

Supporting Information for Journal of Materials Chemistry C

Ferroelectric liquid-crystalline semiconductors based on a phenylterthiophene skeleton: Effect of introduction of oligosiloxane moieties and photovoltaic effect

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Absorption and photoluminescence spectra of compounds 1-3

Absorption and photoluminescence spectra of compounds **1-3** in thin film states were measured at room temperature, using Jasco V-530 UV/VIS spectrophotometer and Hitachi F-2500 fluorescence spectrophotometer, as shown in Figure S1. The melted compounds were capillary-filled into quartz cells with the thickness of 1 μm .

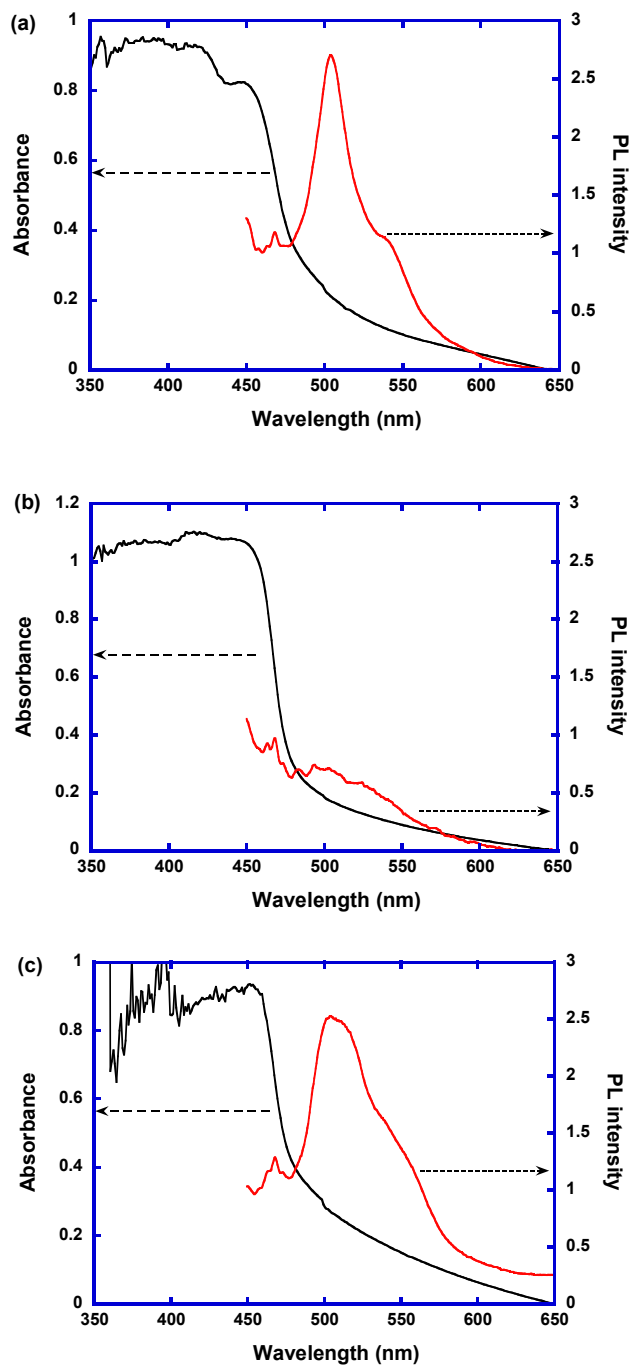


Figure S1 Absorption and photoluminescence spectra of thin films of compounds **1-3**. For photoluminescence spectra, wavelength of the excitation light was 380 nm.

For all compounds, absorbance at 356 nm which is the wavelength of the excitation laser in the time-of-flight measurement exceeds 0.8 and the penetration depths for these compounds are estimated to be less than 500 nm. This value is sufficiently smaller than the sample thickness in the time-of-flight measurement and satisfies the condition for the generation of thin carrier sheets in the measurement.