

INDUSTRIAL ACRYLIC POLYMERIZATION MODELING

Michael Grady, Axalta, USA
mike.grady@axalta.com
Amin Nasresfahani, Axalta, USA

Functionalized solution acrylic polymers are major components of many commercial automotive coatings. Temperature and concentration are important practical control parameters in production of these polymers. A mathematical model that can properly capture their influence on secondary free-radical polymerization reaction mechanisms and the resulting polymer molecular weight and functional group distributions is an important tool that enables new material development, optimization, and safety screening. This talk describes the impetus for and progress in developing such a model.