

# **Functionalization of SWNTs to Facilitate the Coordination of Metal Ions, Compounds and Clusters**

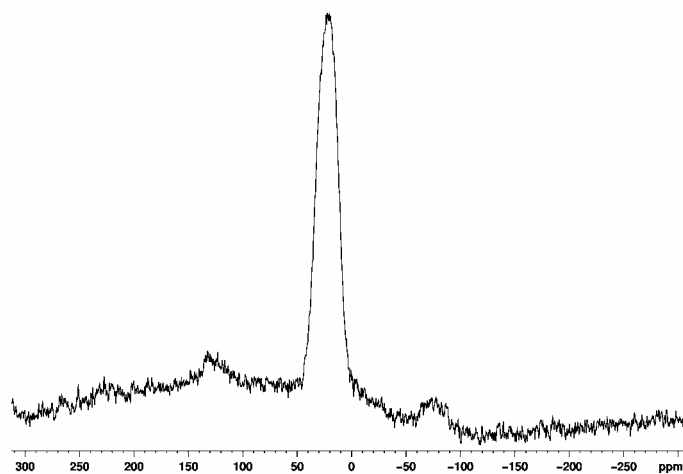
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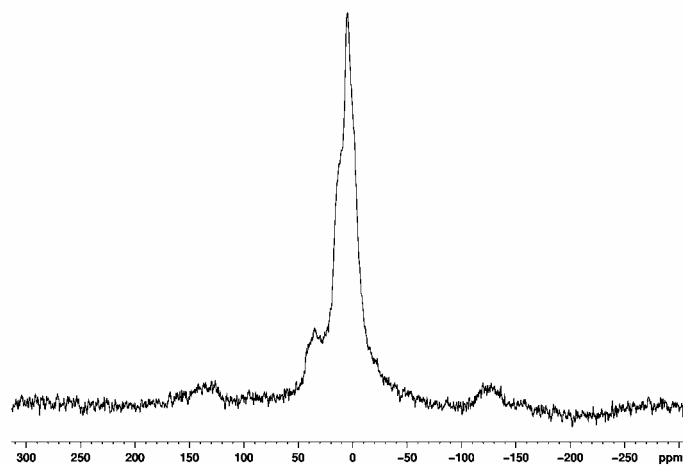
Supplementary Materials

**Table S1.** XPS analysis of functionalized SWNTs.

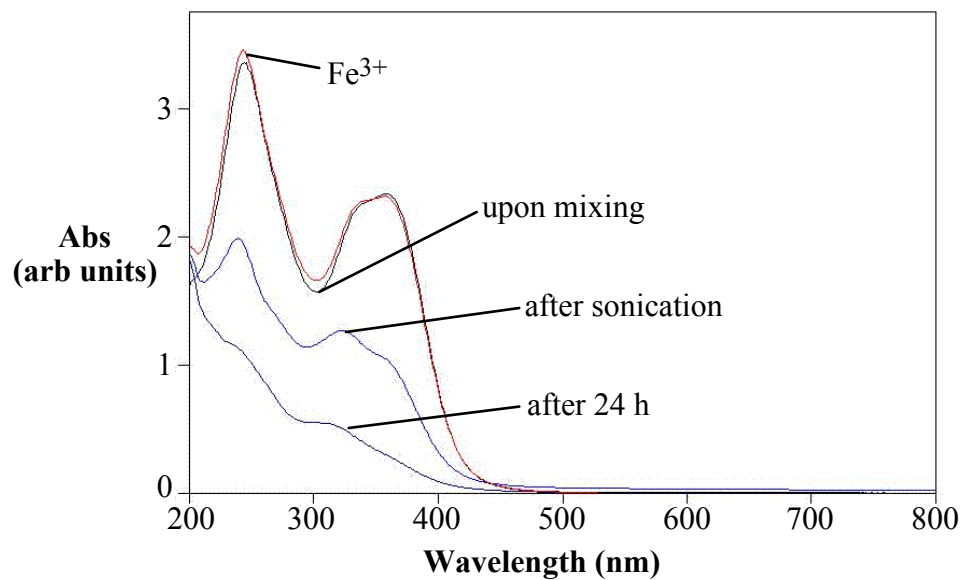
	C	O	N	S	P
DD-SWNT-COOH	92.2	7.8	-	-	-
US-SWNT	66.2	33.8	-	-	-
DD-SWNT-CO <sub>2</sub> -py ( <b>1</b> )	90.7	7.5	1.8	-	-
DD-SWNT-SH ( <b>5</b> )	89.2	8.9	1.0	0.9	-
DD-SWNT-PPh <sub>2</sub> ( <b>6</b> )	85.9	14.0	-	-	≈ 0.1
DD-SWNT-C <sub>6</sub> H <sub>4</sub> Bu <sup>t</sup> ( <b>7</b> )	75.2	24.8	-	-	-
SWNT-py ( <b>8</b> )	72.7	24.4	2.9	-	-
SWNT-SH ( <b>9</b> )	84.1	14.8	-	1.0	-
SWNT-PPh <sub>2</sub> ( <b>10</b> )	76.2	23.6	-	-	≈ 0.1
US-SWNT-py ( <b>12</b> )	52.2	46.7	1.1	-	-
US-SWNT-SH ( <b>13</b> )	71.0	18.1	5.7	5.2	-
US-SWNT-P(O)Ph <sub>2</sub> ( <b>14</b> )	75.8	24.0	-	-	0.2



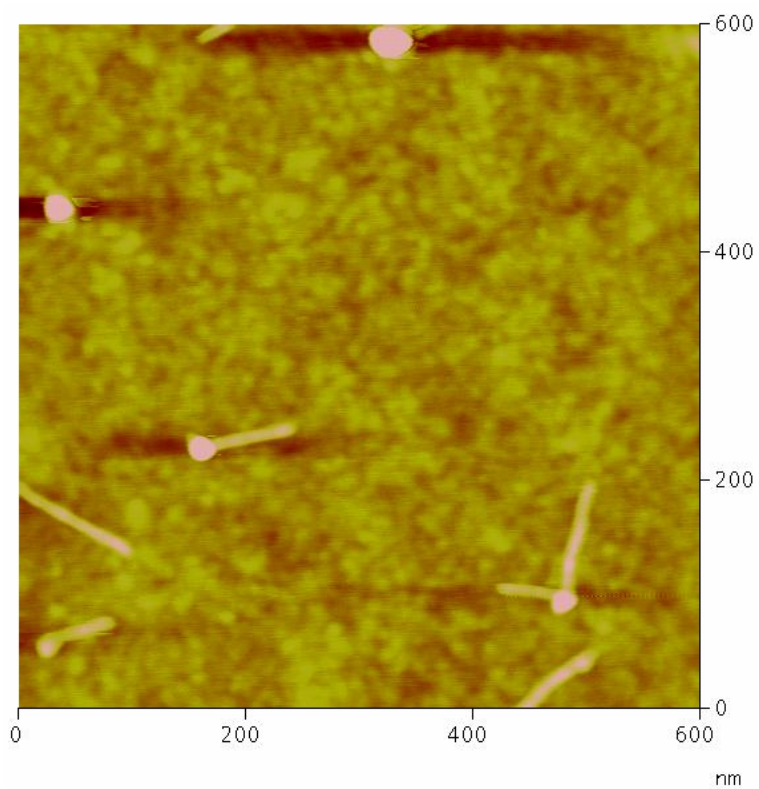
**Fig. S1.** MAS  $^{31}\text{P}$  NMR spectrum of US-SWNT-P(O)Ph<sub>2</sub> (**14**).



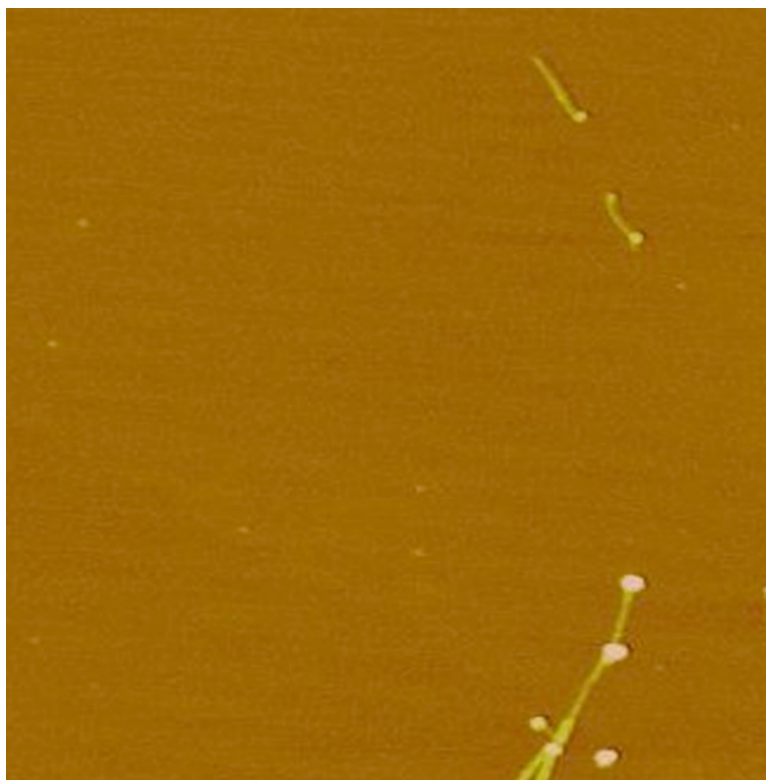
**Fig. S2.** MAS  $^{31}\text{P}$  NMR spectrum of the product from the partial reduction of US-SWNT-P(O)Ph<sub>2</sub> (**14**) to US-SWNT-PPh<sub>2</sub> (**15**).



**Fig. S3.** UV-visible spectra of the product from the addition of DD-SWNT-CO<sub>2</sub>-py (**1**) to a  $\text{Fe}^{3+}$  solution in EtOH.



**Fig. S4.** AFM images of DD-SWNT-CO<sub>2</sub>-py-FeMoC showing the presence of the 2 nm FeMoC molecule on the end of individual DD-SWNTs.



**Fig. S5.** AFM image (2.0 x 2.0  $\mu\text{m}$ ) of DD-SWNT-SH-FeMoC showing the presence of the 2 nm FeMoC molecule on the end of individual nanotubes.