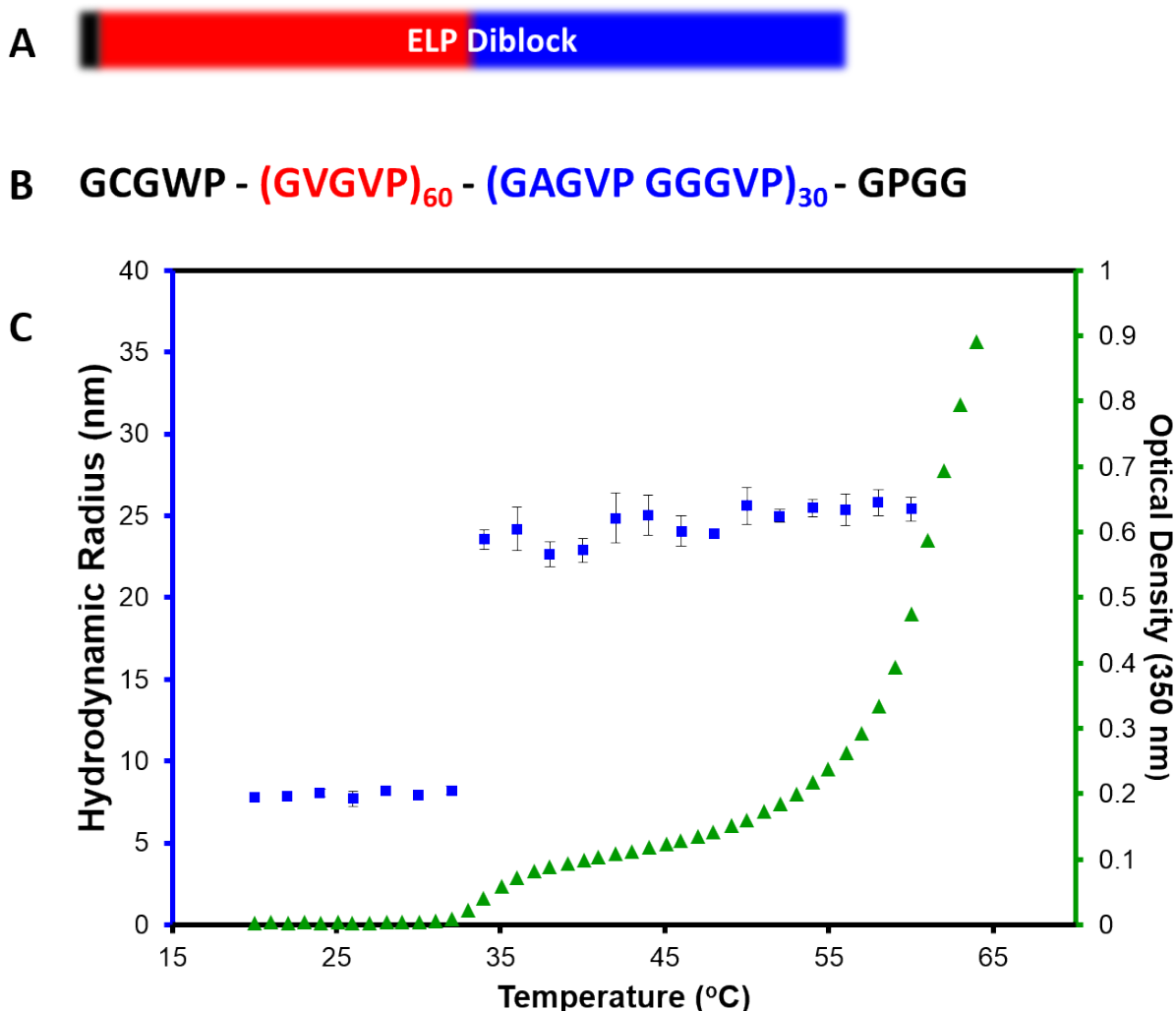**Supplemental Figures for:**

Bio-Inspired Synthesis of Hybrid Silica Nanoparticles Templated from Elastin-like Polypeptide Micelles

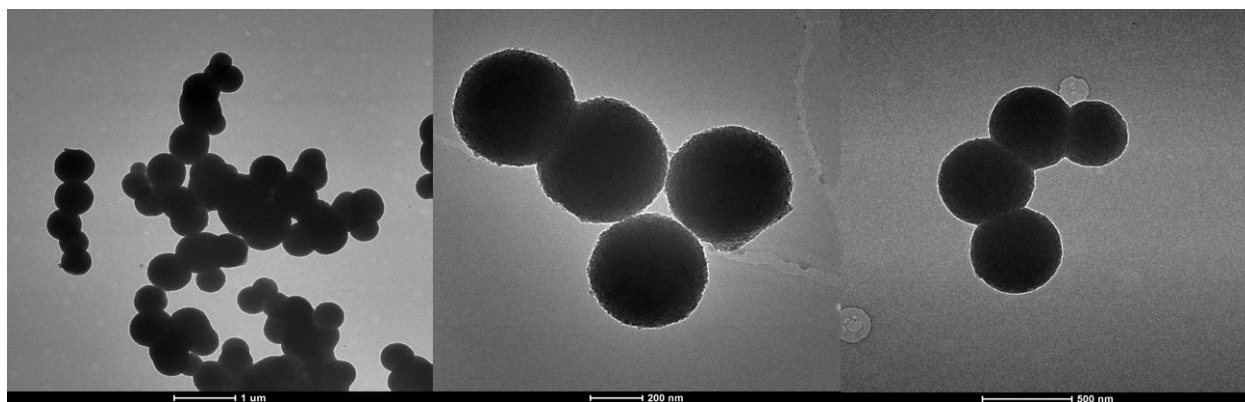Wei Han,[1,3] Sarah MacEwan,[1,3] Ashutosh Chilkoti[1,2,3] and Gabriel P. López[1,2,3]*

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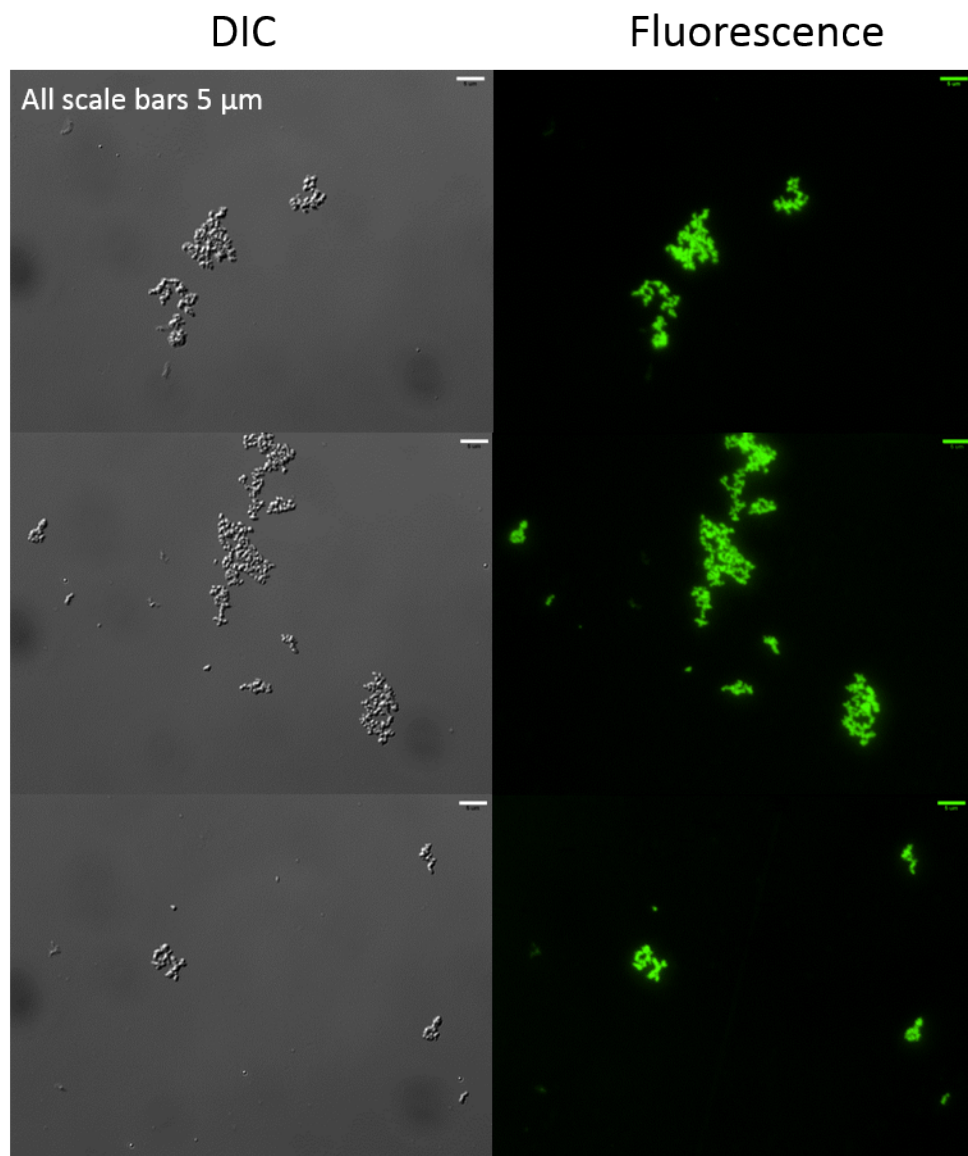3. Research Triangle Materials Science and Engineering Center, Durham, North Carolina, 27708

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A

ELP Diblock

B GCGWP - (GVGVP)$_{60}$ - (GAGVP GGGVP)$_{30}$ - GPGG

C

Figure S1. Schematic representation of control ELP-GG (negative control). (A) Representation of ELP-GG diblock polymer; the hydrophobic ELP block is in red and the hydrophilic ELP block is in blue. (B) Amino acid sequence for ELP-GG containing GCGWP peptide leader at the N-terminus for conjugation of fluorophore (black), hydrophobic ELP block (red), hydrophilic ELP block (blue), and a GPGG peptide trailer at the C-terminus. (C) Dynamic light scattering (DLS) and turbidity measurement for 25 μM ELP-GG in water as a function of solution temperature. The R_h measured by DLS is plotted on the left vertical axis (blue) and the optical density at 350 nm (turbidity) is plotted on the right vertical axis (green).

Figure S2. TEM images of particles resulting from the silicification of ELP-R5 micelles (2.5 mg/mL) carried out at 37 °C in the presence of phosphate (10 mM) with 100 mM TMOS for 30 seconds. Representative images shown from two separate samples.

Figure S3. Differential interference contrast (DIC; left) and fluorescence (right) images of silicified core-conjugated Alexa Fluor 488 ELP-R5 micelles formed through phosphate-mediated crosslinking of silaffin R5 peptides. Images are of particles in PBS.