TECHNOLOGY

Oxidations of Hydrocarbons by Hydroperoxides in Aqueous Media

OVERVIEW

Allylic or benzylic oxidation is of fundamental importance in organic chemistry with applications in areas ranging from agricultural products to pharmaceuticals. Currently, 70% tert-Butyl Hydroperoxide in water (T-Hydro) is an oxidant of choice for the oxidation of many organic compounds, but its uses for catalytic processes is limited. Researchers in the Department of Chemistry and Biochemistry at the University of Maryland have developed an extremely efficient method for the selective oxidation of allylic as well as benzylic hydrocarbons by T-hydro using a catalyst in aqueous media. The advantages of this method include:

* reactions are performed with T-Hydro
* reactions can be performed in water with or without a cosolvent
* method is not limited by scope of substrate, and oxidation is selective for hydrocarbon oxidation
* minimal catalyst destruction at or below 40 degrees Celsius

For additional information please contact the Office of Technology Commercialization, University of Maryland. Phone: 301-405-3947. Email: otc@umd.edu

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Additional Information

INSTITUTION

University of Maryland, College Park

PATENT STATUS

Patent(s) pending

LICENSE STATUS

Contact OTC for licensing information

CATEGORIES

- Chemical

EXTERNAL RESOURCES

- US Patent 8,163,944

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