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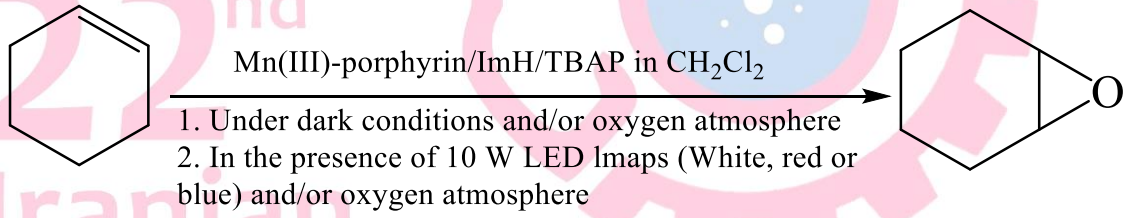
The effect of light on manganese porphyrin catalyzed oxidation of olefins with periodate under different conditions

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Most metal catalyzed oxidation of organic compounds with different terminal oxidants are conducted in air under exposure to sunlight or laboratory light [1-4]. However, little attention was paid to the possible influence of light and molecular oxygen on the efficiecy of the catalytic reactions. In the present study, the oxidation of cyclohexene with periodate catalyzed by manganese porphyrins was studied in dark, under the irradiation of various LED lamps and in the absence or presence of molecular oxygen to investigate the possible contribution of the excited states of manganese porphyrins and autoxidation [5] pathway in the mechanism of the oxidation reaction. The results of this study shows a meaningful difference between the conversions achieved under different reaction conditions, although no change in the product distribution was observed.



Keywords: Manganese porphyrins, Oxidation of olefins, Periodate, Autoxidation conditions, Light exposure

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