Tin(II) Polyoxometalate as an Efficient Catalyst for the Selective Oxidation of Sulfides to Sulfoxides

Ezzat Rafiee^a, Iraj M. Baltork^b, Shahram Tangestaninejad^b, Alireza Azad^a, and Sepideh Moinee^a

^a Department of Chemistry, Faculty of Science, Razi University, Kermanshah, 67149, Iran ^b Department of Chemistry, University of Isfahan, Isfahan, 81746-73441, Iran

Reprint requests to Dr. E. Rafiee. Fax: +98-831-427-4559. E-mail: Ezzat_rafiee@yahoo.com, e.rafiei@razi.ac.ir

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The applicability of the tin(II) polyoxometalate catalyst, $[(n-C_4H_9)_4N]_5PSnMo_2W_9O_{39} \cdot 9H_2O$, for sulfoxidation of diaryl, dibenzyl, aryl benzyl, dialkyl, cyclic, and heterocyclic sulfides with 30% hydrogen peroxide was examined under organic halogen-free condition. It is noteworthy that different functional groups including carbon-carbon double bonds, ketones, oximes, aldehydes, ethers, alcohols, and acetals were tolerated under this reaction condition.

Key words: Tin(II) Polyoxometalate, Sulfoxidation, Sulfoxide, Sulfone, Lewis Acid