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An Efficient NiO-ZrO_2 Catalyzed One-Pot Synthesis of Pentasubstitutedthiopyridines

Pritam A. Mule[1], Chandrashekhar G. Devkate[2], Vinod A. Shelke[3]
Indraraj Arts, Commerce and Science College, Sillod, Aurangabad, Maharashtra, India[1,2,3]
Corresponding Author: pritamrajmule1991@gmail.com[1]

Abstract: Here we report aNiO-ZrO_2catalyzed one pot cyclocondensation, performed at room temperature in ethanol for obtaining high yields of polyfunctionalized pyridines, 2-amino-4-aryl-3,5-dicyano-6-phenylthiopyridines. The developed protocol obeys certain green principles and is scalable and cost effective. The method offered several advantages, such as operational simplicity, easy work-up procedure, shorter reaction time, and high yields of the products (82–93%). This protocol is user-friendly and could be an attractive tool for the synthesis of highly functionalized bioactive 2-amino-4-aryl-3,5-dicyano-6-phenyl thiopyridines.

Keywords: 2-Amino-4-aryl-3,5-dicyano-6-phenylthiopyridines; NiO-ZrO_2; multi component reaction

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