

Batch Process Control and Automation

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Batch process is becoming a preferred choice of manufacturing due to the production shifting from mass manufacturing to high value-added customization manufacturing. The control and automation of batch processes are far behind these of continuous processes. Direct applications of the methods developed for continuous processes lead to the poor control and automation performances for batch processes as there exist fundamental differences between these two types of processes. This talk will take thermoplastic injection molding as a typical batch process to illustrate the batch process characteristics and manufacturing requirement. Based on this, a systematic batch process automation research is conducted for the modeling, control, monitoring and quality optimization.