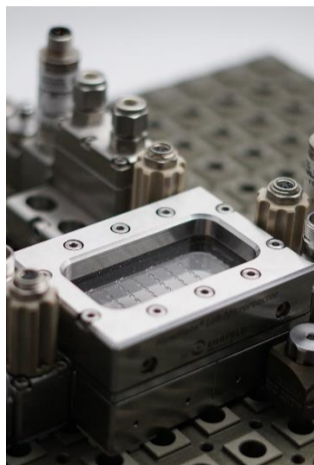


Establishing Micro- and Millireactors worldwide

Reaction Performance and Flow Behavior in a FlowPlate Lab

The alkylation reaction of isobutane and 1-butene catalyzed by H_2SO_4 is a typical liquid–liquid heterogeneous reaction. Mass transfer is the limiting step. Configuring specific micro-mixing structures is useful to intensify the mass transfer and reaction performance in microchannels. The FlowPlate Lab is configured with contraction-expansion structures and triangular obstacles (L-L structure) are used to improve the mixing and reaction performance of the isobutane alkylation process. The results show that the volumetric mass transfer coefficient in the microreactor configured with a micro-mixer was over 27 times of that in the stirring reactor and the reaction conversion reached 95.7% at only 12 s. Please read more in the [publication](#).



High pressure – Miprowa Technology

After several years of requests regarding scalable reactions, feasibility studies for different customers revealed, that there is a need for high pressure reactors. For example, ethoxylations on an industrial scale need high temperatures which necessitate high pressures. For this reason, we developed a high-pressure version of up to 75 bars for the Miprowa® Lab in Alloy 625, 58 bars for the Miprowa® Matrix Pilot and customized pressure resistance for production reactors. Following the integrated scale-up concept, starting with an easy to handle 30-centimeter Miprowa® Lab up to production reactors of more than 7-meter length, for several thousand tons of product per year, we can cover the complete progress.



CFRT 2023 – Flow in Industrial Applications

Please, do not miss the opportunity to meet us again in person. We will be delighted to show you our latest improvements at the 14th edition of the CFRT, which will be held in Portmarnock (Ireland) from 27th – 28th of September 2023. Ehrfeld will present a running system including automation and analytics at the conference table. You don't know, if your process would benefit from the transition to flow chemistry by using microreaction technology? We will assist you with our experience and support you with workshops and proof of principle studies. See you there!



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/ to obtain an initial impression of our technology.

Or meet us in person at the next event:

CFRT 27th – 28th of September in Portmarnock, Dublin, Ireland



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

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Kind regards,

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