

# 18th Brazilian Polymer Conference - 18th CBPol

## Campos do Jordão, SP, Brazil, October 19 to 23, 2025

The Brazilian Polymer Conference (CBPol) is the main scientific forum in polymer science and technology in Brazil, being held every two years since 1991. CBPol has played a key role in advancing polymer science and technology in Brazil and in building collaborative networks among researchers and professionals in the field. Its 18th edition was organized by a group of professors from the Federal University of São Carlos, Mackenzie Presbyterian University, and University of São Paulo, in partnership with the Brazilian Polymer Association (ABPol). The conference was held at the Campos do Jordão Convention Center from October 19 to 23, 2025. Campos do Jordão, located in the Serra da Mantiqueira, is known as the “Brazilian Switzerland”. The town charms visitors with its mild climate and its European-inspired architecture and cuisine.

The 18th CBPol was sponsored by the Brazilian Funding Agencies CAPES, CNPq and FAPESP, Mackenzie Presbyterian University, CFQ/CRQ, Campos do Jordão Convention & Visitors Bureau, Ambiental Campos, Mantiqueira Viva, INCT Polysaccharides, INCT Circularity, Royal Society of Chemistry, Wiley, and the companies XGraphene, Waters-TA Instruments, Instron, DP Union, KCEN, Lauda, Zwick/Roell, PerkinElmer, Netzsch, Anton Paar, AX Plásticos Máquinas Técnicas Ltda, GrapheneUP, HSsensor, ReoTerm, Shimadzu, AuTec, Altmann, Dinatext, Instrutécnica, ABIPET, IBA, INNOMA.

The opening session of the 18th CBPol took place on the evening of October 19, 2025 (Sunday). Those responsible for the session were Prof. Leonardo Bresciani Canto (President of ABPol), Prof. Daniela Becker (Vice-president of ABPol), Prof. Guilhermino José Macêdo Fechine (Chair of the Conference), Prof. Ricardo Jorge Espanhol Andrade (Vice-chair), Prof. Denise Freitas Siqueira Petri (Coordinator of the Scientific Committee), Prof. Roselena Faez (Vice-coordinator of the Scientific Committee), Prof. Otavio Biachi (Events Director, ABPol), Prof. Lidiane C. Costa (Director of Technical Committees, ABPol), Prof. Cesar P. Liberato (Scientific Technical Director, ABPol), Prof. Mariana A. de Moraes (Young Researcher Award 2023) (Figure 1).

The president of ABPol, Prof. Leonardo Bresciani Canto, emphasized the importance of ABPol and CBPol for the continuous advancement of polymer science and technology in Brazil, and welcomed all participants and guests.

In his speech, the conference’s general coordinator, Prof. Guilhermino José Macêdo Fechine, highlighted the importance of circularity and innovation, which are currently vital for research in polymer science and technology. He also emphasized the significance of close collaboration between academia and the private sector, as it helps bring new technologies to society more quickly. This was also a



Figure 1

highlight of the conference, which several companies and academic members attended.

After the presentations, outstanding Brazilian researchers were awarded: Prof. Sebastião Vicente Canevarolo Júnior (UFSCar, SP) received the ABPol “Profa Eloisa Mano” award for Polymer Science, Prof. Roniérik Pioli Vieira (UNICAMP, SP) received the “ABPol Young Researcher” award and the ABPol “Polymer Technology” award was given to Thatiana Cristina Pereira de Macedo (SENAI-CIMATEC, BA) (Figure 2). Subsequently, Prof. Guilhermino José Macêdo Fechine (Chair of the Conference), Prof. Ricardo Jorge Espanhol Andrade (Vice-chair), Prof. Denise Freitas Siqueira Petri (Coordinator of the Scientific Committee), Prof. Roselena Faez (Vice-coordinator of the Scientific Committee) were awarded for their contribution to the 18<sup>th</sup> CBPol.

The ceremony ended with a memorable choir performance by student singers from the Mackenzie Presbyterian University Choir (Figure 3), followed by a welcome cocktail for all participants.

On Sunday afternoon, ABPol’s administrative assistants, Mr. Marcelo Perez Gomes and Ms. Layane Souza, began delivering the conference documents to the participants. At

the same time, there was the 1st. Meeting of the National Institute of Science and Technology in Circularity (INCT Circularidade), under the coordination of Prof. Caio Gomide Otoni, and the minicourse “High impact scientific writing and preparation for public competition”, held by Prof. Dr. Valtencir Zucolotto (USP, SP).

On the following days (Monday to Thursday), the activities for each period of the day (morning and afternoon) began with a plenary lecture, followed by keynotes and oral presentations in 5 parallel sessions, except on Thursday afternoon (only in the morning).

To strengthen existing areas and address topics that have been in high demand recently, 10 symposia were opened for paper submissions. The symposia and the corresponding coordinators were: (1) Polymer Blends and Composites, Profs. Sandro Campos Amico (UFRGS) & Daiane Romanzini (IFRS); (2) Polymer Nanocomposites and Nanostructures, Profs. Danilo Carastan & Suel Vidotti (UFABC); (3) Environmental Aspects of Polymers, Prof. Sandra Andrea Cruz (UFSCar); (4) Biomedical Applications of Polymers, Prof. Rodrigo Lambert Oréfice (UFMG); (5) Polymers for Functional Applications, Profs. Fauze Aouada & Márcia R. M. Aouada (UNESP); (6) Polymerization and



**Figure 2.** Award winners during the opening of the 18th CBPol.



**Figure 3.** Performance of the Mackenzie Presbyterian University Choir

Chemistry of Polymers, Prof. Claudia Sayer (UFSC); (7) Characterization and Physics of Polymers, Prof. Baltus Cornelius Bonse; (8) Polymer Processing and Design, Prof. Lidiane Cristina Costa (UFSCar); (9) Rubber, Elastomers and Thermosets, Prof. Carlos Henrique Scuracchio & Rafael Barbosa (UFSCar); and Innovation and Management in Polymers and Education, Prof. Denise Petri (USP) & Roselena Faez (UFSCar). Figure 4 shows the number of submissions (abstracts and extended abstracts) accepted for presentation at each symposium. The most significant number of papers were submitted to the symposia Polymers for Functional Applications (206), Polymer Blends and Composites (195), and Polymer Nanocomposites and Nanostructures (186).

Out of a total of 1159 submissions, 1134 papers, with 2,940 authors, were accepted for presentation at the conference. All submissions have been previously peer reviewed. The review of the articles was coordinated by Profs. Denise Petri (USP) and Roselena Faez (UFSCar), with the collaboration of symposium coordinators and 118 ad hoc reviewers. The papers presented, including plenary and technical sessions, were divided as follows: 7 plenary

lectures (60 min each), 39 keynotes (30 min each), 125 oral presentations (20 min each), 19 technical presentations (20 min each), and 882 posters.

The plenary lectures, delivered by renowned Brazilian and international researchers (Table 1), covered emerging areas of polymer research worldwide.

About 1072 delegates participated, including 389 undergraduate, 199 graduate students, 70 post-docs (Figure 5) and 40 accompanying persons. This edition was one of the largest, particularly in terms of participation from undergraduate and graduate students.

The conference received paper submissions from Brazilian researchers (1034) and from researchers based in Austria (1), Belgium (1), Canada (4), Chile (8), China (1), Colombia (1), Cuba (1), Czech Republic (1), France (7), Germany (1), Luxemburg (1), Paraguay (5), Peru (3), Portugal (1), Spain (2), and United States (5).

The number of registered participants in Brazil by state (federal region) is shown in Figure 6, with congressmen from 19 states participating in the event. The largest number of researchers was from São Paulo (454), followed by Rio de

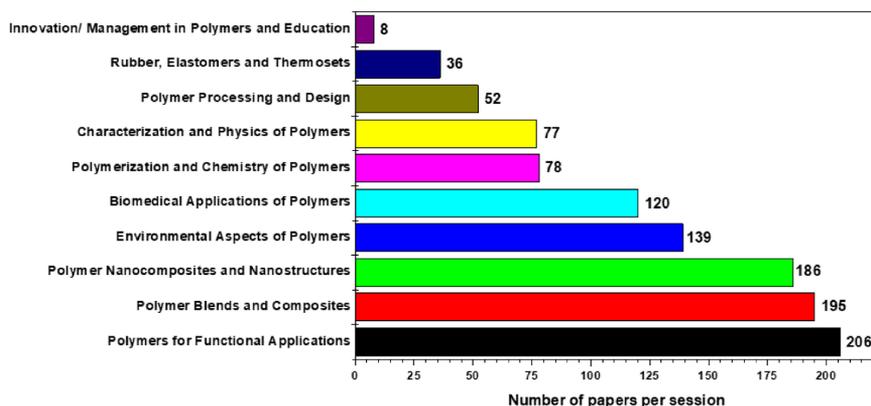


Figure 4. Number of submissions accepted for presentation at each symposium.

Table 1. Plenary lectures presented at the 18th CBPol.

	Lecturer	Title
October 20 8:30 – 9:30	Tatiana Budtova - CEMEF Mines Paris PSL, France	All-cellulose composites: composites like no other
October 20 14:00 – 15:00	Hesheng Xia – Sichuan University, China	Carbon fiber reinforced dynamic crosslinked recyclable polymer composites
October 21 8:30 – 9:30	Iris Raquel Maia Tebeka – Univation Technologies, USA	Sustainability in the plastics industry: how to proactively drive change
October 21 14:00 – 15:00	André Ricardo Fajardo – Federal University of Pelotas, Brazil	Crosslinking strategies: Shaping hydrogels with customized properties for cutting-edge solutions
October 22 8:30 – 9:30	Ludwig Cardon – Ghent University, Belgium	Comparing extrusion-based additive manufacturing and polymer processing techniques: a bottom-up approach for conductive composite applications
October 22 14:00 – 15:00	Roniérik Pioli Vieira – State University of Campinas, Brazil	Terpene-derived polymers: unlocking multifunctionality from nature's toolbox
October 23 8:30 – 9:30	Sebastião Vicente Canevarolo Jr. – Federal University of São Carlos	Understanding the extrusion process by in-line rheo-optical techniques, or, 51 years immersed in the polymer world

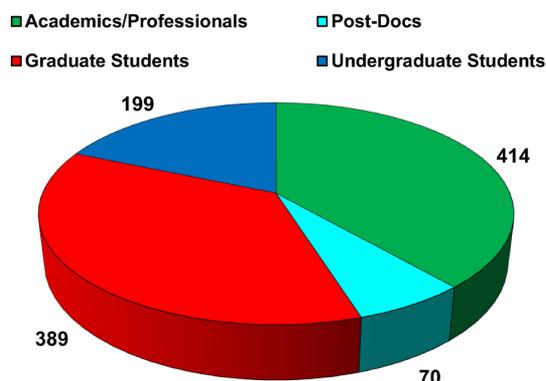


Figure 5. Number of participants in each category (professionals, post-docs, graduate students, and undergraduate students).

Janeiro (114), Rio Grande do Sul (92), Minas Gerais (85), and Santa Catarina (71). However, all Brazilian regions (N, NE, CO, SE and S) were present at the event.

This edition also introduced several new initiatives, including a Youth Committee composed of undergraduate and graduate students (Figure 7), a Kids' Area for the children of congress participants (Figure 8), and a challenge of ideas (Figure 9). Recycling and educational activities were also implemented through a collaboration between Ambiental Campos, the company responsible for the municipal selective collection service, and Mantiqueira Viva, a recently established local cooperative. These partnerships enabled 15 students from a local school to attend the 18th CBPol on Monday morning.

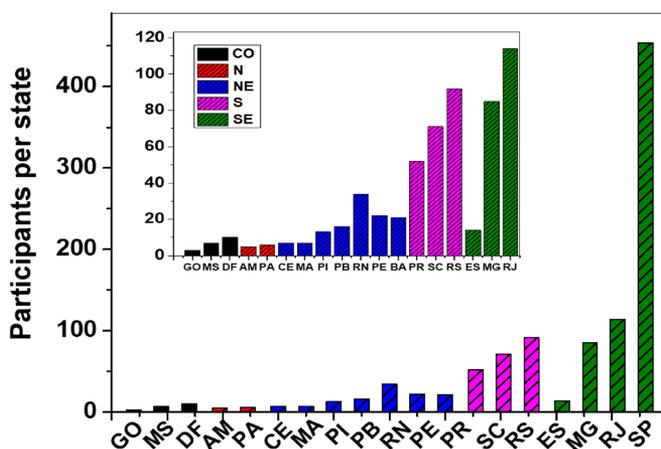


Figure 6. Number of participants by state (federal regions).



Figure 7. Youth Committee and Congress Coordinators.

The community was honored with presentations by Prof. Verônica M. A. Calado and Prof. Luiz A. Pessan, addressing “Engineering Area II – CAPES: Guidelines for 2025–2028” and “Policies for Supporting Graduate Education and Research”, respectively.

On Tuesday evening, immediately after the poster session, there was a meeting of the editorial board of the Journal “Polímeros: Ciência e Tecnologia”, with board

members in attendance, including Prof. Sebastião V. Canevarolo (Editor-in-Chief). In addition, a “happy hour” at the “Mercearia” bar was held, providing an additional opportunity for networking among participants.

On Wednesday evening, all participants could enjoy a joyful conference dinner with music and dancing, which helped warm and cheer everyone up (Figure 10).



Figure 8. Kids' Area for the children of congress participants.



Figure 9. Space for the challenge of ideas.



Figure 10. Conference dinner with music and dancing.

The poster awards were presented during the closing ceremony in the late morning of October 23 (Thursday). All posters were carefully prepared, and the presenters showed great enthusiasm as they discussed their results with participants. As a result, selecting the best poster presentations was not a trivial task for the evaluation committee. Ultimately, three outstanding student posters were selected in each category (doctoral, master's, and undergraduate), and 18 students received honorable mentions. The award-winning students are listed below.

#### **Undergraduate Students:**

##### **1st PLACE – MORPHOLOGICAL AND SPECTROSCOPIC EVALUATION OF ELECTROSPUN FIBERS CONTAINING ALOE VERA AND COPAIBA**

Presenter: Guilherme da Cunha Belem

Authors: Guilherme da Cunha Belem, Andrey Marcos Pinho da Silva, and Marcos Marques da Silva Paula

(Federal University of Amazonas – UFAM)

Area: Polymer Nanocomposites and Nanostructures

##### **2nd PLACE – DEVELOPMENT AND CHARACTERIZATION OF SODIUM ALGINATE BEADS WITH CRAB SHELL (CALLINECTES SAPIDUS)**

Presenter: Débora Giaretta

Authors: Débora Giaretta, Aline Fernandes de Oliveira, Cristian Berto da Silveira, Guilherme Dilari, Antonella Valentina Lazzari Zortea, and Gabriel de Souza Laurentino

(State University of Santa Catarina – UDESC)

Area: Polymers for Functional Applications

##### **3rd PLACE – DILATOMETRY OF POLYTETRAFLUOROETHYLENE ASSISTED BY DIGITAL IMAGE CORRELATION**

Presenter: Taissa de Barros Fregate

Authors: Taissa de Barros Fregate, Rodrigo Bresciani Canto, and Vinicius Fiocco Sciuti

(Federal University of São Carlos – UFSCar)

Area: Polymer Characterization and Physics

#### Honorable Mentions:

- Débora Vitória de Freitas Leal dos Santos, Surface Roughness of Crosslinked and Non-Crosslinked UHMWPE: Relevance for Temporomandibular Joint (TMJ) Wear Testing, National Institute of Metrology, Quality, and Technology (INMETRO)
- Adrielly Botelho de Assis, Production of Pectin Films With Lignin Nanoparticles: Anti-UV Barrier and Concentration Effect, School of Engineering of Ilha Solteira (FEIS-UNESP)
- Gabriel D. Segredo, Mechanical, Rheological and Thermal Evaluation of Coating Films Additivated with Lignin and Conventional Stabilizers, Federal University of São Carlos (UFSCar)

- Bruno Pinto Moura, Development and Characterization of 3D-Printed Biocomposite Scaffolds Based on Poly( $\epsilon$ -caprolactone) with HA and TCP Fillers for Bone Regeneration, Federal University of São Carlos (UFSCar)
- Eduarda Conceição Ferreira, Synthesis and Characterization of Poly(3-dodecylthiophen) Nanocomposites/Carbon Nanotubes (P3DT/MWCNT), Federal University of Itajubá (UNIFEI)
- Eduardo A. V. de Souza, Development of Specialty Polymer Optical Fibers for Advanced Sensing Applications, University of Campinas (UNICAMP)

#### **Master's Students:**

##### **1st PLACE – FABRICATION AND CHARACTERIZATION OF BIODEGRADABLE NANOFIBROUS SUTURES USING ELECTROSPINNING AND TWISTING OF PCL/PLGA BLENDS**

Presenter: Anderson Eugênio Corrêa

Authors: Anderson Eugênio Corrêa, Mayra Aparecida Nascimento, and Priscila Pereira Silva Caldeira

(Federal Center for Technological Education of Minas Gerais – CEFET-MG)

Area: Biomedical Applications of Polymers

##### **2nd PLACE – SYNTHESIS AND CHARACTERIZATION OF POLY-HISTIDINE ACRYLAMIDE AND POLY-LYSINE ACRYLAMIDE AS POTENTIAL ANTIBACTERIAL DENTAL MATERIALS**

Presenter: Victor Rafael Ribeiro Santos

Authors: Victor Rafael Ribeiro Santos, Leandro Segat Perini, Gabriel Severgnini de Oliveira, and Cesar Liberato Petzhold

(Federal University of Rio Grande do Sul – UFRGS)

Area: Polymerization and Polymer Chemistry

##### **3rd PLACE – SYNTHESIS AND CHARACTERIZATION OF MOLECULARLY IMPRINTED POLYMERS APPLIED TO THE SELECTIVE REMOVAL OF THE DYE DIRECT YELLOW 50**

Presenter: Júlia Paula Lima de Araújo

Authors: Júlia Paula Lima de Araújo, Claelson Oliveira Mancio Filho, Gloria Maria Leite Carlos, Karla Grazielle Balbino de Melo, Rafael Barbosa Rios, Deiver Alessandro Teixeira, Maria Del Pilar Taboada Sotomayor, and Sabir Khan

(Federal Rural University of the Semi-Arid Region – UFERSA)

Area: Polymer Characterization and Physics

#### Honorable Mentions:

- Miguel Manuel Cassoma, PEO-b-PPO-b-PEO Copolymers and Lignin: Structure and Interfacial Properties, Institute of Chemistry – USP (IQ-USP)

- Luciana Braga da Costa, Effect of Internal Reactor Reflux on the Thermal Pyrolysis of Polypropylene, Federal University of Rio de Janeiro (UFRJ)
- Jeferson Mukuno, Predictive Modeling of Mechanical and Rheological Properties of Polybutadiene with Recovered Carbon Black Using Artificial Neural Networks, São Paulo State University (UNESP)
- Fabiano Renaldi, Thermal and Rheological Characterization of EVA/Clay/Niobium Pentoxide Compositions, Federal Technological University of Paraná (UTFPR)
- Andreia Maria S. F. Costa, Synthesis, Spectroscopic Characterization, and Conductometric Assessment of Poly(Ionic Liquid)–Biopolymer Interactions, Federal University of Pampa (UNIPAMPA)
- João Paulo Eckert, Electromechanical Performance Analysis of Nafion/Pt-Based IPMCs Coated with Polypyrrole, Federal University of São Carlos (UFSCar)

#### Doctoral Students:

#### 1st PLACE – PRODUCTION OF BACTERIAL CELLULOSE MEMBRANE WITH UMBU POTATO AND EVALUATION OF ITS ANTIMICROBIAL PROPERTIES

Presenter: Dayanna Kelly Marques de Oliveira

Authors: Dayanna Kelly Marques de Oliveira, Alice da Conceição Alves de Lima, Yêda Medeiros Bastos de Almeida, and Glória Maria Vinhas

(Federal University of Pernambuco – UFPE)

Area: Polymers for Functional Applications

#### 2nd PLACE – METHODOLOGY FOR ISOLATION AND CHARACTERIZATION OF MICROPLASTICS IN MATERNAL–FETAL SAMPLES

Presenter: Rafael de Lima Pinto

Authors: Rafael de Lima Pinto, Giovanna Marcele Vieira Machado, Marcos Antônio de Araújo Gouveia, Débora Baptista Pereira, Thiago Ramos Correia, Eduardo Faerstein, Carmen Ildes Rodrigues Fróes Asmus, Nataly Damasceno de Figueiredo, Armando Meyer, Volney de Magalhães Câmara, Ana Maria Furtado de Sousa, and Monica Regina da Costa Marques Calderari

(Federal University of Rio de Janeiro – UFRJ)

Area: Environmental Aspects of Polymers

#### 3rd PLACE – OPTIMIZING KAOLIN-FILLED NATURAL

#### RUBBER COMPOUNDS USING TESPT SILANE COUPLING AGENT

Presenter: Michael Cezar Camargo

Authors: Michael Cezar Camargo, Abel Cardoso Gonzaga Neto, Samuel Marcio Toffoli, and Ticiane Sanches Valera (University of São Paulo – USP)

Area: Rubber, Elastomers, and Thermosets

#### Honorable Mentions:

- Julia L. D. Oliveira, Engineering Bioactive 3D Scaffolds: Combining Precision Architecture and Surface Functionalization for Tissue Regeneration, Federal University of Santa Catarina (UFSC)
- Amanda Caroline de Oliveira Diniz, Biodegradability of Bacterial Cellulose Films in Natural Soil from a Semiarid Climate, Federal University of Pernambuco (UFPE)
- Jéssica Caroline Ferreira Gimenez, Synergistic Effect of Titanium Dioxide and Few-Layer Graphene on the UV-C Photostabilization of Polypropylene, Federal University of São Carlos (UFSCar)
- Cléber Gomes de Jesus, Eugenol Effects on Catalysis and Detection in Urease and Conjugated Polymer Films, Federal University of São Paulo (UNIFESP)
- Samir L. Mathias, Tailoring Chitosan for Improved Performance – The Impact of Cyanoethoxyacrylate Grafting, Federal University of São Carlos (UFSCar)
- Thaís Gallina, Ethoxylated-Quaternized Hydroxyethyl Cellulose: Raw Material for Casting Films and for Synthesizing Bio-Based Polyurethanes with Film-Forming Capabilities, Institute of Chemistry of São Carlos – USP (IQSC-USP)

The ideas challenge also awarded the winner, student Arthur Capriolli (UFRGS), for using reactive extrusion to disperse graphene in a thermoplastic polyurethane matrix.

The members of the CBPol Organizing Committee would like to express their deep appreciation to all the speakers and delegates for their contributions and participation, as well as the invaluable support of sponsors, Brazilian agencies (especially CNPq, CAPES, and FAPESP), and colleagues for making the event in Campos do Jordão successful and enjoyable.

We can't wait to see you at the 19th CBPol!

**Guilhermino José Macêdo Fechine** (Chair)

Mackenzie Presbyterian University

**Denise Freitas Siqueira Petri** (Scientific Coordinator)

University of São Paulo