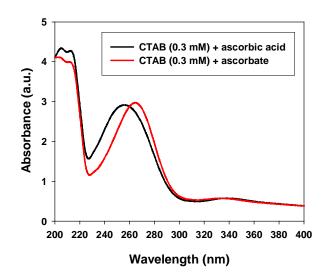


**Figure S1.** TEM image of a Pd nanorod viewed down the <110>/<111> zone showing  $\{111\}$  fringes (inset: HRTEM image) at an angle of 55° to the [110] axis of elongation. This lattice image is consistent with the fivefold-symmetry of the Pd nanorods.



**Figure S2**. UV spectra of the CTAB-ascorbic acid and CTAB-ascorbate mixtures [CTAB: 50 mL of CTAB 0.024 M, 2.1 mL of sodium ascorbate or ascorbic acid 8 mM]. A 10 nm red-shift is observed using ascorbate showing a stronger interaction between the cationic CTAB surfactant and ascorbate.