Supplementary Material (ESI) for Chemical Communications

Electronic Supplementary Information

The critical effect of solvent geometry on the determination of fullerene (C_{60}) self-assembly into dot, wire, and disk structures

Chibeom Park, Hyun Jae Song and Hee Cheul Choi*

Department of Chemistry and Division of Advanced Materials Science, Pohang University of Science and Technology, San 31, Hyoja-Dong, Nam-Gu, Pohang, Korea 790-784

Powder X-ray diffraction

XRD spectra for the C_{60} wires and hexagonal disks were obtained using a synchrotron X-ray diffractometer (Pohang Accelerator Laboratory, 8C2 beamline) with 9 keV radiation corresponding to 1.3776 Å wavelength. The obtained data was converted to CuKα (λ=1.5405 Å) radiation scale for the convenience to compare with previously reported data.

Scanning & transmission electron microscopy

FE-SEM (JEOL JSM-7401F, 15 kV) was used for obtaining SEM images, and high resolution-TEM (HRTEM, JEOL JSM-6700F) was used for electron diffraction pattern analyses.

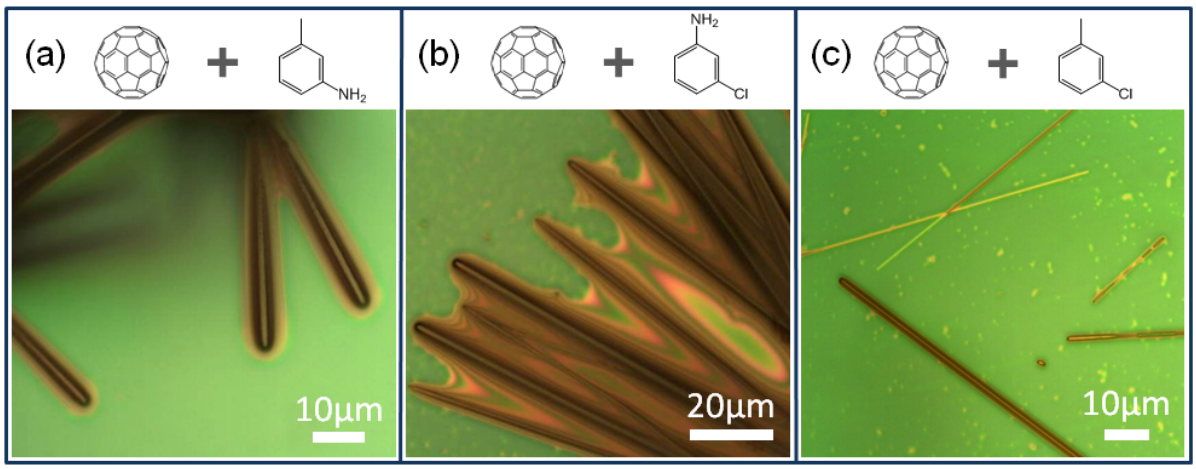

Fig. S1 Optical microscope images of C_{60} wires obtained from C_{60} solutions of (a) m-toluidine, (b) 3-chloroaniline and (c) 3-chlorotoluene

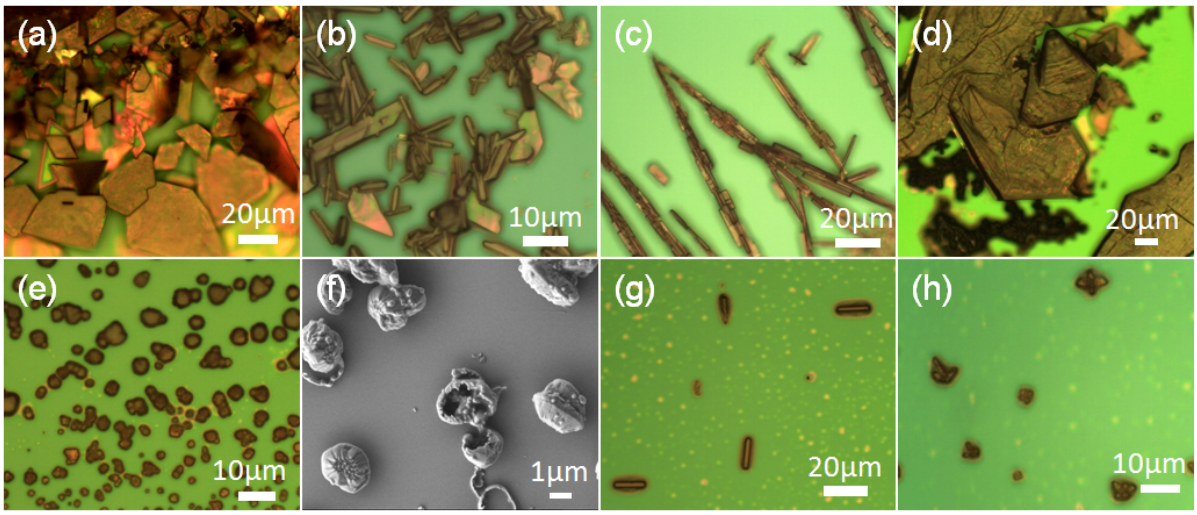

Fig. S2 Optical and SEM images of shapeless C_{60} crystals obtained from C_{60} solutions of (a) benzene, (b) chlorobenzene, (c) toluene, (d) o-xylene (e) p-xylene (f) 1,2,4-trimethylbenzne, (g) dichloromethane and (h) chloroform