

Method For The synthesis Of phenols And Phenolic Compounds Using Hydroxylboron Nitride nanosheets As catalysts

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ABSTRACT

A method (100) for the synthesis of phenols and phenolic compounds using hydroxyl boron nitride nanosheets (103) as catalyst, may be provided. The method (100) may include sonication (110) of the boron nitride (102), hydrothermal (112) of boron nitride (102) to obtain hydroxyl boron nitride as catalyst (103) and using the hydroxyl boron nitride catalyst (103) in the synthesis of phenols and phenolic compounds. The functionalized catalyst (103) used for synthesis of phenol and phenolic compounds, provides a green, sustainable, highly reusable and metal-free methodology under mild conditions.

KEY APPLICATION AREAS

- 1.Organic chemical synthesis.
- 2.Pharmaceutical intermediates.
- 3.Fine chemical manufacturing.
- 4.Agrochemical production.
- 5.Green catalysis.
- 6.Sustainable chemical processing.

POTENTIAL USES

- 1.Synthesis of phenols and phenolic compounds.
- 2.Production of pharmaceutical and specialty chemical intermediates.
- 3.Metal-free catalytic hydroxylation of arylboronic acids.
- 4.Environment-friendly industrial phenol production.

5. High-yield, reusable catalytic processes under mild conditions.
6. Sustainable large-scale organic synthesis.