



XVIII LYON-France

ECerS

Conference & Exhibition  
of the European  
Ceramic Society

WHEN CERAMISTS MEET IN THE CITY OF LIGHTS

2/6 july  
2023

PROGRAM BOOK

Organized by

ECERS



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Lyon 1

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## **WELCOME NOTE TO ECerS XVIII**

It is a great pleasure to welcome you in Lyon, the 'City of Lights', to share the latest discoveries in ceramic science and technology and to connect with colleagues from around the world in a convivial conference atmosphere. It is the third time that the French ceramic community has the pleasure of organizing the European Ceramic Society Conference after Versailles in 1997 and Limoges in 2013. The conference is already a 'hit' in terms of attendance, with about 1200 ceramic experts from industry and academia including 400 students, offering a unique opportunity to participate in an international event covering the development and applications of ceramic-based systems.

We deeply acknowledge all the colleagues that helped us to prepare the congress, symposium organizers, keynotes and highlights, volunteers, and all of you for participating to the success of this edition.

As for previous editions, a School was organized the two days preceding the conference with this time the theme 'Advanced Characterization Techniques' and a Student Speech Contest is organized on Sunday and Monday. In addition to the now traditional symposia dealing with innovative processing, thermo-mechanical properties, modelling and ceramics for different high-tech applications, emphasis is given to new themes, such as advanced characterization techniques, glass-ceramics and glasses, silicate-based ceramics and materials for building applications, as well as the place of ceramics in a necessary sustainable development. Satellite symposia have been organized

in connection with dental clinicians, experts and artists in the field of ceramics, glass and glass-ceramics dealing with cultural heritage, traditional technologies and art, up to cutting-edge technologies. A fourth satellite symposium is dedicated to highlight existing or future collaborations between members of the European Ceramic Society and of the American Ceramic Society. The XVIII<sup>th</sup> ECerS conference includes a total of 16 symposiums over 4 days.

We are also proud to gather more than 50 industrial companies, which acted as sponsors and/or as exhibitors. The exhibition, at the heart of the conference, will be the opportunity for researchers and engineers to see the latest technological developments on ceramic processing from powders to additive manufacturing and sintering, characterization, etc. We deeply acknowledge our academic, institutional, and industrial sponsors and the exhibitors for their strong support.

Thanks to the large participation of companies, we are also proud to organize, for the first time during an ECerS conference edition, a Career Fair and a Technological Workshop, both described in more details hereafter.

We hope you will enjoy all the scientific sessions, the satellite events, the Gala dinner at the "Substances" and some nice visits and food in the 'French Capital of Gastronomy'.

**Once again, welcome in Lyon and thank you for participating to the 2023 ECerS conference!**



**Jérôme CHEVALIER**  
General Chair  
INSA-Lyon  
University of Lyon



**Francis CAMBIER**  
President European  
Ceramic Society



**Jacques POIRIER**  
President French  
Ceramic Society



**Anne LERICHE**  
Co-Chair  
Polytechnic University  
Hauts-de-France



**Helen REVERON**  
Scientific Chair  
INSA-Lyon  
University of Lyon

## ORGANIZING COMMITTEE

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University of Lyon,  
Chairman ECeRS 2023

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President European  
Ceramic Society

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University of Lyon

**Vincent GARNIER**  
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University of Lyon  
Organisation of the  
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University of Lyon  
Organisation of the  
Summer School

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European Ceramic  
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Ceramic Society  
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de la Céramique)

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CNRS/INSA-Lyon,  
University of Lyon,  
Scientific Chair  
ECeRS 2023

**Pascal REYNAUD**  
CNRS/INSA-Lyon,  
University of Lyon

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- » **Ondrej Jankovsky** • University of Chemistry and Technology Prague, Czech Republic
- » **Taner Kavas** • Turkish Ceramic Federation
- » **Young-Wook Kim** • Korean Ceramic Society
- » **Andraz Kocjan** • Jožef Stefan Institute - Ljubljana, Slovenia
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- » **Thomas Kronberg** • Finnish Ceramic Society, Finland
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- » **Alexander Michaelis** • Fraunhofer Institute for Ceramic Technologies and Systems, Germany
- » **Larisa Mezentseva** • Russian Academy of Sciences, Russia
- » **Detlev Nicklas** • Deutsche Keramische Gesellschaft e.V., Germany
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- » **Victor Carlos Pandolfelli** • Universidade Federal de São Carlos, Portugal
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- » **Vladimir Shevchenko** • Russian Academy of Sciences, Russia
- » **Matjas Spreitzer** • Slovenian Chemical Society, Slovenia
- » **Vladimir V. Srdic** • University of Novi Sad, Serbia
- » **Mikoaj Szafran** • Warsaw University of Technology, Poland
- » **Richard Todd** • Oxford University, UK
- » **Athena Tsetsekou** • National Technical University of Athens, Greece
- » **Jingyang Wang** • Chinese Ceramic Society
- » **Kjell Wilk** • Norwegian University of Science and Technology, Norway
- » **Louis Winnubst** • University of Twente, The Netherlands
- » **Omer Van der Biest** • KULeuven, Belgium
- » **Moritz von Witzleben** • European Ceramics Society, Germany
- » **Adrian Volceanov** • Romanian Ceramic Society, Romania
- » **Paolo Zannini** • Italian Ceramic Society, Italy
- » **Andrea Zocca** • BAM, Berlin, Germany



## Program at a glance

	SUN. 2 JULY	MON. 3 JULY	TUE. 4 JULY	WED. 5 JULY	THU. 6 JULY
		Welcome Ceremony & Plenary Lectures	Symposia		Symposia
		Coffee break	Coffee break Exhibition-Posters	Plenary Lectures & Award Ceremony	Coffee break Exhibition-Posters
		Symposia	Symposia		Symposia
		Lunch break	Lunch break	Lunch break	Lunch break
Registration	Student Speech Contest	Student Speech Contest	Symposia	Symposia	Symposia
			Coffee break Exhibition-Posters	Coffee break Exhibition-Posters	Coffee break Exhibition-Posters
			Symposia	Symposia	Symposia
	Welcome Reception	Young Scientists Career Fair		Gala Dinner	
EXHIBITION DAYS					

ECERS XVIII:  
A VERY RICH SCIENTIFIC  
AND SOCIAL PROGRAM

12  
Scientific Symposia

An exhibition of  
**300 posters**  
and  
**44 exhibitors**

4  
Satellite Symposia  
ACeRS-ECeRS symposium, ACT4D  
on Dental applications, Ceramics  
and glass in cultural heritage and  
art, FunGlass Symposium

3  
Satellite Events  
ECeRS Summer School,  
ECeRS Career Fair,  
Experimental workshop  
on additive manufacturing

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ECeRS Summer School,  
ECeRS Career Fair,  
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## Social events

### » WELCOME RECEPTION

**Sunday 2 July • 18:00-19:30**

Lyon Convention Centre - Foyers Forum

After checking-in at the registration desk, enjoy a typical French Wine & Cheese buffet with local and terroir products.

### » YCN STUDENTS EVENING

**Tuesday 4 July • 20:00-23:30**

Ninkasi Gerland

Young ceramic researchers, that is, Master and PhD students including early-stage PhDs have the opportunity to socialize, interact and discuss their work in a warm and festive atmosphere.

A great opportunity to start professional and/or friendly relationships, to initiate collaborative networks and plan lab visits.

*Only registered participants can attend.*



### » CONFERENCE GALA DINNER

**Wednesday 5 July • 19:00-23:00**

Les Subsistances 8 bis Quai Saint-Vincent, 69001 Lyon

Renovated from 1999 to 2001, this 17th century convent has been re-configured as an Arts' house. It is today a venue dedicated to the new languages of the performing arts (dance, theatre, music, digital art...). The 1300 sqm Verrière along with the charming courtyard of les Subsistances, is the ideal venue for the ECeRS 2023 Cocktail and Gala dinner.  
*Only registered participants can attend.*



Shuttle buses will leave the Convention Centre at 18:45. **Don't be late !**



## Scientific events

### » CAREER FAIR AND NETWORKING EVENING

**Monday 3 July • 19:00-20:30**

Room Pasteur

**Job and career opportunities, networking evening with junior researchers!**

On Monday, young ceramists are invited to join the career fair and evening. The career fair is a unique opportunity to discuss and exchange with recruiters and junior researchers from the industry and the academia on job offers, career opportunities or mentoring. The evening will be followed by a networking cocktail. Spend a nice evening and network with future colleagues and researchers from the industrial and academic world!

*Only registered participants can attend.*



### » ECERS STUDENT SPEECH CONTEST

**Sunday 2 July • 14:30-19:00 & Monday 3 July • 11:00-16:30**

Rooms Roseraie 1+2

The student speech contest at the biennial ECeRS conference is an event where research students, representing each of the ECeRS member countries, are able to give an oral presentation that is evaluated by a jury. The presentation duration will be 15 minutes, followed by questions from the jury and the audience. The winner of the 2023 ECeRS Students Speech Contest will be allowed to make his/her presentation again during the Award Ceremony on Wednesday morning!

### » TECHNICAL WORKSHOP

**Monday 3 to Thursday 6 July**

Lyon Convention Centre Exhibition Hall & INSA-Lyon campus

#### DEMONSTRATIONS ON THE SITE OF THE CONFERENCE

Monday 3 July • 13:30..... LITHOZ - Booth #33  
Tuesday 4 July • 14:00 ..... 3DCERAM - Booth #41  
Wednesday 5 July, • 14:00..... CONCR3DE - Booth #36  
Thursday 6 July • 14:00 ..... NANO-e - Booth #1

#### HANDS-ON-TRAINING SESSIONS IN THE PREMISES OF INSA-LYON

The hands-on-training will consist of three afternoon sessions (**Tuesday, Wednesday and Thursday from 15:00 to 17:00**), for which you can benefit a small group training on one ceramic additive manufacturing technology. They will be held at INSA-Lyon (1.5km walking distance from the congress centre : GPS coordinates 45.782286, 4.872411) .

The number of attendees is limited to 10 trainees per technology per day. The attendance to the workshop is free of additional charges and included in your registration to the congress. **Training sessions are only available to persons who registered in advance and received a confirmation email.**





# Plenary speakers

Monday 3 July • 08:30-10:30  
Auditorium Lumière



08:50-09:20



**Yves BOUSSANT-ROUX**  
R&D Vice-President  
Ceramic Materials,  
Saint-Gobain Innovative  
Materials, France

*Ceramic as  
key enabler for  
sustainability*

09:20-09:50



**Richard GAIGNON**  
CEO  
3DCeram,  
France

*Smart Factory:  
vision of the future  
ceramic industry*

09:50-10:20



**Alessandro Alan PORPORATI**  
Director of Medical and  
Scientific Affairs, CeramTec  
GmbH, Germany  
University of Trieste, Italy

*ZPTA ceramic  
bearing surfaces as  
a preferred choice in  
joint arthroplasty?*



Discover the abstracts of the Plenary Speakers  
<https://ecers2023.org/en/program/plenary-speakers/32>



# Awardees



2023 | STUIJTS AWARD  
**Jan DUSZA**  
Slovakia



2023 | RICHARD BROOK AWARD  
**Tatsuki OHJI**,  
Japan



2023 | ACeRS - ECeRS AWARD  
**Francis CAMBIER**  
Belgium



2023 | GIAN NICOLA BABINI AWARD  
**Moritz VON WITZLEBEN**  
Germany



2023 | YOUNG SCIENTIST AWARD  
**Jesus GONZALEZ-JULIAN**  
Germany



2023 | JECS TRUST AWARD  
**Jozef VLEUGELS**  
Belgium



2023 | JECS BEST PAPER AWARD  
**Thomas HÉRISSON DE BEAUVOIR**  
France



2023 | JAMES ZHIJIAN SHEN (OPEN  
CERAMICS BEST PAPER) AWARD  
**David KARL**  
Germany



Discover the abstracts of all the Awardees  
<https://ecers2023.org/en/program/awardees/23>



**Symposium 1 (S1)  
INNOVATIVE CERAMIC SYNTHESSES,  
PROCESSING AND SHAPING**

*Organisers*

**Samuel BERNARD**, IRCER Limoges, France  
**Laura MONTANARO**, Politecnico di Torino, Italy  
*Co-organisers*

**Paolo COLOMBO**, University of Padova, Italy  
**Sylvain DEVILLE**, ILM Lyon, CNRS, France  
**Begoña FERRARI**, Instituto de Cerámica y Vidrio, CSIC, Spain  
**Thomas GRAULE**, EMPA, Switzerland  
**Erkki LEVANEN**, University of Tampere, Finland  
**Rodrigo MORENO**, Instituto de Cerámica y Vidrio, CSIC, Spain  
**Günter MOTZ**, University of Bayreuth, Germany  
**Waldemar PYDA**, AGH University of Science and Technology, Poland  
**Marco SEBASTIANI**, Università Roma 3, Italy

**Symposium 2 (S2)  
THERMAL PROCESSES AND ADVANCED SINTERING**

*Organisers*

**Claude ESTOURNES**, CNRS, France  
**Manuel BELMONTE**, Institute of Ceramics and Glass, Spain  
*Co-organisers*  
**Rajendra K. BORDIA**, Clemson University, USA  
**Francis CAMBIER**, BCRC Mons, Belgium  
**Javier GARAY**, University of California San Diego, USA  
**Irina HUSSAINOVA**, Tallinn University of Technology, Estonia  
**Anne LERICHE**, Polytechnical University Hauts-de-France, France  
**Koji MORITA**, National Institute for Materials Science (NIMS), Japan  
**Roberto ORRÚ**, University of Cagliari, Italy  
**Clive RANDALL**, Penn State University, USA  
**Laura SILVESTRONI**, Institute of Science and Technology - CNR, Italy  
**Richard TODD**, University of Oxford, UK

**Symposium 3 (S3)  
ADDITIVE MANUFACTURING**

*Organisers*

**Jens GÜNSTER**, BAM-Berlin, Germany  
**Fabrice ROSSIGNOL**, IRCER Limoges, France  
*Co-organisers*  
**Erik ADOLFSSON**, SWEREA IVF, Sweden  
**Giorgia FRANCHIN**, University Padova, Italy  
**Andraž KOCJAN**, Jožef Stefan Institute, Slovenia  
**Fabrice PETIT**, BCRC, Belgium  
**Eduardo SAIZ GUTIERREZ**, Imperial College, UK  
**André STUDART**, ETHZ, Switzerland  
**Andrea ZOCCA**, BAM-Berlin, Germany

**Symposium 4 (S4)  
ADVANCED STRUCTURAL CERAMICS,  
COMPOSITES AND ARCHITECTURED MATERIALS**

*Organisers*

**Gerard L. VIGNOLES**, University of Bordeaux, CNRS, CEA, Safran, LCTS, France  
**Jozef VLEUGELS**, KU Leuven, Belgium  
*Co-organisers*  
**Raúl BERMEJO**, University of Leoben, Austria  
**Tobias FEY (TBC)**, Friedrich-Alexander University of Erlangen-Nürnberg, Germany  
**Frank KERN**, University of Stuttgart, Germany  
**Dietmar KOCH**, University of Augsburg, Germany  
**Andrea LAZZERI**, University of Pisa, Italy  
**Alberto ORTONA**, Italian Swiss Technical University (SUPSI), Manno, TI, Switzerland  
**Zbigniew PEDZICH**, AGH University of Science & Technology, Cracow, Poland

**Pascal REYNAUD**, CNRS, INSA Lyon, MaTEIS, France  
**Malika SAËDAOUI**, Mohammadia School of Engineers (EMI), Rabat, Morocco  
**Pavol SAJGALIK**, Slovak Acad. Sci., Bratislava, Slovakia

**Symposium 5 (S5)  
REFRACTORIES, HIGH AND ULTRA-HIGH  
TEMPERATURE CERAMICS**

*Organisers*

**Jacques POIRIER**, University of Orléans, France  
**Jon BINNER**, University of Birmingham, UK  
*Co-organisers*  
**Christos ANEZIRIS**, Technische Universität Bergakademie Freiberg, Germany  
**Mike CINIBULK**, AFRL, USA  
**Diletta SCITI**, ISTECCNR, Italy  
**Shaoming DONG**, Shanghai Institute of Ceramics, China  
**William FAHRENHOLTZ**, University of Missouri Sci & Techn, USA  
**Harald HARMUTH**, Montanuniversität Leoben, Austria  
**In HO JUNG**, Seoul National University, South Korea  
**Victor PANDOLFELLI**, Universidade Federal de Sao Carlos, Brazil  
**Thorsten TONNESEN**, RWTH Aachen University, Germany  
**Yutaka KAGAWA**, Tokyo University of Technology, Japan

**Symposium 6 (S6)  
CERAMICS AND SUSTAINABLE DEVELOPMENT**

*Organisers*

**Chiara ZANELLI**, ISTECC Faenza, Italy  
**Christoph WOHRMEYER**, Imerys, Germany  
**Cécile PAGNOUX**, IRCER Limoges, France  
*Co-organisers*  
**Julien FOURCADE**, Baikowski, France  
**Patrick GEHRE**, Freiberg University, Germany  
**Thomas GRAULE**, EMPA, Switzerland  
**João António LABRINCHA**, Universidade de Aveiro, Portugal  
**Yiannis PONTIKES**, KU Leuven, Belgium

**Symposium 7 (S7)  
GLASS-CERAMICS AND GLASSES**

*Organisers*

**Kathleen RICHARDSON**, University of Centra Florida, USA  
**Daniel NEUVILLE**, USTV and CNRS-IPGP Paris, France  
**Mathieu ALLIX**, CEMHTI CNRS Orléans, France  
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**Delia BRAUER**, Otto Schott Institute, Germany  
**Monica FERRARIS**, University of Torino, Italy  
**Dusan GALUSEK**, Trencin University - FunGlass, Slovakia  
**Christoph GROSS**, SCHOTT AG, Germany  
**Mohamed NAJI**, University Sidi Mohamed Ben Abdallah, Morocco  
**Rajan SAINI**, Akal University, India  
**Cristina SILIGARDI**, Università di Modena e Reggio Emilia, Italy  
**Sohei SUKENAGA**, Tohoku University, Japan

**Symposium 8 (S8)  
FUNCTIONAL CERAMICS**

*Organisers*

**Catherine ELISSALDE**, ICMCB, CNRS, University Bordeaux, France  
**Barbara MALIČ**, Jožef Stefan Institute, Slovenia  
*Co-organisers*  
**Miguel ALGUERÓ**, Instituto de Ciencia de Materiales de Madrid (ICMM), CSIC, Spain  
**Vincenzo BUSCAGLIA**, Institute of Condensed Matter Chemistry and Technologies for Energy (ICMATE), CNR, Italy  
**Adrian GOLDSTEIN**, Israel Ceramic and Silicate Institute, Israel  
**Jurij KORUZA**, Technical University Graz, Austria

**Adelina IANCULESCU**, Politechnica University of Bucharest, Romania  
**Pascal MARCHET**, University of Limoges, France  
**Jürgen RÖDEL**, Technical University of Darmstadt, Germany  
**Vladimir SRDIĆ**, University of Novi Sad, Serbia  
**Marlies K. VAN BAEI**, Hasselt University, Belgium  
**Paula VILARINHO**, University of Aveiro, Portugal

**Symposium 9 (S9)  
CERAMICS FOR ENERGY CONVERSION AND  
STORAGE, CHEMISTRY AND ENVIRONMENT**

*Organisers*

**Fabienne AUDUBERT**, CEA, France  
**Federico SMEACETTO**, Politecnico di Torino, Italy  
**Olivier GUILLON**, Forschungszentrum Jülich & RWTH Aachen University, Germany  
*Co-organisers*  
**Nicolas CLAVIER**, ICSM, CNRS, France  
**Laurence CROGUENNEC**, ICMCB, University of Bordeaux, France  
**Jérôme LAURENCIN**, CEA / LITEN, France  
**Michael REECE**, Queen Mary University of London, UK  
**Jose SERRA**, Polytechnic University of Valencia, Spain  
**Peter VANG HENDRIKSEN**, DTU Energy, Denmark  
**Louis WINNUBST**, University of Twente, Netherlands

**Symposium 10 (S10)  
BIOCERAMICS, COMPOSITES AND  
BIOACTIVE GLASSES FOR HEALTHCARE**

*Organisers*

**Aldo BOCCACCINI**, University of Erlangen-Nuremberg, Germany  
**Laurent GREMILLARD**, MATEIS Insa Lyon, France  
*Co-organisers*  
**Jose Carlos ALMEIDA**, University of Aveiro, Portugal  
**Marc BOHNER**, RMS Foundation, Switzerland  
**Eric CHAMPION**, University of Limoges, France  
**Christèle COMBES**, Institut National Polytechnique Toulouse, France  
**Hakan ENGQVIST**, Uppsala University, Sweden  
**David MARCHAT**, Mines Saint Etienne, France  
**Paola PALMERO**, Politecnico di Torino, Italy  
**Alessandro Alan PORPORATI**, Ceramtec AG, Germany

**Symposium 11 (S11)  
CERAMICS AND INORGANIC MATERIALS  
FOR BUILDING APPLICATIONS**

*Organisers*

**Jean-Marc TULLIANI**, DISAT Politecnico di Torino, Italy  
**Martin CYR**, LMDC University Toulouse, France  
*Co-organisers*  
**Maria Chiara BIGNOZZI**, University of Bologna, Italy  
**Shashank BISHNOI**, Indian Institute of Technology Delhi, India  
**Maria CRUZ ALONSO**, Institute of Construction Science Eduardo Torroja, Spain  
**Rachida IDIR**, Cerema, France  
**Rao Arsalan KHUSHNOOD**, National University of Sciences and Technology, Pakistan  
**Elodie PRUD'HOMME**, INSA de Lyon, France  
**Harn WEI KUA**, National University of Singapore, Singapore  
**William WILSON**, Université de Sherbrooke, Canada

**Symposium 12 (S12)  
ADVANCED CHARACTERIZATION TECHNIQUES**

*Organisers*

**Giovanni BRUNO**, BAM-Berlin, Germany  
**René GUINEBRETIERE**, IRCER Limoges, France  
*Co-organisers*  
**Mael GUENNOU**, University of Luxembourg, Luxembourg  
**Pamela THOMAS**, University of Warwick, Coventry, UK  
**Franck FAYON**, CEMHTI-CNRS Orléans, France

**Karine MASENELLI-VARLOT**, INSA Lyon, France  
**Valter SERGO**, Università degli Studi di Trieste, Italy

**Satellite Symposium 13 (SS13)  
CERAMICS AND GLASS IN CULTURAL HERITAGE**

*Organisers*

**Jana GÖBEL**, Porzellanikon Selb-Ploessberg, Germany  
**Anne BOUQUILLON**, C2RMF Paris, France  
**Yona WAKSMAN**, ArAr CNRS Lyon, France  
*Co-organisers*  
**Claudia CASALIE**, Museo Internazionale delle Ceramiche in Faenza, Italy  
**Atika CHEMMI**, Cité de la Céramique, France  
**Rhiannon EWING-JAMES**, The Clay Foundation CIO, UK  
**Ian FREESTONE**, University College London, UK  
**Celestino GRIFA**, Università degli Studi del Sannio di Benevento, Italy  
**Nadine SCHIBILLE**, CNRS UMR 7065 IRAMAT, France  
**Philippe SCIAU**, CNRS UPR 8011 CEMES, France  
**Antonín TOMÁSEK**, Univerzita J. E. Puryně v Ústí nad Labem, Czech Republic  
**Márcia VILARIGUES**, Lisbon NOVA University, Portugal

**Satellite Symposium 14 (SS14)  
ACERS-ECERS JOINT SYMPOSIUM**

*Organisers*

**Sanjay MATHUR**, American Ceramic Society, USA  
**Francis CAMBIER**, European Ceramic Society, Belgium  
*Co-organisers*  
**Christos ANEZIRIS**, Technical University Freiberg, Germany  
**Jon BINNER**, University of Birmingham, UK  
**Rajendra K. BORDIA**, Clemson University, USA  
**Michele DONDI**, CNR-ISTEC, Italy  
**Monica FERRARIS**, Politecnico di Torino, Italy  
**Suk-Joong KANG**, Korea Institute of Ceramic Engineering and Technology, South Korea  
**Young-Wook KIM**, Seoul National University, South Korea  
**Ravi KUMAR**, Indian Institute of Technology, Madras, India  
**Tatsuki OHJI**, AIST Japan, Japan  
**Omer VAN DER BIEST**, KULeuven, Belgium  
**Pavol SAJGALIK**, Slovak Academy of Sciences, Slovakia

**Satellite Symposium 15 (SS15)  
CLINICAL APPLICATIONS OF CERAMICS  
AND TECHNOLOGIES IN DENTISTRY  
IN MEMORIAM JAMES ZHIJIAN SHEN AND TOMAŽ KOSMA**

*Organisers*

**Andraž KOCJAN**, Jožef Stefan Institute, Slovenia  
**Paola PALMERO**, Politecnico di Torino, Italy  
*Co-organisers*  
**Jianmin HAN**, Peking University, China  
**Peter JEVNIKAR**, University of Ljubljana, Slovenia  
**Ralf KOHAL**, Universitätsklinikum Freiburg, Germany  
**Antonia RESSLER**, Tampere University, Finland  
**Jens TARTSCH**, European Society for Ceramic Implantology, Switzerland

**Satellite Symposium 16 (SS16)  
FUNGLASS SYMPOSIUM - FUNCTIONAL  
AND SURFACE FUNCTIONALIZED GLASSES**

*Organiser*

**Dušan GALUSEK**, FunGlass, TnUAD, Slovakia  
*Co-organisers*  
**Martin MICHÁLEK**, FunGlass, TnUAD, Slovakia  
**Jozef KRAXNER**, FunGlass, TnUAD, Slovakia  
**Amirhossein PAKSERESH**, FunGlass, TnUAD, Slovakia  
**José Joaquín VELÁZQUEZ GARCÍA**, FunGlass, TnUAD, Slovakia



# Detailed oral sessions program\*

Key for Session Codes: How to read the sessions codes



<b>S1</b> Innovative ceramic syntheses, processing and shaping	<b>S2</b> Thermal processes and advanced sintering	<b>S3</b> Additive manufacturing	<b>S4</b> Advanced structural ceramics, composites and architected materials
<b>S5</b> Refractories, high and ultra-high temperature ceramics	<b>S6</b> Ceramics for sustainable development	<b>S7</b> Glass-ceramics and glasses	<b>S8</b> Functional ceramics
<b>S9</b> Ceramics for energy conversion and storage, chemistry and environment	<b>S10</b> Bioceramics, composites and bioactive glasses for healthcare	<b>S11</b> Ceramics and inorganic materials for building applications	<b>S12</b> Advanced characterization techniques
<b>SS13</b> Ceramics and glass in cultural heritage	<b>SS14</b> ACerS-ECerS joint Symposium	<b>SS15</b> Clinical Applications of Ceramics and Technologies in Dentistry	<b>SS16</b> Funglass Symposium - Functional and Surface functionalized Glasses

● Plenary / Keynote / Highlight      ● Scientific event / Social event

\*Update: 13 June 2023

## SUNDAY 2 JULY

14:30 - 16:30	Student Speech Contest-01	ROOM ROSERAIE 1+2
17:00 - 19:00	Student Speech Contest-02	ROOM ROSERAIE 1+2
18:00 - 19:30	Welcome Reception	FOYER FORUM 1-2-3

## MONDAY 3 JULY

08:30 - 10:30		Welcome Ceremony & Plenary Lectures	AUDITORIUM LUMIÈRE
10:30 - 11:00		Coffee break	
11:00 - 13:00	<b>MON-S1-01</b>	Innovative ceramic syntheses, processing and shaping 01	AUDITORIUM PASTEUR
11:00 - 13:00	<b>MON-S3-01</b>	Additive manufacturing 01	ROOM PASTEUR
11:00 - 13:00	<b>MON-S4-01</b>	Advanced structural ceramics, composites and architected materials 01	ROOM RHÔNE 1
11:00 - 13:00	<b>MON-S5-01</b>	Refractories, high and ultra-high temperature ceramics 01	ROOM RHÔNE 3B
11:00 - 13:00	<b>MON-S6-01</b>	Ceramics and sustainable development 01	ROOM RHÔNE 4
11:00 - 13:00	<b>MON-S7-01</b>	Glass-ceramics and glasses 01	ROOM RHÔNE 2
11:00 - 13:00	<b>MON-S8-01</b>	Functional ceramics 01	ROOM RHÔNE 3A
11:00 - 13:00	<b>MON-S8-02</b>	Functional ceramics 02	ROOM ST CLAIR 3A + 3B
11:00 - 13:00	<b>MON-S9-01</b>	Ceramics for energy conversion and storage, chemistry and environment 01	AUDITORIUM LUMIÈRE
11:00 - 13:00	<b>MON-SS14-01</b>	ACerS-ECerS joint symposium 01	ROOM ST CLAIR 2
11:00 - 13:00		Student Speech Contest 03	ROOM ROSERAIE 1+2
10:30 - 11:00		Lunch break	EXHIBITION HALL
13:30 - 14:00		Technical Workshop <i>Onsite demonstration by Lithoz</i>	BOOTH #33
14:30 - 16:30	<b>MON-S1-02</b>	Innovative ceramic syntheses, processing and shaping 02	AUDITORIUM PASTEUR
14:30 - 16:30	<b>MON-S3-02</b>	Additive manufacturing 02	ROOM PASTEUR
14:30 - 16:30	<b>MON-S4-02</b>	Advanced structural ceramics, composites and architected materials 02	ROOM RHÔNE 1
14:30 - 16:30	<b>MON-S5-02</b>	Refractories, high and ultra-high temperature ceramics 02	ROOM RHÔNE 3B



14:30 - 16:30	MON-S6-02	Ceramics and sustainable development 02	ROOM RHÔNE 4
14:30 - 16:30	MON-S7-02	Glass-ceramics and glasses 02	ROOM RHÔNE 2
14:30 - 16:30	MON-S8-03	Functional ceramics 03	ROOM RHÔNE 3A
14:30 - 16:30	MON-S8-04	Functional ceramics 04	ROOM ST CLAIR 3A + 3B
14:30 - 16:30	MON-S9-02	Ceramics for energy conversion and storage, chemistry and environment 02	AUDITORIUM LUMIÈRE
14:30 - 16:30	MON-S10-01	Bioceramics, composites and bioactive glasses for healthcare 01	ROOM ST CLAIR 1
14:30 - 16:30	MON-SS14-02	ACerS-ECerS joint symposium 02	ROOM ST CLAIR 2
14:30 - 16:30		Student Speech Contest 04	ROOM ROSERAIE 1+2
16:30 - 17:00		Coffee break - Exhibition - Posters	EXHIBITION HALL
17:00 - 19:00	MON-S1-03	Innovative ceramic syntheses, processing and shaping 03	AUDITORIUM PASTEUR
17:00 - 19:00	MON-S4-03	Advanced structural ceramics, composites and architected materials 03	ROOM RHÔNE 1
17:00 - 19:00	MON-S4-04	Advanced structural ceramics, composites and architected materials 04	ROOM RHÔNE 2
17:00 - 19:00	MON-S5-03	Refractories, high and ultra-high temperature ceramics 03	ROOM RHÔNE 3B
17:00 - 19:00	MON-S6-03	Ceramics and sustainable development 03	ROOM RHÔNE 4
17:00 - 19:00	MON-S8-05	Functional ceramics 05	ROOM RHÔNE 3A
17:00 - 19:00	MON-S8-06	Functional ceramics 06	ROOM ST CLAIR 3A + 3B
17:00 - 19:00	MON-S9-03	Ceramics for energy conversion and storage, chemistry and environment 03	AUDITORIUM LUMIÈRE
17:00 - 19:00	MON-S10-02	Bioceramics, composites and bioactive glasses for healthcare 02	ROOM ST CLAIR 1
17:00 - 19:00	MON-SS14-03	ACerS-ECerS joint symposium 03	ROOM ST CLAIR 2
19:00-20:30		Young Scientists Career Fair	ROOM PASTEUR

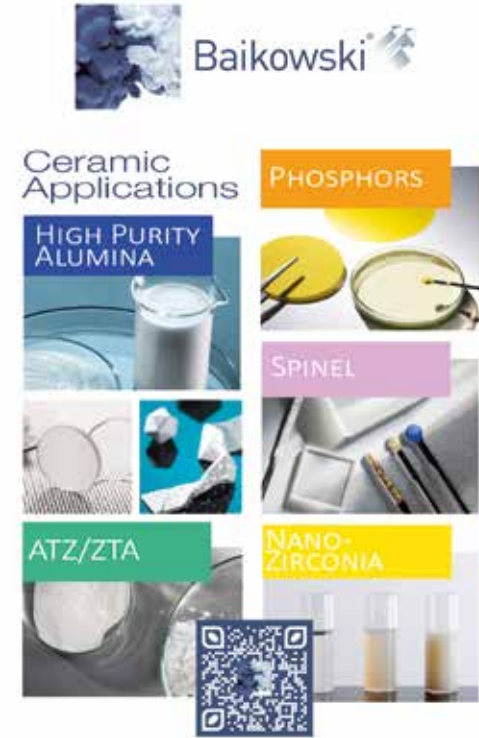


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## TUESDAY 4 JULY

08:30 - 10:30	<b>TUE-S1-04</b>	Innovative ceramic syntheses, processing and shaping 04	AUDITORIUM PASTEUR
08:30 - 10:30	<b>TUE-S2-01</b>	Thermal processes and advanced sintering 01	ROOM ST CLAIR 1
08:30 - 10:30	<b>TUE-S3-03</b>	Additive manufacturing 03	ROOM PASTEUR
08:30 - 10:30	<b>TUE-S4-05</b>	Advanced structural ceramics, composites and architected materials 05	ROOM RHÔNE 1
08:30 - 10:30	<b>TUE-S4-06</b>	Advanced structural ceramics, composites and architected materials 06	ROOM RHÔNE 2
08:30 - 10:30	<b>TUE-S5-04</b>	Refractories, high and ultra-high temperature ceramics 04	ROOM RHÔNE 3A
08:30 - 10:30	<b>TUE-S6-04</b>	Ceramics and sustainable development 04	ROOM RHÔNE 3B
08:30 - 10:30	<b>TUE-S7-03</b>	Glass-ceramics and glasses 03	ROOM ST CLAIR 2
08:30 - 10:30	<b>TUE-S8-07</b>	Functional ceramics 07	ROOM ST CLAIR 3A + 3B
08:30 - 10:30	<b>TUE-S9-04</b>	Ceramics for energy conversion and storage, chemistry and environment 04	AUDITORIUM LUMIÈRE
08:30 - 10:30	<b>TUE-SS13-01</b>	Ceramics and glass in cultural heritage and art 01	ROOM ROSERAIE 3
08:30 - 10:30	<b>TUE-SS14-04</b>	ACerS-ECerS joint symposium 04	ROOM RHÔNE 4
08:30 - 10:30	<b>TUE-SS15-01</b>	Clinical Applications of Ceramics and Technologies in Dentistry 01	ROOM ROSERAIE 1+2
10:30 - 11:00		Coffee break - Exhibition - Posters	EXHIBITION HALL
11:00 - 13:00	<b>TUE-S1-05</b>	Innovative ceramic syntheses, processing and shaping 05	AUDITORIUM PASTEUR
11:00 - 13:00	<b>TUE-S2-02</b>	Thermal processes and advanced sintering 02	ROOM ST CLAIR 1
11:00 - 13:00	<b>TUE-S3-04</b>	Additive manufacturing 04	ROOM PASTEUR
11:00 - 13:00	<b>TUE-S4-07</b>	Advanced structural ceramics, composites and architected materials 07	ROOM RHÔNE 1

11:00 - 13:00	<b>TUE-S5-05</b>	Refractories, high and ultra-high temperature ceramics 05	ROOM RHÔNE 3A
11:00 - 13:00	<b>TUE-S7-04</b>	Glass-ceramics and glasses 04	ROOM ST CLAIR 2
11:00 - 13:00	<b>TUE-S8-08</b>	Functional ceramics 08	ROOM ST CLAIR 3A + 3B
11:00 - 13:00	<b>TUE-S9-05</b>	Ceramics for energy conversion and storage, chemistry and environment 05	AUDITORIUM LUMIÈRE
11:00 - 13:00	<b>TUE-S9-06</b>	Ceramics for energy conversion and storage, chemistry and environment 06	ROOM RHÔNE 3B
11:00 - 13:00	<b>TUE-SS13-02</b>	Ceramics and glass in cultural heritage and art 02	ROOM ROSERAIE 3
11:00 - 13:00	<b>TUE-SS14-05</b>	ACerS-ECerS joint symposium 05	ROOM RHÔNE 4
11:00 - 13:00	<b>TUE-SS15-02</b>	Clinical Applications of Ceramics and Technologies in Dentistry 02	ROOM ROSERAIE 1+2
13:00 - 14:30		Lunch break	EXHIBITION HALL
14:00-14:30		Technical Workshop <i>Onsite demonstration by 3DCeram</i>	BOOTH #41
14:30 - 16:30	<b>TUE-S1-06</b>	Innovative ceramic syntheses, processing and shaping 06	AUDITORIUM PASTEUR
14:30 - 16:30	<b>TUE-S2-03</b>	Thermal processes and advanced sintering 03	ROOM ST CLAIR 1
14:30 - 16:30	<b>TUE-S3-05</b>	Additive manufacturing 05	ROOM PASTEUR
14:30 - 16:30	<b>TUE-S4-08</b>	Advanced structural ceramics, composites and architected materials 08	ROOM RHÔNE 1
14:30 - 16:30	<b>TUE-S4-09</b>	Advanced structural ceramics, composites and architected materials 09	ROOM RHÔNE 2
14:30 - 16:30	<b>TUE-S5-06</b>	Refractories, high and ultra-high temperature ceramics 06	ROOM RHÔNE 3A
14:30 - 16:30	<b>TUE-S7-05</b>	Glass-ceramics and glasses 05	ROOM ST CLAIR 2
14:30 - 16:30	<b>TUE-S8-09</b>	Functional ceramics 09	ROOM ST CLAIR 3A + 3B
14:30 - 16:30	<b>TUE-S9-07</b>	Ceramics for energy conversion and storage, chemistry and environment 07	AUDITORIUM LUMIÈRE

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14:30 - 16:30	<b>TUE-S9-08</b>	Ceramics for energy conversion and storage, chemistry and environment 08	ROOM RHÔNE 3B
14:30 - 16:30	<b>TUE-SS13-03</b>	Ceramics and glass in cultural heritage and art 03	ROOM ROSERAIE 3
14:30 - 16:30	<b>TUE-SS14-06</b>	ACerS-ECerS joint symposium 06	ROOM RHÔNE 4
14:30 - 16:30	<b>TUE-SS15-03</b>	Clinical Applications of Ceramics and Technologies in Dentistry 03	ROOM ROSERAIE 1+2
16:30 - 17:00		Coffee break - Exhibition - Posters	EXHIBITION HALL
17:00 - 19:00	<b>TUE-S1-07</b>	Innovative ceramic syntheses, processing and shaping 07	AUDITORIUM PASTEUR
17:00 - 19:00	<b>TUE-S2-04</b>	Thermal processes and advanced sintering 04	ROOM ST CLAIR 1
17:00 - 19:00	<b>TUE-S3-06</b>	Additive manufacturing 06	ROOM PASTEUR
17:00 - 19:00	<b>TUE-S4-10</b>	Advanced structural ceramics, composites and architected materials 10	ROOM RHÔNE 1
17:00 - 19:00	<b>TUE-S4-11</b>	Advanced structural ceramics, composites and architected materials 11	ROOM RHÔNE 2
17:00 - 19:00	<b>TUE-S5-07</b>	Refractories, high and ultra-high temperature ceramics 07	ROOM RHÔNE 3A
17:00 - 19:00	<b>TUE-S8-10</b>	Functional ceramics 10	ROOM ST CLAIR 2
17:00 - 19:00	<b>TUE-S8-11</b>	Functional ceramics 11	ROOM ST CLAIR 3A + 3B
17:00 - 19:00	<b>TUE-S9-09</b>	Ceramics for energy conversion and storage, chemistry and environment 09	AUDITORIUM LUMIÈRE
17:00 - 19:00	<b>TUE-S9-10</b>	Ceramics for energy conversion and storage, chemistry and environment 10	ROOM RHÔNE 3B
17:00 - 19:00	<b>TUE-SS13-04</b>	Ceramics and glass in cultural heritage and art 04	ROOM ROSERAIE 3
17:00 - 19:00	<b>TUE-SS15-04</b>	Clinical Applications of Ceramics and Technologies in Dentistry 04	ROOM ROSERAIE 1+2

## WEDNESDAY 5 JULY

08:30 - 12:30		Plenary Lectures & ECerS Awards Ceremony	AUDITORIUM LUMIÈRE
12:30 - 14:00		Lunch break	EXHIBITION HALL
14:00-14:30		Technical Workshop <i>Onsite demonstration by CONCR3DE</i>	BOOTH #36
14:00 - 16:00	<b>WED-S1-08</b>	Innovative ceramic syntheses, processing and shaping 08	AUDITORIUM PASTEUR
14:00 - 16:00	<b>WED-S2-05</b>	Thermal processes and advanced sintering 05	ROOM RHÔNE 3A
14:00 - 16:00	<b>WED-S3-07</b>	Additive manufacturing 07	ROOM PASTEUR
14:00 - 16:00	<b>WED-S3-08</b>	Additive manufacturing 08	ROOM RHÔNE 1
14:00 - 16:00	<b>WED-S4-12</b>	Advanced structural ceramics, composites and architected materials 12	ROOM RHÔNE 2
14:00 - 16:00	<b>WED-S5-08</b>	Refractories, high and ultra-high temperature ceramics 08	ROOM RHÔNE 3B
14:00 - 16:00	<b>WED-S8-12</b>	Functional ceramics 12	ROOM ST CLAIR 3A + 3B
14:00 - 16:00	<b>WED-S9-11</b>	Ceramics for energy conversion and storage, chemistry and environment 11	AUDITORIUM LUMIÈRE
14:00 - 16:00	<b>WED-S10-03</b>	Bioceramics, composites and bioactive glasses for healthcare 03	ROOM ST CLAIR 1
14:00 - 16:00	<b>WED-S11-01</b>	Ceramics and inorganic materials for building applications 01	ROOM RHÔNE 4
14:00 - 16:00	<b>WED-S12-01</b>	Advanced characterization techniques 01	ROOM ST CLAIR 2
14:00 - 16:00	<b>WED-SS16-01</b>	Funglass Symposium - Functional and Surface functionalized Glasses 01	ROOM ROSERAIE 1+2
16:00 - 16:30		Coffee break - Exhibition - Posters	EXHIBITION HALL
16:30 - 18:30	<b>WED-S1-09</b>	Innovative ceramic syntheses, processing and shaping 09	AUDITORIUM PASTEUR
16:30 - 18:30	<b>WED-S2-06</b>	Thermal processes and advanced sintering 06	ROOM RHÔNE 3A
16:30 - 18:30	<b>WED-S3-09</b>	Additive manufacturing 09	ROOM PASTEUR

## WEDNESDAY 5 JULY

16:30 - 18:30	<b>WED-S4-13</b>	Advanced structural ceramics, composites and architected materials 13	ROOM RHÔNE 2
16:30 - 18:30	<b>WED-S5-09</b>	Refractories, high and ultra-high temperature ceramics 09	ROOM RHÔNE 3B
16:30 - 18:30	<b>WED-S8-13</b>	Functional ceramics 13	ROOM ST CLAIR 3A + 3B
16:30 - 18:30	<b>WED-S9-12</b>	Ceramics for energy conversion and storage, chemistry and environment 12	AUDITORIUM LUMIÈRE
16:30 - 18:30	<b>WED-S10-04</b>	Bioceramics, composites and bioactive glasses for healthcare 04	ROOM ST CLAIR 1
16:30 - 18:30	<b>WED-S11-02</b>	Ceramics and inorganic materials for building applications 02	ROOM RHÔNE 4
16:30 - 18:30	<b>WED-S12-02</b>	Advanced characterization techniques 02	ROOM ST CLAIR 2
16:30 - 18:30	<b>WED-SS16-02</b>	Funglass Symposium - Functional and Surface functionalized Glasses 02	ROOM ROSERAIE 1+2
19:00 - 23:00		Gala Dinner	LES SUBSTANCES









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## THURSDAY 6 JULY

08:30 - 10:30	<b>THU-S1-10</b>	Innovative ceramic syntheses, processing and shaping 10	AUDITORIUM PASTEUR
08:30 - 10:30	<b>THU-S10-05</b>	Bioceramics, composites and bioactive glasses for healthcare 05	ROOM RHÔNE 4
08:30 - 10:30	<b>THU-S11-03</b>	Ceramics and inorganic materials for building applications 03	ROOM ST CLAIR 2
08:30 - 10:30	<b>THU-S12-03</b>	Advanced characterization techniques 03	ROOM ST CLAIR 1
08:30 - 10:30	<b>THU-S2-07</b>	Thermal processes and advanced sintering 07	ROOM RHÔNE 2
08:30 - 10:30	<b>THU-S3-10</b>	Additive manufacturing 10	ROOM PASTEUR
08:30 - 10:30	<b>THU-S4-14</b>	Advanced structural ceramics, composites and architected materials 14	ROOM RHÔNE 1
08:30 - 10:30	<b>THU-S5-10</b>	Refractories, high and ultra-high temperature ceramics 10	ROOM RHÔNE 3B
08:30 - 10:30	<b>THU-S8-14</b>	Functional ceramics 14	ROOM ST CLAIR 3A + 3B
08:30 - 10:30	<b>THU-S9-13</b>	Ceramics for energy conversion and storage, chemistry and environment 13	AUDITORIUM LUMIÈRE
08:30 - 10:30	<b>THU-S9-14</b>	Ceramics for energy conversion and storage, chemistry and environment 14	ROOM RHÔNE 3A
08:30 - 10:30	<b>THU-SS16-03</b>	Funglass Symposium - Functional and Surface functionalized Glasses 03	ROOM ROSERAIE 1+2
10:30 - 11:00		Coffee break - Exhibition - Posters	EXHIBITION HALL
11:00 - 13:00	<b>THU-S1-11</b>	Innovative ceramic syntheses, processing and shaping 11	AUDITORIUM PASTEUR
11:00 - 13:00	<b>THU-S2-08</b>	Thermal processes and advanced sintering 08	ROOM RHÔNE 2
11:00 - 13:00	<b>THU-S3-11</b>	Additive manufacturing 11	ROOM PASTEUR
11:00 - 13:00	<b>THU-S4-15</b>	Advanced structural ceramics, composites and architected materials 15	ROOM RHÔNE 1
11:00 - 13:00	<b>THU-S5-11</b>	Refractories, high and ultra-high temperature ceramics 11	ROOM RHÔNE 3B

11:00 - 13:00	<b>THU-S8-15</b>	Functional ceramics 15	ROOM ST CLAIR 3A + 3B
11:00 - 13:00	<b>THU-S9-15</b>	Ceramics for energy conversion and storage, chemistry and environment 15	AUDITORIUM LUMIÈRE
11:00 - 13:00	<b>THU-S9-16</b>	Ceramics for energy conversion and storage, chemistry and environment 16	ROOM RHÔNE 3A
11:00 - 13:00	<b>THU-S10-06</b>	Bioceramics, composites and bioactive glasses for healthcare 06	ROOM RHÔNE 4
11:00 - 13:00	<b>THU-S11-04</b>	Ceramics and inorganic materials for building applications 04	ROOM ST CLAIR 2
11:00 - 13:00	<b>THU-S12-04</b>	Advanced characterization techniques 04	ROOM ST CLAIR 1
11:00 - 13:00	<b>THU-SS16-04</b>	Funglass Symposium - Functional and Surface functionalized Glasses 04	ROOM ROSERAIE 1+2
13:00 - 14:30		Coffee break - Exhibition - Posters	EXHIBITION HALL
14:00-14:30		Technical Workshop <i>Onsite demonstration by NANO-e</i>	BOOTH #1
14:30 - 16:30	<b>THU-S1-12</b>	Innovative ceramic syntheses, processing and shaping 12	AUDITORIUM PASTEUR
14:30 - 16:30	<b>THU-S2-09</b>	Thermal processes and advanced sintering 09	ROOM RHÔNE 2
14:30 - 16:30	<b>THU-S3-12</b>	Additive manufacturing 12	ROOM PASTEUR
14:30 - 16:30	<b>THU-S3-13</b>	Additive manufacturing 13	ROOM RHÔNE 3B
14:30 - 16:30	<b>THU-S4-16</b>	Advanced structural ceramics, composites and architected materials 16	ROOM RHÔNE 1
14:30 - 16:30	<b>THU-S8-16</b>	Functional ceramics 16	ROOM ST CLAIR 3A + 3B
14:30 - 16:30	<b>THU-S9-17</b>	Ceramics for energy conversion and storage, chemistry and environment 17	AUDITORIUM LUMIÈRE
14:30 - 16:30	<b>THU-S10-07</b>	Bioceramics, composites and bioactive glasses for healthcare 07	ROOM RHÔNE 4
14:30 - 16:30	<b>THU-S11-05</b>	Ceramics and inorganic materials for building applications 05	ROOM ST CLAIR 2

# Sponsors & partners

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ACADEMIC, ASSOCIATIONS, INSTITUTIONAL SPONSORS

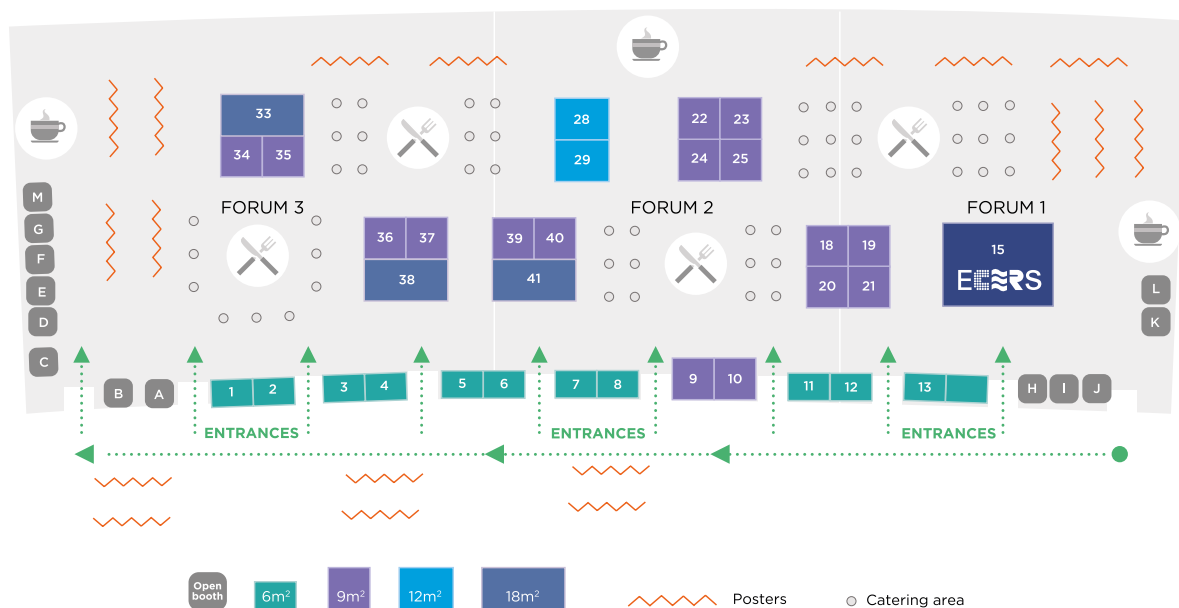


# Exhibitors





## Exhibition floorplan



- |                          |                                    |                        |                                  |
|--------------------------|------------------------------------|------------------------|----------------------------------|
| 1 Nanoe                  | 13 Kagaku                          | 28 Verder              | A. Novadditive                   |
| 2 Ribori Instrumentation | 14 Fritsch GmbH                    | 29 Anton Paar          | B. FCT Systeme                   |
| 3 ETC                    | 15 ECeRS                           | 33 Lithoz              | C. Pôle Européen de la Céramique |
| 4 Carnot Ingénierie@Lyon | 18 Tosoh                           | 34 Dr Fritsch Norimat  | D. NewTec Scientific             |
| 5 RHP Technology         | 19 Bunting Magnetics Europe        | 35 LUM                 | E. Setaram                       |
| 6 Setnag                 | 20 Bruker                          | 36 Concr3de            | F. GDR Tamarys                   |
| 7 Hirox                  | 21 Admatec Nano Dimension Division | 37 BCRC                | G. CeraQuest                     |
| 8 HTDS                   | 22 ATL                             | 38 Imerys              | H. FunGlass                      |
| 10 Fritsch               | 23 CTTC                            | 39 Malvern Panalytical | I. Sugino                        |
| 11 Quintus Technologies  | 24 Bony                            | 40 Saint-Gobain        | J. RMS Foundation                |
| 12 GrindoSonic           | 25 Baikowski                       | 41 3DCERAM             | K. CESAREF                       |
|                          |                                    |                        | L. Toyal                         |
|                          |                                    |                        | M. FIRE                          |



### ECeRS Village

We are pleased to invite you to **visit the ECeRS Village in the Exhibition area** to discover more about ECeRS: its activities, its conferences and schools, its journals (JECS and Open Ceramics), its topical networks but also to learn more about the societies members of ECeRS and meet their representatives - 20 member countries out of 30 will present a poster and will be available to answer your questions and, why not, set up future collaborations!

# ECeRS

## THE EUROPEAN CERAMIC SOCIETY



### MEMBERS

Austria  
Belgium  
Croatia  
Czech Republic  
Denmark  
Finland  
France  
Georgia  
Germany  
Greece  
Hungary  
Ireland  
Italy  
Latvia  
The Netherlands  
Norway  
Poland  
Portugal  
Romania  
Russia  
Serbia  
Slovak Republic  
Slovenia  
Spain  
Sweden  
Switzerland  
Turkey  
United Kingdom

### ASSOCIATED MEMBERS:

Iran  
Morocco



### MEMBERSHIP

If you are a member of one of our European or associated members countries then you are automatically considered as a member of ECeRS!

This comes with advantages:

### ECERS EVENTS

**ECeRS biennial Conference & Exhibition** : Next one: ECeRS XIX Dresden 2025 - 31 August-4 September 2025 - [www.ecers2025.org](http://www.ecers2025.org)

**ECeRS Students Speech Contest** : Contest organised during the ECeRS biennial conferences: young research students, representing each of the ECeRS member countries give an oral presentation that is evaluated by a jury - next one: ECeRS XIX in Dresden 2025

**Shaping conferences** : Next one: Shaping 9 - Warsaw - fall 2024

**Electroceramics conferences** : Next one: Electroceramics XIX 19-22 August 2024 in Vilnius, Lithuania

**yCAM forums** : Next: 2023 - Leoben - 30 August-1 September 2023 & 2024 - Tampere - May 2024!

**Summer Schools** : Organised prior to the ECeRS events - the next one will be organised prior to the Electroceramics 2024 conference in Vilnius.

Reduced fees to attend events and School (co) organised by ECeRS!

### 2 JOURNALS (ELSEVIER)

**Journal of ECeRS (JECS)**: topics related to the structure, properties and processing of ceramic materials

**Open Ceramics**: topics related to all classes of ceramic materials - open access journal.

Reduced subscription prices for the 2 ECeRS Journals!

### 4 TOPICAL NETWORKS

**Electroceramics**  
**Bioceramics**

**Additive Manufacturing** (Europe Makes Ceramics)  
**Young Ceramists Network** (YCN!)

Access to JECS Trust Funding!

Check the ECeRS website and register to the newsletter for more information and events related to ceramics!

[ecers.org](http://ecers.org)

The European Ceramic Society AISBL

Avenue Gouverneur Cornez , 4 - 7000 Mons - Belgium - +32 (0)65 403421 - [info@ecers.org](mailto:info@ecers.org)

Most activities of ECeRS are sponsored by JECS Trust



# FRENCH CERAMIC SOCIETY

GRUPE FRANÇAIS DE LA CÉRAMIQUE  
created in 1985

[GF-CERAMIQUE.FR](http://GF-CERAMIQUE.FR)

**400**  
INDIVIDUAL MEMBERS

**96**  
INDUSTRIAL / INSTITUTIONAL MEMBERS

## PRESENTATION & MISSIONS

- Promote exchanges within a community of 400 members
- Support actions to promote scientific research
- Support the national and international mobility of young researchers
- Organize congresses
- Publish didactic books



J. POIRIER  
PRESIDENT



J.M. HEINTZ  
PRESIDENT ELECT



A. LERICHE  
TREASURER

## TOPICS

- Powder syntheses, processing and shaping - Additive manufacturing
- Thermal processes and sintering
- Functional and structural properties – Characterisation techniques
- Ceramics for energy, health, chemistry, environment, high temperatures, transport, tableware ....

## CONFERENCES, SEMINARS, SCHOOL, WEBINARS

- XVIII EcerS Conference & Exhibition *Co-organizer*
- Annual GFC Conference with PhD thesis and poster contests
- 4 Technical Workshops per year

Refractories  
Thermal spraying  
Additive manufacturing  
Sustainable development



- Ceramic Autumn School

*Unconventional sintering processes, 8-13 october 2023, Aussois (Fr)*



The Journal of the European Ceramic Society Trust

# Funding for Ceramics Research and Education

The Journal of the European Ceramic Society Trust (JECS Trust) was set up in December 2007 to oversee the expenditure of funds passed on to the European Ceramic Society (ECerS) by the Society's Journal and by its publisher, Elsevier. In its allocation of the Trust's resources, the Board of the JECS Trust aims:

- to enable the European Ceramic Society to engage in a broad range of activities for the benefit of its membership.
- to strengthen research and teaching in Europe within the subject of ceramics
- to maintain and build on the current strong reputation of the Journal



Applicants wishing to receive financial support from the JECS Trust should submit their bids electronically to the joint JECS Trust/ECerS secretariat. Decision on awards are taken by the Board of the JECS Trust

The application forms can be downloaded on

[www.jecstrust.org](http://www.jecstrust.org)

Deadlines for Mobility projects\*  
February 28 & May 31  
August 31 & November 30

Deadlines for General Activities\*  
(Workshops, Conferences, etc...)  
May 31 & November 30

Around  
**€ 3 500 000**  
already awarded  
to more than 300 projects

Examples of activities that can be supported include:

- Funding of visits by individuals to other laboratories within Europe to learn new techniques or to access equipment not available in their own laboratories.
- Events such as workshops which are specifically aimed at students/early stage researchers/high school teachers.
- Workshops on topical research areas likely to result in high quality papers for publication in the Journal of the European Ceramic Society.

# JECS Trust

Av. Gouverneur Cornez, 4 - 7000 Mons - Belgium  
+32 65 40 34 21 - [ecers@bcrc.be](mailto:ecers@bcrc.be)



## PRACTICAL INFORMATION



### REGISTRATION DESK OPENING HOURS

#### Hall Terreaux

**Sunday 2 July**  
14:00-19:00

**Monday 3 July**  
08:00-19:30

**Tuesday 4 July**  
08:00-19:30

**Wednesday 5 July**  
08:00-19:00

**Thursday 6 July**  
08:00-17:30



### BADGES

**For security reasons, you are required to wear your badge at all times while at the Conference.**

Delegates and exhibitors badges give access to the welcome reception, plenary and breakout sessions, posters and industrial exhibition, coffee breaks.



### LANGUAGE

**English** is the official language of the conference.



### CLOAKROOM

A cloakroom and baggage room is available near the registration desk. But for security reasons, we suggest that you leave your belongings at your hotel.

**For 'Lost and found' items: please check at the registration desk.**



### COFFEE BREAKS

**The coffee breaks are served in the Exhibition Hall LEVEL -2**

There will be no morning coffee break on Wednesday 5 July, as the Plenary Lectures & ECerS Award Ceremony will take place from 8:30 to 12:30.



### POSTER SESSIONS

**The poster presentations will take place in the Exhibition Hall**

of Lyon Convention Centre along with the industrial exhibition and coffee breaks.

Posters will be hanged from **Monday 3 July 13:00 to Thursday 6 July 14:30.**



### SPEAKER-READY ROOM

This is the place to finalize and download your presentation.

**Check for Salon Lumière LEVEL -1**

All speakers are required to check-in at the Speaker-Ready Room at least **2 hours before their presentation or the day before in case of first morning session.**

The Speaker-Ready room will be opened on **Sunday 2 July** from 15:00 to 18:00 and from **Monday 3 to Thursday 6 July** from 8:00.



### MOBILE WEBAPP

**The ECerS 2023 mobile webapp is your go-to resource to make the most of your conference experience.**

Plan your schedule, connect with speakers and attendees, access the floor plan, find exhibitors, and much more! Every registered delegate has received a login email to access the webapp. You can also ask at the registration desk for assistance.

<https://ecers2023.org/webapp>



### WIFI

The Wifi is available in all the Conventer Centre premises. With the support of CeramTec.

**CeramTec**  
THE CERAMIC EXPERTS

Network **CeramTec**  
Password **bioloxdelta**



### DRESS CODE

The dress code for the conference and social events is **casual/informal.**



### LUNCHES

The registration fees include lunches. They will be served as **standing buffet every day in the Exhibition Hall**

Tables and chairs are available in the hall for most of the delegates.

You can also enjoy a lunch outside the Convention Centre, you will find various restaurants and take away snacks in the Cité Internationale.

**On Thursday 6 July, you will enjoy a full vegetarian lunch.**



### HELP

*Should you have questions or require help, please ask at the registration desk or liaise with our wonderful team of volunteers wearing Orange scarves.*



## Driving XRD: The Versatile Powder Diffractometer

XRDynamic 500

FIND OUT MORE



## CONGRESS VENUES

Lyon Convention Centre  
50, QUAI CHARLES DE GAULLE  
69006 LYON  
CITÉ INTERNATIONALE

[www.ccc-lyon.com](http://www.ccc-lyon.com)

**!**  
TECHNICAL WORKSHOP  
HANDS-ON  
TRAINING VENUE

INSA-Lyon Campus  
BÂTIMENT  
BLAISE PASCAL  
7 AVENUE JEAN CAPELLE  
69100 VILLEURBANNE

The Technical Workshop hands-on training on additive manufacturing will take place in the premises of INSA-Lyon, at 15 min. walking distance from the Convention Centre.

GPS coordinates  
45.782286, 4.872411

### Access by public transport

Each participant will be offered a 24h pass per conference day, activated on the first entry on the TCL network, and providing an unlimited access to subways, trams, buses and funiculars.



#### BUS STOP | CITÉ INTERNATIONALE

**Line C1-C2:** from Part Dieu station  
**Line C5:** from Bellecour metro station  
**Line C4:** from Jean Macé metro station



#### CAR PARKS

P1 - P2 - P0 public car parks  
2 to 10 min. walking distance



#### VELO'V BIKE RENTAL

4 bike rental stations in the Cité Internationale  
1 to 3 days passes

## ECerS XVIII AN ECO-FRIENDLY EVENT

Lyon is one of the smartest destination in Europe: the City was granted by the European Union the "European Capital of Smart Tourism 2019" Award and in 2021, Lyon Airports obtained the ISO 14001 for its environmental performance.

However, reducing the environmental impact of ECERS 2023 in Lyon was one of our major challenges. The organizers, OnlyLyon, the Lyon Convention Centre and all ECERS 2023 partners have worked together on this topic to make the congress an eco-friendly event, with concrete actions and incentives:

Organization and Scientific committees have been mainly organized remotely in order to **reduce travel impact**.

**Carbon compensation:** the organizers will support a NGO, selected for its eco-policy.

**Use of paper has been drastically limited:** a reduced Program Book format, an online interactive program and a mobile webapp, encouragement to all sponsors and exhibitors to reduce their printed documentation.

**No plastic bottle** provided during the congress, a water flask provided in the delegate kit and water fountains available throughout the Convention Centre.

**Intelligent waste management** in the Convention Centre, including sorting and recycling of biowaste.

**Optimization of energy and water consumption** in the venue, as well as reducing CO2 emissions by promoting electric vehicles and offering respective recharging stations.

**Upcycling of the badges pouches** at the end of the congress.

**Local food production**, short supply chains, accessibility and distribution, seasonal and organic products.

Limitation of meat offer in the lunches and dinner, and a complete day with **vegetarian menu** only on Thursday 6 July

Limitation of food waste by daily collection of unconsumed products and meals for charities, in conformity with health regulations .

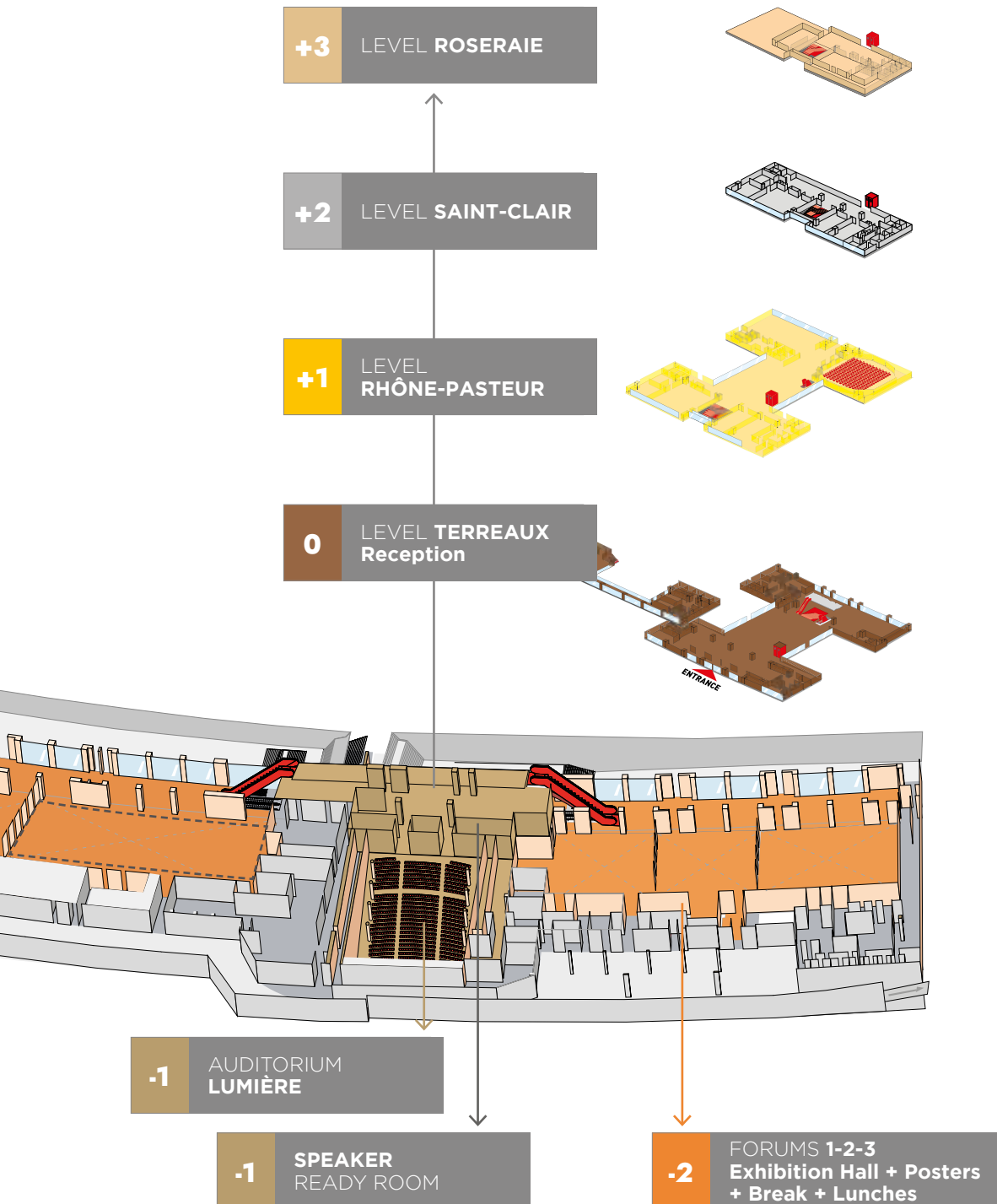
Sourcing of **local suppliers**, within 100km of Lyon at the most.



*The organizers expect all participants to reduce use of energy and resources, during the conference.*



## Convention centre floorplan



Take charge of your future, get connected with Ceramics!

# YOUNG CERAMISTS NETWORK

The nr. 1 network in ceramics!

Keep in touch with good friends, advertise your research

Be the first to hear about work and funding opportunities in ceramic research

Join the best events in the ceramics domain

Join now on Social Media or subscribe for newsletters!



Young Ceramists Network  
[www.youngceramists.eu](http://www.youngceramists.eu)

ECeRS



# Notes

Dotted lines for writing notes.



XIX Conference of the European Ceramic Society

## Save the Date

**August 31 to September 4, 2025**

Dresden, Germany, International Congress Center

[www.ecers2025.org](http://www.ecers2025.org)



## Mobile Webapp

The ECerS 2023 mobile webapp is your go-to resource to make the most of your conference experience.

Plan your schedule, connect with speakers and attendees, access the floor plan, find exhibitors, and much more!



## Wifi

Network: **CeramTec**  
Password: **bioloxdelta**

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<https://ecers2023.org>

Organized by

**ECERS**



**INSA**



**Lyon 1**

## Smart functional polymer-ceramic composites for sustainable energy harvesting and storage

Buscaglia M.T.<sup>a</sup>, Stagnaro P.<sup>b</sup>, Curecheriu L.<sup>c</sup>, Canu G.<sup>a</sup>, Mercadelli E.<sup>d</sup>, Vijatovic Petrovic M.<sup>e</sup>, Craciun F.<sup>f</sup>, Barzic A.I.<sup>g</sup>, Mitoseriu L.<sup>c</sup>, Buscaglia V.<sup>a</sup>

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<sup>b</sup> CNR-SCITEC, Via de Marini 6, Genoa, Italy

<sup>c</sup> Faculty of Physics, Alexandru Ioan Cuza University, Blv. Carol I, nr.11, 700506 Iasi, Romania

<sup>d</sup> CNR-ISTEC, Via Granarolo 64, Faenza, Italy

<sup>e</sup> Inst. for Multidisciplinary Research, Univ. of Belgrade, Kneza Visislava 1, Belgrade, Serbia

<sup>f</sup> CNR-ISM, Via del Fosso del Cavaliere, 100, Rome, Italy

<sup>g</sup>“Petru Poni” Inst. of Macromolecular Chemistry, Aleea Grigore Ghica Voda 41A, Iasi, Romania

Polymer-based composites containing insulating inorganic fillers with different functionalities are attracting a great deal of interest for multiple applications, including embedded planar capacitors, flexible piezoelectric harvesters and portable devices for self-powered electronics.

They combine typical properties of polymers, such as easy processing at low temperature, flexibility and high breakdown strength (BDS) with the dielectric or piezoelectric properties of some inorganic compounds and, in particular, of ferroelectric perovskites such as BaTiO<sub>3</sub>, 0.94 Na<sub>0.5</sub>Bi<sub>0.5</sub>TiO<sub>3</sub> - 0.06 BaTiO<sub>3</sub> and Ba<sub>1-y</sub>Ca<sub>y</sub>Zr<sub>x</sub>Ti<sub>1-x</sub>O<sub>3</sub>.

A rational selection of components, good interface engineering and proper processing optimization allows a thorough comprehension of the complex process-structure-morphology-properties relationships of the multicomponent systems. Here, we present our most significant results on PVDF-ceramic composites for energy harvesting and storage.

A careful multi-level characterization allows the optimization of the functional properties (dielectric behaviour, piezoelectricity, power density), performance and durability (mechanical strength, flexibility, fatigue resistance) as specifically required for the envisaged final devices.

**Acknowledgements:** This work was carried out in the framework of Bilateral Agreement Italy-Serbia, code: RS19MO01, 2019-2022; Project RAISE, selected by PNRR funds for Innovation Ecosystems for Liguria; Bilateral Agreement Italy-Romania, P2-AR-CNR-2023-2025

**Keywords:** *composite materials; materials engineering; energy harvesting; energy storage; piezoelectric flexible devices*