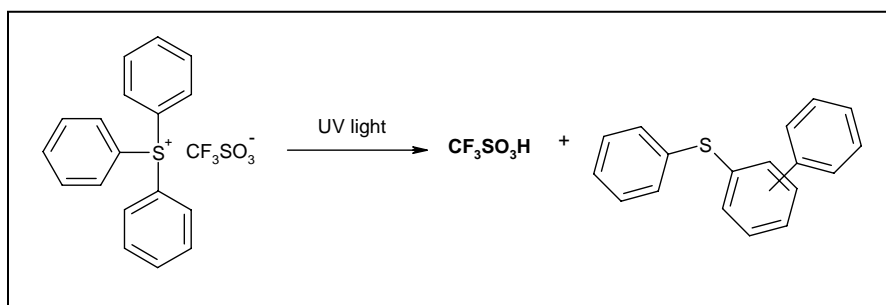


Supplementary Material for
Tunable Two-Colour Patterning of MEHPPV from a Single Precursor

To appear in Journal of Materials Chemistry

K. Nagesh, D. Gupta, D. Kabra, K. S. Narayan and S. Ramakrishnan*

Triphenyl sulfonium triflate (PAG) on irradiating with UV light produces triflic acid.
The transformation is given below in the scheme.



Scheme S1. Generation of triflic acid from triphenylsulfonium triflate (PAG) with UV light

GPC molecular weights:

Viscotek TDA 300 model GPC setup was used, and calibration was done with polystyrene standards for conventional calibration curve in THF at 30C and the molecular weights are found to be 100KDaltons (Mn) with PDI around 2.0

NMR of the polymers:

¹H NMR spectra were recorded using a Bruker 400 MHz spectrometer, using CDCl₃ as the solvent and TMS as the internal reference.

¹H-NMR: 7.0-6.5(Ph), 5.7(CH-DTC), 4.9(CH-OMe), 4-2.5(OCH₂, OCH₃), 2-0.5(CH, CH₂, CH₃). Composition of dithiocarbamate incorporated was calculated from the ratio between benzylic proton peaks around 4.9 and 5.7ppm.

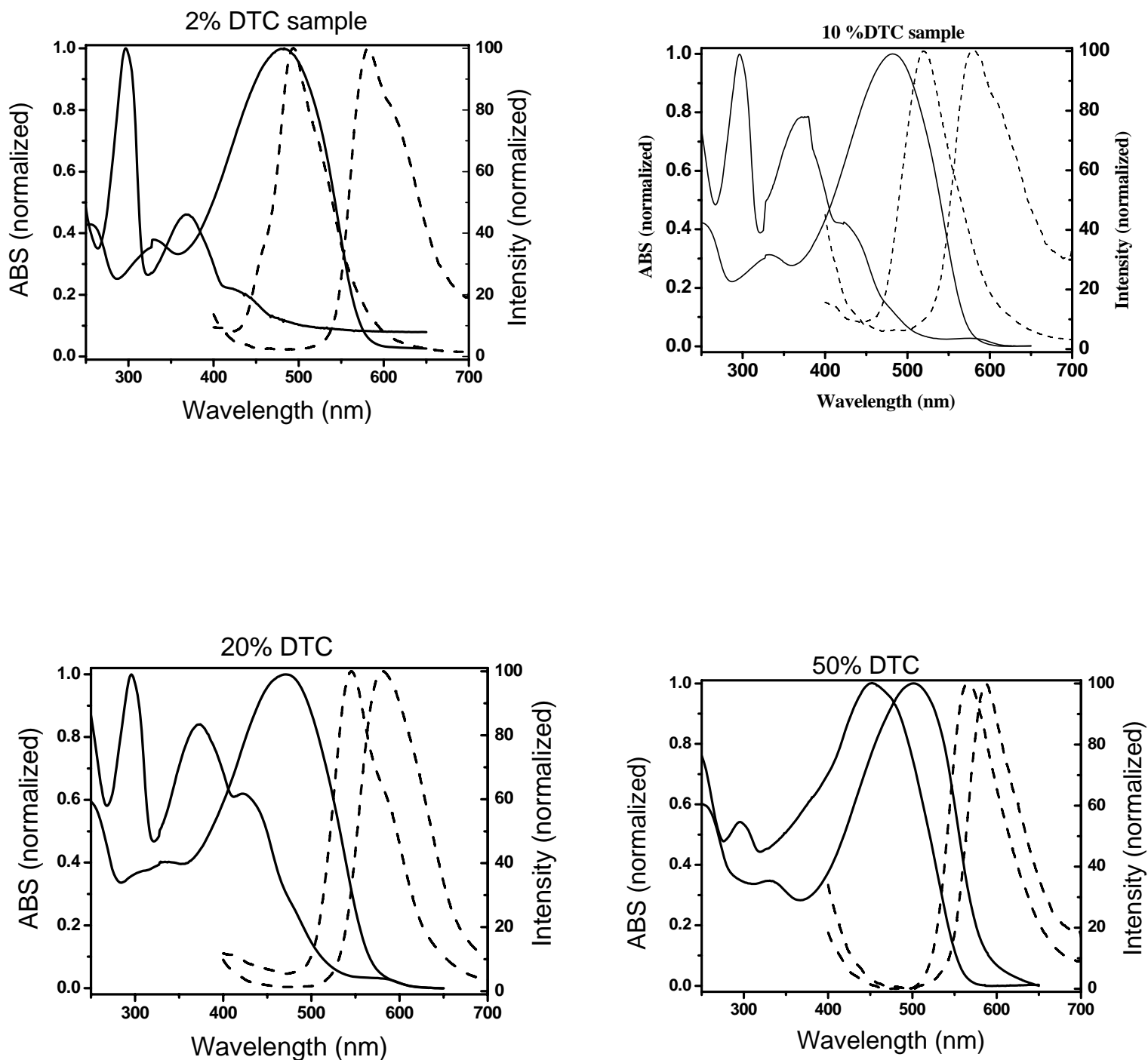


Figure F1. UV-Visible and fluorescence spectra of patterned samples in both the patterned region. (clock wise from top left: 2 % DTC, 10 % DTC, 20 % DTC, and 50 % DTC) – The solid line indicates UV-visible spectra and the dashed line FL spectra

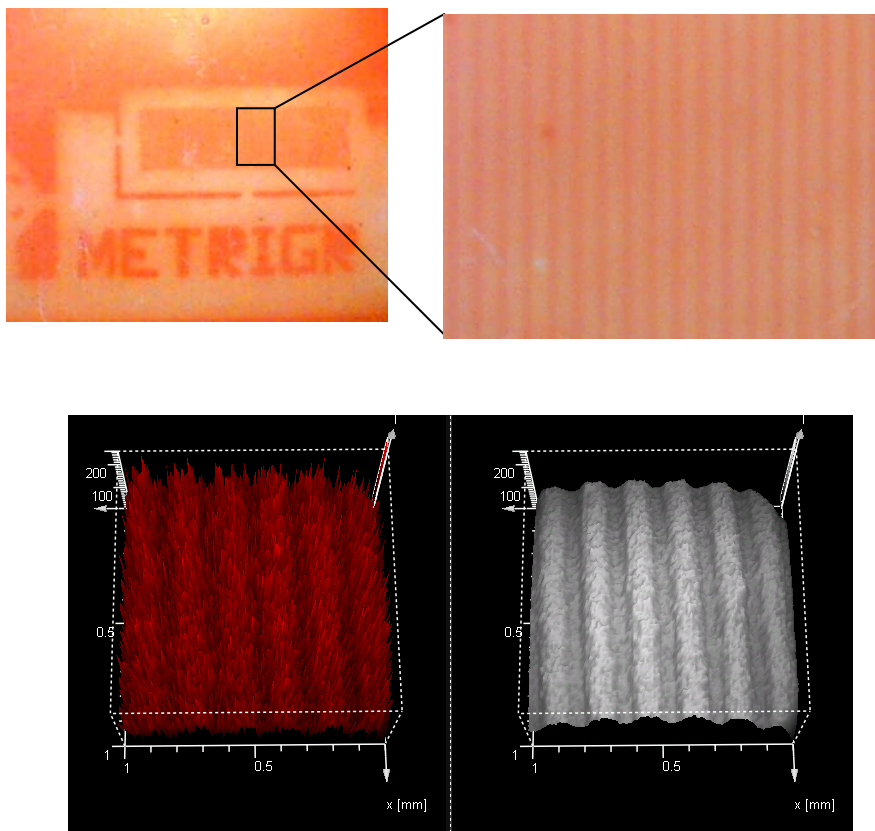


Figure F2. Top- Photographs of a pattern which shows the fidelity of the process at various length scales. Bottom- Confocal images of 40 micron spacing patterns with 488 nm excitation wavelength. left-confocal image, right-bright-field image

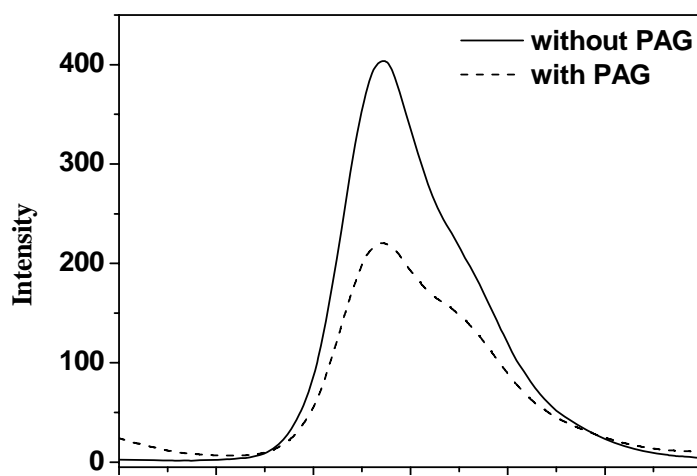


Figure F3. Fluorescence spectra of LC regions with and without PAG