EFCE Spotlight Talks

Working Party on Crystallization

25 March 2024

10:00-12:00 CET

EFCE

MACHINE LEARNING AND ARTIFICIAL INTELLIGENCE APPLICATIONS IN INDUSTRIAL CRYSTALLIZATION

Artificial intelligence (AI) and machine learning (ML) are now omnipresent in chemical engineering applications. In industrial crystallization they are employed for performing several tasks, such as: inferring the size and three-dimensional shape of crystals from images, identifying parameters of kinetic models and formulating hybrid predictive models for thermodynamic properties, notably solubility. In this webinar three innovative applications from academia and industry will be presented.

PROGRAM

10:00 **Welcome and introduction**
Daniele Marchisio, Chair Working Party on Crystallization
Boelo Schuur, EFCE Scientific Vice-President

10:10 **Online 3D characterization of crystals in suspension with Machine Learning**
Anna Jaeggi, ETH Zurich - Switzerland

10:40 **Artificial intelligence in crystallization development: automated process monitoring using image analysis**
Akeem Olaleye, APC – Ireland

11:10 **Machine Learning algorithms in population balance-based crystallization modeling**
Álmos Orosz, Budapest University of Technology and Economics - Hungary

11:40 **Discussion and conclusion**
Daniele Marchisio, Chair Working Party on Crystallization

REGISTRATION

free of charge but mandatory

Contact: martine.poux@toulouse-inp.fr
daniele.marchisio@polito.it