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2-(2-Hydroxy-5-methyl-3-formylphenyl)-imidazo[4,5-*f*][1,10]-phenanthroline

Hui Chao*, Cai-Wu Jiang, Xian-Lan Hong and Liang-Nian Ji**

State Key Laboratory of Optoelectronic Materials and Technologies / Department of Chemistry, Zhongshan University, Guangzhou 510275, P. R. China
E-mail: *ceschh@zsu.edu.cn, **cesjln@zsu.edu.cn

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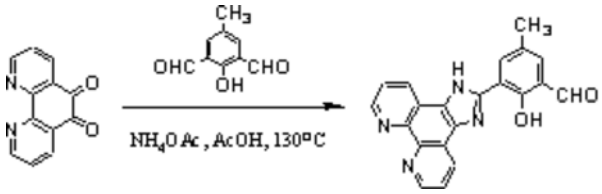

1,10-phenanthroline-5,6-dione was prepared by a previously published method [1]. A mixture of 2-hydroxy-5-methyl-isophthalic aldehyde (0.25 g, 1.5 mmol), 1,10-phenanthroline-5,6-dione (0.32 g, 1.5 mmol), ammonium acetate (2.31 g, 30 mmol) and glacial acetic acid (30 cm^3) was refluxed for about 2 h, then cooled to room temperature and diluted with water (ca, 60 cm^3). Dropwise addition of concentrated aqueous ammonia gave a yellow precipitate, which was collected and washed with water. The crude product in ethanol was purified by silica gel filtration (60-100 mesh, ethanol). The principal yellow band was collected. A yellow crystalline solid was obtained by slow evaporation of the solution, which was then dried *in vacuo*. Yield 0.35 g, 65%.

^{1}H NMR (500 MHz, d_6-DMSO): d13.85 (s, 1H), 10.51 (s, 1H), 9.14 (s, 1H), 8.99 (d, 2H, J = 8), 8.87 (d, 2H, J = 8), 8.29 (s, 1H), 7.78 (t, 2H, J = 7), 7.48 (s, 1H). 2.36 (s, 3H).

^{13}C NMR (125 MHz, d_6-DMSO): 192.2, 158.9, 150.8, 148.1, 143.6, 134.9, 131.8, 131.3, 129.8, 128.1, 127.6, 126.3, 123.6, 123.3, 120.5, 22.3.

IR (KBr. cm^{-1}): 3416s, 3036m, 1693s, 1609m, 1560m, 1482m, 1356m, 1250s, 1131m, 1075s, 969s, 807s, 737s and 646s.

FAB-MS ($[M+1]^+$): 355.

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References

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