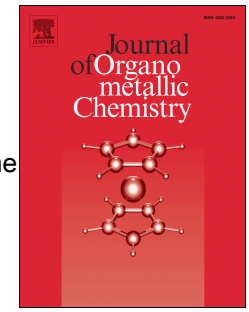
Accepted Manuscript



Facile synthesis of pyrazoles by iron-catalyzed regioselective cyclization of hydrazone and 1,2-diol under ligand-free conditions

Niranjan Panda, Subhadra Ojha

PII: S0022-328X(18)30143-8

DOI: 10.1016/j.jorganchem.2018.02.043

Reference: JOM 20342

To appear in: *Journal of Organometallic Chemistry*

Received Date: 16 January 2018

Revised Date: 19 February 2018

Accepted Date: 24 February 2018

Please cite this article as: N. Panda, S. Ojha, Facile synthesis of pyrazoles by iron-catalyzed regioselective cyclization of hydrazone and 1,2-diol under ligand-free conditions, *Journal of Organometallic Chemistry* (2018), doi: 10.1016/j.jorganchem.2018.02.043.

Facile Synthesis of Pyrazoles by Iron-catalyzed Regioselective Cyclization of Hydrazone and 1,2-diol under Ligand-free Conditions

Niranjan Panda and Subhadra Ojha*

Department of Chemistry, National Institute of Technology Rourkela, Odisha-769008, India
Email: npanda@nitrkl.ac.in; niranjanpanda@gmail.com; ORCID: 0000-0002-7431-8826

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