Supporting Information

Electrophoretic Deposition of Au Nanocrystals inside Perpendicular Mesochannels of TiO_2

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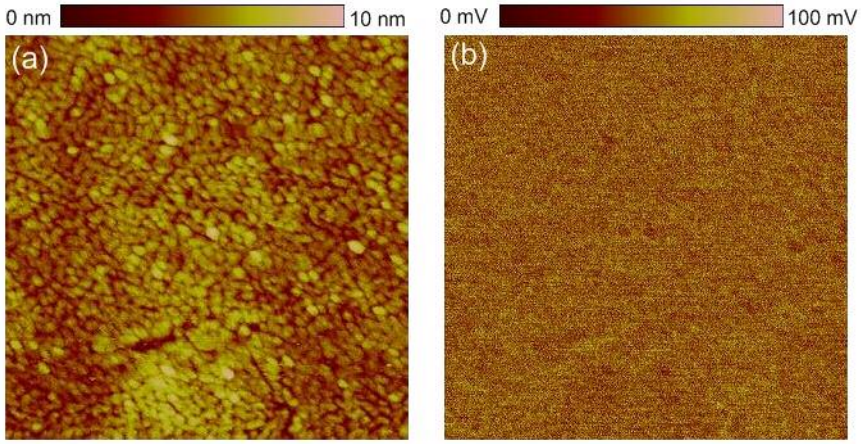

Figure S1. a) 500 x 500 nm AFM topography image of TiO_2 thin film. b) 500 x 500 nm surface potential image of (a) shows no significant potential differences between pillars and pores.

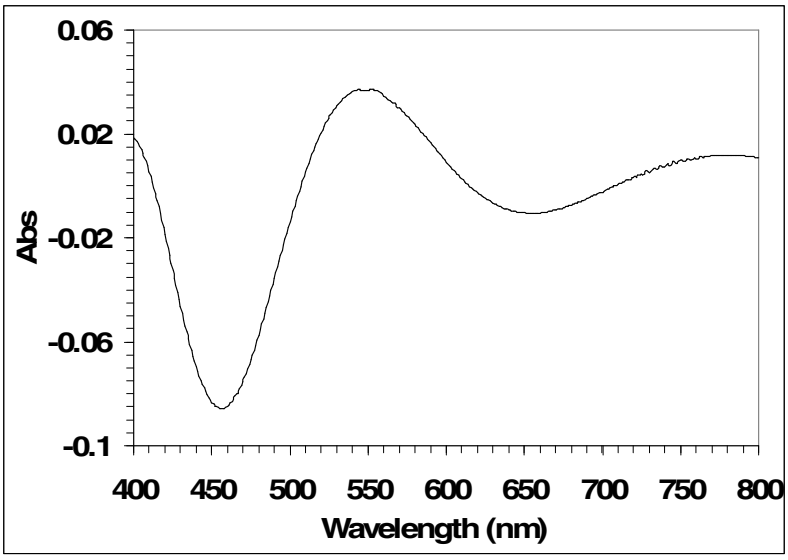

Figure S2. UV-Vis spectroscopy of mesoporous TiO_2 film on ITO/glass with "waves" resulting from the interference of multiple interfaces (TiO_2/ITO/glass).

Table S1. Fit parameters for x/y axis of Au/TiO_2 nanocomposite, e_1= 1.95.

Oscillator	Amplitude	Center Energy	Broadening	Band Gap
T-L	142.68	3.98	1.27	3.52
Gauss. 1	1.91	7.90	5.16	N/A
Gauss. 2	0.14	2.24	0.37	N/A
Drude	1.56	N/A	0.76	N/A

Table S2. Fit parameters for z axis of Au/TiO_2 nanocomposite, e_1=1.23.

Oscillator	Amplitude	Center Energy	Broadening	Band Gap
T-L	287.09	3.98	1.76	3.52
Gauss. 1	0.65	7.90	6.02	N/A
Drude	9.31	N/A	1.35	N/A