



# TPO<sup>®</sup> 2023 GLOBAL AUTOMOTIVE CONFERENCE

Troy, MI • October 1-4, 2023  
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ENGINEERED POLYOLEFINS FOR THE  
**MOBILITY EVOLUTION**



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DETROIT MARRIOTT TROY HOTEL  
200 West Big Beaver Road | Troy, Michigan 48084 USA

## YOU'RE INVITED TO ATTEND THE COMPLIMENTARY 2023 TPO SUNDAY TUTORIALS

**OCTOBER 1, 2023**

REGISTRATION NOT NECESSARY



**DR. NISCHAY KODIHALLI SHIVAPRAKASH**  
*Mitsubishi Chemical America-Performance Polymers Division,  
Specialty Materials Group*

### **3:30 PM History, Present, and Future of Thermoplastic Vulcanizates (TPVs): A Structure Property Outlook**

Thermoplastic vulcanizates (TPVs) are a special class of high-performance thermoplastic elastomers (TPEs) which combine both the excellent elasticity and mechanical properties of crosslinked rubbers and good processability and recyclability of thermoplastics. This presentation will be focused on different types of TPVs developed till date from various combinations of elastomers and thermoplastic blends with a fundamental understanding of polymer structure property relationship.



**PROF. AMAR MOHANTY**  
*School of Engineering & Department of Plant Agriculture  
University of Guelph, Ontario, Canada*

### **4:15 PM Innovations in Biocarbon Reinforced Polyolefin Sustainable Composites: A New Direction for Automotive Application**

Biocarbon-filled sustainable composites are featuring prominently in a recent material innovation for light-weight automotive applications. Biocarbon is a solid product of thermochemical conversion of waste biomass. Biocarbon can also be sourced from biomass mixed with non-recyclable waste plastics. Advantages of biocarbon for composite uses are its sustainable nature, thermal stability, no odor issues, extremely low variability as a natural filler (predominantly carbon structure). Supply chain is of low risk as biocarbon can be made from abundant waste resources available globally. Recent innovations in biocarbon-filled thermoplastic bio-composites and benefits to the green environment will be highlighted with a special focus on PP and TPO bio-composites.