

Method For Synthesis Of Nitriles By Ammoxidation Of Aromatic Alcohols Using Metal-Free Sulfonated Boron Nitride As Catalyst

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ABSTRACT

A method (100) for ammoxidation of aromatic alcohols using boron nitride (102) as catalyst, may be provided. The method (100) may include preparing (110) the exfoliated boron nitride (103) using commercial boron nitride, functionalizing (120) the exfoliated boron nitride (103) with sulfonic group to obtain functionalized catalyst (104) and using (130) the functionalized catalyst (104) in the synthesis of nitriles. The functionalized catalyst (104) used for the ammoxidation of aromatic alcohols (105) for the production of nitriles (106). Further, the functionalized catalyst (104) used provides a green, sustainable, and metal-free methodology under mild conditions.

KEY APPLICATION AREAS

1. Organic chemical synthesis.
2. Pharmaceutical intermediates.
3. Fine chemicals manufacturing.
4. Agrochemicals and dye intermediates.
5. Green catalysis.
6. Sustainable chemical processing.

POTENTIAL USES

1. Green synthesis of aromatic nitriles.
2. Production of pharmaceutical and speciality chemical intermediates.
3. Metal-free catalytic organic transformations.
4. Environment-friendly industrial nitrile manufacturing.

5. High-selectivity synthesis under mild conditions.
6. Sustainable production of functional organic compounds.