Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics. This journal is © the Owner Societies 2015

## SUPLEMENTARY INFORMATION

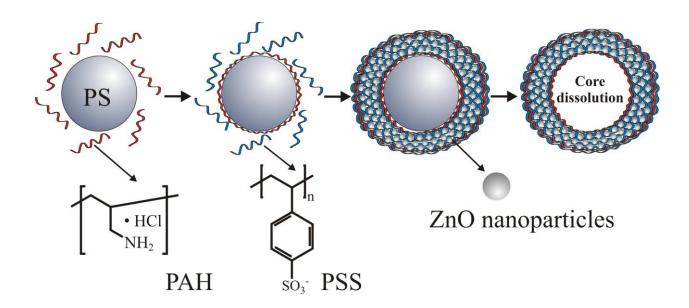
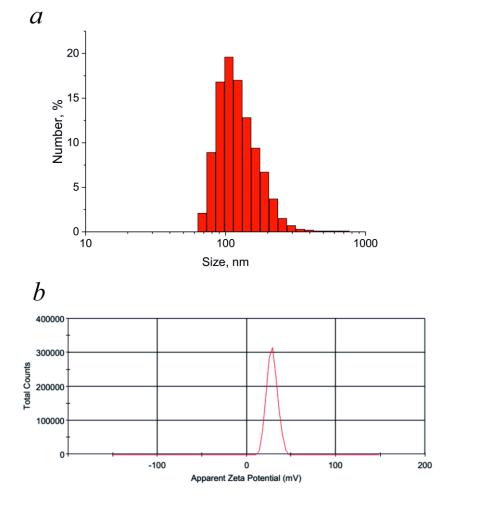
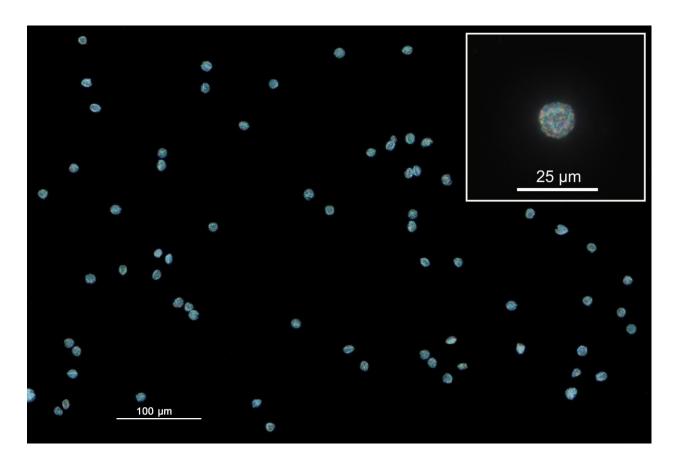


Fig. 1S. Process of LbL assembly on a polystyrene (PS) core



**Fig. 2S.** DLS particle size histogram (a) and  $\zeta$ -potential graph (b) of ZnO nanoparticles in aqueous medium.



**Fig. 3S.** Dark field x20 (a) and x100 (b) images of nanocomposite microcapsules before ultrasonic treatment

**Supplementary Movie 1.** Video recording of the impact of high-frequency ultrasound on nanocomposite microcapsules