SUPPLEMENTARY MATERIAL

Direct One-Pot Cobalt(II) Phthalocyanine Catalyzed Synthesis of N-Substituted Isoindolinones

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General Experimental

Metal salts used were purchased from Merck, Germany. Cobalt phthalocyanines was synthesized by a reported procedure with some modification and characterized by FTIR and UV-VIS spectroscopy. Silica gel (60-120 mesh) used for column chromatography was purchased from Sisco Research Laboratories Pvt. Ltd. India and all other chemicals were purchased from Spectrochem, India, Merck, Germany, and Sigma-Aldrich, USA and were used without further purification. NMR spectra were recorded on a Bruker Avance-300 spectrometer. Mass spectra were recorded on QTOF-Micro of Waters Micromass and Maxis-Bruker. The GC-MS analysis was carried out on a Shimadzu (QP 2010) series Gas Chromatogram-Mass Spectrometer (Tokyo, Japan), AOC-20i auto-sampler coupled, and a DB-5MS capillary column, (30 m x 0.25 mm i.d., 0.25µm). The initial temperature of column was 70 °C held for 4 min. and was programmed to 230 °C at 4°C/min., then held for 15 min. at 230 °C; the sample injection volume was 2 µl in GC grade dichloromethane. Helium was used as carrier gas at a flow rate of 1.1 ml min⁻¹ on split mode (1:50).

Synthesis of Cobalt (II) phthalocyanine

A mixture of phthalimide (26.28 g, 0.18 mol), urea (55.2 g, 0.92 mol), CoCl₂.6H₂O (11.85 g, 0.05 mol) and ammonium molybdate (4.69 g, 0.0038 mol) was heated under microwave irradiation for 3 min. The reaction mixture was cooled to room temperature and in sequence washed with 5% NaOH, distilled water and 2% HCl and finally with distilled water again. After
that the resulting solid was dissolved in minimum quantity of concentrated H₂SO₄ and poured in distilled water to precipitate the desired cobalt (II) phthalocyanine, which were then filtered to give 9.5 g (48.5% yield) of cobalt (II) phthalocyanine.

**General procedure for the synthesis of N-substituted isoindolinones**

To a stirred suspension of CoPc (0.01 mmol) in ethanol were added 2-carboxybenzaldehyde (1.0 mmol), amine (1.0 mmol) and diphenylsilane (1.5 mmol) at room temperature and then the temperature was raised to 70 °C. On completion of the reaction (as monitored by TLC), reaction mixture was filtered and passed through anhydrous Na₂SO₄. The crude product was purified by column chromatography over silica-gel (60-120) mesh.
NMR spectra of isolated compounds

*N*-Phenylisoindolone 3a (Table 2, entry 1)
N-(4-methoxyphenyl)isoindolinone 3b (Table 2, entry 2)
N-(4-methylphenyl)isoindolinone 3c (Table 2, entry 3)
N-(4-Iodophenyl)isoindolinone 3d (Table 2, entry 4)
$N$-(2,6-dimethylphenyl)isoindolinone 3h (Table 2, entry 8)
N-Phenethylisoindolinone 5b (Table 3, entry 2)
N-(2'-Methoxyphenethyl)isoindolinone 5c (Table 3, entry 3)
N-(4’-Methoxyphenethyl)isoindolinone 5d (Table 3, entry 4)
N-(2'-Bromophenethyl)isoindolinone 5e (Table 3, entry 5)
*N*-(*3′*-Bromophenethyl)isoindolinone 5f (Table 3, entry 6)
$N$-(4'-Bromophenethyl)isoindolinone 5g (Table 3, entry 7)
N-(3’-Bromo-4’-methoxyphenethyl)isoindolinone 5h (Table 3, entry 8)
N-(1-Hydroxyphenethyl)isoindolinone 5i (Table 3, entry 9)
2-(1'-Methyl-N-phenylimino)benzoic acid 7a (Scheme 1)
2-(1’-Methyl-N-tolylimino)benzoic acid 7c (Scheme 1)