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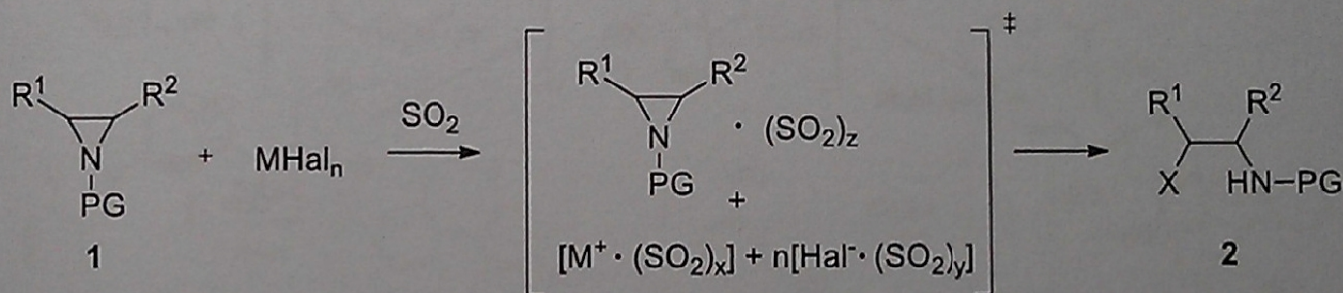
NUCLEOPHILIC SUBSTITUTIONS IN LIQUID SULFUR DIOXIDE: RING OPENING OF AZIRIDINES

Jevgenija Lugiņina, Māris Turks

Faculty of Material Science and Applied Chemistry, Riga Technical University
 Paula Valdena Str. 3, Riga, LV-1007, Latvia
 maris_turks@ktf.rtu.lv

Aziridine moiety represents an interesting class of three-membered ring systems that are valuable in organic and medicinal chemistry.¹ Because of the ring tension, a common transformation is aziridine ring opening. Literature research showed that there are only few precedents of aziridine ring opening using metal halides.² Despite the fact that sulfur dioxide is known as solvent for ionic chemistry, it is not applied as a solvent for aziridine ring opening.

Here we present a synthetic process of aziridine **1** opening with metal halides and other nucleophiles using sulfur dioxide as a solvent. Reactions were performed in different temperature modes and in several solvents in parallel experiments.



The obtained results showed that sulfur dioxide is outstanding solvent for nucleophilic opening of aziridines. Reactions **1** → **2** proceeded with excellent yields and product purity.

References:

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