

### Utility-based optimization for scheduling of chemical processes

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Optimization of chemical processes is concerned with many conflicting variables or objectives. To deal with this situation, multi-objective optimization technique has been widely accepted and rigorously studied.

Another way to treat the trade-offs is utility-based optimization. Rather than optimizing over the outcome of processes itself, one can optimize the utility from the outcome. Since utility is a measure of level of decision makers' satisfaction, maximizing utility would lead to the best result for decision makers and can reflect his/her preferences.

In this study, scheduling problem, which contains time-cost trade-off, is introduced and solution technique using utility-based optimization is presented.