**Supporting Information**

**Choline chloride-urea as a solvent/catalyst for the synthesis of 2-aminoimidazopyridines *via* Strecker reaction**

Amin Parvizi Moghadam,*a* Afshin Sarvary, \**,a* Negin Dehghan*b*

*a* Department of Chemistry, Faculty of Science, Babol Noshirvani University of Technology, Shariati Ave., Babol 47148-71167, Iran. *E-mail: a.sarvary@nit.ac.ir*

*b Graduate student from School of Chemistry, Shahrood University of Technology, Shahrood 36199-95161, Iran.*

**I. General Procedures**

All commercial materials were used without further purification. Reactions were followed by Thin-Layer Chromatography (TLC) performed using precoated plates of silica 60 F254, with U.V light as a visualizing agent. NMR spectra were recorded at 298 K on a Brucker Avance 300 MHz spectrometer, using DMSO-*d6* as solvent. Melting points were determined on an Electro- thermal 9200 apparatus and were left uncorrected.

Considering the compounds **4a** and **4e-k** were synthesized and identified previously,[9-12] their identification was done by comparing the reported melting points. The structures of imidazo[1,2-α]pyridines **4b-d** were identified by 1H and 13C NMR (seeSupporting Information).

**II. General Procedure for the Synthesis of compounds 4a-k**

**General procedure for the synthesis of imidazo[1,2-a]pyridin-3-amines 4a-k:** A mixture of aldehydes (0.25 mmol), KCN (0.3 mmol), and 2-aminopyridines (0.3 mmol) in 1 mL of the DES was stirred for 3 h at 80 ˚C. The reaction was cooled to room temperature, and 2 drops of HCl (37%) was added to the reaction vessel. Then, the reaction mixture was washed with water (2 × 3 mL) and the solid residue recrystallized from CHCl3/*n-*hexane to obtain the products.

**III. Spectral data of 4a-d**

**2-(4-Chlorophenyl)-6-methylimidazo[1,2-a]pyridin-3-amine (4a)**: White powder (48 mg, 75 %), mp 246–248 ˚C (dec);[20] 1H NMR (DMSO-*d6*): δ= 2.35 (s, CH3), 5.44 (brs, NH2), 7.49 (d, J= 9.0 Hz, 2H–Ar), 7.59 (d, J= 9 Hz, H–Ar), 7.96 (d, J= 9 Hz, H–Ar), 8.05 (d, J= 9.0 Hz, 2H–Ar), 8.28 (s, H–Ar) ppm; 13C NMR (DMSO-*d6*): δ= 18.35, 114.70, 121.18, 127.55, 128.20, 129.01, 129.23, 130.09, 131.62, 137.13, 138.26, 166.93 ppm.

**2-(4-Bromophenyl)-6-methylimidazo[1,2-a]pyridin-3-amine (4b):** White powder (53 mg, 71 %), mp 220–224 ˚C (dec); 1H NMR (DMSO-*d6*): δ= 2.09 (s, CH3), 6.21 (brs, NH2), 6.50 (d, J= 9.0 Hz, H–Ar), 7.30 (d, J= 9.0 Hz, H–Ar), 7.56 (d, J= 9.0 Hz, 2H–Ar), 7.74 (s, H–Ar), 7.95 (d, J= 9 Hz, 2H–Ar) ppm; 13C NMR (DMSO-*d6*): δ= 17.35, 109.15, 120.51, 128.03, 129.06, 131.02, 131.58, 137.96, 139.66, 145.09, 157.52, 167.49 ppm.

**2-(3-amino-6-methylimidazo[1,2-a]pyridin-2-yl)-4-bromophenol (4c):** Orange powder (48 mg, 61 %), mp 267-270 ˚C (dec); 1H NMR (DMSO-*d6*): δ= 2.33 (s, CH3), 5.56 (brs, NH2), 6.84 (d, J= 9.0 Hz, H–Ar), 7.11 (d, J= 9.0 Hz, H–Ar), 7.25 (d, J= 9.0 Hz, H–Ar), 7.46 (d, J= 9.0 Hz, H–Ar),8.23 (s, H–Ar), 7.28 (s, H–Ar), 11.00 (brs, OH), ppm; 13C NMR (DMSO-*d6*): δ= 18.34, 110.28, 115.74, 119.17, 120.54, 121.78, 125.95, 126.82, 127.37, 129.20, 130.50, 137.19, 155.73, 160.35 ppm.

**2-(3-aminoimidazo[1,2-a]pyridin-2-yl)-4-bromophenol (4d):** Orange powder (55 mg, 73 %), mp 242–146 ˚C (dec); 1H NMR (DMSO-*d6*): δ= 5.47 (brs, NH2), 6.87 (d, J= 9.0 Hz, H–Ar), 7.04 (t, J= 6.0 Hz, H–Ar), 7.25-7.31 (m, 2H–Ar), 7.58 (d, J= 9.0 Hz, H–Ar), 8.30 (d, J= 3 Hz, H–Ar), 8.44 (d, J= 6 Hz, H–Ar), 13.11 (brs, OH) ppm; 13C NMR (DMSO-*d6*): δ= 110.49, 112.69, 116.26, 119.16,121.05, 123.25, 124.61, 126.36, 129.30, 130.73, 137.94, 155.63, 160.07 ppm.

**IV: Copies of 1H & 13C NMR spectra of the compounds 4a-d**

****

****

****

****

****

****

****

****