Electronic Supplementary Material (ESI) for Soft Matter.

Supporting Information

Encapsulation of anticancer drug by hydrogen-bonded multilayers of tannic acid

*Fei Liu,[1] ‡ Veronika Kozlovskaya,[1] ‡ Oleksandra Zavgorodnya,[1] Claudia Martinez-Lopez,[1] Shane Catledge,[2,3] and Eugenia Kharlampieva[1,3]**

[1]Department of Chemistry,[2] Department of Physics, University of Alabama at Birmingham, Birmingham, AL, 35294, USA
[3]Center for Nanoscale Materials and Biointegration, University of Alabama at Birmingham, Birmingham, AL, 35294, USA

*Correspondence address: 901 14th St South, CHEM294, Birmingham, AL, USA, 35294, e-mail: ekharlam@uab.edu

‡The authors equally contributed to this work

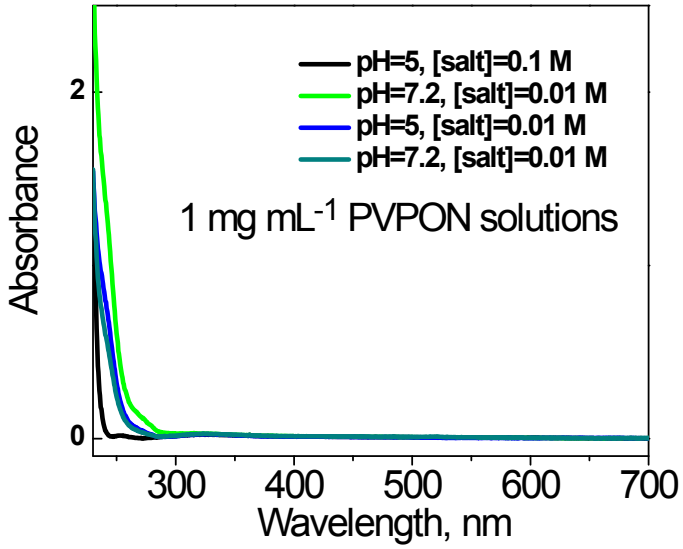

Figure S1. Absorption spectra of 1 mg mL^{-1} PVPON solutions at pH=5 (0.1 and 0.01 M salt solutions) and at pH=7.4 (0.1 and 0.01 M salt solutions).

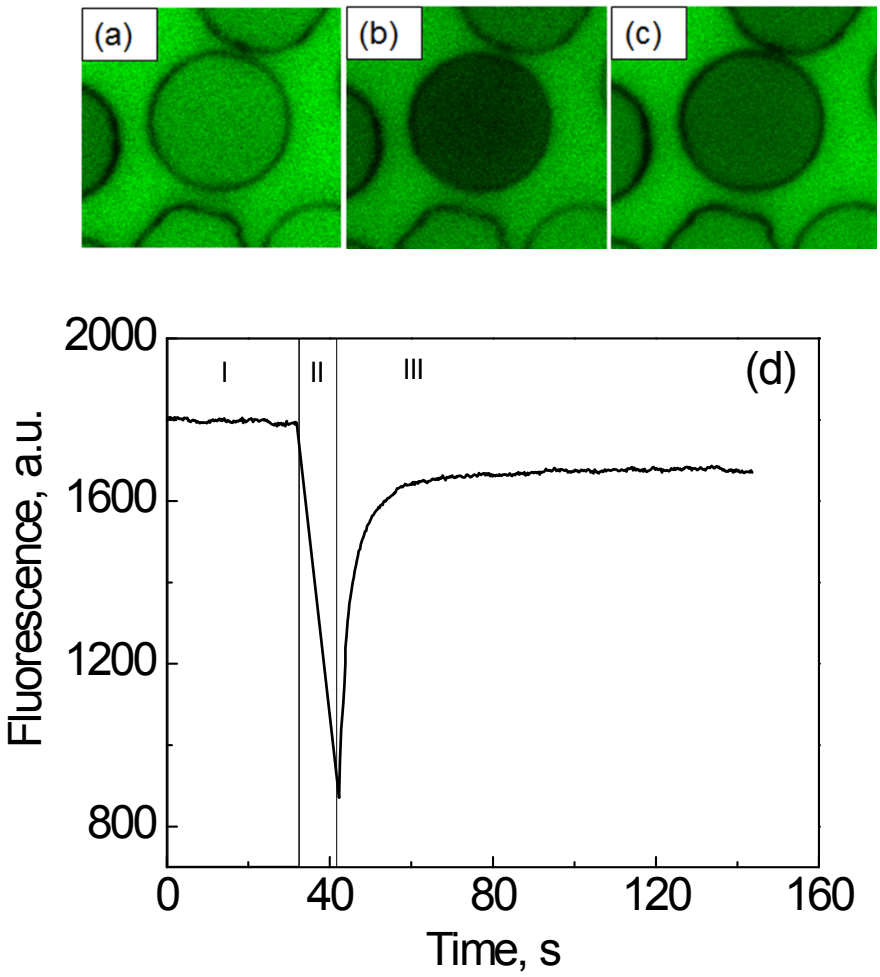

Figure S2. Confocal microscopy images of PEI(TA/PVPON)$_8$ capsules at pH=7.2 in the presence of FITC solution (a) before photo-bleaching, (b) right after photobleaching the capsule interior region with a 488 nm laser beam at 100% intensity, and (c) after fluorescence recovery. (d) A typical fluorescence recovery curve obtained for 8-bilayer PEI(TA/PVPON) hollow capsules prepared at pH=7.2. In region I, at low excitation intensity, the equal emission from the exterior and interior of a capsule is observed (a). In region II, at the increased excitation intensity, the FITC dye is photo-bleached in the illumination area. In the capsule exterior fast diffusion of FITC results in the unaffected fluorescence, while the interior of the capsule is dark as the non-bleached FITC slowly penetrates through the capsule wall (b). In region III, when the excitation intensity is decreased again, the fluorescence recovery after photo-bleaching is observed inside the capsule with time (c).