

No Magic: Catalysts from the Cylinder

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New design of catalyst screening reactor allows low-cost tests at higher temperatures

The Institut für Mikrotechnik Mainz GmbH (IMM) has further developed its catalyst screening reactor for heterogenously catalytical applications. The new cylindrical shape of the stainless steel screening reactor (Catalyst Testing Micro Reactor CTMR) allows test temperatures of up to 800° C, 300° C higher than its predecessor. Depending on test temperatures, its pressure stability ranges from approx. 3 bar (800° C) to 100 bar (400° C). In the modularly structured reactor, up to 10 different catalysts can be tested simultaneously. Computer simulation proves that, in the 10 parallel channels, the reactor's flow rates differ by less than 5 %.

The CTMR contains 10 precisely manufactured inserts on which 10 disposable micro structured platelets are placed. If required the platelets can be coated with different catalysts and, thanks to large-scale wet chemical production, they are available at low-

cost. A choice of different caps allows parallel and serial screening. Caps and inserts for the equipment with new catalyst platelets are easily exchangeable. Measurements are carried out time and cost efficiently.

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