Supporting Information

Syntheses of l Molecule

**4'-([2,2':6',2''-Terpyridine]-4'-yl)-[1,1'-biphenyl]-4-carboxylic:** 30% NH3 solution (1 mL) and NaOH (0.054 g, 1.26 mmol) dissolved in a minimum amount of water were added slowly to a solution of methyl 4'-formyl-[1,1'-biphenyl]-4-carbonxylate (0.15 g, 0.63 mmol) and 2-acetylpyridine (0.14 mL, 1.26 mmol) in ethanol (25 mL). After the addition of the NaOH, the solution turned yellow and after about 1 h lucid brownish red. The solution was stirred vigorously at room temperature in a flask open to air for 24 h, after which water
(50 mL) was added to the solution, a slightly yellow precipitate was obtained. HCl was added to the solution, which was then neutralized alkali to pH = 5. The precipitate was collected by filtration and washed with water. For further purification it was refluxed for 1 h in 25 mL EtOH, and the solid collected by filtration and dried in vacuum. (0.045 g, 20%).

**Scheme S1.** l Molecule synthesis.



**Figure S1.** Characterization of l Molecule*.* Interrelated maps of l molecule as follows:
1H NMR of l molecule (400 MHz, DMSO); 1H NMR (400 MHz, DMSO): δ 13.03 (s, 1H, COOH), 8.80 (s, 4H, H6A, H3B), 8.71 (d, *J* = 6.9 Hz, 2H, H3A), 8.17–8.03 (m, 6H, H3D, H2D, H3C), 8.03–7.96 (m, 2H, H2C), 7.96–7.87 (m, 2H, H4A), 7.56 (d, *J* = 2.2 Hz, 2H, H5A).



**Figure S2.** Thermo gravimetric curve of l molecule.



**Figure S3.** Infrared spectroscopy of l molecule.



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