

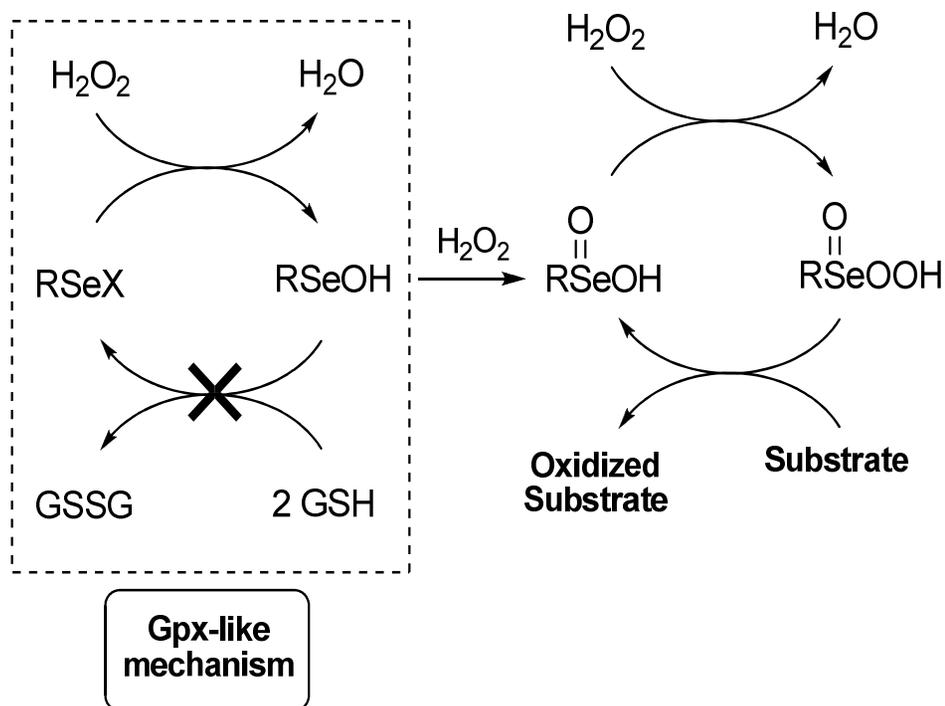
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GREEN OXIDATIONS OF ALDEHYDES TO CARBOXYLIC ACIDS AND ESTERS

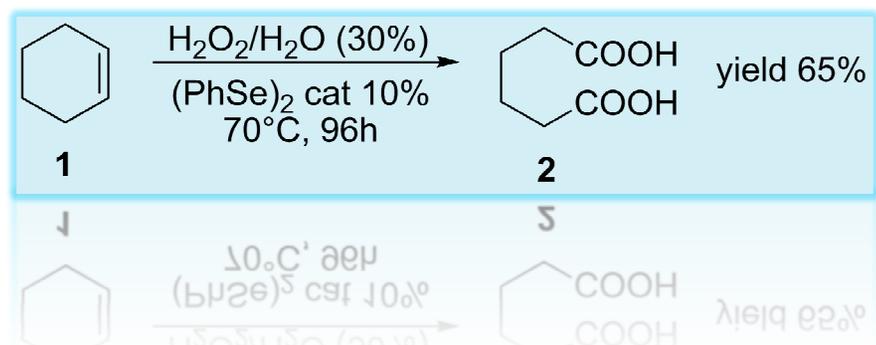
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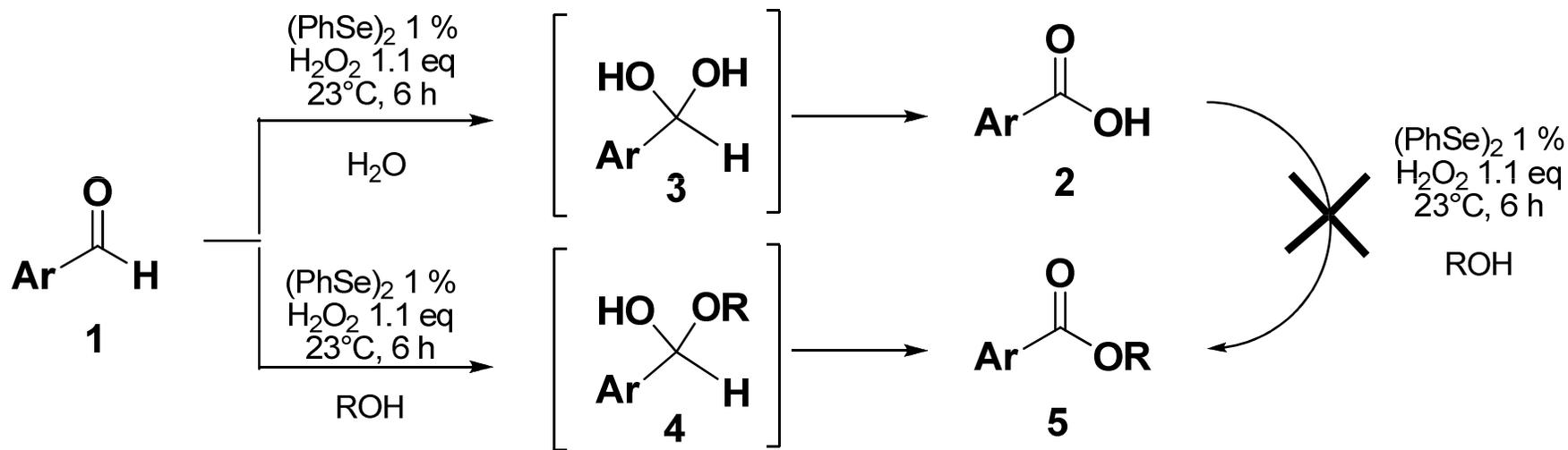
Bio-Logic Oxidation



diphenyl diselenide has been used to catalyze the synthesis of adipic acid by the oxidation of cyclohexene through a one pot, six step mechanism similar to that reported by Noyori which involves four consecutive oxidations of the initially formed diols. After 96 hours at 70 °C using 10 mol% of diselenide and 40 equivalents of 30% aqueous hydrogen peroxide, colorless crystalline adipic acid was obtained in 65% yield.



Oxidation of Aldehydes



A bioinspired oxidative approach has shown to be versatile and represents a convenient alternative to the classical procedures for the green conversion of aldehydes to carboxylic acids or esters with good yields.