Supporting Information

Two Novel Ambipolar Donor-Acceptor Type Electrochromic Polymers with the Realization of RGB (Red-Green-Blue) Display in one Polymer

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Fig. S1† (a) $^1$H NMR spectrum of 2,5-dibromopyridine-3,4-diamine in DMSO. Solvent peak at $\delta = 2.49$ ppm is marked by ‘x’. H$_2$O peak at $\delta = 3.33$ ppm is marked by ‘y’. (b) $^{13}$C NMR spectrum of 2,5-dibromopyridine-3,4-diamine in DMSO.
Fig. S2† (a) $^1$H NMR spectrum of 4,7-dibromo-[1,2,5]thiadiazolo[3,4-c]pyridine in CDCl$_3$. Solvent peak at $\delta = 7.26$ ppm is marked by ‘x’. H$_2$O peak at $\delta = 1.56$ ppm is marked by ‘y’. (b) $^{13}$C NMR spectrum of 4,7-dibromo-[1,2,5]thiadiazolo[3,4-c]pyridine in CDCl$_3$. Solvent peak at $\delta = 77.3$ ppm is marked by ‘x’.
Fig. S3† (a) $^1$H NMR spectrum of 4,7-bis(4-methoxythiophen-2-yl)-[1,2,5]thiadiazolo[3,4-c]pyridine in CDCl$_3$. Solvent peak at $\delta = 7.26$ ppm is marked by ‘x’. (b) $^{13}$C NMR spectrum of 4,7-bis(4-methoxythiophen-2-yl)-[1,2,5]thiadiazolo[3,4-c]pyridine in CDCl$_3$. 
**Fig. S4†** (a) $^1$H NMR spectrum of 4,7-bis(4-butoxythiophen-2-yl)-[1,2,5]thiadiazolo[3,4-c]pyridine in CDCl$_3$. Solvent peak at $\delta = 7.26$ ppm is marked by ‘x’. H$_2$O peak at $\delta = 1.56$ ppm is marked by ‘y’. (b) $^{13}$C NMR spectrum of 4,7-bis(4-butoxythiophen-2-yl)-[1,2,5]thiadiazolo[3,4-c]pyridine.