Electronic Supplementary Material (ESI) for Journal of Materials Chemistry
This journal is © The Royal Society of Chemistry 2012

Electronic Supplementary Information

Single-component room-temperature discotic nematic liquid crystals by introducing an attraction-enhancing in-plane protrusion onto the hexa(phenylethynyl)benzene core

Hsiu-Hui Chen, Hsin-An Lin, Shih-Chieh Chien, Tsai-Hui Wang, Hsiu-Fu Hsu* and Tzenge-Lien Shih*

General procedure

All chemicals and solvents were reagent grades (Aldrich Chemical Co.) and used without further purification. ^{1}H and ^{13}C NMR spectra were recorded on a Bruker AC-300 spectrometer. Chemical shifts are reported in ppm relative to residual CHCl3 (δ = 7.26, 1H; 77.0, ^{13}C). Multiplicities are given as s (singlet), d (doublet), t (triplet), q (quartet), and m (multiplet). Differential scanning calorimetry (DSC) was measured on a Perkin-Elmer Pyris1 with heating and cooling rates of 10 °C min^{-1}. Polarizing optical microscopy (POM) was carried out on a Zeiss Axio Imager A1m with a Mettler FP90/FP82HT hot stage system. X-ray powder diffraction data were collected on the wiggler beam line BL17A of the National Synchrotron Radiation Research Center (NSRRC), Taiwan, using a triangular bent Si(111) monochromator and a wavelength of 1.3271 Å. The sample in a 1-mm capillary or an extruded filament was mounted on the Huber 5020 diffractometer. An air stream heater is equipped at BL17A beamline and the temperature controller is programmable by a PC with a PID feedback system. Mass spectra were obtained on Finnegan MAT-95XL and elemental analyses were carried out on a Heraeus CHN-O-Rapid Analyzer at the NSC Regional Instrumental Centre at National Chiao Tung University, Hsinchu, Taiwan and at National Cheng Kung University, Tainan, Taiwan.

This journal is © The Royal Society of Chemistry 2012

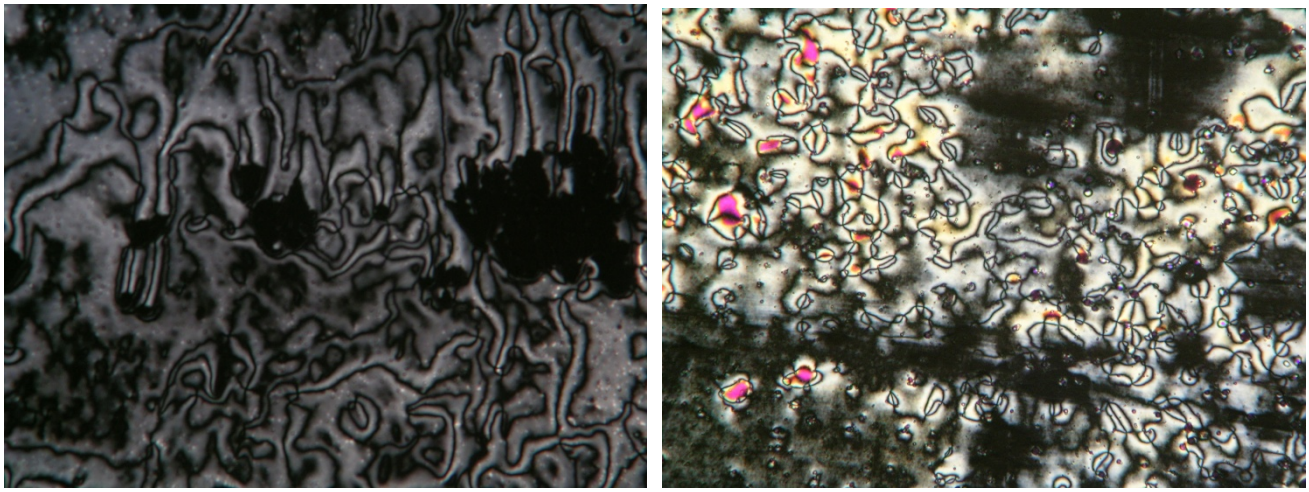


Fig. S1 Optical textures of **6d** at 116 °C and **8** at 25 °C on cooling.

5

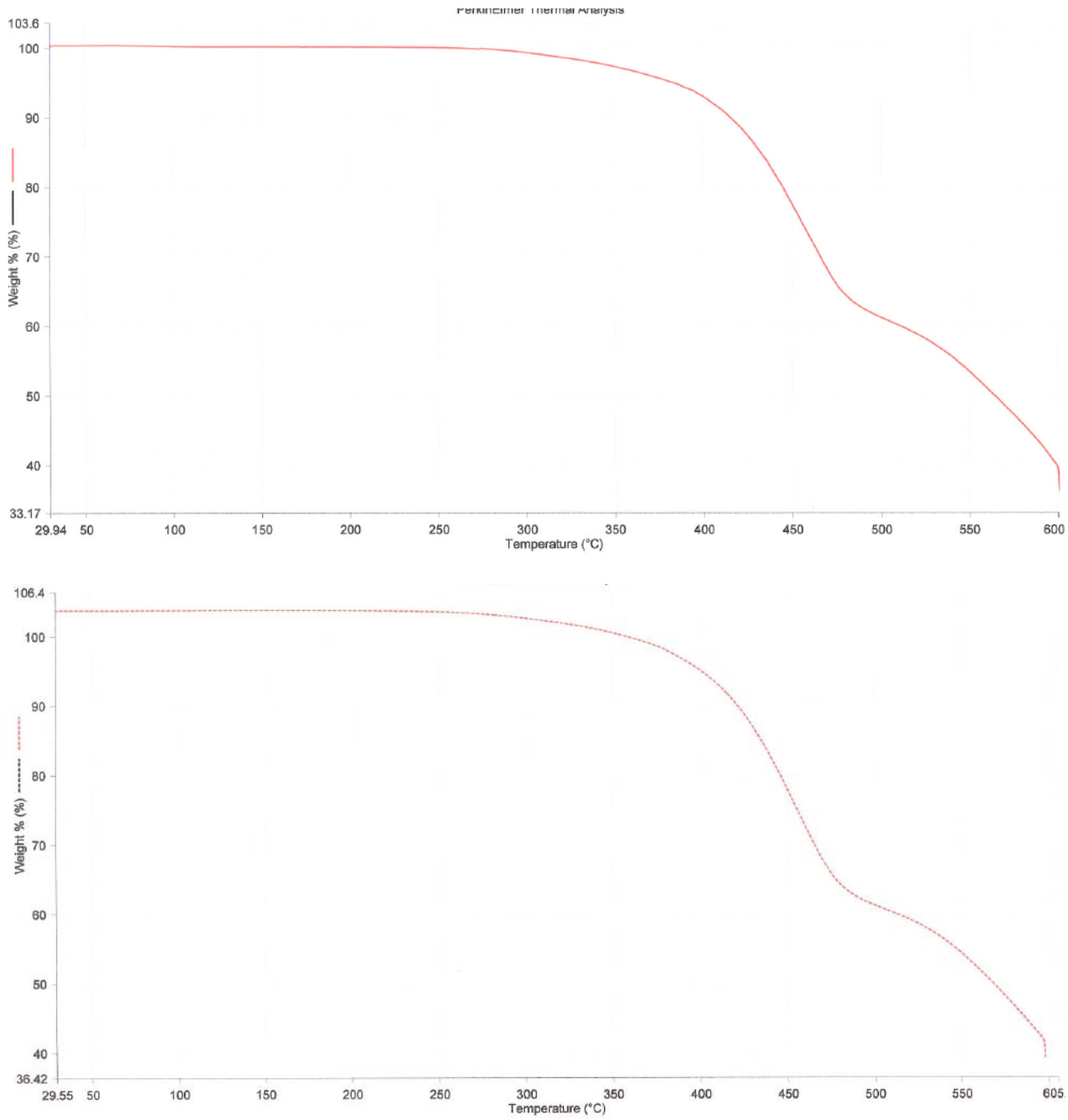
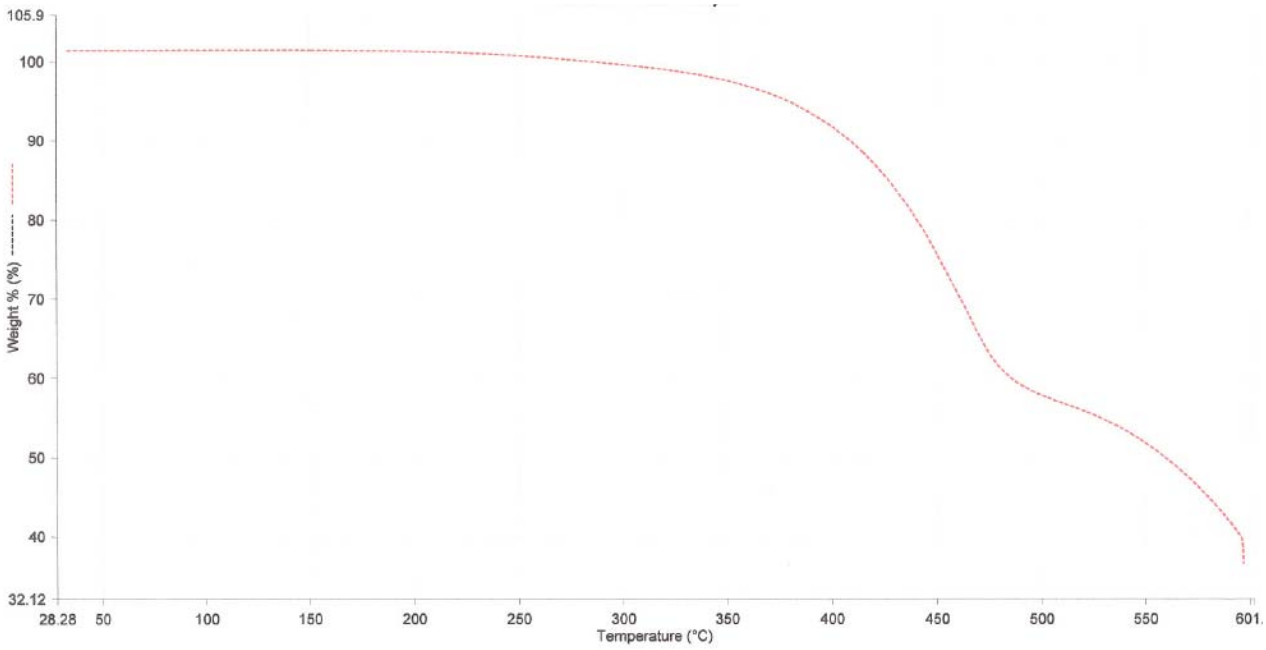


Fig. S2 TGA thermographs of **6a** (top) and **6b** (bottom).



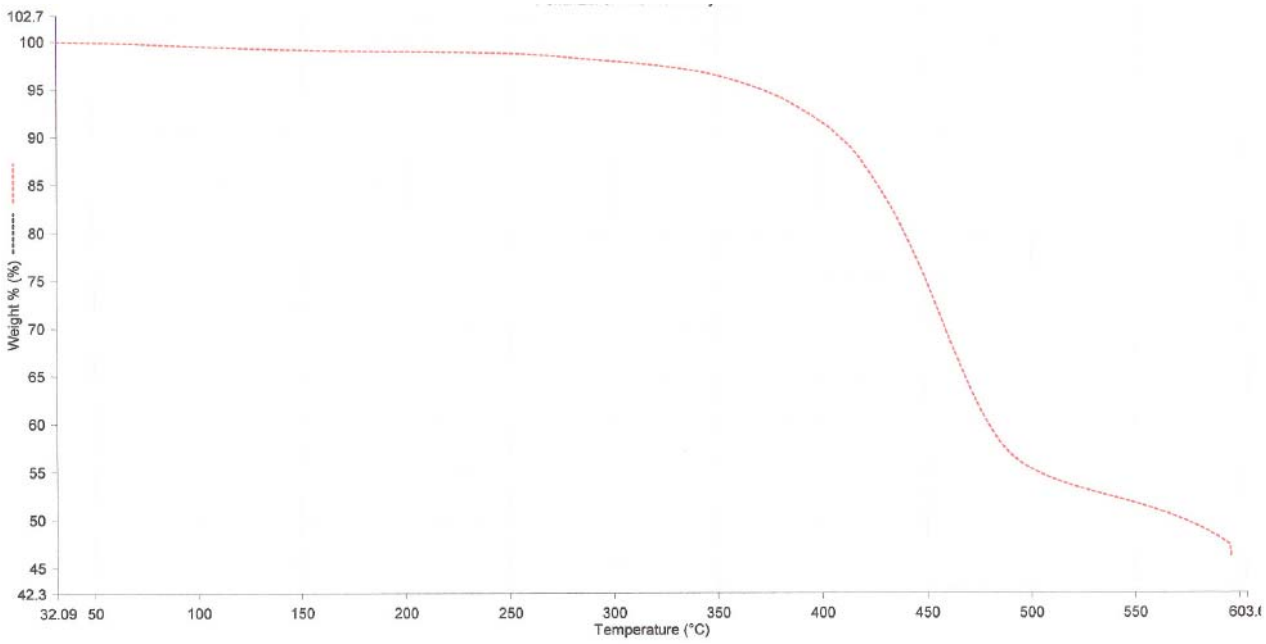


Fig. S3 TGA thermographs of **6c** (top) and **6d** (bottom).