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Supporting Information

Fabrication of Carbon Microtubes from Thin Films of Supramolecular Assemblies via Self-Rolling Approach

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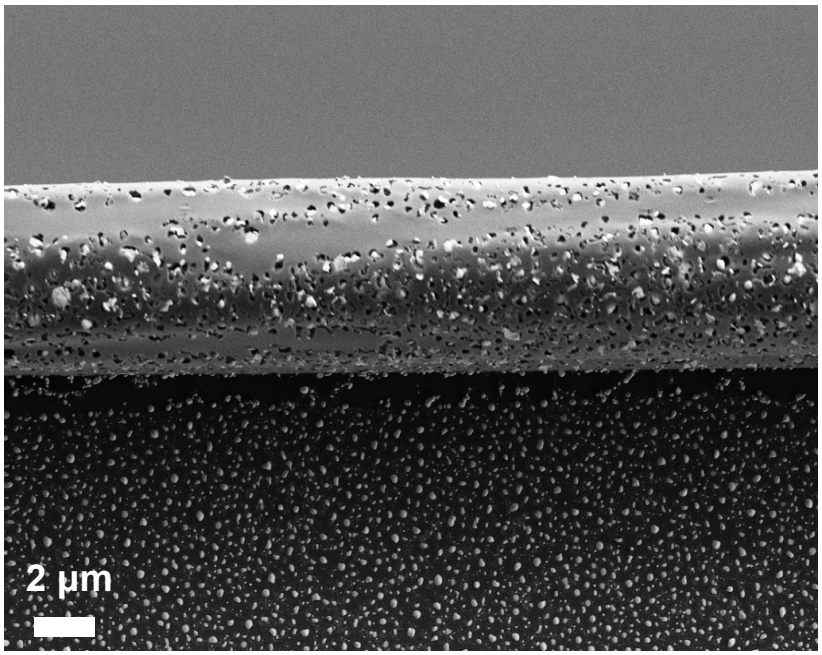
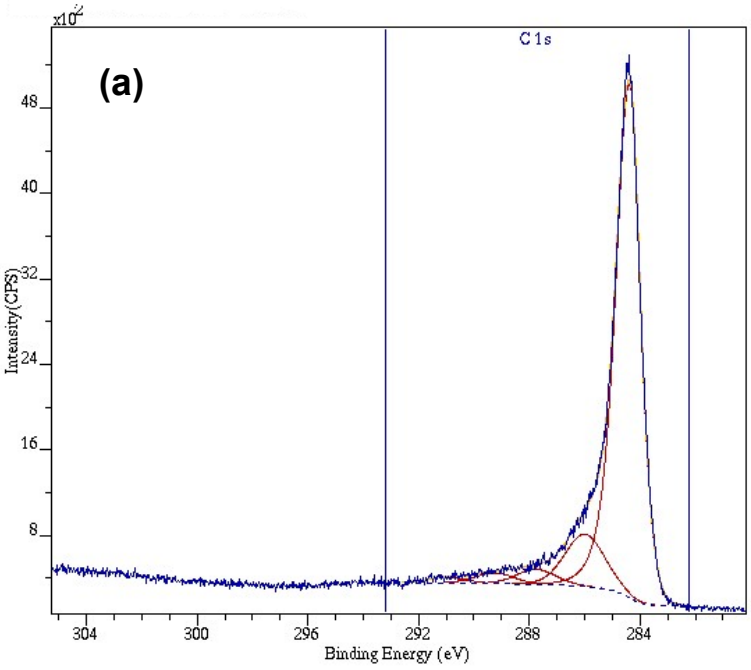
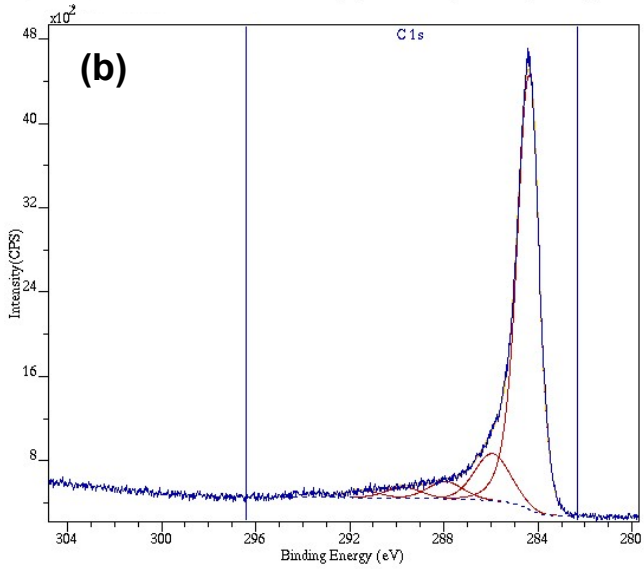
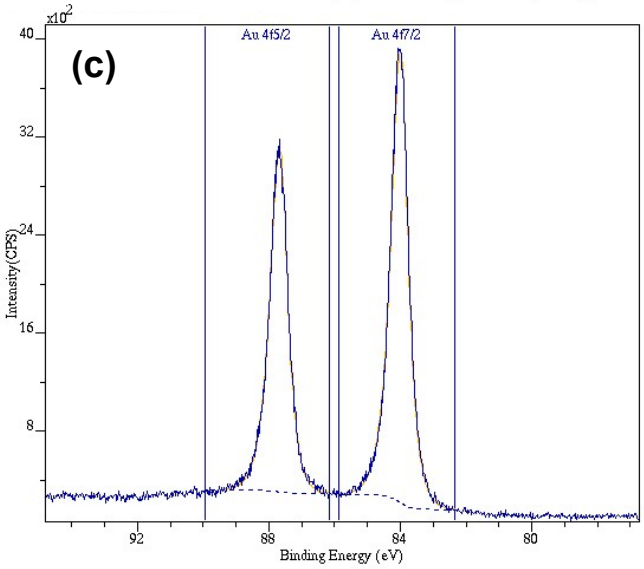
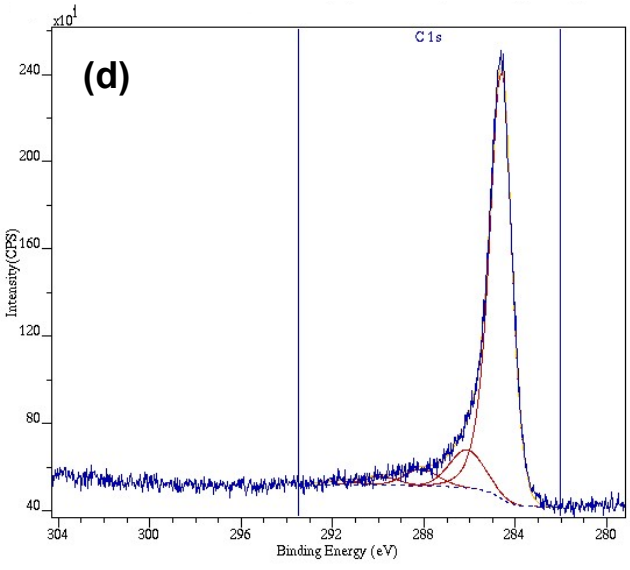


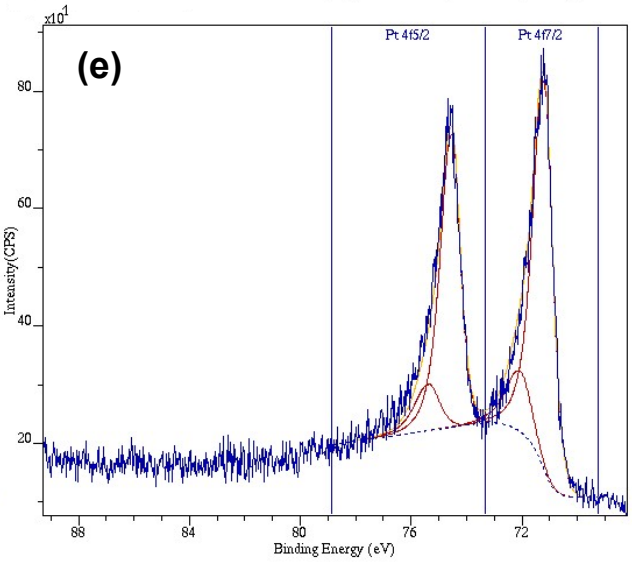
Figure 1S. Porous carbon/platinum hybrid microtubes obtained from samples where the resin formation was stopped before completion.











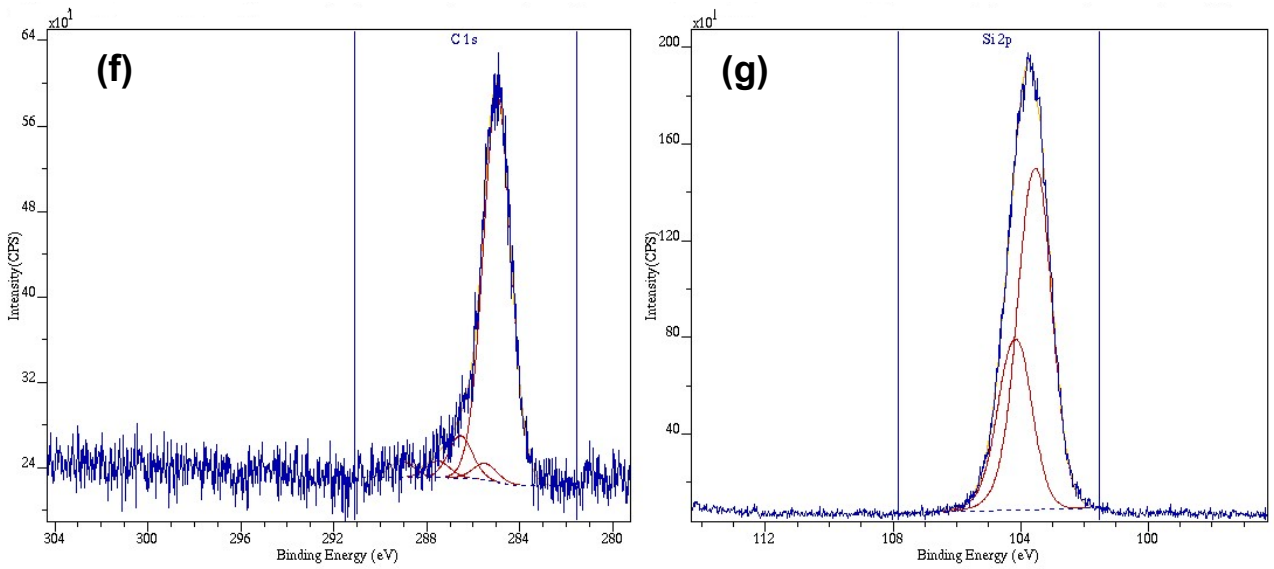


Figure 2S. The surface chemistry of the carbon and carbon/metal hybrid tubes was characterized by XPS (a) C 1s spectrum of pure carbon tube; (b) & (c) C 1s and Au 4f spectrum of carbon/gold microtube respectively; (d) & (e) C 1s and Pt 4f spectrum of carbon/platinum microtube respectively; (f) & (g) C 1s and Si 2p spectrum of carbon/silica microtube respectively. The C 1s regions of carbon, carbon/gold, and carbon/platinum show peaks having the typical shape of graphite-like structures. They are characterized by a small main component peak and a strong tailing at the side of higher binding energy values. The tailing results from a high number of excited states in the graphite-like structure. The shape of the C 1s spectrum of carbon/silica microtube is somewhat different from the spectra disused above (f). Probably, the carbon tubes are fully decorated with silicon species and do not contribute to the C 1s spectrum. The Au 4f spectrum is composed of the Au $4f_{7/2}$ and Au $4f_{5/2}$ peaks (c). Each of the Au $4f_{7/2}$ and Au $4f_{5/2}$ peaks showed only one component peak indicating the presence of gold in metal state. The difference of the binding energy (ΔBE) of the Au $4f_{7/2}$ and Au $4f_{5/2}$ peaks excellently equals the

value given in the literature : $\Delta BE = |BE(Au\ 4f_{7/2}) - BE(Au\ 4f_{5/2})| = 3.67$ eV. The Pt 4f spectrum is composed of the Pt $4f_{7/2}$ and Pt $4f_{5/2}$ peaks (e). Each of the Pt $4f_{7/2}$ and Pt $4f_{5/2}$ peaks showed two component peaks *A* and *B* could indicate the presence of two different binding states of platinum. The difference of the binding energies (ΔBE) of the component peaks of the Pt $4f_{7/2}$ and Pt $4f_{5/2}$ peaks excellently equals the value given in the literature: $\Delta BE = |BE(Pt\ 4f_{7/2}) - BE(Pt\ 4f_{5/2})| = 3.33$ eV. The Si 2p spectrum is composed of the Si $2p_{3/2}$ and Si $2p_{1/2}$ peaks (g). Each of the Si $2p_{3/2}$ and Si $2p_{1/2}$ peaks showed only one component peak indicating the presence of only one binding state of silicon state. The binding energy of the Si $2p_{3/2}$, which was found to be BE = 103.525 eV is typical for SiO_2.

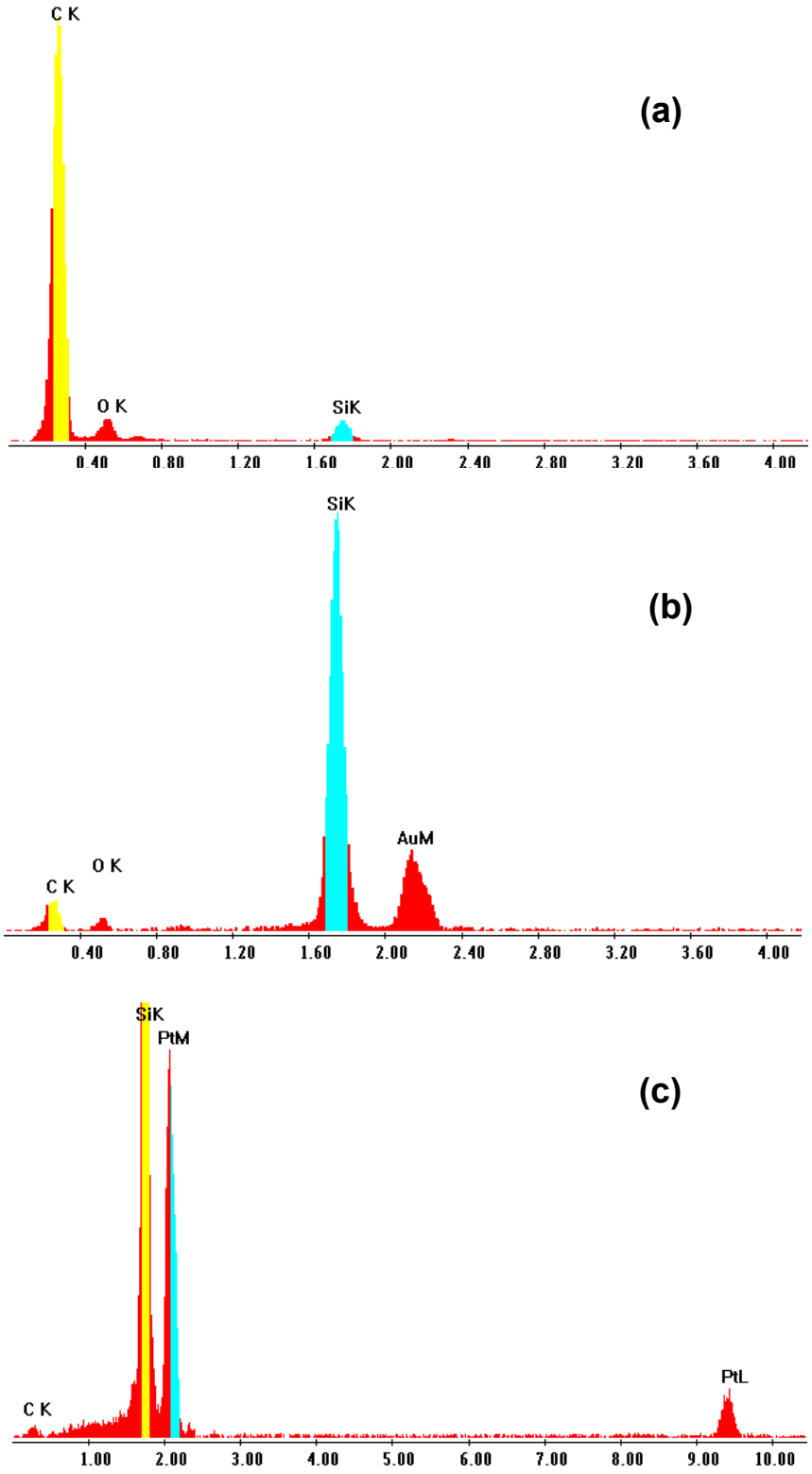


Figure 3S. Energy-dispersive X-ray spectroscopy (EDX) was also used to determine the composition of the carbon and carbon/metal hybrid microtubes (a) pure carbon tube; (b) carbon/gold microtube; (c) carbon/platinum microtube. The EDX spectra clearly shows high yield of carbon in carbon microtubes. The silicon and oxygen peak in the spectra are due to silicon wafers with a thin layer of silicon oxide used for the sample preparation. The presence of platinum and gold in the carbon/metal hybrid microtubes was also corroborated by the EDX spectra.