

## Establishing Micro- and Millireactors worldwide

### Laboratory of the future

Currently, the monitoring of multistep continuous flow processes by multiple analytical sources is still seen as a resource intensive and specialized activity. In the following paper from the university of Graz with Prof. Oliver Kappe, the coupling of a modular microreactor system (MMRS) with real-time monitoring by inline IR and NMR, in addition to online UPLC, is described. Using this platform, experimental data can be rapidly generated (17 iterations in under 2 hours) to access information on the different chemical species at multiple points within the reactor and to generate process understanding.

Application of this platform is the optimization of a multistep organolithium transformation. At same time, the process structure and the automation concept for the production process is delivered. The optimized continuous flow conditions were directly demonstrated in a scale-out experiment with in-process monitoring to afford the desired product in 70% isolated yield and provided a throughput of 4.2 g/h. These data can be directly used for scaling up.

Please have a closer look at the corresponding [publication](#).



### New potentials at Ehrfeld

As meanwhile the industrial market worldwide is looking deeper into the field of flow chemistry and especially at microreaction technology, Ehrfeld started to grow as well. The newest enhancement to our team is Dr. Jordi Ampurdanes, who started to work for Ehrfeld from the 1<sup>st</sup> of June 2019 as a process development project manager. By education he is chemical engineer and obtained his PhD in heterogeneous catalysis in 2014. He will support our team in terms of sale and feasibility studies in the lab.



### Chemspec - Transforming challenges into opportunities

Again, Ehrfeld will join the Chemspec europe 2019 from the 26th until the 27th of June in Basel. Operating in a highly competitive

market with complex environmental guidelines for example in China, the fine and specialty chemicals industry is currently experiencing a multitude of pressures whilst benefiting from high levels of investment, especially in green and bio-based technologies. With the right mindset and information, the current challenges, like product quality, time-to-market, safety or cost efficiencies, can be turned into opportunities for innovation and business growth. So please take the opportunity and have a closer look at our trendsetting technology in hall 1 booth **E259** from lab up to the production of some thousand tons of product per year.



If you have any questions, we will be pleased to answer them by phone, email or in a personal meeting. Visit us under [www.ehrfeld.com](http://www.ehrfeld.com) to obtain an initial impression of our technology.

Or meet us in person at the next event:

[ChemSpec Europe](http://ChemSpec Europe)

26<sup>th</sup> – 27<sup>th</sup> of June in Basel

In case of further questions, please do not hesitate to contact us:

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Kind regards,  
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