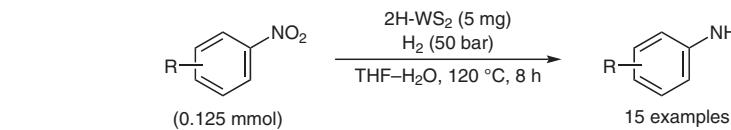
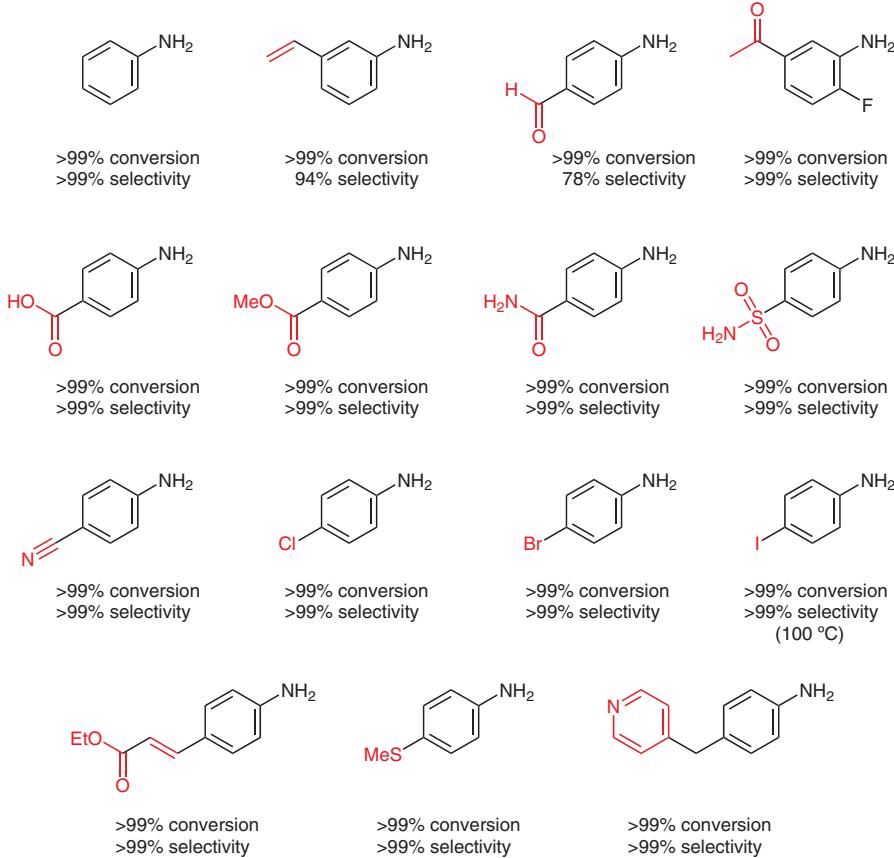


Selective Hydrogenation of Nitroarenes Catalyzed by Nanostructured Tungsten Disulfide



Results:



Significance: Nanostructured tungsten disulfide (2H-WS₂) catalyzed the selective hydrogenation of nitroarenes in the presence of other reducible functional groups under H₂ (50 bar) to give the corresponding anilines exclusively in >99% conversions with 78 to >99% selectivities.

Comment: The preparation of 2H-WS₂ was previously reported (B. Mahler, V. Hoepfner, K. Liao, G. A. Ozin *J. Am. Chem. Soc.* **2014**, *136*, 14121). In the hydrogenation of 1-nitro-3-vinylbenzene, the catalyst was reused four times without a significant decline in conversion, whereas the selectivity increased during the recycling experiment (fresh: 94% selectivity; 4th reuse: >99% selectivity).

Category
Polymer-Supported Synthesis
Key words
tungsten catalysis
hydrogenation
nitroarenes
chemoselectivity
anilines