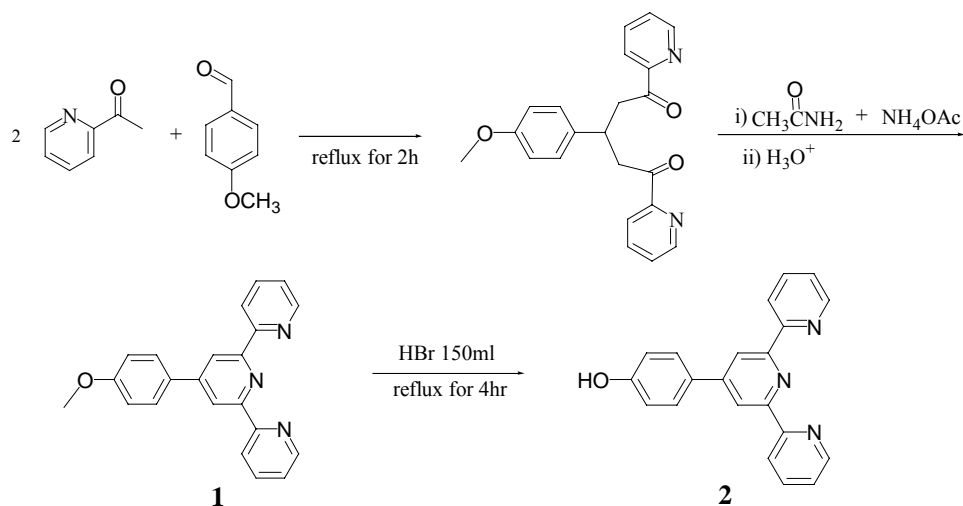


Electronic Supplementary Information

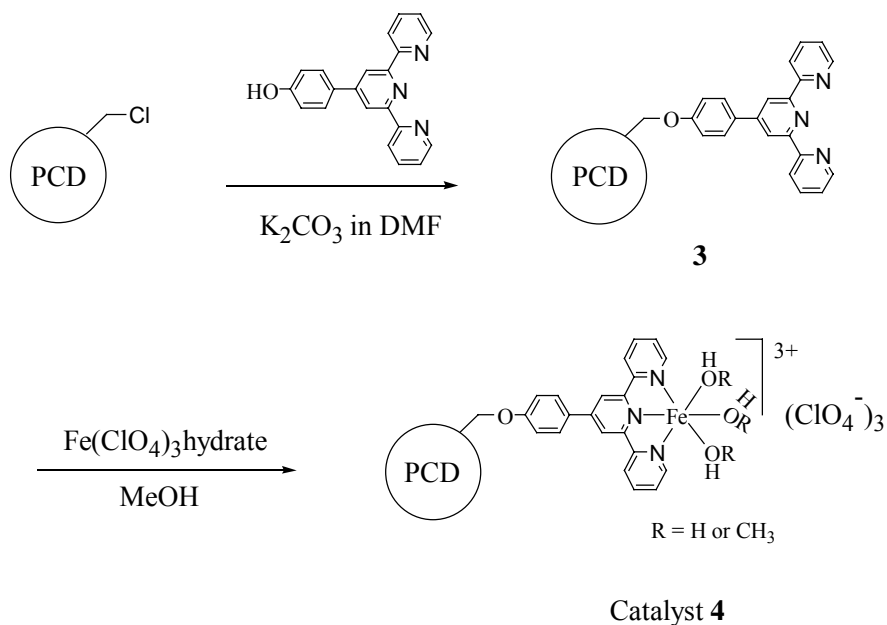


Scheme 1. Synthesis of functionalized terpyridine compound

2,6-Bis(2'-pyridyl)-4'-(*p*-hydroxyphenyl)pyridine (2): 2-Acetylpyridine(9.7 g, 0.08 mol), acetamide(71 g, 1.2 mol), ammonium acetate(46 g, 0.6 mol), *p*-anisaldehyde(5.4 g, 0.04 mol) in 500 ml flask were heated at 180°C for 2hr. After the flask was cooled to 120°C, NaOH solution(35 g in 75 ml H₂O) was added and the mixture was refluxed for 2hr. The liquid part of the mixture was decanted and the oily solid was washed with water. The solid was dissolved in a small amount of glacial acetic acid, and HBr solution(48%, 7ml) was added. After the mixed solution was kept at room temperature for 16 hr, the precipitate was filtered. The precipitate was dissolved in 300 ml H₂O, and the pH of the solution was adjusted to about 7~8 by 4N KOH. The product was extracted by CH₂Cl₂, and purified by flash column chromatography with CHCl₃ (broad yellow band) to give pure 2,6-bis(2'-pyridyl)-4-(*p*-methoxyphenyl)pyridine (**1**). **1** was dissolved in 150 ml of HBr(48%) and refluxed for 4hr. After the solvent was distilled out, the residual solid was treated with basic NaHCO₃ solution. The solid product was

recrystallized from EtOH to give pure 2,6-bis(2'-pyridyl)-4-(*p*-hydroxyphenyl)pyridine (**2**). (Overall yield: 40%)

$^1\text{H-NMR}$ (DMSO- d_6) δ 6.95(d,2H), 7.52(q,2H), 7.80(d,2H), 8.02(tr,2H), 8.65(m,4H), 8.75(d,2H); $^{13}\text{C-NMR}$ (DMSO- d_6) δ 116.21 117.04 120.89 124.44 127.90 128.21 137.44 149.30 155.12 155.50 158.95; FAB-Mass(m/z): 325; Elemental analysis(%) calcd. for $\text{C}_{21}\text{H}_{15}\text{N}_3\text{O}$: C 77.52, H 4.65, N 12.91; found: C 77.26, H 4.65, N 12.77.



Scheme 2. Synthesis of polymer-supported PCD-(tpy)Fe catalyst

Attachment of terpyridine to PCD, PCD-tpy (3): The mixture of polymer supporter (PCD, 0.54 g), 2,6-bis(2'-pyridyl)-4-(*p*-hydroxyphenyl)pyridine (**2**, 0.975 g, 3 mmol) and K_2CO_3 (0.769 g, 6 mmol) in 20 mL of DMF was shaken for 1 day. The solid product was filtered and washed with DMF, water, and acetone. And then it was further washed with acetonitrile for 1 day by shaking to give a dark yellow solid.

Coordination of iron into terpyridine ligand, PCD-(tpy)Fe (4): Terpyridine-PCD and the excess amount of iron(III) chloride (or Iron(III) perchlorate) were mixed in 30 ml of MeOH. The mixture was shaken for 1 day. The solid product was filtered and washed with MeOH, H₂O, and acetone, and then air-dried. Two X-ray emission peaks (K_α, K_β) at 6.4 and 7.1 KeV in EPMA confirmed the presence of Fe in PCD-Fe(tpy) complex **4**.

Catalytic reaction conditions: Epoxides (0.6 mmol) were dissolved in methanol (1 mL), and the polymer-supported catalyst **4** (15 mg, calculated to determine the actual amount of Fe(III)-tpy catalyst to 0.02 mmol) was added and shaken at room temperature. Reaction conversion was monitored by GC/GC-Mass analysis of 20 μL aliquots withdrawn periodically from the reaction mixture. *A control reaction carried out in the absence of the catalyst **4** did not show the formation of the ring-opened product in the same time period. A trace amount of 1,2-diol was sometimes detected from the product mixture, presumably as a result of epoxide hydrolysis with moisture in methanol, but this pathway could be suppressed easily by using absolute methanol.* Since the stilbene oxide is vulnerable at the temperature of GC, the conversion of stilbene oxide to 1-hydroxy-2-ether-stilbene was characterized by HPLC.