

**A Study of the Formation, Purification, Ligand Substitution
Chemistry, and Application as a SWNT Growth Catalyst of
the Nanocluster**



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Supplementary Material

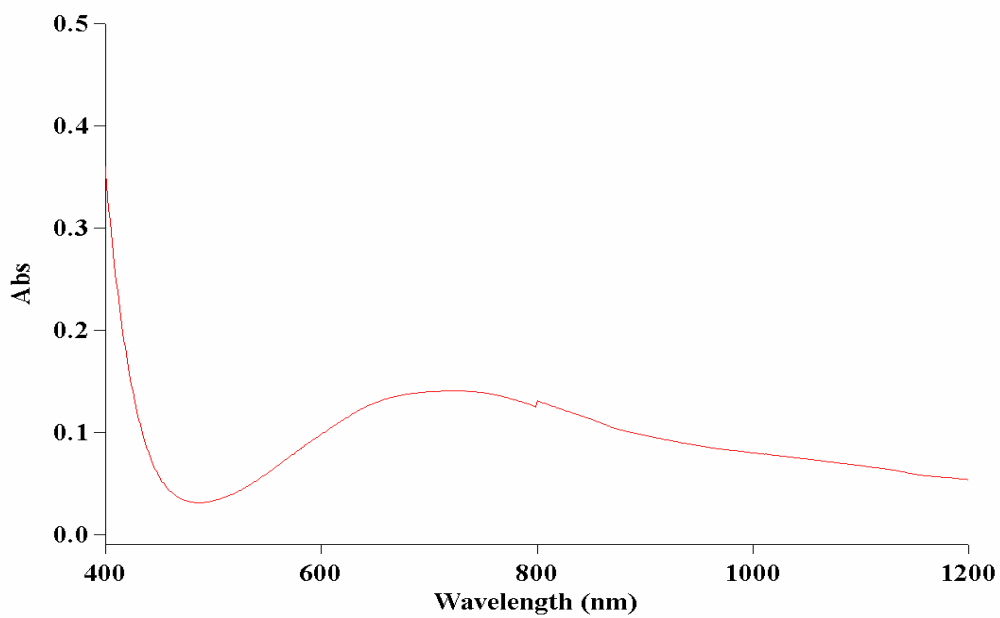


Fig. S1. UV-visible spectrum of the blue water-soluble fraction (in pH 2 water) formed in the synthesis of FeMoC.

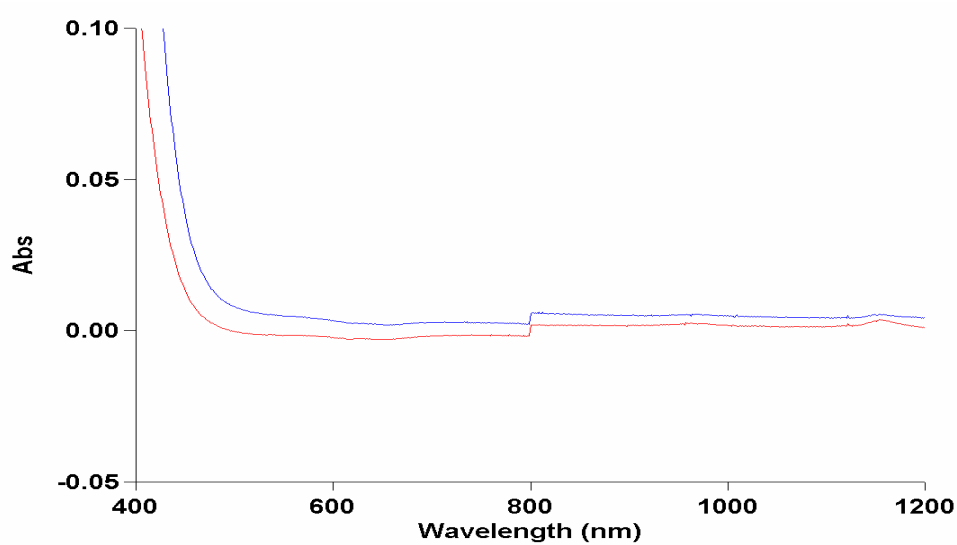


Fig. S2. UV-visible spectra (in H₂O @ pH 2) of the yellow solid formed in the synthesis of FeMoC (red line), and Keplerate (blue line).

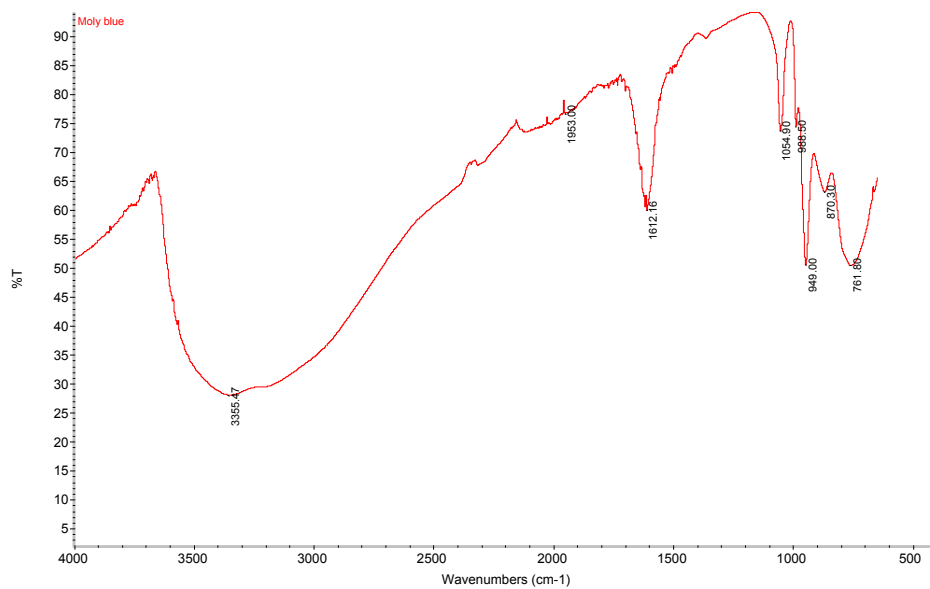


Fig. S3. ATR of the blue fraction formed in the synthesis of FeMoC.

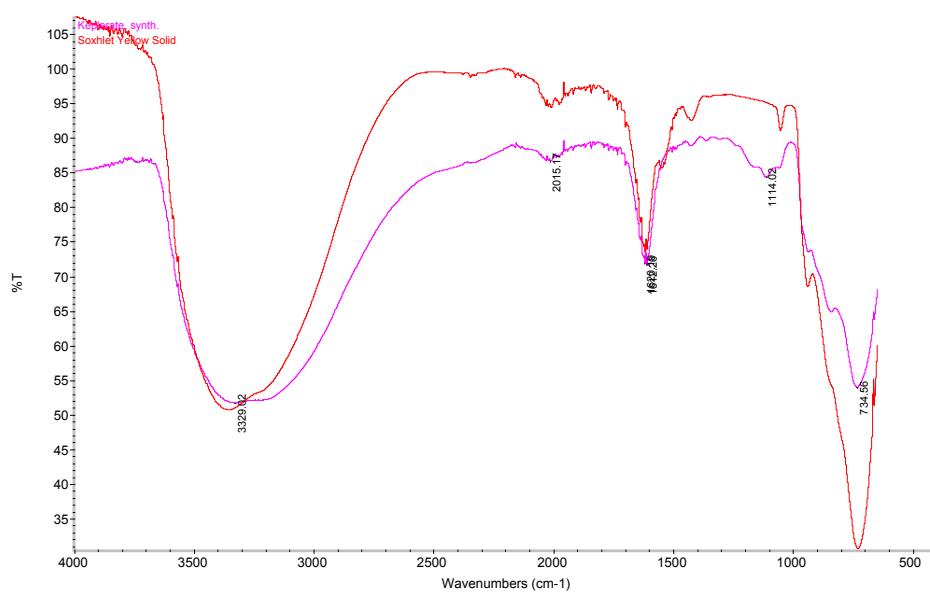


Fig. S4. Comparison of ATR spectra of Keplerate (pink) and the yellow solid (red) formed in the synthesis of FeMoC.

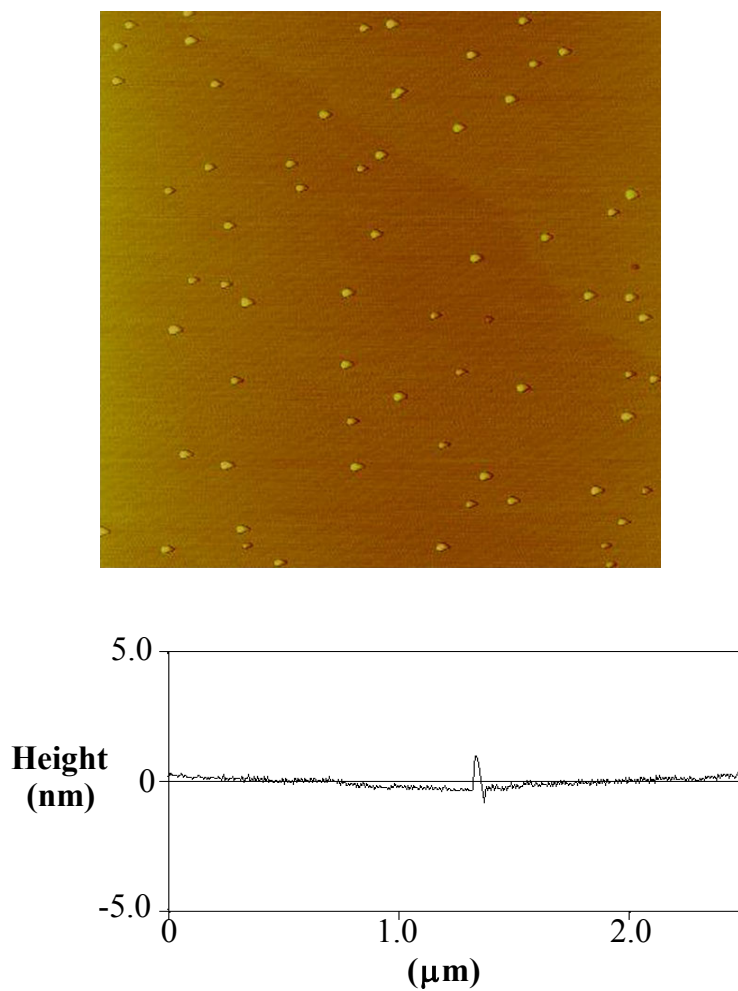


Fig. S5. Representative tapping mode AFM image ($2 \times 2 \mu\text{m}$) and associated height analysis of FeMoC-EtOH showing the features to be about 2 nm tall, the theoretical height is 2.1 nm.

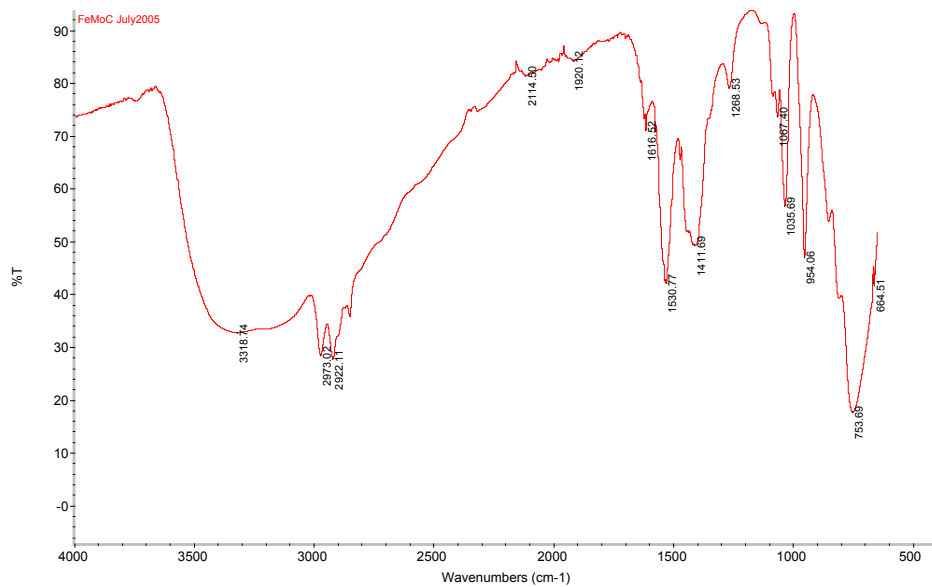


Fig. S6. ATR of FeMoC-EtOH solid.

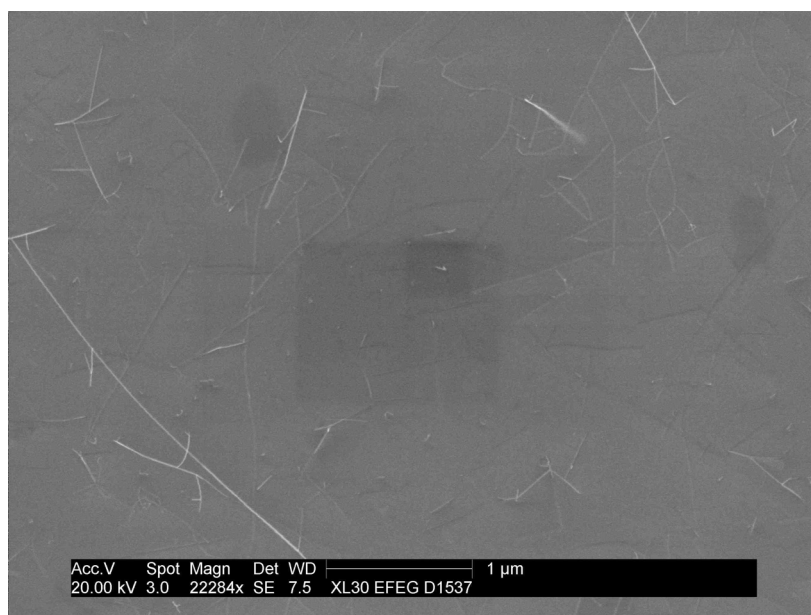


Fig. S7. SEM micrograph of SWNTs grown from aged FeMoC-EtOH on a spin-on-glass surface.

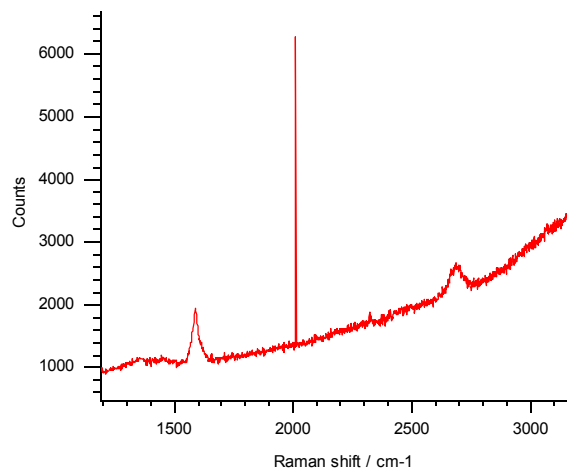


Fig. S8. Raman spectrum of surface after growth run with FeMoC.