## Multilayered hollow nanostructures from self-assembled supramolecular metallo-triblock copolymers

Adam O. Moughton, Kurt Stubenrauch and Rachel K. O'Reilly

**Supporting Information** 



Figure S1. <sup>1</sup>H NMR spectrum of CTA, 1 in CDCl<sub>3.</sub>



Figure S2.<sup>13</sup>C NMR spectrum of CTA, 1 in CDCl<sub>3.</sub>



Figure S3.<sup>1</sup>H NMR spectrum of CTA, 1 plus 1.05 equiv. of palladium(II) in CDCl<sub>3.</sub>



Figure S4. <sup>1</sup>H NMR spectrum of complex shown with 1.1 equiv. of pyridine in CDCl<sub>3.</sub>



Figure S5. GPC RI trace for polymer 3a run in THF.



Figure S6. Tapping mode AFM images of nanocages 11



**Figure S7.** <sup>1</sup>H NMR spectrum of triblock, **8** in DMSO-d<sub>6</sub> showing key signal for pyridine unit upon metal complexation at 8.3 ppm.



**Figure S8.** <sup>13</sup>C NMR spectrum of diblock, **3** in CDCl<sub>3</sub> showing key signal for trithiocarbonate at 221 ppm.



**Figure S9.** <sup>13</sup>C NMR spectrum of end capped diblock, **4** in CDCl<sub>3</sub> showing the loss of the trithiocarbonate signal at 221 ppm.



**Figure S10.** <sup>1</sup>H NMR spectrum of Pd complexed amphiphilic diblock, **6** in DMSO- $d_6$  showing key signal for pincer unit after metal complexation and deprotection at 4.8 ppm.



**Figure S11.** Negative images are shown for clarity; a) Unstained TEM image of **10** (scale bar = 100 nm) b) PTA stained TEM image of **10** (scale bar = 100 nm) c) Uranyl acetate stained TEM image of **10** (scale bar = 100 nm)



**Figure S12.** PTA stained TEM image of **11** (scale bar = 200 nm) (Positive image are shown for clarity)