11th CFRT for Industrial Applications Symposium

On October 21-23 the 11th CFRT for Industrial Applications Symposium took place in Glasgow at the The Technology & Innovation Centre (TIC) - University of Strathclyde.

On the first day a training course was led by Assoc. Prof. **DI Dr. Heidrun Gruber-Woelfler** of Graz University of Technology and looked at the theory of synthesis in Flow and at an introduction to work-up, crystallisation and filtration processes.
The second part of the training course was led by **Dr Thomas McGlone** Technical Operations Manager at CMAC National Facility.
Attendees had at their disposal 4 different stations with 4 different DEMOS and gained insights of an end to end continuous process. 3 stations focused on different synthesis reactions performed by Chemtrix/Mettler Toledo, Corning/Zaiput Flow Technologies, Ehrfeld.
A fourth station featured a model compound run through 4-unit operations – synthesis, work-up, crystallisation and filtration. These were linked into a continuous, 'end-to-end process'. This gave delegates the opportunity to observe some downstream operations (following synthesis).
The day was very busy but people enjoyed touching with hands instruments and get answers to their curiosities.
The continuous filtration system (one of the two in the world) obtained the interest of the participants.

The second day started with the Keynote presentation of prof Timothy F. Jamison from MIT who entered into details of "on demand synthesis". His presentation highlighted **the importance of data and the need for more**.
An example from an Italian company (Angelini) who has substituted part of the synthesis of an API (tradozone) with a continuous process, gained the attention of the attendees especially because this synthesis has obtained **the green light from FDA** in a short amount of time.
Both Matthew Bio (Snapdragon chemistry) and Darren Whitaker (Perceptive Engineering Limited) underlined the importance of **machine learning and digitalization**.
Charlotte Wiles (Chemtrix) and Wouter Stam (Flowid) presented case studies which underline the importance of **bridging the chemist and engineer gap**.
These two experts need to work together to find the right solutions after the identification of the problem. The afternoon of the first day saw Pharmaceutical companies presenting their experience in continuous and how this technology can help reduce time to market.
The day ended with a Roundtable on **Time to Market** - how to increase productivity in order to reduce development costs and get new therapies to the pharmaceutical market more rapidly. The roundtable was moderated by Craig Johnston, former director of CMAC and co-founder of 3F Bio.

The take home message of the roundtable is that all companies (reactors, auxiliaries, models, CMOs, Pharma) need to collaborate to implement this technology for the sake of the consumer-patient. **The "Flow" community needs to act as a community despite competition**.
The day ended with a networking event at the Clydeside Distillery which gave a unique opportunity to meet, network and do business in an exclusive, friendly environment. People wandered around the Dockside Story and discover fascinating tales about the birth of the whisky industry and Glasgow's history. People really enjoyed the evening and gained the energy to face the last day.

The last day opened with the keynote and chairman presentation – Prof Timothy Noël from Eindhoven University of Technology- who focused his speech on **Photochemistry**. The day went on with speeches held sometimes by two speakers at the same time – two partners – to enhance the importance of collaboration.
The take home message of the day for sure is the importance of **Flow technology for safety issues**, for reactions which could be difficult to implement in batch (i.e. Photochemistry and cryogenic reactions etc) and for increase of **financial revenues**. Last but not least is the importance of **sharing with the community** not only success stories but also failures from which the community can learn. The aim of this symposium is both to present real case studies that can be of example to companies who are trying to understand if **Flow is the right way to go** and connect people who are trying to reach the same aim. This was possible thanks to brilliant speakers and participants who interacted in a very smart environment as the Technology and Innovation Centre (TIC) is. TIC was a perfect location not only for conference and exhibition set up but also for labs and networking area.
With this we would like to thank all the people involved in this event and invite you to join us in our **12th CFRT symposium** which will take place in **Graz (Austria)** on 28-30 September 2020.