Supporting Information

A Versatile Approach to Fabricate Ordered Heterogeneous Bull's-eye-like Microstructure Arrays

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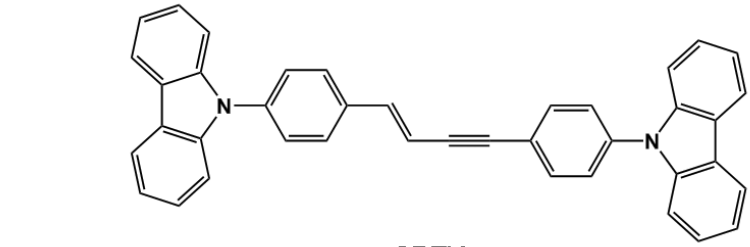
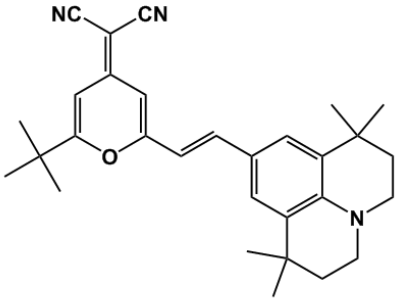
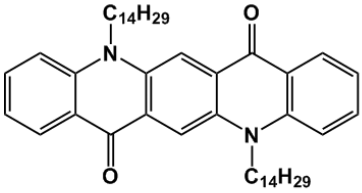


CPEY



DCJTB



DTQA

schematics of the molecular structure

(E)-9,9'-(4,4'-(but-1-en-3-yne-1,4-diyl)bis(4,1-phenylene))bis(9H-carbazole) (CPEY), 4-(Dicyanomethylene)-2-tert-butyl-6-(1,1,7,7-tetramethyljulolidin-4-yl-vinyl)-4H-pyan (DCJTB) and 5,12-ditetradecylquinolino[2,3-b]acridine-7,14(5H,12H)-dione (DTQA).

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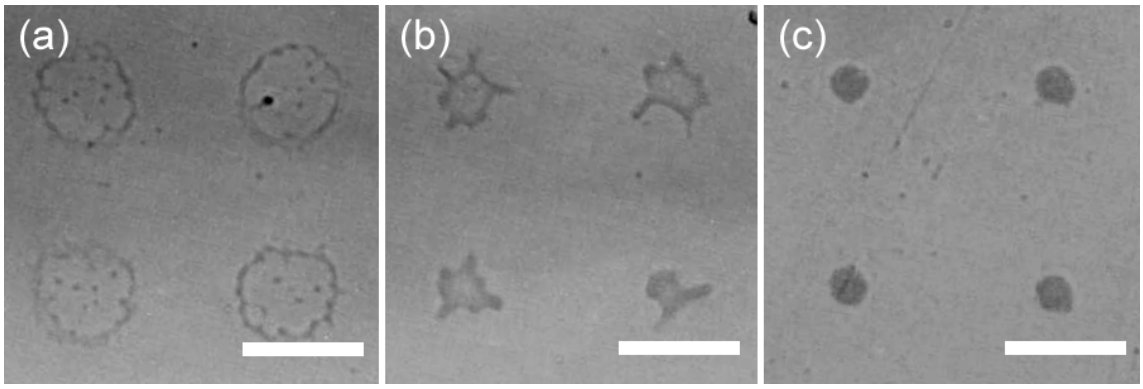
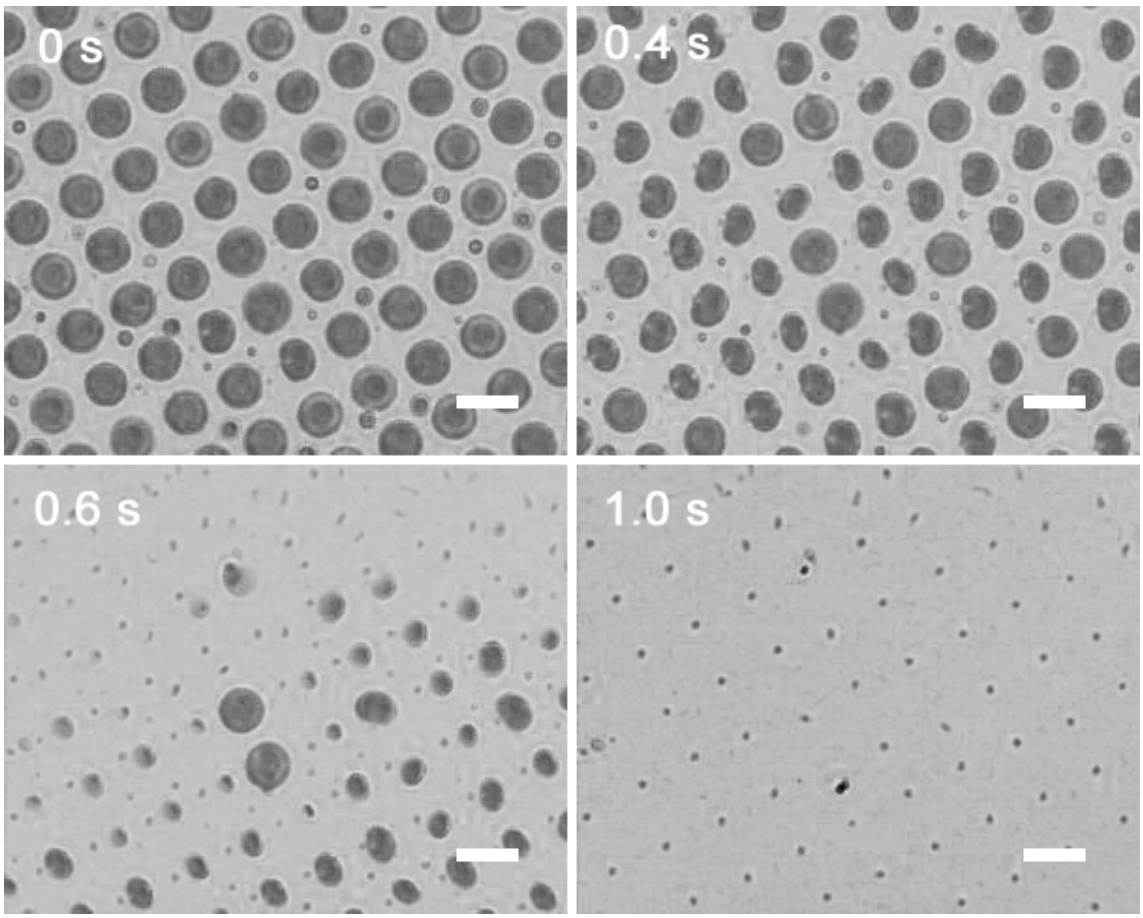
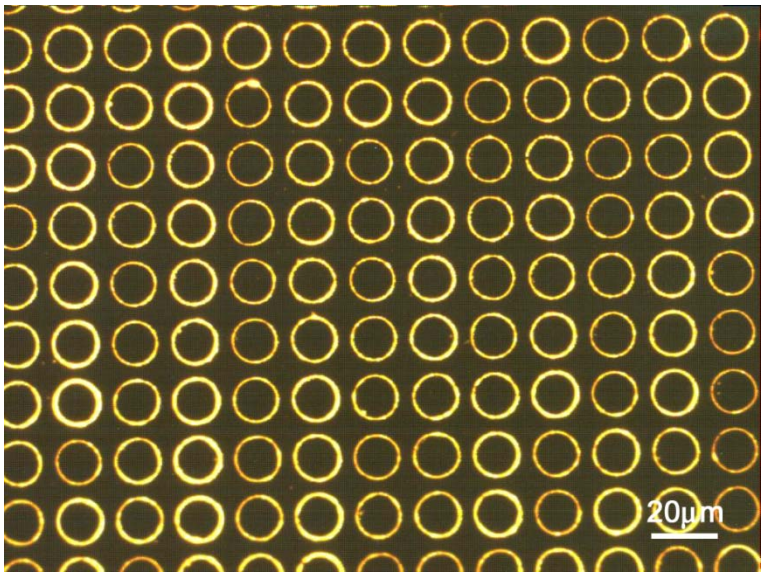


Supporting Information Figure 1. The corresponding optical micrographs verified the presentations of the mechanisms of dot arrays formation. After SAMs-induced dewetting, the disk-likc thin films were observed in (a). With evaporation of chloroform, the disc-like films shrank incompletely under the role of surface tension in (b). Finally, after the solvent evaporated completely, the ordered dot arrays were obtaied in (c).



Supporting Information Figure 2. The inspection of water condensation on the patterned gold substrate was carried out in situ using an optical microscope: the ordered PVK dot arrays under the water droplets had been exposing gradually with the evaporation of water within 1.0 s. From serial figures, we could clearly see that the condensing water droplets on gold substrate are independent and stable in the hydrophilic regions of the circular area. It is indicated that the chemical properties of the SAMs have been reserved on the surface after formation of ordered PVK dot arrays by dip coating. The scale bar is 20 μm.



Supporting Information Figure 3. A fluorescent image of 2D ordered arrays of DTQA ring arrays that were fabricated by dipping a gold substrate with water-droplets-patterned surface in a 0.5 mg mL^{-1} DTQA solution in chloroform and withdrawing immediately, followed by complete evaporation of chloroform and water. From this figure, we could clearly observe that the DTQA ring arrays exhibit intensive yellow-green luminescence under UV excitation.