



WILEY

 Thieme Chemistry

**EuCheMS**   
European Chemical Sciences  
Division of Organic Chemistry



Universidad  
de Huelva



# 8th Young Investigators Workshop EuCheMS - Division of Organic Chemistry

Islantilla, Huelva 16-17 September 2016

A B S T R A C T S

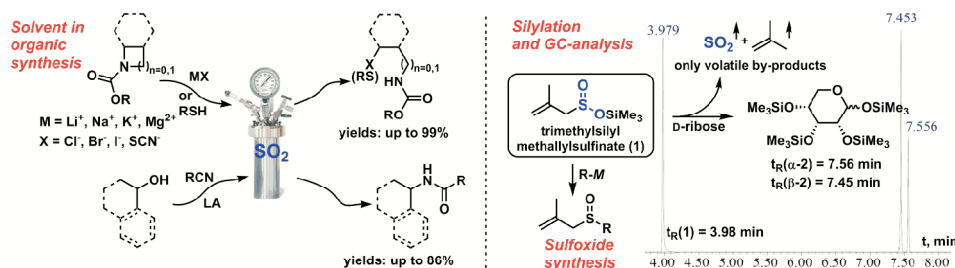


## SULFUR DIOXIDE: USEFUL REAGENT AND SOLVENT IN ORGANIC CHEMISTRY

Maris Turks, Jevgenija Luginina, Agnese Stikute, Daniels Posevins, Irina Novosjolova, Vilnis Peipins, Krista Suta, Mikus Purins  
Faculty of Materials Science and Applied Chemistry,  
Riga Technical University,  
P. Valdena Str. 3, Riga, LV-1048, Latvia  
maris\_turks@ktf.rtu.lv

Recently, many applications of SO<sub>2</sub> and its crystalline surrogates in organic synthesis have been reported. We have discovered that carbamate-protected aziridines and azetidines undergo efficient ring-opening reactions in liquid SO<sub>2</sub> with I and II group metal halides and thiols [1]. We have also found that liquid SO<sub>2</sub> facilitates the Ritter reaction. For the latter novel In(OTf)<sub>3</sub> – catalyzed conditions were developed [2].

Additionally, we have developed catalytic conditions for synthesis of trialkylsilyl allylsulfonates in *ene*-reactions between allylsilanes and SO<sub>2</sub>. The obtained products can be used as effective derivatization (silylation) reagents for qualitative and quantitative GC-analysis of non-volatile polyhydroxy compounds [3] and as starting materials in sulfoxide synthesis [4].



- [1] Luginina, J.; Uzuleņa, J.; Posevins, D.; Turks, M. *Eur. J. Org. Chem.* **2016**, 1760.  
[2] Posevins, D.; Suta, K.; Turks, M. *Eur. J. Org. Chem.* **2016**, 1414.  
[3] Marković, D.; Tchawou, W. A.; Novosjolova, I.; Laclef, S.; Stepanovs, D.; Turks, M.; Vogel, P. *Chem. Eur. J.* **2016**, *22*, 4196.  
[4] Stikute, A.; Peipiņš, V.; Turks, M. *Tetrahedron Lett.* **2015**, *56*, 4578.