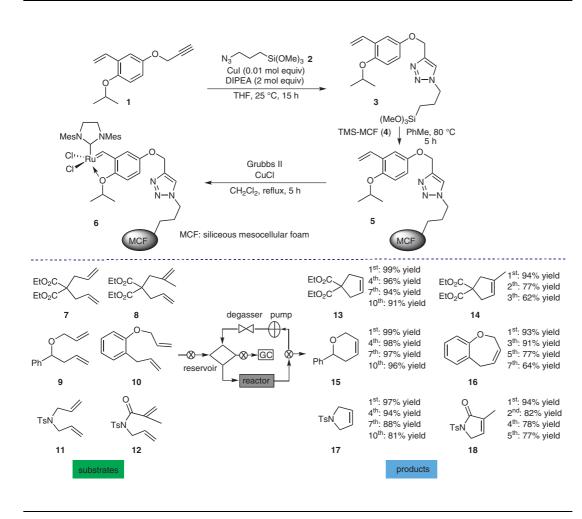
J. LIM, S. S. LEE,\* J. Y. YING\* (INSTITUTE OF BIOENGINEERING AND NANOTECHNOLOGY, THE NANOS, SINGAPORE) Mesoporous Silica-Supported Catalysts for Metathesis: Application to a Circulating Flow Reactor

Mesoporous Silica-Supported Catalysts for Metathesis: Application to a Circulating Flow Reactor *Chem. Commun.* **2010**, 806-808.

## A Mesoporous Silica-Supported Ruthenium Catalyst for Metathesis



Significance: A mesoporous silica-supported catalyst 6 for metathesis was prepared and applied to a circulating flow reactor system. Thus, the Grubbs II catalyst was immobilized on siliceous mesocellular foam (MCF) microparticles 5 to give the catalyst 6. The ring-closing metathesis of dienes 7–12 was performed in a circulating flow reactor system filled with 6 (225 mg; reactor size = 4.6 mm x 50 mm) at 50 °C with a flow rate of 5 mL/min to afford the corresponding products 13–18 in 93–99% yield.

**Comment:** The mesoporous silica-supported catalyst **6** was recycled nine times without or with loss of catalytic activity in a circulating flow reactor (**15**: 1<sup>st</sup> use: 99% yield, 4<sup>th</sup> use: 98% yield, 7<sup>th</sup> use: 97% yield, 10<sup>th</sup> use: 96% yield **18**: 1<sup>st</sup> use: 94% yield, 2<sup>nd</sup> use: 82% yield, 4<sup>th</sup> use: 78% yield). The authors mentioned that their circulating flow system was superior to the continuous flow system filled with **6** in terms of recyclability.

SYNFACTS Contributors: Yasuhiro Uozumi, Yoichi M. A. Yamada, Chung Keun Jin Synfacts 2010, 4, 0487-0487 Published online: 22.03.2010 DOI: 10.1055/s-0029-1219460; Reg-No.: Y01810SF

2010 © THIEME STUTTGART • NEW YORK

## Category

Polymer-Supported Synthesis

## Key words

mesoporous silica

metathesis

circulating flow reactor

ruthenium

