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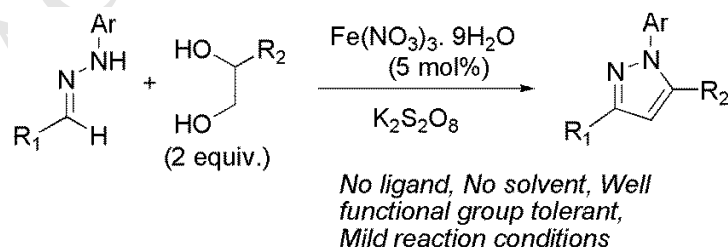
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KEYWORDS: Pyrazoles, Iron-catalysis, 1,2-diol, hydrazones, ligand-free condition

ABSTRACT: A facile synthesis of pyrazoles by the cyclization of hydrazones and 1,2-diols was described. In the presence of ferric nitrate, the reaction occurs under neat conditions and makes the use of potassium persulfate to oxidize the diol to α -hydroxy carbaldehyde for the reaction with hydrazones to produce 1,3- and 1,3,5-substituted pyrazoles selectively. The overall regioselective transformation occurs in one-pot under ligand-free, mild conditions even in the presence of air.

Graphical Abstract



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