

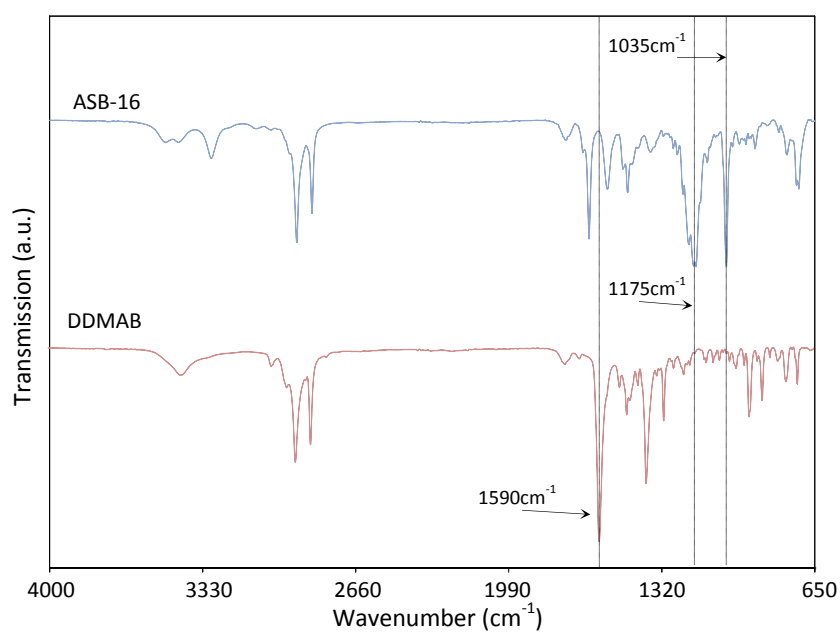
## **Supplementary Content**

### **Zwitterionic Amphiphile Coated Magnetofluorescent Nanoparticles – Synthesis, Characterization and Tumor Cell Targeting**

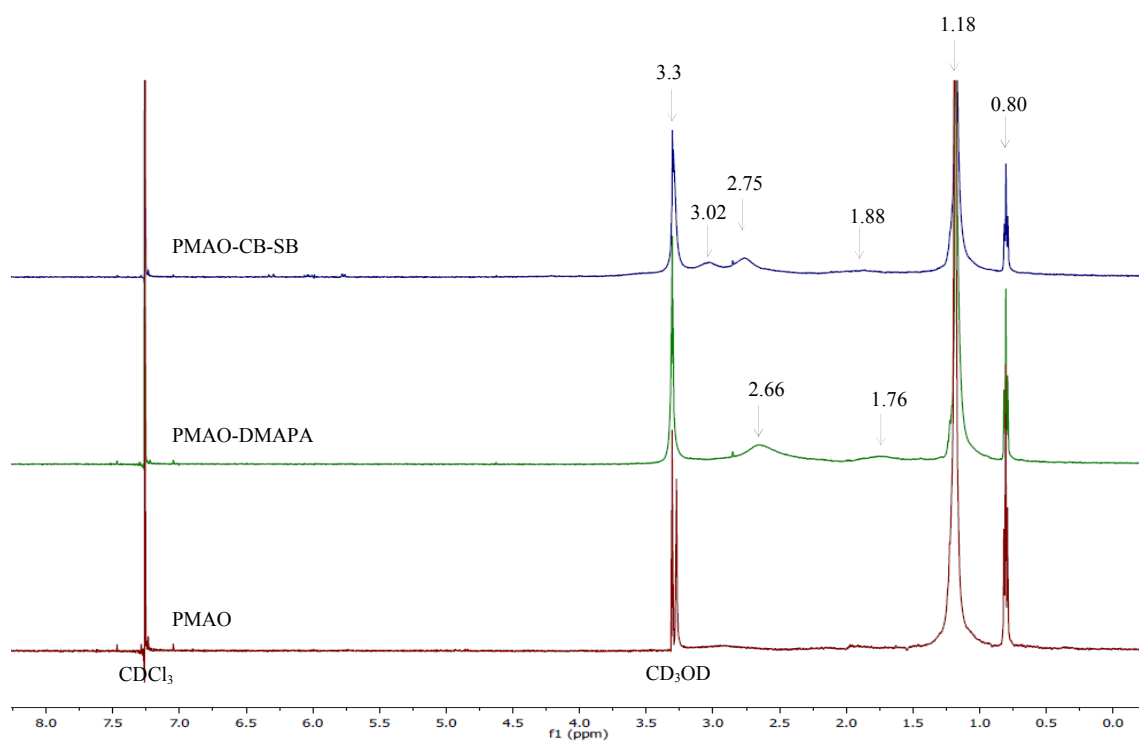
Violeta G. Demillo,<sup>a,b</sup> Xiaoshan Zhu\*<sup>a,b</sup>

<sup>a</sup> *Department of Electrical and Biomedical Engineering, University of Nevada, Reno, NV, USA*

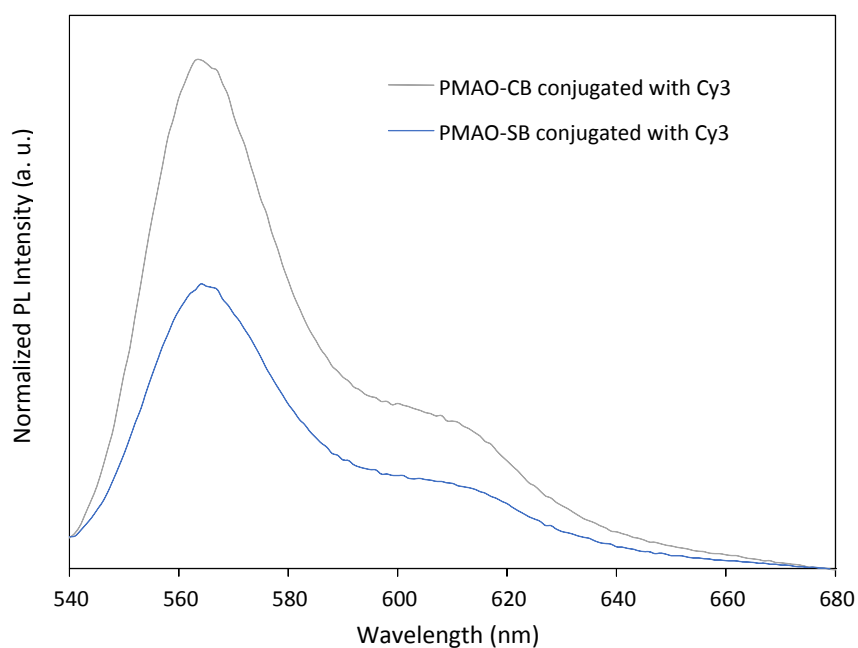
<sup>b</sup> *Biomedical Engineering Program, University of Nevada, Reno, NV, USA*



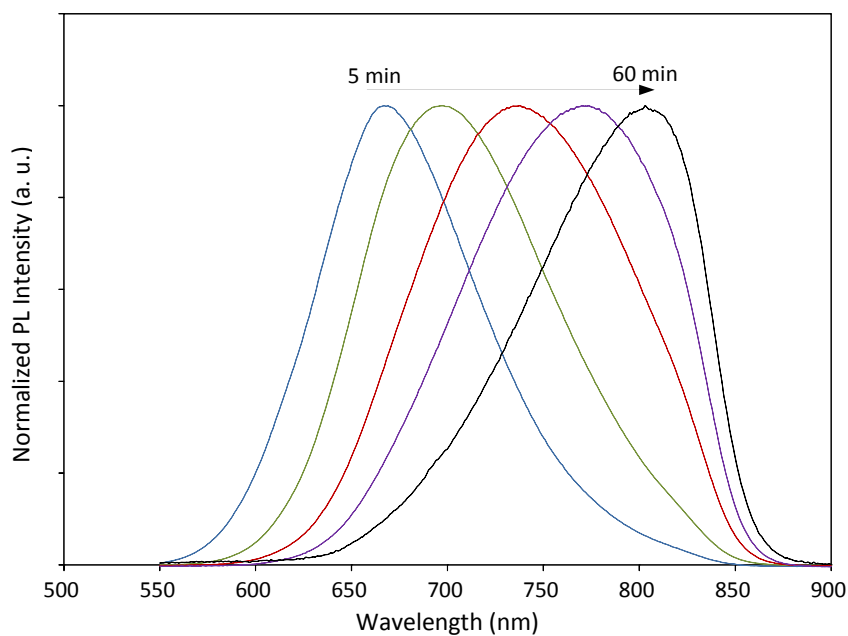
**Figure S1.** FTIR spectra of ASB-16 (with sulfobetaine) and DDMAB (with carboxybetaine)



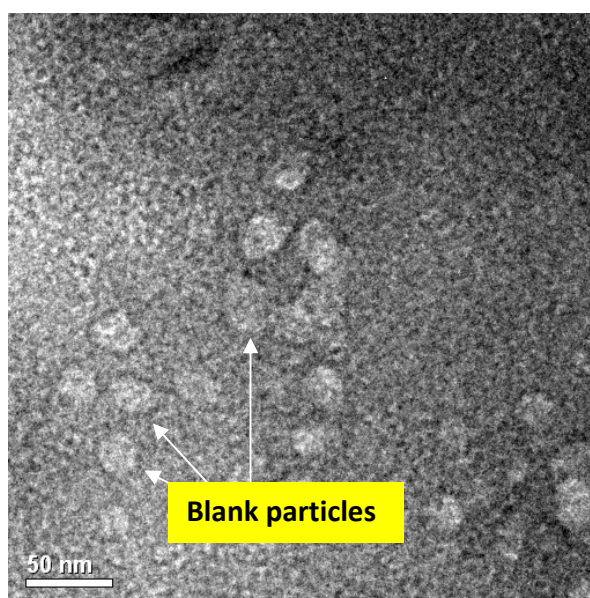
**Figure S2.** NMR spectra of PMAO derivatives in the synthesis of PMAO-CB-SB



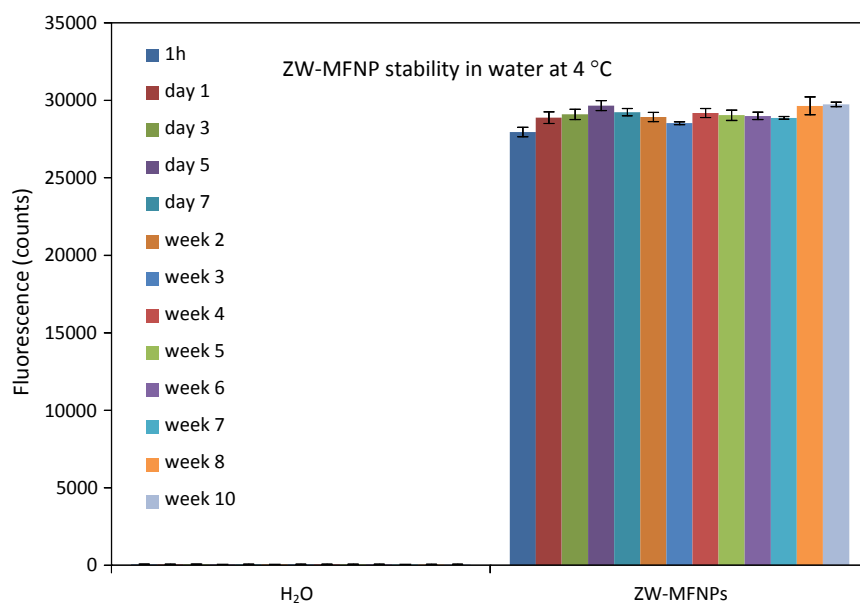
**Figure S3.** Effect of CB groups on facilitating the conjugation reaction – PMAO-CB (100% CB and 0% SB) and PMAO-SB (0% CB and 100% SB) were prepared and further conjugated with amino fluorophores (amino Cy3) in organic phase through EDC cross-linking. With the same cross-linking conditions, PMAO-CB conjugates present a higher fluorescence intensity of Cy3 compared to PMAO-SB conjugates.



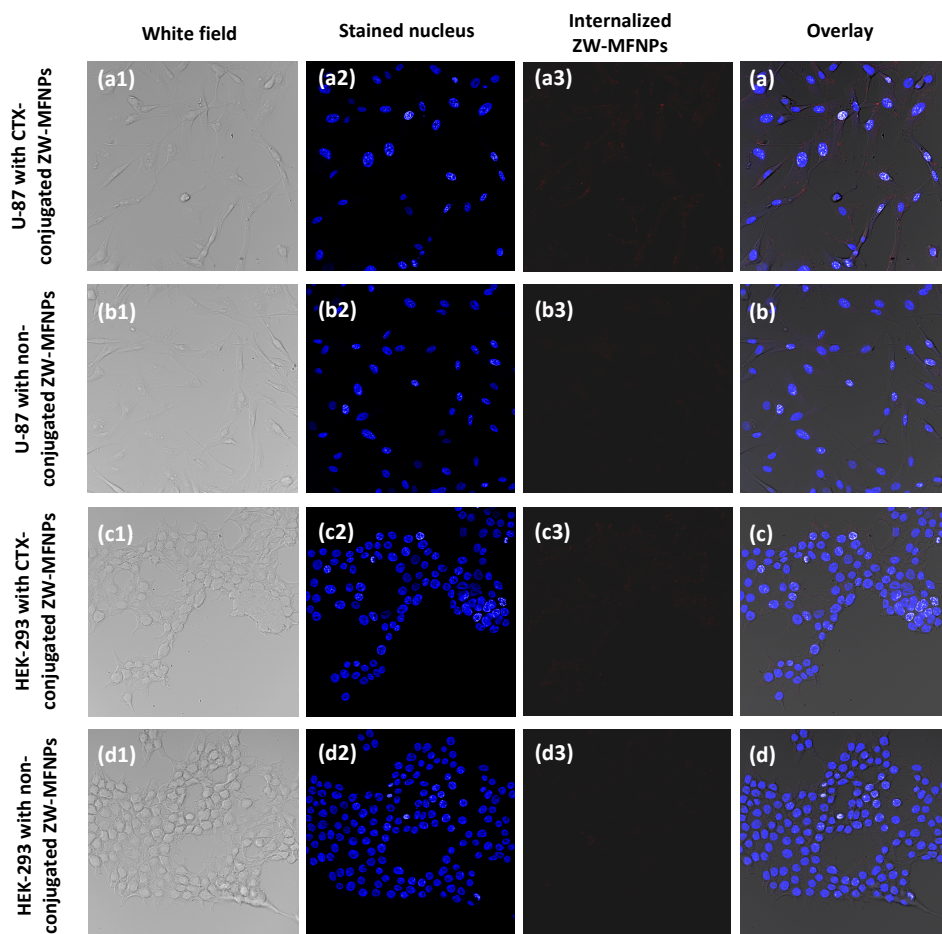
**Figure S4.** Representative and normalized photoluminescence intensity of CIS QDs in the time course of growth (the synthetic temperature = 240 °C)



**Figure S5.** TEM image of blank particles using only PMAO-CB-SB polymers (without loading any QDs and magnetic NPs). 1% phosphotungstic acid was used to negatively stain the blank particles for TEM imaging.



**Figure S6.** Long-term stability of ZW-MFNPs in water at 4 °C



**Figure S7.** Confocal images at different channels and their overlays demonstrating the cellular uptake/internalization of CTX-conjugated ZW-MFNPs and non-conjugated ZW-MFNPs under the same concentration of particles by U-87 and HEK-293