

# 16<sup>th</sup> Brazilian Polymer Conference - 16<sup>th</sup> CBPol

## Ouro Preto, MG, October 24 to 28, 2021



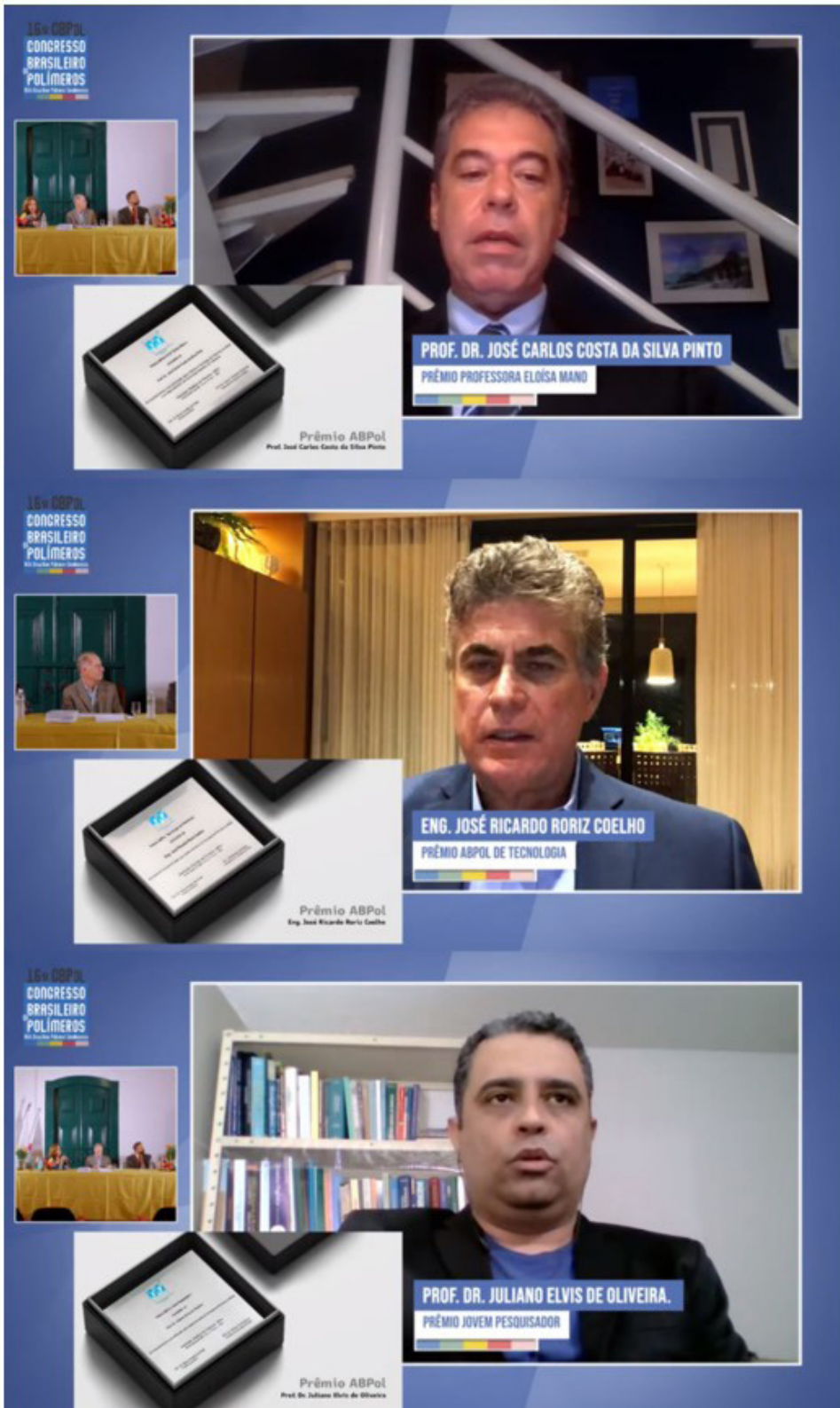
The Brazilian Polymer Conference (CBPol), organized biannually since 1991 by the Brazilian Polymer Association, is the most important scientific event in the field of polymers in the country, bringing together professionals from universities, research institutes, government agencies and companies interested in the development of technologies for the production, characterization and application of polymers. The 16th edition of CBPol (16th CBPol) intended to transport the event to a more extensive international scope. For this, the submitted papers were all mandatorily written in English, as well as the oral and poster presentations had to give priority to the use of the English language.

The 16th CBPol was initially planned to be held in the Minas Gerais city of Ouro Preto. However, uncertainties and concerns about the COVID19 pandemic forced its establishment in virtual form. Thus, the 16th Brazilian Congress of Polymers was held virtually (remotely) from October 24 to 28, 2021. Despite being held remotely, the event kept the theme associated with its initial headquarters

(Ouro Preto/MG). In addition, the opening ceremony was broadcast live from the historic center of Ouro Preto with the presence of members of the organizing committee, such as Profa. Kátia Novack (Chair), Prof. Marco Aurelio De Paoli (ABPol's president) and Prof. Cláudio Gouvêa dos Santos, among others (Figure 1). Following the speeches, awards were given to remarkable Brazilian researchers: Prof. José Carlos Costa da Silva Pinto (UFRJ) received the ABPol "Profa Eloisa Mano" Polymer Science prize, Prof. Juliano Elvis de Oliveira (UFLA) received the "ABPol Young Researcher" prize and the ABPol "Polymer Technology" prize was awarded to Eng. José Ricardo Roriz Coelho (ABIPLAST) (Figure 2). The ceremony was closed with a concert performed by the Trio Amaranto, a vocal group from Belo Horizonte (Figure 3). Another non-technical highlight of the congress was short videos that were broadcast in between sessions of the congress with subjects such as: how to make "pão-de-queijo", how to speak "mineirês" and how to become a real "mineiro", regionalism of the people from Minas Gerais State.



1. The Opening Ceremony broadcast online. From left to right, Prof. Cláudio Gouvêa dos Santos (Member of organizing committee), Prof. Kátia Novack (Member of organizing committee), Prof. Marco Aurelio De Paoli (ABPol's president) and Prof. Máximo Eleotério Martins (Adjunct Pro-Dean of Administration at the Federal University of Ouro Preto)



a)

b)

c)

2. The ABPol 2021 awardees. (a) Prof. José Carlos Costa da Silva Pinto (UFRJ), ABPol “Profa Eloisa Mano” Award. (b) Eng. José Ricardo Roriz Coelho (ABIPLAST), ABPol Technology Award. (c) Prof. Juliano Elvis de Oliveira (UFLA) ABPol Young Researcher Award.



3. The concert was performed by Trio Amaranto.

The congress had 15 plenary presentations lasting 50 minutes, which featured highly prestigious speakers in the field of polymers from Brazil and abroad. In addition to the plenary sessions, 5 keynote lectures of 30 minutes and 129 oral presentations of 20 minutes each were held. The oral presentations were shown simultaneously in 5 rooms throughout the days of the event. Three (3) poster sessions of 100 posters each were held with so-called e-posters, in which the posters were viewed online together with a short presentation recorded by the authors, which remained available for conversation via the platform chat during the presentation. Seven (7) technical lectures were held during the event, covering subjects such as polymer analysis and processing techniques. During the event, 456 scientific and technical papers associated with polymers were presented. Around 198 teaching and research institutions and companies in the polymer area were represented at the event. In addition, papers from 23 different countries were presented, including countries in America (Central, South and North), Europe, Asia and Africa. In Brazil, papers from 20 different states in the 5 regions of the country were presented. These numbers demonstrate the impact of the event and its importance in national and international contexts.

Of the 456 papers presented at the 16<sup>o</sup>CBPol, 289 (63%) were presented by students, and of these papers, 62 were presented by undergraduate or technical education students and 227 by graduate students (master and PhD). These numbers clearly show a high level of participation of students in the event. The presentation of papers at the event allowed the students to be exposed to a select and extensive audience that evaluates, comments, criticizes and congratulates the works done, which are considerably important for their future carriers. In addition, the event expanded and amplified knowledge in areas of great importance to the country (polymer materials) for these

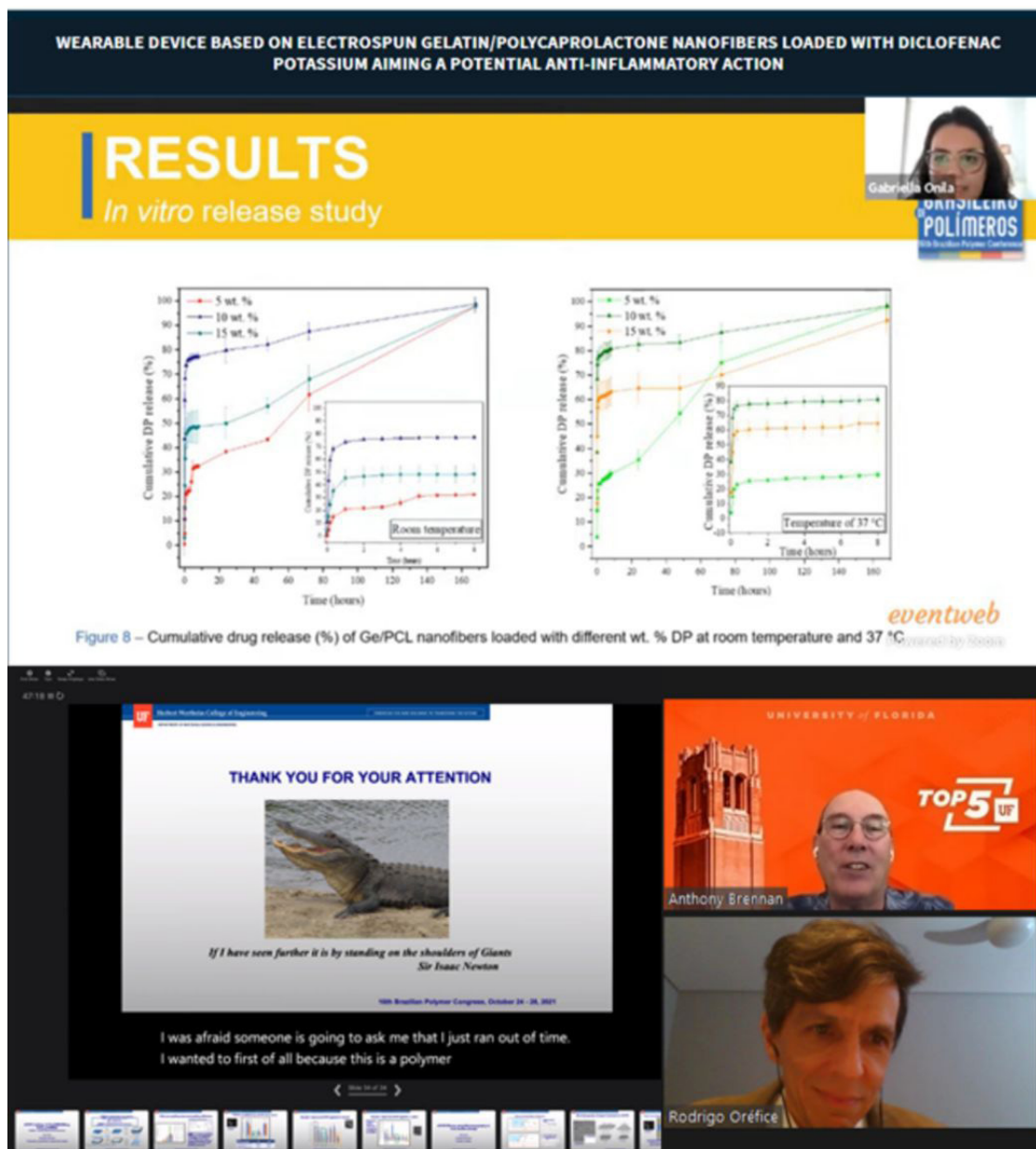
students and other participants in subjects not normally addressed in technical and higher education courses. Over the years, CBPol has always played a leading role in informing and discussing issues related to polymer science and technology.

The following renowned researchers participated in the 16th CBPol as invited and keynote speakers:

1. Alejandro J. Müller - University of the Basque Country UPV/EHU (Spain) – “Application of the SSA thermal fractionation technique to thermoplastic polyurethanes and recycled polyolefin blends”
2. Amin Shavandi - Université Libre Bruxelles (Belgium) – “Restore and Regenerate Our Natural Resources: High-value Biobased Products for Biomaterials Applications”
3. André Studart - ETH Zürich (Switzerland) – “3D Printing of Polymers into Biologically-Inspired Structures”
4. Anthony Brennan - University of Florida (USA) – “Recent Advances In Antifouling Technologies”
5. Denise Petri – USP (Brazil) – “Polysaccharides as platforms for new functional materials”
6. Filomena Barreiro – Instituto Politécnico de Bragança (Portugal) – “Microencapsulation: a world of possibilities”
7. Jaime C. Grunlan - Texas A&M University (USA) – “Water-Based Multifunctional Nanocoatings from Polyelectrolyte Complexation: Opportunities & Challenges”
8. Jose Covas – Universidade do Minho (Portugal) – “In-process characterization of polymer nanocomposites during extrusion “

9. Mohammad Arjmand – The University of British Columbia (Canada) – “Advanced Polymer-based Electromagnetic Shields”
10. Patrícia Patrício – CEFET-MG (Brazil) - “Integrated technologies using polymers that contribute to the reduction of waste from different industrial sectors”
11. Richard Weiss – Georgetown University (USA) – “Complex Polymeric Materials Through Self-Assembly Initiated by Small Molecules: Reversible Gels, Ionomers, and Rubbery Polymers”
12. Rosario Bretas – UFSCar (Brazil) – “Electrospinning: An Old Technique For New Applications”
13. Sabu Thomas – Mahatma Gandhi University (India)
14. Sadhan C. Jana – The University of Akron (USA) – “Design of Polymer-Derived Nanoparticles, Nanorods And Porous Microparticles”
15. Silvia Bettini – UFSCar (Brazil) – “Industrial citrus waste: an opportunity to obtain biodegradable and flexible compounds”
16. Ulrich Wiesner – Cornell University (USA) – “Polymer Self-Assembly based Functional Materials”

Figure 4 shows images captured during the online conference as an example on how the virtual presentations and other activities occurred.



4. Two moments taken during the online event.

It is worth mentioning that a commission established by the scientific committee of the 16th CBPol evaluated all posters presented by students and awarded the three best posters in the undergraduate/technical education, master's and PhD categories. To this end, at least two different evaluators had contact with the paper, presentation and student of each poster. After this evaluation, the evaluators filled out an online questionnaire that was used to define the best posters. Winners received books and coupons from scientific publishers.

### Best Poster Awards - Undergraduate Students

- 1° - HEMILLY CIRQUEIRA MARTINS, Fundação Universidade Federal do Tocantins (UFT), Title: Myrcene Release By Chitosan Loaders Crosslinked With Sodium Tripolyphosphate Or Glutaraldehyde, Adviser: Ana Maria da Silva Maia.
- 2° - VANESSA ZIMMER KIEFFER, Universidade Federal do Rio Grande do Sul (UFRGS), Title: Influence Of Physical Treatment In Curaua Fiber On Post-Consumption Hdpe Composites, Supervisor: Ruth Marlene Campomanes Santana.
- 3° - YAN FARIA GUIMARÃES SILVA, Univerdade Federal de São Carlos (UFSCar), Title: PLA/SEP nanocomposites: Effect of nanoparticle content on the short-term mechanical properties, Supervisor: Juliano Marini.

### Best Poster Awards - Master Students

- 1° - MATHEUS FERNANDES FLORES, Universidade de São Paulo (USP) - Instituto de Química de São Carlos, Title: Solubilization of cellulose by supercritical CO<sub>2</sub> in the presence of superbase DBU, Supervisor: Antonio Aprigio da Silva Curvelo.
- 2° - CHAIANE NEUMANN, Instituto Federal de Educação, Ciência e Tecnologia do Rio Grande do Sul, Title: Interaction Between Type I And Ii Coagents And Polybutadiene Isomers On Crosslinking Systems Using Organic Peroxide, Supervisor: Edson Francisquetti.
- 3° - PÂMELA ROSA OLIVEIRA, Universidade Federal de Santa Catarina (UFSC), Title: Kaolin Nanoclays

Organically Modified With Oregano Essential Oil For Active Packaging Applications, Supervisor: Larissa Nardini Carli.

### Best Poster Awards - PhD Students

- 1° - BISMARCK NOGUEIRA DA SILVA, Universidade Federal de Juiz de Fora (UFJF), Title: Preparation Of Silver Nanoparticles Using Polyaniline/Cellulose Acetate Blend Films For Sens Application, Supervisor: Celly M. S. Izumi.
- 2° - LUCIANA MENTASTI, Centro de Investigaciones en Física e Ingeniería del Centro de la Provincia de Buenos Aires (CIFICEN) - INMAT, Argentina, Title: Luminescent YVO<sub>4</sub>:Eu<sup>3+</sup>: from nanoparticles to nanocomposites.
- 3° - VANESSA OLIVEIRA CASTRO, Universidade Federal de Santa Catarina (UFSC), Title: Electrical And Morphological Properties Of Aligned Piga/ Ntes Mats For Tissue Engineering, Supervisor: Claudia Merlini.

We would like to thank the organizing and scientific committee as well as the symposia coordinators and the *ad hoc* referees, who played a key role in achieving the excellent scientific quality of the conference. We also thank the funding agencies that supported the event, CNPq and FAPEMIG, as well as the sponsors and exhibitors. We also gratefully acknowledge ABPol, its board and employee (Mr. Marcelo P. Gomes) and the APTOR team, for all of their support in the organization of the event.

Finally, we thank all of the participants of the 16<sup>th</sup> CBPol who contributed significantly to the success of the conference. We look forward to see you all at the 17<sup>th</sup> CBPol!

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