

Electronic Supplementary information

Ellipsometry. Film thicknesses were determined by null-ellipsometry (Multiskop, Optrel, Berlin, Germany). All measurements were done under ambient conditions at 70° angle of incidence using a Nd-YAG laser ($\lambda = 532$ nm), and the data fit for the film thickness and optical properties were performed using the Elli software (Optrel). The refractive index, n , and absorption coefficient, k , of the substrate were determined from silicon surfaces using a 2-layers model (air/substrate). The thickness of the SAM film was then determined using a 3-layers model (air/film/substrate), and assuming that film optical constants were $n = 1.46$ and $k = 0$.

Atomic Force Microscopy. Surface images were acquired with an atomic force microscope in Tapping mode powered by a Nanoscope IV controller (Digital Instruments, Santa Barbara, CA) using Silicon AFM tips (Nanosensor, Park Scientific) with a spring constant of $k = 20$ N m⁻¹.

Transmission Electron Microscopy. The size and morphology of nanoparticles were analyzed by transmission electron microscopy (TEM) with a Philips CM 200 at an accelerating voltage of 200 kV. TEM samples were prepared by dipping 400 mesh carbon-coated copper grids into an aqueous suspension of nanoparticles, and air dried for 24 h prior to analysis.