

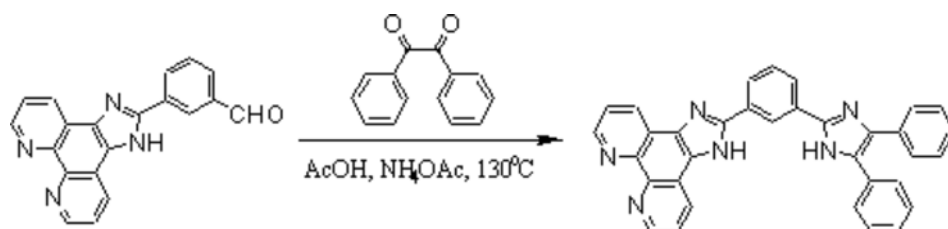
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www.molbank.org**(1-(Phenanthrolo[5,6-d]imidazol-2-yl)-3-(4,5-diphenylimidazol-2-yl)benzene****Hui Chao***, **Cai-Wu Jiang**, **Hao Zhang** and **Liang-Nian Ji****

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2-(3-Formylphenyl)imidazo[4,5-f][1,10]phenanthroline was prepared by a previously published method [1]. A mixture of 2-(3-formylphenyl)imidazo[4,5-f][1,10]phenanthroline (0.25 g, 0.77 mmol), benzil (0.16 g, 0.77 mmol), ammonium acetate (1.19 g, 15.4 mmol) and glacial acetic acid (10 cm³) was refluxed for about 2 h. The cooled solution was filtered, diluted with water (about 60 cm³) and neutralized with concentrated aqueous ammonia. The precipitate was collected and purified by column chromatography on alumina with ethanol-toluene (1:2 v/v) as eluent to give the title compound as a pale yellow powder. Yield 0.27 g, 67.7%.

¹H NMR (500 MHz, *d*₆-DMSO): 13.95 (s, 1H), 13.07 (s, 1H), 9.24 (s, 1H), 9.05 (d, 2H, *J* = 8), 9.00 (d, 2H, *J* = 8), 8.29 (d, 1H, *J* = 8), 8.25 (d, 1H, *J* = 8), 7.93 (d, 2H, *J* = 6.5), 7.83 (m, 3H), 7.74 (t, 1H, *J* = 8), 7.57 (d, 2H, *J* = 7), 7.57 (t, 1H, *J* = 8), 7.36 (t, 2H, *J* = 8), 7.28 (t, 2H, *J* = 7.0).

¹³C NMR (125 MHz, *d*₆-DMSO): 150.3, 147.8, 145.0, 143.7, 137.4, 135.7, 135.1, 131.1, 130.9, 130.5, 129.6, 129.3, 128.5, 128.1, 127.7, 127.2, 126.6, 126.1, 125.9, 123.7, 123.3, 123.0, 119.3.

IR (KBr. cm⁻¹): 3430, 1629, 1564, 1481, 1451, 1412, 1385, 1352, 1259, 1077, 1026, 1001, 968, 809, 766, 737, 698.

UV-Vis (*l*, nm, in ethanol): 288, 304.

FAB-MS (*[M+1]*⁺): 515.

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References and Notes

1. Chao, H.; Ye, B.-H.; Li, H.; Li, R.-H.; Zhou, J.-Y.; Ji, L.-N. *Polyhedron* **2000**, *19*, 1975.

Sample availability: available from the authors

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