

Supporting Information

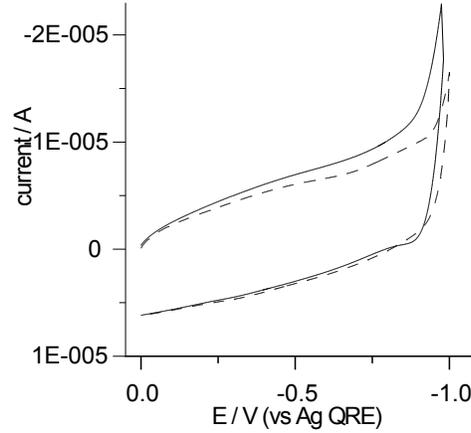


Figure S1. Cyclic Voltammetric curve of saturated SWNT-PSS⁻, 0.01 M Na₂SO₄, aqueous solution. $v = 0.1$ V/s, $T = 25$ °C; working electrode is Pt disc ($r = 0.05$ cm). Potentials measured vs. silver quasi-reference electrode (~ -0.05 V vs. SCE). The dashed line corresponds to the response of the blank supporting electrolyte solution.

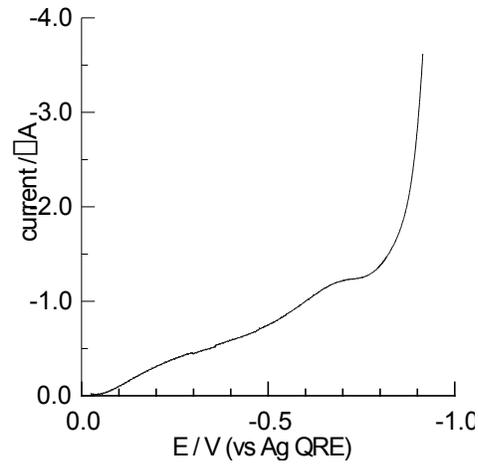


Figure S2. Voltammetric curve of saturated SWNT-PSS⁻, 0.01 M Na₂SO₄, aqueous solution (after subtraction of background current). $V = 0.1$ V/s, $T = 25$ °C; working electrode is Pt disc ($r = 0.05$ cm). Potentials measured vs. silver quasi-reference electrode (~ -0.05 V vs. SCE).

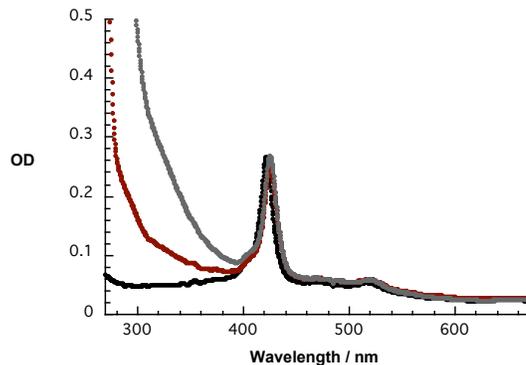


Figure S3. Absorption spectra of a dilute aqueous solution of H_2P^{8+} (3.2×10^{-6} M) upon adding several concentrations of $\text{PSS}^{\text{n-}}$.

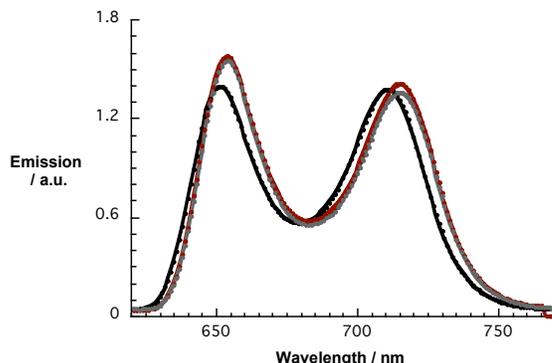


Figure S4. Fluorescence spectra of a dilute aqueous solution of H_2P^{8+} (3.2×10^{-6} M) upon adding several concentrations of $\text{PSS}^{\text{n-}}$ – complementary to Figure S2. Excitation wavelength is 424 nm.

Experimental Materials.

Na_2SO_4 (pro analysi from Merck), and Millipore water were used for the preparation of solutions for electrochemical investigations.

Electrochemical instrumentation and measurements. The electrochemical experiments were carried out with an Autolab Model PGSTAT30 with a platinum disc (diameter: 0.1 cm) as working electrode, a platinum spiral as counter electrode and a silver wire as quasi-reference electrode. Temperature control was accomplished within 0.1 °C with a Lauda RL 6 CS thermostat.

Transmission Electron Microscopy. Images were recorded on a Philips TEM 208 at an accelerating voltage of 100 kV.

Nanosecond Laser Flash Photolysis experiments were performed with 532-nm laser pulses from a Quanta-Ray CDR Nd:YAG system (6 ns pulse width) in a front face excitation geometry.

Fluorescence lifetimes were measured with a Laser Strobe Fluorescence Lifetime Spectrometer (Photon Technology International) with 337 nm laser pulses from a nitrogen laser fiber-coupled to a lens-based T-formal sample compartment equipped with a stroboscopic detector. Details of the Laser Strobe systems are described on the manufacture's web site, <http://www.pti-nj.com>.

Emission spectra were recorded with a SLM 8100 Spectrofluorometer. The experiments were performed at room temperature. Each spectrum represents an average of at least 5 individual scans, and appropriate corrections were applied whenever necessary.