



TNCHE Asia 2024 Conference
" Decarbonization, AI and Digital Transformation
for Sustainability in Process Industries "
Presenter's Biodata & Abstract



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Title of Presentation : **Optimizing Batch Process Control in Polymers and Specialty**
Chemical Plants for Energy Efficiency, Time Savings, and
Environmental Sustainability

Presentation Abstract :

Polymers and specialty chemical plants rely on batch processing for the production of various high-value compounds. However, optimizing batch processes to enhance energy efficiency, reduce processing time, minimize deviations, maximize product yield, and achieve carbon neutrality presents a significant challenge. This BatchOPT technology explores the implementation of batch optimal control technology in polymers and specialty chemical plants to address these objectives. By integrating advanced control algorithms, real-time monitoring systems, and predictive analytics, this technology aims to develop comprehensive strategies for improving process performance and sustainability. Through a combination of simulation studies, case studies, and experimental validation, this technology seeks to elucidate the potential benefits of batch optimal control in polymers and specialty chemical manufacturing. The outcomes of this technology are expected to provide valuable insights for industry practitioners, policymakers, and we aiming to enhance the efficiency, productivity, and environmental sustainability of batch processes in polymers and specialty chemical plants.