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Oxidation Cascade with Oxone: Cleavage of Olefins to Carboxylic Acids

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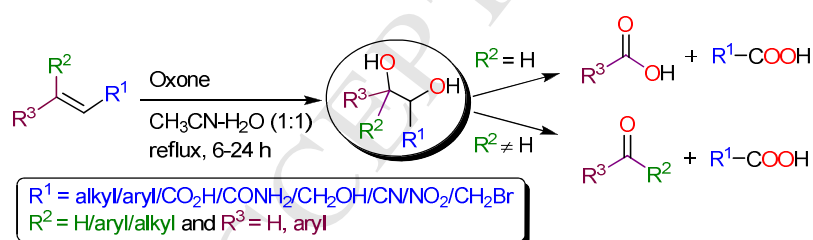
Abstract

A variety of olefins is shown to be cleaved oxidatively to the corresponding acids with oxone as the reagent. The simple methodology that works well for a range of alkenes, i.e., styrenes, nitrostyrenes, stilbenes, cinnamic acids, chalcones, etc., involves heating of the reactant with oxone in acetonitrile-water mixture (1:1, v/v) at reflux. The oxidation cascade involves initial dihydroxylation followed by oxidative cleavage and oxidation of the resultant aldehydes to acids.

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Graphic for TOC



Keywords: Oxidation, Ozonolysis, Oxone, Styrenes, Stilbenes, Cinnamic Acids, Chalcones and Diols.

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