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Supporting Information

Self-assembly of carbon nanodots induced by liquid-liquid phase separation in a surface microdroplet

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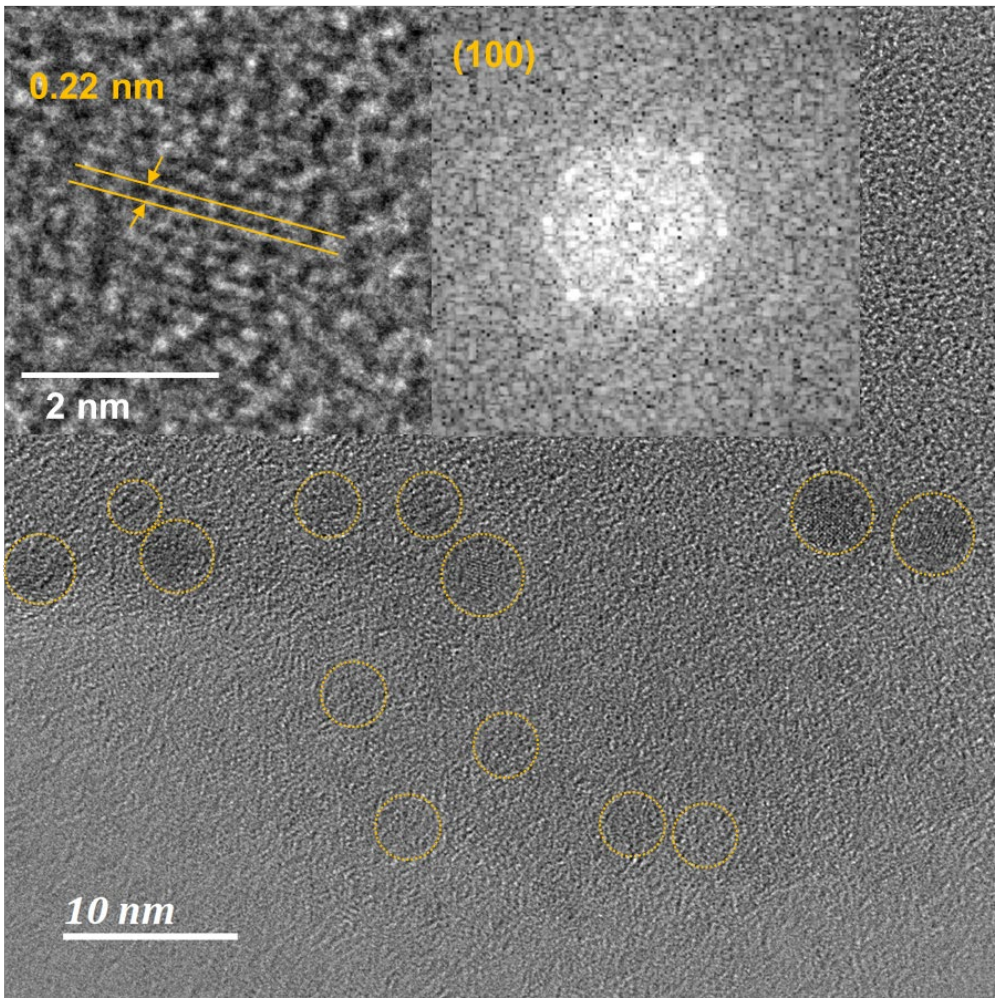
Table S1. Initial contact angels of different ternary droplets on PFDTS-Si substrate.

Oil Component	**CA (water-rich)**	**CA (oil-rich)**
Toluene	70.7 ± 0.6°	53.2 ± 0.1°
Decane	55.5 ± 2.1°	45.6 ± 0.2°
Octanol	55.9 ± 0.3°	56.1 ± 2.3°
Oleic acid	61.1 ± 0.7°	56.0 ± 1.4°

(a)



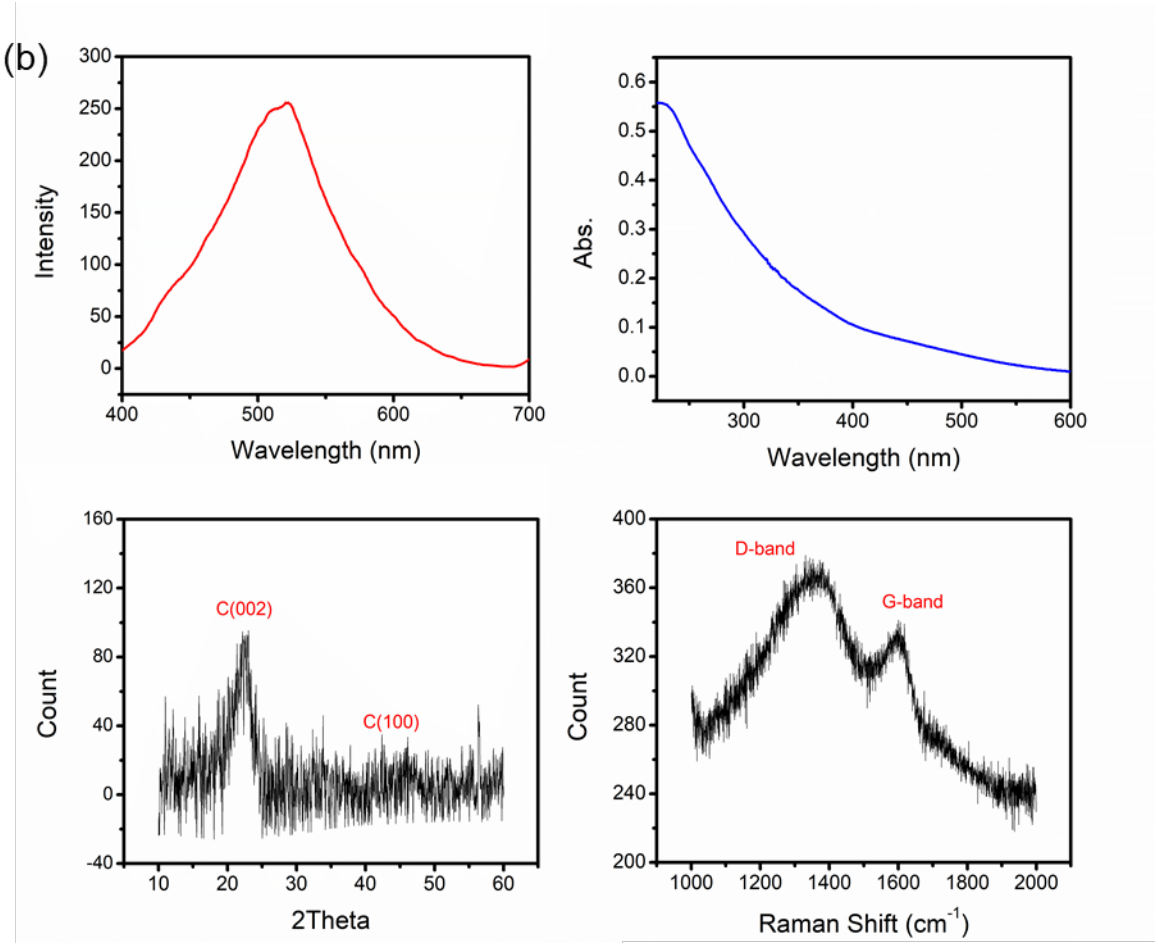


Fig. S1. The characterization of synthesised carbon nanodots (C-dots): (a) High-resolution TEM images of the size, morphology and diffraction pattern of the C-dots. The d-spacing of 0.22 nm is corresponding to the (100) plane lattice of graphite. (b) The fluorescence (top left, at 385 nm excitation wavelength), absorbance (top right), XRD (bottom left) and Raman (bottom right) spectra showing the typical structures of C-dots in agreement with the reported literature.[1]

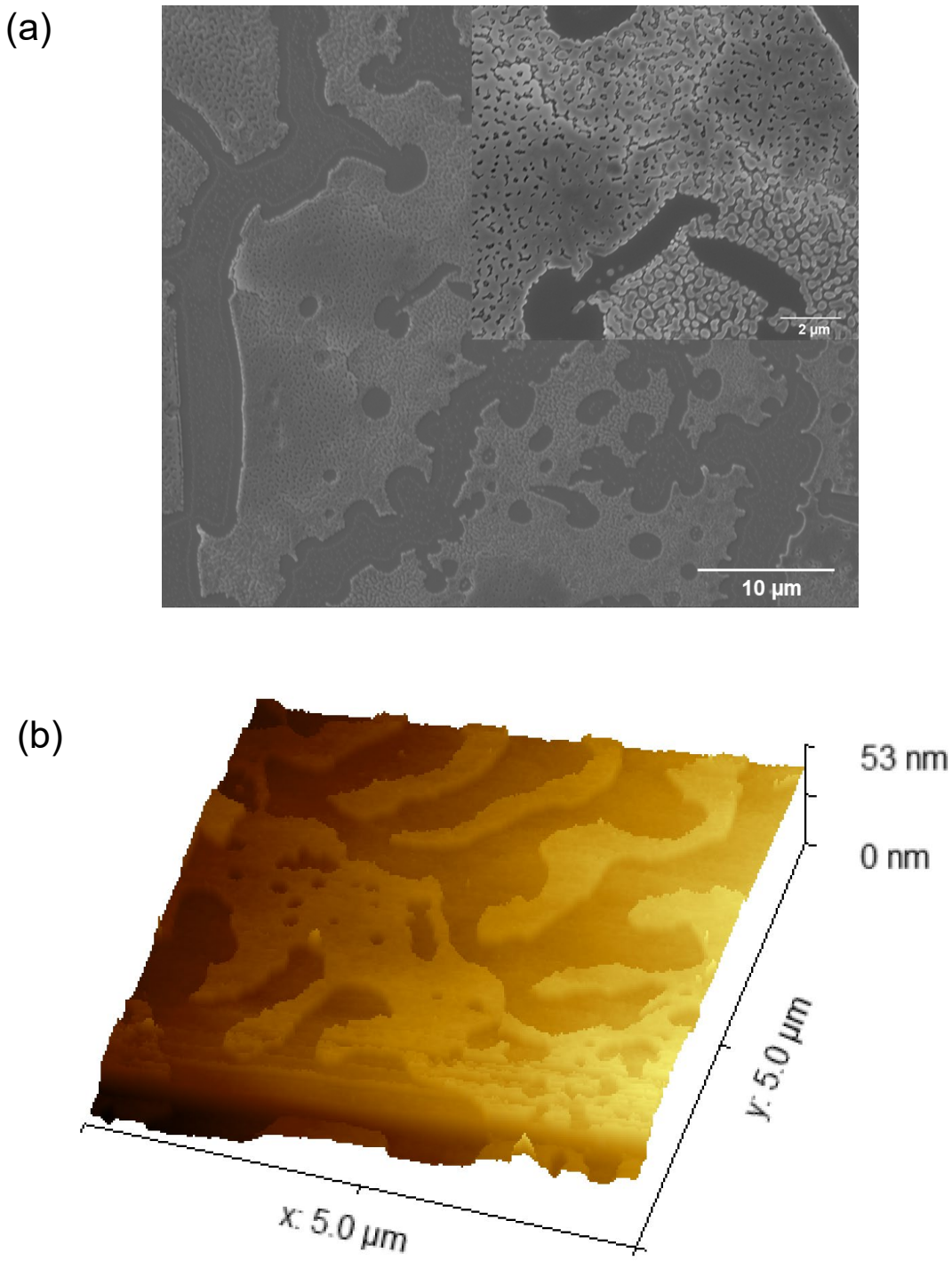


Fig. S2. The SEM images (a) with different amplifications and AFM morphology (b) for C-dots assembly from the evaporation of a pure water droplet.

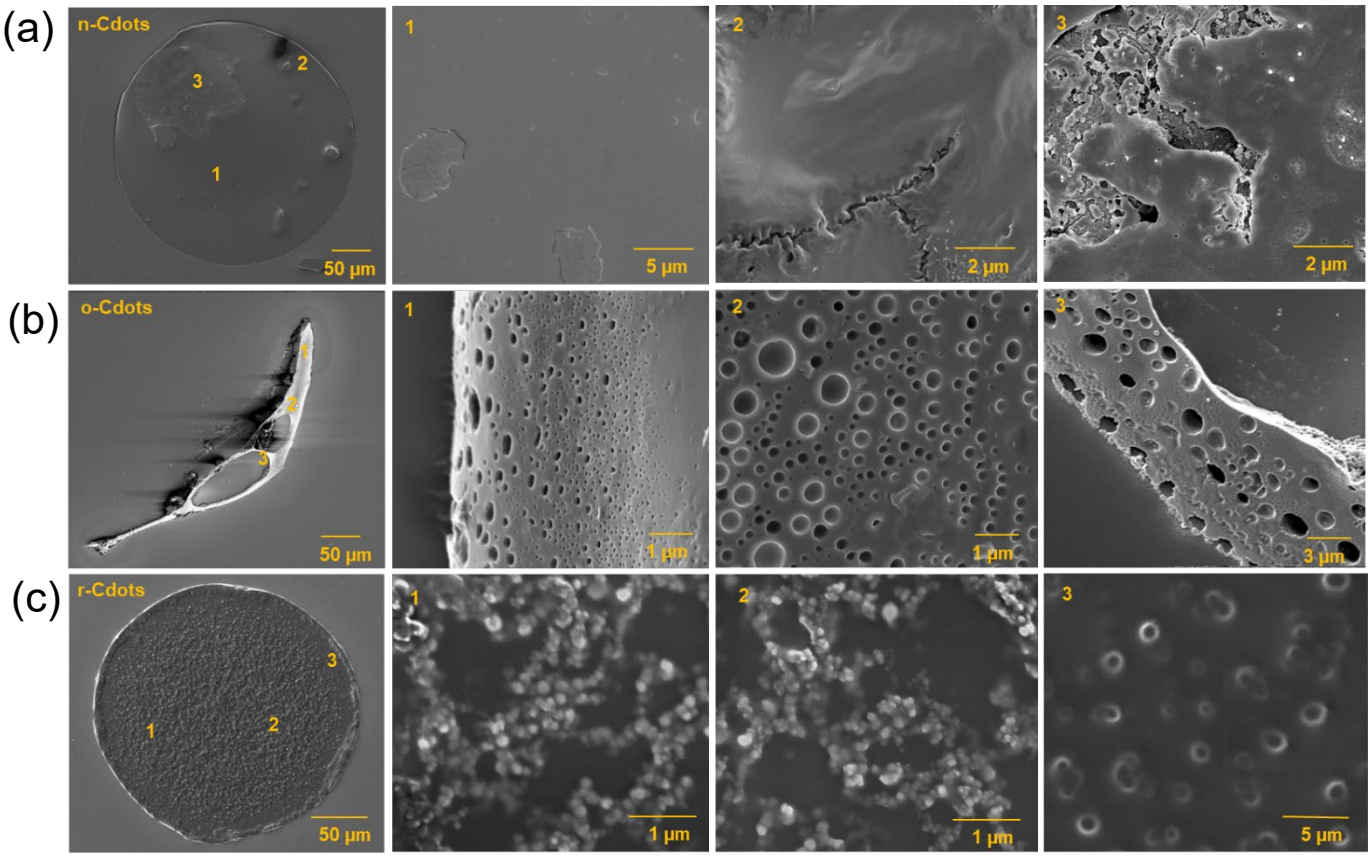


Fig. S3. The SEM images showing the morphological structures of n-Cdots (a), o-Cdots (b) and r-Cdots (c) at different assembly locations.

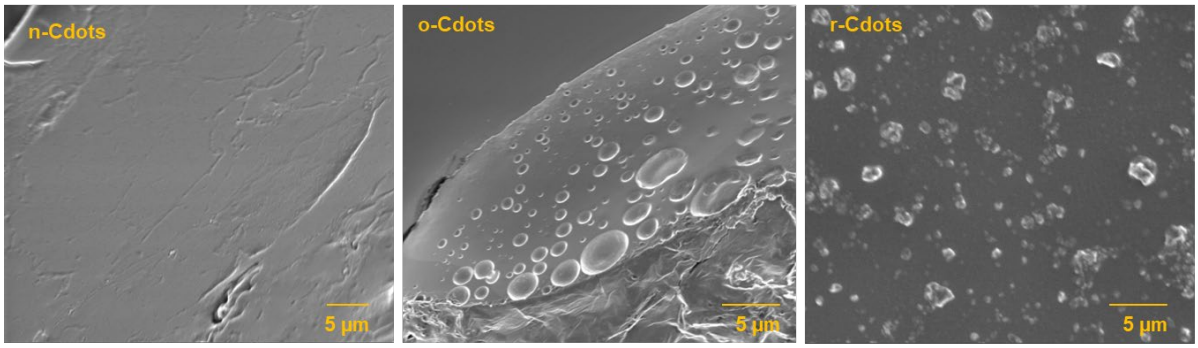


Fig. S4. The SEM images showing the morphological structures of n-Cdots, o-Cdots and r-Cdots assembled from 5-times higher concentration of C-dots.

Reference:

1. L. Bao, C. Liu, Z.-L. Zhang and D.-W. Pang, Advanced Materials, 2015, 27, 1663–1667.