


Methods, IMC, Mülhaupt

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| <p>Polymerization Catalysis</p> <p><i>Automated polymerization reactor</i></p> | <p>Model: <i>Chemspeed Accelerator</i> Unit and Room: <i>FMF, fourth floor, R4051</i> Responsible: <i>Georg Müller, 203 4800</i> Further information: <i>http://www.chemspeed.com</i></p> | |
| <p>Short Description: Chemspeed is used for parallel synthesis and high-throughput screening of chemical reactions at variable temperatures and pressures. The parallel reactor allows the automated, computer controlled and simultaneous processing of polymer synthesis with various monomers.</p> | <p>Picture of the Equipment</p>  | |
| <p>Available Experiments/Techniques: variation of relevant parameters (monomer pressure, catalyst concentration, temperature) for catalysis in parallel reaction (high-output screening). This can be to optimize the catalyst system to achieve an optimized product in terms of increasing the activity of the catalyst and the product selectivity.</p> | | |
| <p>Special Equipment: Equipment for up to 10 parallel reactions with pressures up to 10 bar</p> | | |
| <p>Measurements on the equipment are currently done by:</p> | <p><input type="checkbox"/> Students <input type="checkbox"/> Students after Introduction <input checked="" type="checkbox"/> Students after extensive training <input checked="" type="checkbox"/> Trained scientific service personal</p> | |
| <p>Recent Publications, where this instrument was important (optional):</p> | <p>A. Tuchbreiter, J. Marquardt, B. Kappler, J. Honerkamp, M.O.Kristen, R. Mülhaupt: "High Output Polymer Screening (HOPS): Exploiting combinatorial chemistry and data mining tools in catalyst and polymer development", <i>Macromol. Rapid Commun</i>, 2003, <i>24</i>, 47-62.</p> | |
| <p>Typical problems that may be solved with this instrument:</p> | <p><i>-Parallel screening of various catalysts</i> <i>-Variation of polymerization parameters for maximum catalyst activity</i></p> | |