

**INSTITUTE OF NATURAL  
AND SYNTHETIC POLYMERS  
FCHPT STU**

**POLYMER INSTITUTE SAS**

**21-23 MAY, 2025**

**2025  
PMA & SRC  
CONFERENCE**

**PROGRAM**



Congress Center of  
the Slovak Academy of  
Sciences  
Smolenice Castle



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10.30 – 10.40	MOSNÁČEK Jaroslav TIŇO Radko CHODÁK Ivan HUDEC Ivan	<b>OPENING CEREMONY</b>	
<b>Chairperson</b>	<b>TIŇO Radko</b>		
10.40 – 11.00	<b>Opening Lecture</b>	<b>HÍVEŠ Ján</b> vice-rector for Science and Research STU Bratislava	Research activities of the Slovak University of Technology in Bratislava
11.00 – 11.20	<b>Opening Invited Lecture</b>	<b>MARUŠÁK Viktor</b> secretary general Association of the Automotive Industry in Slovakia	Current Status and Perspective of the Automotive Industry in Slovakia
11.20 – 11.40	<b>Invited Lecture</b>	<b>DOBEŠ Libor</b> managing director Autoklastr Ostrava	Recycling of plastic materials in the automotive sector
11.40 – 12.10	<b>Invited Lecture</b>	<b>KEBÍSEK Ivan</b> Engineering Director Yanfeng International Automotive Technology Tech Center Trenčín	Personalized and Intelligent Travel Experience in Smart Cabin
12.10 – 12.40	<b>Invited Lecture</b>	<b>WANG De-Yi</b> IMDEA Materials Institute, Madrid	Recent progress on flame-retardant polymers in automotive: From Fundamental to application
12.40 - 14.00	<b>Lunch</b>		
<b>Chairperson</b>	<b>MOSNÁČEK Jaroslav</b>		
14.00 – 14.30	<b>Invited Key Lecture</b>	<b>HOMOLA Tomáš</b> Masaryk University Brno	Plasma Meets Polymers: Advanced Surface Engineering of Plastics
14.30 – 15.00	<b>Invited Lecture</b>	<b>TIŇO Radko</b> STU Bratislava	Possibilities of using low-temperature plasma in the treatment of heritage objects made of plastics
15.00 – 15.30	<b>Invited Lecture</b>	<b>TICHÝ PETR</b> Plasmatreat Austria GmbH	HydroPlasma - Efficient and Sustainable Cleaning Solution for the Highest Cleanliness Requirements
15.30 – 16.00	<b>Invited Lecture</b>	<b>DIAN Marek</b> Yanfeng International Automotive Technology Tech Center Trenčín	Validation of Automotive Interiors Plastic Parts
16.00 – 16.30	<b>Coffee Break</b>		
16.30 – 18.00	<b>Poster Session</b>		
19.00 – 20.00	<b>CONCERT „KUŠTÁROVCI“</b>		
20.00 – 22.00	<b>CONFERENCE GALA EVENING</b>		

## LIST OF POSTERS

1. **PETKOVÁ Mária**  
The colour stability of packaging materials
2. **HRICOVÁ Marcela**  
Masterbatches for biodegradable packaging
3. **KRUŽELÁK Ján**  
Rubber compounds with biopolymer component
4. **KRUŽELÁK Ján**  
EMI absorption shielding of rubber composites based on ferrites and carbon fillers
5. **WOO CHANGSU**  
Development of Integrated Design System for Automotive Rubber Components
6. **SEDNIČKOVÁ Michaela, NÓGELLOVÁ Zuzana**  
Low-density polyethylene composites with modified montmorillonite
7. **MONTÁG Peter**  
Recycling of polyurethane - Industry point of view
8. **PREŤO Jozef, HRONKOVIČ Ján**  
Possibilities for devulcanization of rubber crumb from tires using mechanical and chemical processes
9. **DŽUGANOVÁ Michaela**  
Lignin and devulcanized rubber crumb for next-generation rubber composites
10. **SMETANOVÁ Anna**  
Development of complex testing methodology of tyre abrasion
11. **VYKYDALOVÁ Anna**  
Effect of a Multicomponent Halogen-Free Flame Retardant on the Properties of Polyethylene for the Cable Industry
12. **PEIDAYESH Hamed**  
Electrical Conductivity Behavior of Rubber Composites with Varying Crosslink Density Under Cyclic Mechanical Deformation

<b>Chairperson</b>	<b>CHODÁK Ivan</b>		
<b>8.30 – 9.00</b>	<b>Invited Key Lecture</b>	<b>ALEXY Pavel</b>	Plastics and Bioplastics in The Circular Economy
<b>9.00 – 9.20</b>	<b>Opening Lecture Plan-C</b>	<b>REINGRUBER Iris</b>	Plan-C   the project for Moving Plastics and Machine Industry towards Circularity   at a glance
<b>9.20 – 9.40</b>	<b>Contributed Lecture</b>	<b>ENACHE Andra-Cristina</b>	Circular Chemistry as the Key to a Circular Economy: Transforming PET Waste into Sustainable Materials
<b>9.40 – 10.00</b>	<b>Contributed Lecture</b>	<b>KAŠČAK Jakub</b>	Optimizing filament production for FFF technology: Presentation of current results in the area of circular economy support
<b>10.00 – 10.20</b>	<b>Contributed Lecture</b>	<b>TIRPÁK Slavomír</b>	A mixture of hemp hemicellulose and Nonoilien biodegradable plastic and its composting possibilities in condition of home composting
<b>10.20 – 10.50</b>	<b>Coffee Break</b>		
<b>Chairperson</b>	<b>KNAPČÍKOVÁ Lucia</b>		
<b>10.50 – 12.00</b>	<b>Workshop Moving PLastics and mAchine iNdustry towards Circularity (Plan-C)</b>		
<b>12.00 – 13.00</b>	<b>Lunch</b>		
<b>13.00 – 17.00</b>	<b>Trip to Driny Cave</b>		
<b>Chairperson</b>	<b>ALEXY Pavol</b>		
<b>17.00 – 17.30</b>	<b>Invited Key Lecture</b>	<b>LANDL Richard</b>	Characterization of materials in polymer and rubber industry
<b>17.30 – 18.00</b>	<b>Invited Lecture</b>	<b>EKKEHARD Füglein</b>	Characterization of polymers using various methods of thermal analysis
<b>18.00 – 18.20</b>	<b>Contributed Lecture</b>	<b>TINÁK Milan</b>	Debonding and sealing solutions for E-mobility
<b>18.20 – 18.40</b>	<b>Contributed Lecture</b>	<b>VACH AGÓCSOVÁ Sára</b>	Biobased biodegradable blends for tissue engineering with enhanced 3D printability and mechanical properties
<b>18.40 - 19.00</b>	<b>Contributed Lecture</b>	<b>OSWALD Eduard</b>	Bio based polymer composites
<b>19.00 – 19.30</b>	<b>Dr. h.c. Ing. Štefan Rosina Awards</b>		
<b>19.30 – 21.00</b>	<b>DINNER &amp; WINE TASTING</b>		

<b>Chairperson</b>	<b>MAJERSKÝ Juraj</b>		
<b>8.30 – 9.00</b>	<b>Invited Key Lecture</b>	<b>BREJCHA Jiří</b>	Current trends and issues in tyre recycling
<b>9.00 – 9.20</b>	<b>Contributed Lecture</b>	<b>PEIDAYESH Hamed</b>	End-of-life Tires as Secondary Raw Materials for Sustainable Environment
<b>9.20 – 9.40</b>	<b>Contributed Lecture</b>	<b>KRATINA Ondřej</b>	The influence of material composition on self-heat buildup of rubber until blowout
<b>9.40 – 10.00</b>	<b>Contributed Lecture</b>	<b>ČADEK Drahomír</b>	Natural-based antioxidants for rubber compounds
<b>10.00 – 10.20</b>	<b>Contributed Lecture</b>	<b>PŮSCHL Marek</b>	Effect of the Carbon Black Type and Load on Fatigue Properties and Thermal Expansion of the Rubber
<b>10.20 – 10.45</b>	<b>Invited Lecture</b>	<b>PLEVÁK Zdeno BELOBRAD Juraj</b>	Rubber Valley Puchov & Otrokovice, Material Development
<b>10.45 – 11.15</b>	<b>Coffee Break</b>		
<b>Chairperson</b>	<b>HUDEC Ivan</b>		
<b>11.15 – 11.40</b>	<b>Invited Lecture</b>	<b>MAJERSKÝ Juraj</b>	State of plastics legislation in the eu / smart production cell
<b>11.40 – 12.05</b>	<b>Invited Lecture</b>	<b>KOLLÁR Miroslav</b>	Computer optimisation of plastic parts design
<b>12.05 – 12.30</b>	<b>Invited Lecture</b>	<b>MALÍČKOVÁ Lucia</b>	Computational Modelling and High Performance Computing Driven Innovation in the Development of Polymeric Materials in the Context of the European Competence Centre Framework
<b>12.30 – 13.00</b>	<b>Invited Lecture</b>	<b>OREL Daniel</b>	Real possibilities of using artificial intelligence in plastic injection technology
<b>13.00 - 13.10</b>	<b>HUDEC Ivan CHODÁK Ivan</b>	<b>CONFERENCE CLOSING CEREMONY</b>	
<b>13.10 – 14.00</b>	<b>Lunch</b>		

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