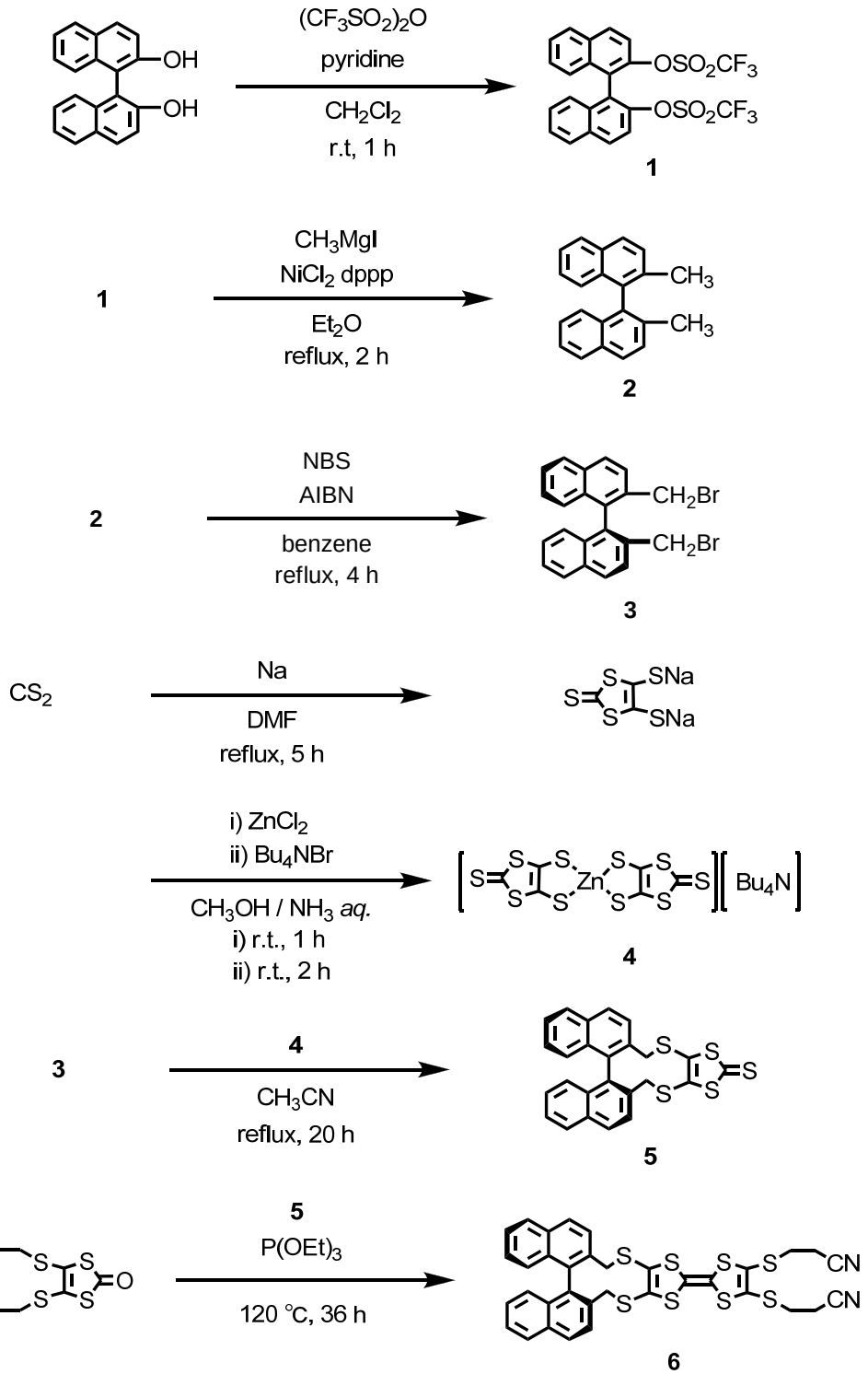
Supporting Information for Review

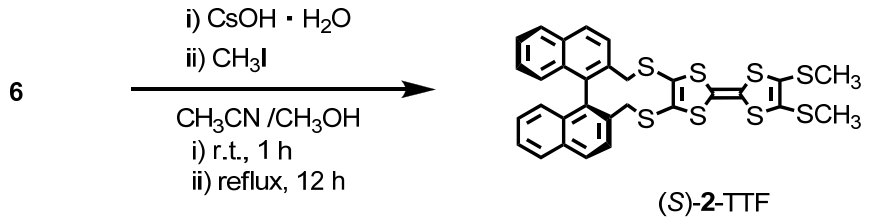
SYNTHESIS AND PROPERTIES OF CONDUCTING POLYMER NANOTUBES WITH REDOX-ACTIVE TETRATHIAFULVALENE

Shinya Nanbu, Tsukasa Nakahodo, and Hisashi Fujihara*

Synthesis of **1**-TTF and **2**-TTF.

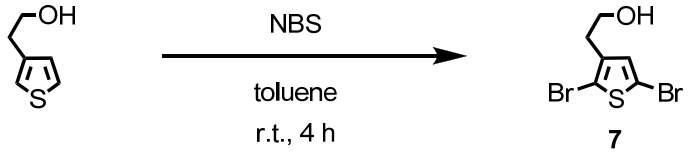


6: ^{1}H NMR ($CDCl_3$) δ 2.72 (t, J = 7.2 Hz, 4H, CH_2), 3.07 (t, J = 7.2 Hz, 4H, CH_2), 3.70-3.90 (m, 4H, CH_2), 7.03 (d, J = 8.8 Hz, 2H, Ar-H), 7.23-7.26 (m, 2H, Ar-H), 7.47 (t, J = 7.4 Hz, 2H, Ar-H), 7.63 (d, J = 8.8 Hz, 2H, Ar-H), 7.93 (d, J = 8.4 Hz, 2H, Ar-H), 7.98 (d, J = 8.4 Hz, 2H, Ar-H); ^{13}C NMR (100 MHz, $CDCl_3$) δ 18.85, 31.2, 40.0 (CH_2), 105.3, 115.2, 117.4, 125.8, 126.2, 126.9, 127.5, 127.9, 128.3, 128.8, 131.6, 132.6, 132.9 (Ar); MS (FAB) *m/z* 716 (M^+).



(*S*)-**2**-TTF

(*S*)-**2**-TTF: ^{1}H NMR ($CDCl_3$) δ 2.42 (s, 6H, -CH_3), 3.50, 4.08 (dd, *J* = 13.6 Hz, 4H, CH_2), 7.03 (d, *J* = 8.8 Hz, 2H, Ar-H), 7.23 (t, *J* = 7.4 Hz, 2H, Ar-H), 7.44 (t, *J* = 7.4 Hz, 2H, Ar-H), 7.63 (d, *J* = 8.8 Hz, 2H, Ar-H), 7.90 (d, *J* = 8.4 Hz, 2H, Ar-H), 7.95 (d, *J* = 8.4 Hz, 2H, Ar-H); ^{13}C NMR ($CDCl_3$) δ 19.2 (*C*H_3), 40.0 (*C*H_2), 125.7, 126.1, 126.8, 127.2, 127.6, 128.3, 128.3, 128.8, 132.6, 132.9 (Ar).



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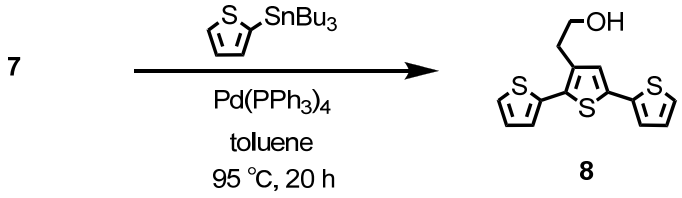

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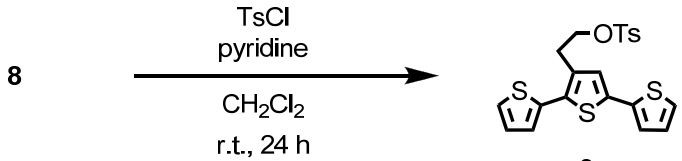

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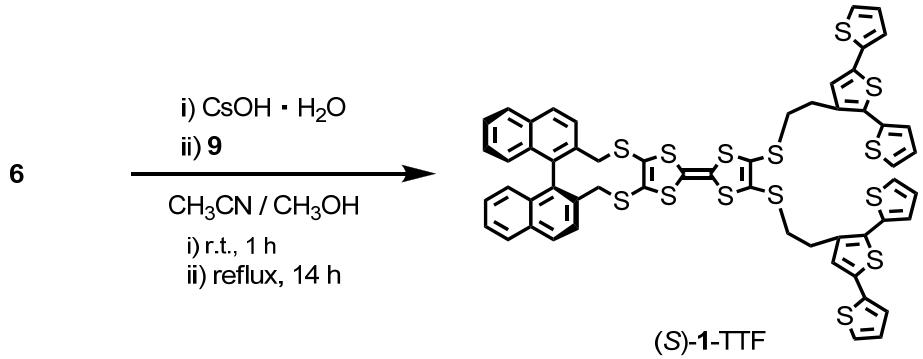

(*S*)-**1**-TTF

(*S*)-**1**-TTF: ^{1}H NMR ($CDCl_3$) δ 2.88-3.07 (m, 8H, CH_2), 3.70-3.95 (m, 4H, CH_2), 6.96-7.03 (m, 8H, Ar-H), 7.09 (d, *J* = 4.0 Hz, 2H, Ar-H), 7.14 (d, *J* = 4.0 Hz, 2H, Ar-H), 7.19-7.24 (m, 6H, Ar-H), 7.41 (t, *J* = 7.6 Hz, 2H, Ar-H), 7.62 (d, *J* = 8.0 Hz, 2H, Ar-H), 7.87 (d, *J* = 8.0 Hz, 2H, Ar-H), 7.93 (d, *J* = 8.8 Hz, 2H, Ar-H); ^{13}C NMR ($CDCl_3$) δ 30.0, 36.1, 40.0 (*C*H_2), 123.8, 124.6, 125.7, 125.8, 126.1, 126.3, 126.8, 127.6, 127.9, 128.2, 128.3, 128.8, 131.1, 132.6, 132.9, 134.9, 135.7, 136.5, 136.8 (Ar); MS (FAB) *m/z* 1158 (M^+).