

Novel alcohol oxidation catalyst

Enables to effectively oxidize sec-alcohol as well as n-alcohol and to oxidized with air

Summary

Alcohol oxidation is one of fundamental reactions in organic chemistry. This reaction is especially useful for synthesizing high-value-added compounds such as medicine, pesticide, perfume and so on. Although, TEMPO and the related compounds featuring AZADO skeleton (e.g. AZADO, 1-Me-AZADO, and ABNO) are often used as alcohol oxidation catalyst, there are some problems concerning catalytic activity and reaction efficiency. This invention provides novel alcohol oxidation catalyst "Nor-AZADO" which can effectively oxidize sec-alcohol as well as n-alcohol using air as the terminal oxidant.

Effect & Application

The advantages of Nor AZADO are as follows.

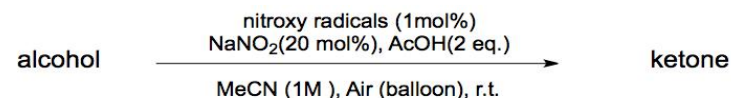
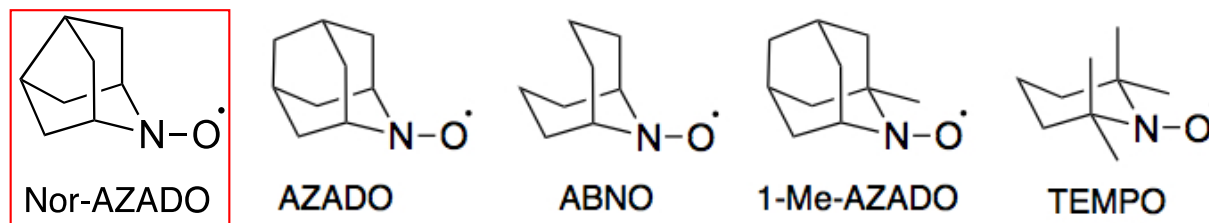
1. Ultra-high catalytic turnover, enabling efficient oxidation of sec-alcohol
2. Possible to finish the aerobic oxidation in a short reaction time with high catalytic activity

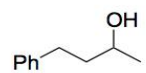
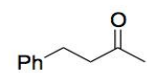
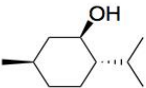
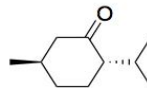
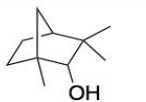
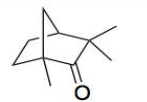
Patent Information

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Chemical structure and Catalytic property of Nor-AZADO



entry	substrates	products	Conversion* (time)				
			TEMPO	1-Me-AZADO	AZADO	ABNO	Nor-AZADO
1			5% (13h)	99% (9h)	100% (7h)	99% (12h)	100% (6h)
2			0% (14h)	83% (14h)	100% (10h)	99% (14h)	100% (7h)
3			0% (14h)	99% (10h)	100% (8h)	99% (10h)	100% (6h)

* GC

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