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Application of novel continuous crystallization approaches in pharmaceutical drug manufacture

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Continuous manufacturing and crystallization has been an ad hoc research field in the past decade, which campaigns for the development and adoption of current generation technologies in the pharmaceutical industry. The Centre for Innovative Manufacturing in Continuous Manufacturing and Crystallization (CMAC) aims to accelerate the adoption of continuous manufacturing processes for the production of active pharmaceutical ingredients to higher quality, at lower cost and more sustainably. A series of novel continuous manufacturing and crystallization technologies incorporating process monitoring technologies and information systems are currently being investigated to provide engineering designs that are amenable to adoption in commercial plants and robust on scale-up to industrial production capacities. It is hoped that these technologies will enable the change from batch to continuous manufacturing in the pharmaceutical sector and accelerate the adoption of quality by design (QbD) principles, that is, quality assured by better product and process understanding.

Biography

Keddon Powell has received BSc in General Chemistry and Applied Chemistry (2007) from The University of the West Indies, Jamaica. In 2010, he has obtained his MSc in Applied Chemistry from the University of Limerick, Ireland. He has over 8 years combined industry and academic experience in Chemistry and Engineering. He has recently completed PhD in Pharmaceutical from Loughborough University, United Kingdom and has since been appointed as a Research Associate at the Centre for Innovative Manufacturing in Continuous Manufacturing and Crystallization, University of Strathclyde.

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