## **Electronic Supplementary Information**

Structure of Hydrated Cobalt Ion Confined in the Nanospace of Single-Wall Carbon Nanotube

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Co adsorption on SWNT: 15 mg of SWNT or oxSWNT was added to a solution of 0.5 M cobalt acetate (Co(OAc)<sub>2</sub>) in an glass tube. The tube was sealed using gas burner and shaken for 40 h at 303 K in a water bath. The cobalt ions together with water molecules get inside the carbon nanotube mainly by capillary action. The suspension was filtered and the Co ion adsorbed SWNT was washed several times to remove physically adsorbed Co ions from the surface of SWNT. Finally, the samples were dried at 100° C for overnight.

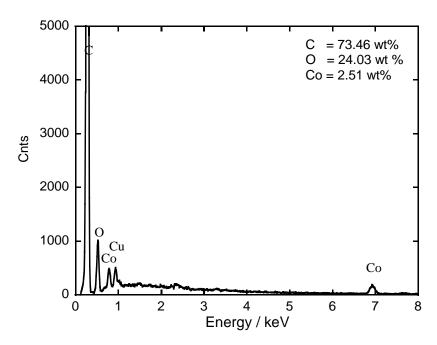


Fig. S1: EDX spectra of Co adsorbed oxSWNT (The peak for Cu arises from the sample substrate).