Electronic Supplementary Information for

Segregated Polymeric Nanocomposites wtih Tunable Three-dimensional Network of Nanoparticles by Controlling the Dispersion and Distribution

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Figure S1: Optical images of the porous film with controlled distribution of NPs. (a) 5 ×, (b) 20 ×, (c) 50 × and (d) 100 ×.

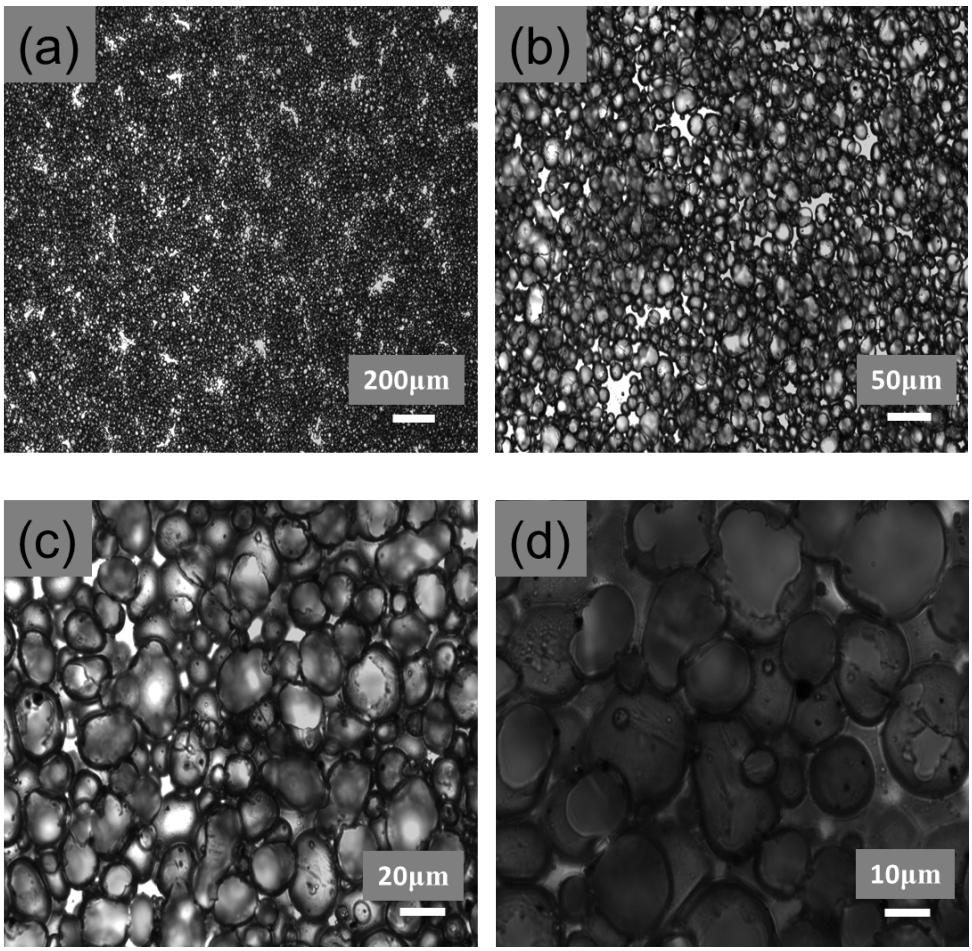

Figure S2: Distribution of NPs (MWCNTs) on the pores for samples with different loading: (a) 1 wt% (b) 2 wt% and (c) 3 wt%. Lots of NPs are found on the surface of the pores as shown by the SEM images with high magnification.

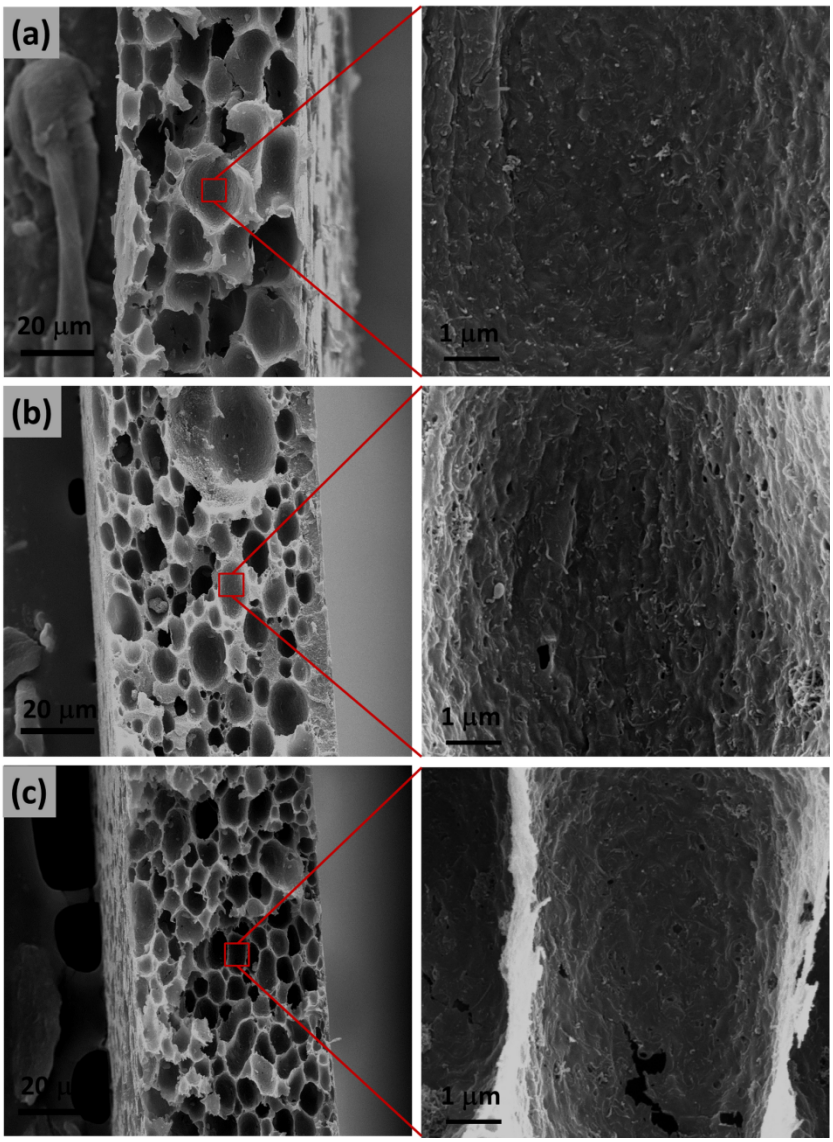

Figure S3: Effects of the film thickness on the pore size for the sample with 2 wt% of MWCNT and a W/O ratio of 0.15. The inserts are the SEM images of the fracture surface of the porous films. Scale bars: 20 μm.

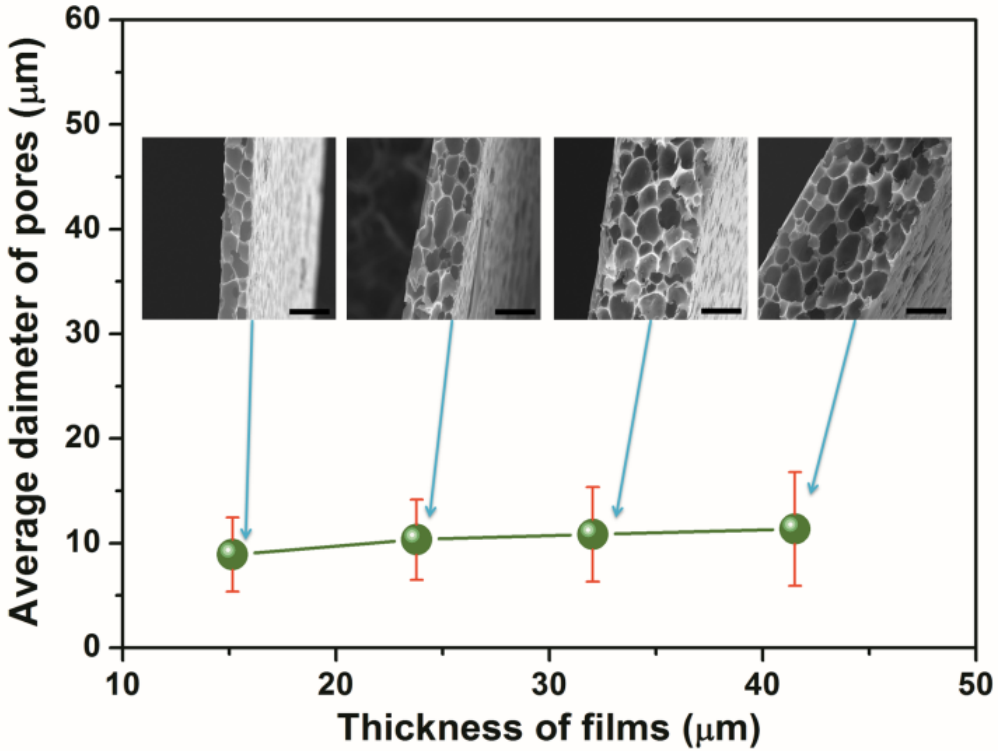

Figure S4: W/O ratio dependent behavior of the pore size for the porous nanocomposites with 2 wt% of MWCNTs. (a) – (d): SEM images of the fracture surface for the samples with W/O ratio of 0.1, 0.15, 0.2 and 0.3, respectively. (e) The average size of the pores as a function of the W/O ratio.

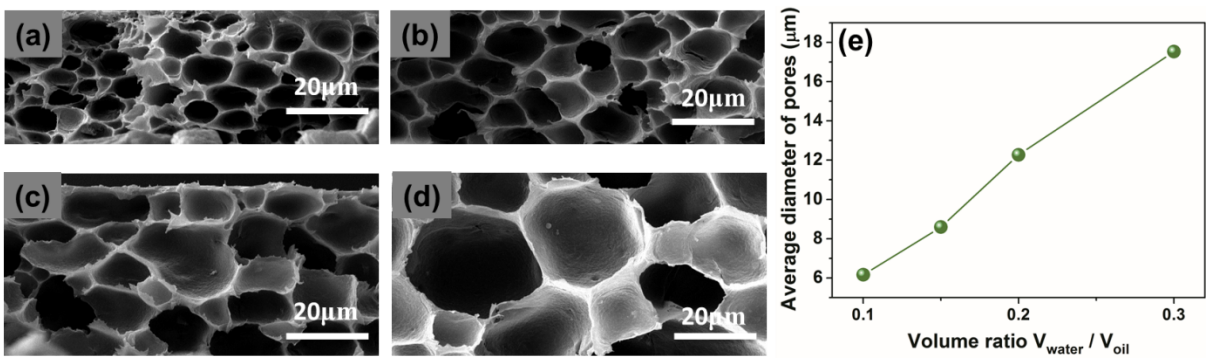

Figure S5: Control the distribution of NPs by adjusting W/O ratio as revealed by the pore structures: (a) – (d) are optical images of the samples with W/O volume ratio of 0.1, 0.15, 0.2 and 0.3, respectively. (e) – (h) SEM images of the surface contacting with the glass substrate for the samples withW/O volume ratio of 0.1, 0.15, 0.2 and 0.3, respectively.