**Supporting Information** 

## TwoNovelAmbipolarDonor-AcceptorTypeElectrochromic Polymers with the Realization of RGB (Red-<br/>Green-Blue) Display in one Polymer

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Fig. S1<sup>†</sup> (a) <sup>1</sup>H NMR spectrum of 2,5-dibromopyridine-3,4-diamine in DMSO. Solvent peak at  $\delta = 2.49$  ppm is marked by 'x'. H<sub>2</sub>O peak at  $\delta = 3.33$  ppm is marked by 'y'. (b) <sup>13</sup>C NMR spectrum of 2,5-dibromopyridine-3,4-diamine in DMSO.



Fig. S2<sup>†</sup> (a) 1H NMR spectrum of 4,7-dibromo-[1,2,5]thiadiazolo[3,4-c]pyridine in CDCl<sub>3</sub> .Solvent peak at  $\delta$  = 7.26 ppm is marked by 'x'. H<sub>2</sub>O peak at  $\delta$  = 1.56 ppm is marked by 'y'. (b) <sup>13</sup>C NMR spectrum of 4,7-dibromo-[1,2,5]thiadiazolo[3,4-c]pyridine in CDCl<sub>3</sub>. Solvent peak at  $\delta$  = 77.3 ppm is marked by 'x'.



4,7-bis(4-methoxythiophen-2-yl)-Fig. **S3**† (a) 1H NMR spectrum of [1,2,5]thiadiazolo[3,4-c]pyridine in CDCl<sub>3</sub>. Solvent peak at  $\delta = 7.26$  ppm is marked NMR spectrum 4,7-bis(4-methoxythiophen-2-yl)by 'x'. (b)  $^{13}C$ of [1,2,5]thiadiazolo[3,4-c]pyridine in CDCl<sub>3</sub>.



Fig. S4<sup>†</sup> (a) <sup>1</sup>H NMR spectrum of 4,7-bis(4-butoxythiophen-2-yl)-[1,2,5]thiadiazolo[3,4-c]pyridine in CDCl<sub>3</sub>. Solvent peak at  $\delta$  = 7.26 ppm is marked by 'x'. H<sub>2</sub>O peak at  $\delta$  = 1.56 ppm is marked by 'y'. (b) <sup>13</sup>C NMR spectrum of 4,7bis(4-butoxythiophen-2-yl)-[1,2,5]thiadiazolo[3,4-c]pyridine.