Continuous flow technology as an attractive approach to move towards the 'Factory of Tomorrow'

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Abstract:

To understand the full benefits of continuous flow technology an introduction will be provided of the basic theory and related advantages. In more detail, topics such as flow regime, pressure drop, mixing, dispersing and heat exchange will be explored. To master the challenge of converting a specific batch process into an efficient better performing continuous flow process it is essential to understand the process thoroughly.

A theoretical proof-of-concept is a powerful methodology for developing flow processes. At this early stage the potential benefits of flow technology like higher yield, less reaction time, less side products or higher heat exchange etc. can be explored to establish if there is an opportunity for transfer from the existing batch process. For a scale-up there are different technologies to consider and in this lecture some application examples to give an impression of the way to your 'Factory of Tomorrow' will be presented.