



Dear Colleagues and Friends,

Dear Colleagues and Friends, once again we met in beautiful Rytyro for the Annual Conference of the Polish Society for Biomaterials. This year's special occasion was the 25th birthday of the "Engineering of Biomaterials" Journal, celebrated together with Prof. Stanisław Błażewicz - co-founder and first Editor-in-Chief of the journal, PSB Honorary Member.

We are proud to continue the tradition and constantly improve the Journal's quality. We are also counting on your support and input here – as announced, we have a Best Paper Competition for all manuscripts submitted in 2022. So, submit yourself ([www.biomaterials.pl](http://www.biomaterials.pl)) or spread the word among your colleagues. Please remember also to reference some recent "Engineering of Biomaterials" papers in your other publications. All of these mean a lot for the Journal and for the whole Polish Society for Biomaterials.

Coming back to the Conference itself, we had 2 outstanding Plenary Lecturers – Prof. Christine Dupont talked about "Polyelectrolyte and Protein Assemblies for The Design of Functional Thin Films and Materials", while Dr. Christine Courillon presented on "ERC Individual and Synergy Grants". Those were accompanied by 36 oral presentations, 3 lectures sponsored by this year's exhibitors, i.e. Polbionica (Prof. Michał Wszola), CeCert (MSc Konrad Łuźniak) and PureClinical (MSc Adam Sobantka), as well as 80 poster presentations and 16 Rapid Fire presentations. That was a lot of first-class biomaterials-related science! Moreover, there were a lot of scientific discussions going on during both regular sessions and evening social events. Traditionally, under the auspices of the Young Scientist Forum of the ESB, we organized the Best Poster Competition and held a Rapid Fire Session. Congrats to Mateusz Bartniak from the Lodz University of Technology for winning the prize and special thanks to CeCert and PureClinical companies for the award sponsorship.

Finally, the celebrations and social events. We hope that you all enjoyed the regional dinner at cottage bar "Nad potokiem" (or "Chata u Stacha"), live-music Gala Dinner on Friday, and the trip to Stary Sącz on Saturday morning. The photo gallery is available here: <http://www.biomat.agh.edu.pl/gallery>.

It has been a pleasure to organize this annual conference for you and then it was truly amazing to enjoy the event alongside such wonderful participants!

Thank you!

Your Organizing Committee

Elżbieta Pamuła

Barbara Szaraniec

Katarzyna Trała

Patrycja Domalik-Pyzik



## POLISH SOCIETY FOR BIOMATERIALS

AGH University of Science and Technology  
Faculty of Materials Science and Ceramics  
Department of Biomaterials and Composites  
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## ORGANIZING COMMITTEE

Elżbieta Pamuła - Chair of the Organizing Committee, President of the Polish Society for Biomaterials  
Barbara Szaraniec - Secretary  
Katarzyna Trała - Secretary of the Engineering of Biomaterials Journal  
Patrycja Domalik-Pyzik – YSF representative, Website administrator

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## General Information

The **Conferences on Biomaterials in Medicine and Veterinary Medicine** are held every year and address both fundamentals and clinical applications of carbon, metals, polymers, ceramics and composite biomaterials. Their aim is to present the latest results of scientific research as well as to exchange ideas, knowledge and experience of scientists, researchers and clinicians in the field of biomaterials.

The topics to be covered during the Conference include, but are not limited to:

- Smart biomaterials
- Surface modification and functionalization
- Advanced manufacturing
- Antimicrobial surfaces and materials
- Biointerfaces
- Bioimaging and biosensing
- Tissue engineering / Regenerative medicine
- Drug and gene delivery
- Cell encapsulation and delivery
- Stem cells
- Cancer therapy
- Bone and cartilage
- Neural regeneration
- Cardiovascular applications
- Biomechanics and micromechanics
- Clinical trials
- Translation and commercialization



ENGINEERING OF  
**BIOMATERIALS**  
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## ABSTRACTS

All participants intend to contribute oral and/or poster presentations were requested to prepare one-page abstract in English, which was published in conference materials (non-reviewed special edition of the "Engineering of Biomaterials,, Journal ). Each author might submit maximum two abstracts (one for oral and one for poster or two for poster presentations). Abstract submission was only possible during registration via our online system. Only abstracts from individuals who have paid the registration fee were published.

We have accepted total number of 118 abstracts.

## FULL PAPERS

We invited all participants to send full papers for publication in a regular issue of the "Engineering of Biomaterials" Journal (peer-reviewed, included in Index Copernicus Journals Master List, with the Polish Ministry of Science and Higher Education scoring – 20 points).

## ORAL AND POSTER PRESENTATIONS

We had 2 plenary lectures, 36 oral presentations , 80 poster presentations, 16 rapid fire presentations within the Best Poster Competition and 3 Invited Lectures form our Sponsors



Plenary Lectures were given by:

- **Prof. Christine DUPONT**  
Université Catholique de Louvain  
Faculté des Bioingénieurs  
Institut de la Matière Condensée et des Nanosciences  
Belgium  
*„Polyelectrolyte and Protein Assemblies for The Design of Functional Thin Films and Materials”*
- **Dr. Christine COURILLON**  
Synthetic Chemistry and Materials (PE5), Team leader  
European Research Council Executive Agency  
Brussels, Belgium  
*„ERC Individual and Synergy Grants”*



## Prof. Christine Dupont

Plenary Lecture: **Polyelectrolyte and Protein Assemblies for The Design of Functional Thin Films and Materials**

*Full Professor and Dean*

*Université Catholique de Louvain, Faculté des Bioingénieurs, Institut de la Matière Condensée et des Nanosciences; Place L. Pasteur, 1 bte L4.01.10 - 1348 Louvain-la-Neuve, Belgium*

[christine.dupont@uclouvain.be](mailto:christine.dupont@uclouvain.be)



**Christine Dupont** graduated as a bioengineer in 1995 then received her PhD degree from UCLouvain, Belgium, in 2000. She has more than 20 years of experience in physico-chemistry of (bio)interfaces, adsorbed protein layers, biomaterials science, cell-material interactions, nanobiotechnologies, and biomimetic materials. She is currently a Full professor and Dean at the Faculty of bioscience engineering and carries her research activities at the Institute of Condensed Matter and Nanosciences of UCLouvain. She teaches courses in general and analytical chemistry, colloid and surface science, biomaterials science, and surface characterization methods. Her current research projects include the assembly of polyelectrolytes and proteins into functional thin films and new materials, the confinement of proteins and enzymes into

nano-objects for biomedical applications and biocatalysis, the use of Argon clusters to transfer bioactive proteins under vacuum, and the development of an artificial cornea for in vitro studies.

## Dr. Christine Courillon

Plenary Lecture: **ERC Individual and Synergy Grants**

*Research Programme Agent*

*Synthetic Chemistry and Materials (PE5), Team leader*

*European Research Council Executive Agency*

*ERCEA.B.4 - Physical Sciences and Engineering*

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**Christine Courillon** studied Chemistry at Ecole Normale Supérieure where she received an "Agregation" diploma and followed PhD studies in the field of the synthesis of biologically active heterocycles at "Institut de Chimie des Substances Naturelles" with a CNRS- Rhône Poulenc fellowship in Gif sur Yvette. She was a post-doctoral associate at the University of Austin, Texas, where she worked on the total synthesis of Ambruticine. Christine returned to Paris at the University Pierre et Marie Curie where she investigated stereoselective palladium-mediated reactions, and successfully defended a Habilitation to direct research. She then received a full professor position at the University Paris-Diderot where she developed radical heterocyclic chemistry. In 2009, Christine left Paris for Brussels first as an innovation manager and then as the chair of the European project office at the Free University of Brussels.

She joined the European Research Council Executive Agency in 2015, as the "Physical & Analytical Chemistry" panel coordinator and now coordinates the "Synthetic Chemistry and Materials" panel.



## Sponsored Lectures:

- Prof. Michał Wszola, Polbionica  
*„Challenges in Clinical Applications of 3D-Bioprinted Bionic Organs”*



- Konrad Łuźniak, CeCert  
*„A Medical Device on the Market -the Path from an Idea to Use in Patient”*



- Adam Sobantka, PureClinical  
*„Preparations for a Clinical Trial in the Context of Obtaining a Grant”*

