

Polymer Reaction Engineering XI

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11-15 December 2022

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Monday, December 12, 2022

08:00 – 09:00 Breakfast

Topic 1

09:00 – 09:45 **Developing strategies for polymer redesign and recycling using reaction pathway analysis** 1
Linda Broadbelt, Northwestern University, USA

09:45 – 10:30 **Renewable barrier polymers from carbohydrates** 2
Carson Meredith, Georgia Tech, USA

10:30 – 11:00 Coffee break

11:00 – 11:30 **Chemical recycling of polyethylene by tandem catalytic conversion to propylene** 3
Ivan Konstantinov, The Dow Chemical Company, USA

11:30 – 12:00 **Kinetic phenomena in mechanochemical depolymerization of poly(styrene)** 4
George Y. Chang, Georgia Institute of Technology, USA

12:00 – 12:30 **Ring-chain equilibrium for polyester recycling** 5
Flavio Tollini, Politecnico di Milano, Italy

12:30 – 14:00 Lunch

Topic 2

14:00 – 14:45 **Mathematical modeling for control of emulsion polymerization**
Jose Maria Asua, POLYMAT, University of the Basque Country, Spain

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Usue Olatz Aspiazua, POLYMAT, Spain

15:15 – 15:45 **Performance analysis of kinetic Monte Carlo algorithms for synthesis of linear polymers** 7
Alessandro D. Trigilio, Ghent University, Belgium

15:45 – 16:15 **Pushing forward the predictive power of kinetic Monte Carlo simulations for detailed (de)polymerization chemistries** 8
Yoshi W. Marien, Ghent University, Belgium

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18:00 – 19:30 Dinner

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John Tsavalas, University of New Hampshire, USA

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Kristina Zentel, TU Darmstadt, Germany

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