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## 4-Ferrocenylaniline

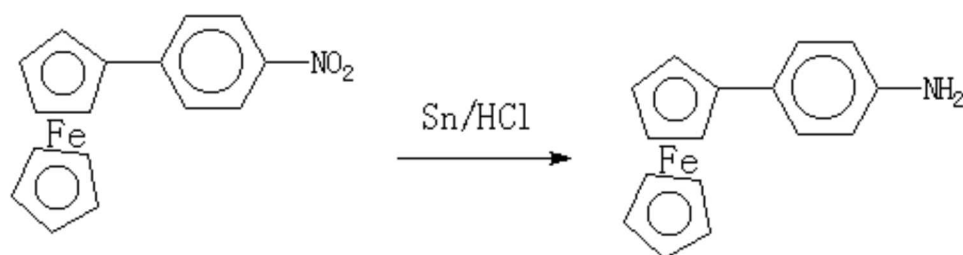
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The reduction of 4-nitrophenylferrocene with tin in acidic condition gives 4-ferrocenylaniline, which is an important intermediate for the synthesis of ferrocene-containing Schiff's base liquid crystals [1].

To a stirred mixture of 4-nitrophenylferrocene [2] (2 g, 7 mmol) in 25 ml of concentrated hydrochloric acid and 40 ml ethanol is added tin (granulated, 4.5 g, 40 mmol) and the reaction mixture is heated under reflux for 4 h. After the mixture has cooled, 200 ml water is added and aqueous NaOH is added to adjust the pH to 14 before filtration. The filtrate is extracted with CH<sub>2</sub>Cl<sub>2</sub> and dried (Na<sub>2</sub>SO<sub>4</sub>). The solvent is removed by rotary evaporation. The crude product is recrystallized from petroleum ether (boiling range 60-80°C) to give 4-ferrocenylaniline as an red-orange solid (1.4 g, 76%).

M.p: 157-159°C.

IR(KBr, cm<sup>-1</sup>): 3437, 3350, 1621, 1605, 1529, 1454, 1103, 998.

<sup>1</sup>HNMR(CDCl<sub>3</sub>): 7.3(d, 2H, C<sub>6</sub>H<sub>4</sub>), 7.65(d, 2H, C<sub>6</sub>H<sub>4</sub>), 4.0(s, 5H, C<sub>5</sub>H<sub>5</sub>), 4.2(s, 2H, C<sub>5</sub>H<sub>4</sub>), 4.5(s, 2H, C<sub>5</sub>H<sub>4</sub>), 3.4(s, 2H, NH<sub>2</sub>).

Elemental analysis for C<sub>16</sub>H<sub>15</sub>FeN: calculated, C, 68.57; H, 5.38; N, 5.00%. Found: C, 68.85; H, 5.46; N, 5.12%.

## References

1. Espinet, P.; Esteruelas, M. A.; Oro, L. A.; Serrano, J. L.; Sola, E. *Coor. Chem. Rev.* **1992**, *117*, 215.
2. Hu, P.; Zhao, K.-Q.; Xu, H.B. *Molecules* **2001**, *6*, M249.

*Sample Availability:* Available from the authors and from MDPI.

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