

ZHAW Zürich working on new perspectives for biodiesel and heterogeneous catalysis

The Department of Chemical Engineering at the Zurich University of Applied Sciences (ZHAW, Switzerland), headed by Dr. Peter Riedlberger is concerned, among other things, with the preparation of heterogeneous catalysts and with heterogeneously catalyzed reactions in microreactors. Two systems (Figure) were recently set up and put into operation based on the modular MMRS system from Ehrfeld®.



In the fixed-bed reactor plant (figure on the left) studies are currently being carried out on biodiesel production from micro-algae. The system offers the possibility to carry out reactions at pressures up to 20 bar and temperatures up to 200 ° C. The reaction mixture can be analyzed online using Raman, UV-VIS and NIR spectroscopy. In the solid synthesis plant (figure on the right) processes for the production of complex heterogeneous catalysts are developed. The focus here is on the precise control and regulation of the individual material flows and their mixing. A decisive influence on the catalytic properties of these novel materials can be exerted on the synthesis conditions. Moreover, they are important for the prevention of fouling in miniaturized continuously operated reaction systems (Hochstrasser et al., 2017). These miniaturized continuous processes of heterogeneous catalytic reaction systems developed in the Department of Chemical Engineering at the ZHAW in Wädenswil underscores the manifold possibilities in the field of flow chemistry (Allemann et al., 2017).

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:

9th Symposium on Continuous Flow Reactor Technology for Industrial Applications
14th-16th of November in Barcelona <http://www.flowchemistrytks.com/>

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

info@ehrfeld.com

+49 6734 919300

Best regards,
Ehrfeld Mikrotechnik GmbH

www.ehrfeld.com

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