22nd Iranian Chemistry Conference, 23-25 August, 2023
University of Kurdistan

Oxovanadium(IV) unsymmetrical Schiff base complex as an efficient catalyst for selecive oxidation of sulfides to sulfoxides with H_2O_2

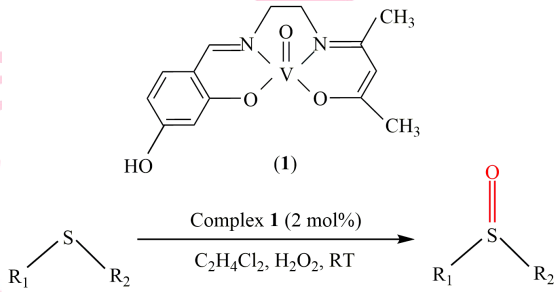
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Organic sulfoxides play an essential role in the synthesis of chemically useful and biologically active compounds including drugs, flavors, germicides, and catabolism regulators. Therefore, the selective oxidation of sulfides into the corresponding sulfoxides has taken up a great part in modern synthetic chemistry [1]. Transition metal Schiff base complexes are significant and efficient homogeneous catalysts in the oxidation of organic compounds using different oxidizing agents. Good catalytic activity and selectivity have been reported as the main advantages of homogeneous metal complexes [2].

In this work, the oxovanadium(IV) unsymmetrical Schiff base complex (**1**) was synthesized in good yield based on the procedure described in the literature [3]. The synthesized complex **1** was successfully used for selective oxidation of sulfides to sulfoxides with 30% H_2O_2 as oxidant in dichloroethane at room temperature (Scheme1). Good to excellent yields and use of hydrogen peroxide as a green oxidant can be mentioned as advantages of this protocol for the oxidation of sulfides.



Scheme 1: Selective oxidation of sulfides to sulfoxides catalyzed by complex **1**

Keywords: Oxo-vanadium(IV) Schiff base complex, Homogeneous catalyst, Selective oxidation, Sulfide

References

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