:00 **EPD of low friction and self lubricating PTFE coatings on titanium alloy substrate**
Aleksandra Fiolek, AGH University of Krakow, Poland
- 18:00 – 19:30 **JECS Trust Student Awards** (Oral-Poster)
Chair: Begoña Ferrari
- Effect of processing temperature on EPD-derived bioactive composite coatings for metallic implants**
Rezvan Azari, University of Erlangen-Nuremberg, Germany

Monday, October 13, 2025 (continued)

Electrophoretic deposition of octahedral molybdenum clusters and graphene oxide layers for antibacterial photoinactivation

Émilie Fragnaud, University of Rennes, France

Electropolymerized PEDOT on biomimetic templates for bone tissue regeneration

Rosa María Martín Rodríguez, Institute for Ceramic and Glass ICV-CSIC, Spain

Electrophoretic deposition of nano-TiO₂, on 3D-printed Al₂O₃ structures by binder jetting for water photocatalysis applications

Pablo Ortega-Columbrans, COLFEED4Print, Spain

Electrophoretic deposition on separated-from-the-electrodes polymer membrane

David Stark, Tel-Aviv University, Israel

19:30 – 21:00

Dinner

21:00 – 22:00

Poster Session / Social Hour

Posters

1. **NOMAD: Novel biomaterials to prevent dental peri-implant infections**
Annabel Braem, KU Leuven Department of Materials Engineering (MTM), Belgium
2. **Electrostatic assembly of SiO₂–SiO₂ composite particles and formation of ordered arrays via electrophoretic stimulation**
Wai Kian Tan, Toyohashi University of Technology, Japan
3. **EPD of thyme oil-enriched sodium alginate-based coatings on stainless steel substrates**
Aleksandra Fiolek, AGH University of Krakow, Poland
4. **Effect of polydopamine layer on AC electrophoretic deposition of alumina/cellulose nanofiber composites**
Tomohiko Yoshioka, Okayama University, Japan
5. **Hydrothermal-EPD: A combined approach for tailored functional film fabrication**
Vanessa Proust, CEA Marcoule, France
6. **Electrophoretic deposition of insulating particles in aqueous suspensions: Influence of suspension properties**
Hugo Ulpert, CIRIMAT, France

Tuesday, October 14, 2025

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|---------------|--|
| 07:30 – 09:00 | Breakfast (Breakfast Room) |
| | <u>Session 3: Biomaterials and biofunctionalization of surfaces (I)</u> Chair: Greg Payne |
| 09:00 – 10:00 | Keynote: From current to cure: AC electrophoretic deposition for next-generation antimicrobial surfaces Annabel Braem, KU Leuven Department of Materials Engineering (MTM), Belgium |
| 10:00 – 10:30 | Chitosan-based coatings containing bioactive glass or silver nitrate on metallic filters by electrophoretic deposition (EPD) Zoya Hadzhieva, University of Erlangen-Nuremberg, Germany |
| 10:30 – 11:30 | Coffee Break (Patio) |
| 11:30 – 12:30 | Keynote: Feasibility of electrophoretic co-deposition of essential oil and polysaccharides to develop antimicrobial coatings for metallic biomaterials: Microstructure and properties Tomasz Moskalewicz, AGH University of Krakow, Poland |
| 12:30 – 13:00 | Evaluation of chitosan/mesoporous bioactive glass coatings on PLA scaffolds: A comparison between dip-coating and electrophoretic deposition techniques Daniela Becker, UDESC, Brazil |
| 13:00 – 15:00 | Lunch |
| | <u>Session 4: Biomaterials and biofunctionalization of surfaces (II)</u> Chair: Annabel Braem |
| 15:00 – 16:00 | Keynote: Design of multifunctional chitosan patches embedding alginate microspheres for drug and cell delivery Lina Altomare, Politecnico di Milano, Italy |
| 16:00 – 16:30 | Effect of processing temperature on EPD-derived bioactive composite coatings for metallic implants Rezvan Azari, University of Erlangen-Nuremberg, Germany |
| 16:30 – 17:00 | Electropolymerized PEDOT on biomimetic templates for bone tissue regeneration Rosa María Martín Rodríguez, Institute for Ceramic and Glass ICV-CSIC, Spain |
| 17:00 – 20:00 | Excursion |
| 20:00 – 21:30 | Dinner |

Wednesday, October 15, 2025

07:30 – 09:00 Breakfast (Breakfast Room)

Session 5: Energy Storage and Generation Devices

Chair: Nicholas Vogel

09:00 – 10:00 **Keynote: Electrochemical deposition of nanoarchitectonic metal atom cluster-based photoelectrodes for solar cell applications**
Adèle Renaud, University of Rennes, France

10:00 – 10:30 **Electrophoretic deposition of MnCu-based coatings for reversible solid oxide cell operation**
Francesco Gallo, Politecnico di Torino, Italy

10:30 – 11:00 **Electrophoretic deposition of electrocatalysts on proton-conducting membranes**
Michael Bredol, FH Münster University of Applied Sciences, Germany

11:00 – 11:30 Coffee Break (Patio)

11:30 – 12:00 **Coated current collector for energy storage device development: Manufacture, Testing and Industry Relevance**
John Low, Warwick University, UK

12:00 – 12:30 **Fabrication of BiVO₄ photoanodes via Electrophoretic Deposition for application in photoelectrochemical Cells**
Fernanda Garcia, Université Clermont Auvergne, France

12:30 – 13:00 **Electrophoretic deposition of graphene-enhanced structural battery electrodes for multifunctional energy storage**
Zhenyuan Xia, Chalmers University of Technology, Sweden

13:00 – 13:30 **Electrophoretic deposition process: A very interesting tool to fabricate nanocomposites coating based on inorganic octahedral cluster units**
Fabien Grasset, CNRS–Saint-Gobain–NIMS, Japan

13:30 – 15:00 Lunch

15:00 – 16:00 Networking / Free-time

Session 6: Separation and Photocatalytic Membranes

Chair: Adele Renaud

16:00 – 17:00 **Keynote: Electrostatic separation of nanoplastics from wastewater**
Nicolas Vogel, University of Erlangen-Nuremberg, Germany

17:00 – 17:30 **Electrophoretically controlled solar absorbers based on carbon nanotube**
Guillaume Toquer, ENSCM, France

17:30 – 18:00 **Electrophoretic deposition of nano-TiO₂ on 3D-printed Al₂O₃ structures by binder jetting for water photocatalysis applications**
Pablo Ortega-Columbrans, COLFEED4Print, Spain

18:00 – 18:30 **Electrophoretic deposition on separated-from-the-electrodes polymer membrane**
David Stark, Tel-Aviv University, Israel

Wednesday, October 15, 2025 (continued)

- 18:30 – 19:00 **Unveiling hidden electrochemical processes during electrophoretic deposition of nanostructures**
Alejandro Vazquez, Universidad Autónoma de Nuevo León, UANL, Mexico
- 19:30 – 20:00 Reception
- 20:00 – 22:00 Gala Dinner

Thursday, October 16, 2025

- 07:30 – 09:30 Breakfast
- Session 7: Optical and Optoelectronic Devices**
Chair: A. Javier Sanchez-Herencia
- 09:30 – 10:00 **Dynamic interplay of color transitions and particle behavior in α -Fe₂O₃/SiO₂ nanoparticle-based electrophoretic displays**
Andrew Pascall, Lawrence Livermore National Laboratory, USA
- 10:00 – 10:30 **Rapid and controllable assembly of three-dimensional nanocrystal superlattice films via electrophoretic deposition**
Andrew Pascall, Lawrence Livermore National Laboratory, USA
- 10:30 – 11:00 **Electrophoretic deposition for advanced nanostructured coatings: From Sb₂S₃ thin films to photonic crystals**
Clément Lebastard, ENSCR Rennes University, France
- 11:00 – 11:30 Coffee Break (Patio)
- 11:30 – 12:00 **Simultaneous shaping and reduction of binder-free electrochemically reduced graphene oxide electrodes through cathodic EPD**
Begoña Ferrari, Instituto de Cerámica y Vidrio, CSIC, Spain
- 12:00 – 12:30 **Conclusions / Closing Remarks**
(EPD International Network, next EPD conference, etc.)
Begoña Ferrari and Aldo R. Boccaccini
- 12:30 – 14:00 Lunch
- Departures

Upcoming ECI Conferences

2025

INTEGRATED CONTINUOUS BIOMANUFACTURING VII

October 5 – 9, 2025

I. Ramos, Johnson & Johnson; M. Brower, Merck; A. Jungbauer, BOKU; K. Brower. Sanofi
Dubrovnik, Croatia

ELECTROPHORETIC DEPOSITION VIII: FUNDAMENTALS AND APPLICATIONS

October 12 – 16, 2025

A.R. Boccaccini, University of Erlangen-Nuremberg; B. Ferrari, Institute for Ceramic and Glass, Spanish Research Council; A.J. Brookhaven National Laboratory; F. Grasset, IRL LINK, CNRS; K. Katagiri, Hiroshima University
Calabria, Italy

ENZYME ENGINEERING XXVIII

October 19 – 24, 2025

J. Woodley, DTU; D. Heddam-Welner, DTU
Helsingør, Denmark

CERAMIC MATRIX COMPOSITES III

October 26 – 31, 2025

R. Darolia, GE Aerospace; K. Goto, JAXA; G. Vignoles, University of Bordeaux; S. Kitaoka, Japan Fire Ceramics Center; T. Akatsu, Tokyo University of Technology
Yamanashi, Japan

BENEFICATION OF PHOSPHATES X

November 2 – 7, 2025

Chair: Patrick Zhang, Florida Industrial and Phosphate Research Institute, USA; Co-Chairs: Phong Vo, Ardaman & Associates Inc, USA; Erika Rova, Yara Suomi Oy, Finland; André Carlos Silva, Federal University of Goiás, Brazil; Ewan Wingate, Bechtel Australia, Australia
Hanoi, Vietnam

2026

INNOVATIVE MATERIALS & METHODS FOR ADDITIVE MANUFACTURING III (IM2AM)

January 11 – 16, 2026

B. Compton; University of Tennessee, Knoxville; E. Eastwood, KCNSC; N. Gupta, New York University; D. Schmidt and J. Gonzalez-Gutierrez, Luxembourg Institute of Technology; P. Cortes, University of Texas at El Paso
Savannah, Georgia, USA

ADVANCING MANUFACTURE OF CELL AND GENE THERAPIES IX

February 1 – 5 2026

J. Moscariello; C. Hoesli, McGill University; B. Marques, CenturyTC
Hilton Head, SC, USA

Upcoming ECI Conferences

ENG2WINE: INDUSTRY CHALLENGES AND INNOVATIVE ENGINEERING SOLUTIONS

March 22-26, 2026

D.E. Block, University of California Davis, USA; D. Durner, University of Applied Sciences Kaiserslautern, Germany; D. K. Kundiyana, E & J Gallo Winery, USA
Porto, Portugal

DELIVERY OF NUCLEIC ACID THERAPEUTICS III: BIOLOGY, ENGINEERING AND DEVELOPMENT

April 9 – 13, 2026

L. Sepp-Lorenzino, Intellia Therapeutics; S. F. Dowdy, University of California San Diego School of Medicine; M. Stanton, Generational Bio
Croatia

VACCINE TECHNOLOGY X

April 12-17, 2026

T. Tagmyer, PATH; N. Alteras, Moderna; S. Frank, UCL; D. Cowley, AstraZeneca
Porto, Portugal

NANOTECHNOLOGY IN MEDICINE V: PHYSICAL TRIGGERS AND ADVANCED MATERIALS

April 19-23, 2026

R. Fernandes, George Washington University; J. Nguyen, University of North Carolina at Chapel Hill; A. Schroeder, Technion
Giardini Naxos, Messina, Sicily, Italy

WASTELCA 5: NEW TOOLS FOR LIFE CYCLE SUSTAINABILITY ASSESSMENT OF MUNICIPAL AND CHALLENGING WASTE MANAGEMENT

June 7 – 12, 2026

U. Arena, University of Campania "Luigi Vanvitelli", Italy; A. Damgaard, DTU, Denmark; M. Materazzi, UCL, UK; F. Ardolino, University of Campania "Luigi Vanvitelli", Italy
Cetraro (Calabria), Italy

July 19 – 23, 2026

BIOCHEMICAL AND MOLECULAR ENGINEERING XXIV

D. Tullman-Ercek, Northwestern University; M. Blenner, University of Delaware; A. Lewis, Moderna
Puerto Rico

NANOMECHANICAL TESTING IN MATERIALS RESEARCH AND DEVELOPMENT X

October 4 – 9, 2026

Conference Chair: Verena Maier-Kiener
Montan Universität Leoben, Austria

October 12 – 15, 2026

SINGLE USE TECHNOLOGIES VIII

N. Montenay, Sartorius; G. Gillespie, North Carolina State University; P. Smith, GSK
Montreal, P.Q., Canada

Engineering Conferences International

Engineering Conferences International (ECI) is a not-for-profit global engineering conferences program that has served the engineering/scientific community since 1962 as successor program to Engineering Foundation Conferences. ECI has received recognition as a 501(c)3 organization by the U.S. Internal Revenue Service and is incorporated in the State of New York as a not-for-profit corporation.

The program has been developed and is overseen by volunteers both on the international Board of Directors and international Conferences Committee. More than 1,900 conferences have taken place to date. The conferences program is administered by a professional staff and the conferences are designed to be self-supporting.

ECI Mission

To serve the engineering/scientific community with international, interdisciplinary, leading edge engineering research conferences

ECI Purposes

The advancement of engineering arts and sciences by providing a forum for the discussion of advances in the field of science and engineering for the good of mankind by identification and administration of international interdisciplinary conferences

To work with engineering, scientific and social science societies and the interested general public to jointly sponsor conferences and to take other actions that will foster complementary programming.

To initiate conferences that will have a significant impact on engineering education, research practice and/or development.

ECI Encouragement of New Conference Topics

The ECI Conferences Committee invites you to suggest topics and leaders for additional conferences and encourages you to submit a proposal for an ECI conference.

Ideally, proposals should be submitted from 18 to 24 months in advance of the conference although the staff can work on a shorter timeline.

The traditional format for an ECI conference is registration Sunday afternoon with technical sessions held each morning and evening through Thursday or Friday noon. Afternoons are used for informal gatherings, poster sessions, field trips, subgroup meetings and relaxation. This format has served well to build important professional networks in many areas.

ECI welcomes proposals for shorter conferences and for conferences which span weekends in order to reduce the number of working days participants are away from their offices.

ECI Works With You

ECI works with conference chairs in two complementary ways. First, an experienced member of the Conferences Committee acts as your technical liaison from the proposal stage through the conference itself. He or she is always available to consult with you on any conference issue.

Second, after your proposal has been approved by the Conferences Committee, the ECI staff will assume responsibility for the administration of the conference.

Your primary responsibilities will be recruiting the organizing committee, developing the technical program and securing third-party funding necessary to support the travel of key speakers.

The responsibilities of ECI's "full service" staff include -- but are not limited to -- the following:

- Recommend, negotiate, contract and make substantial deposits for housing, meals, meeting space, A/V equipment and tours.
- Maintain web sites for the conference and for submission of abstracts.
- Publicize via electronic and print media.
- Administer all finances including grants, contributions and purchase orders. (ECI makes grant funds available as soon as a grant is approved.) There is no need for chairs to set up a conference bank account or file tax returns for their conference.
- Process all applications and registrations.
- Produce bound program/abstracts book.
- Contract for the publication of print or electronic proceedings, if any.
- Provide on-site staff during the conference.

For more information, please contact the ECI Director at Barbara@engconfintl.org