

# ADVANCED MATERIALS

**Supporting Information**

for

*Advanced Materials*, adma.200701790

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## Supporting information

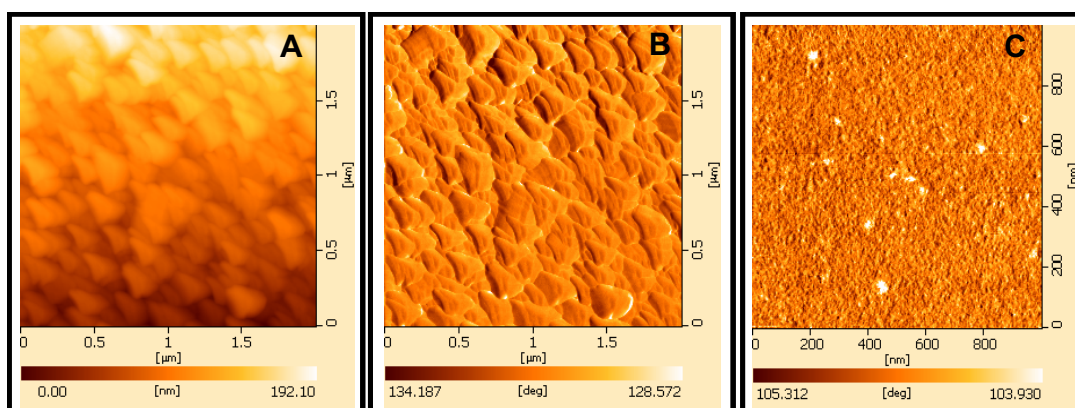
### Electric field assisted growth of highly uniform and oriented gold nanotriangles on conducting glass substrates

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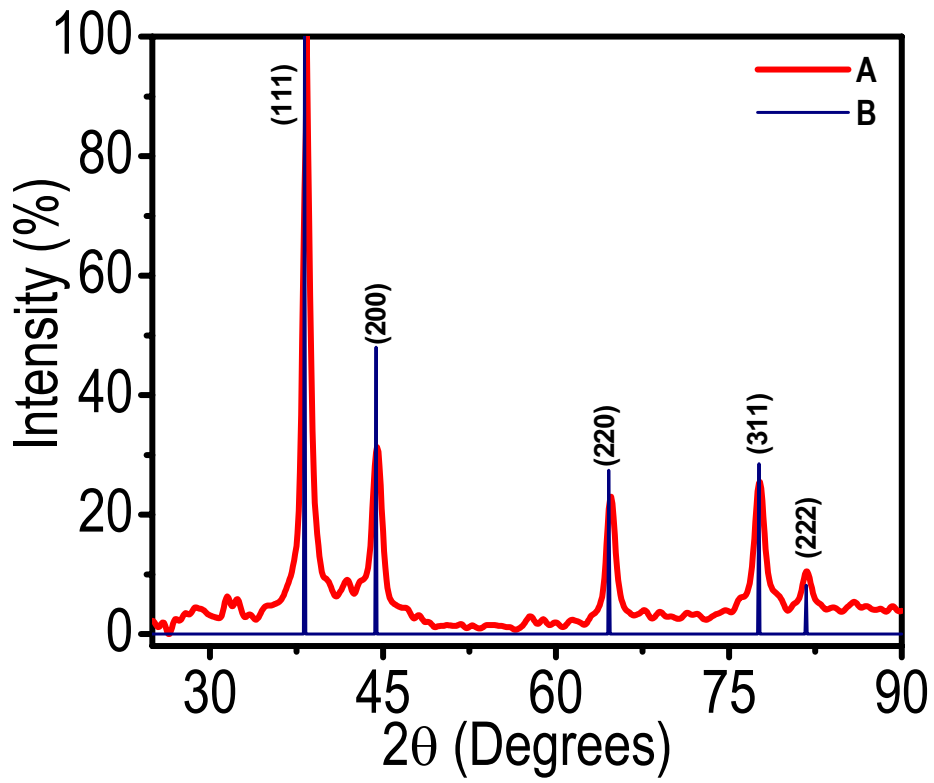
E-mail: pradeep@iitm.ac.in

#### Supporting information 1



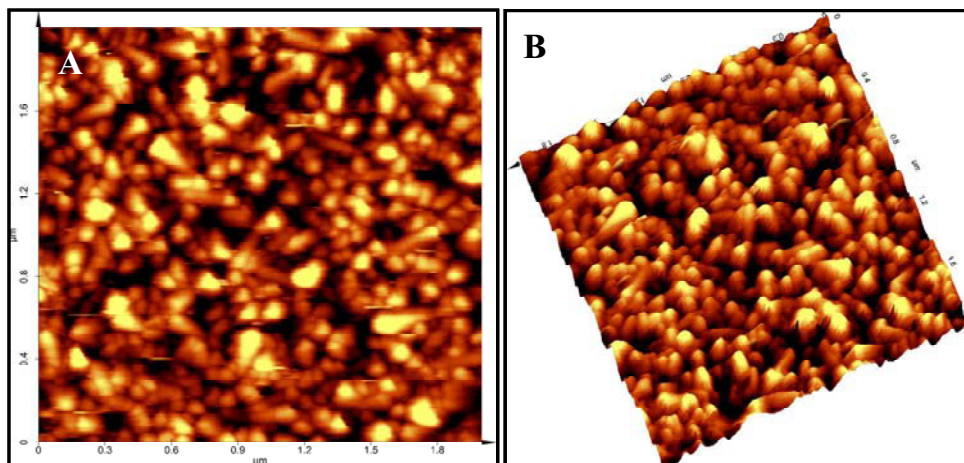
**Figure S1.** DFM images of gold nanotriangle formed on the ITO surface after 1 h of growth. A and B are topographic and phase images (2 μM x 2 μM) of the NTs coated ITO glass plate, respectively and C is the topographic image (1 μM x 1 μM) of the blank conducting glass plate. The ITO substrate is smooth without any structures.

## Supporting information 2



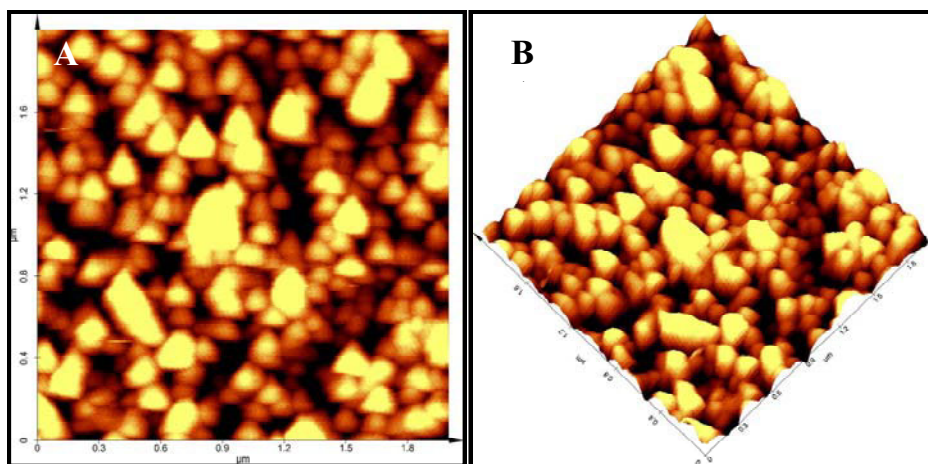
**Figure S2.** X- ray diffraction pattern of NTs formed on ITO after 1 h growth (A). The intensities from a polycrystalline sample are shown as the stick spectrum (B), taken from the standard XRD data file. The patterns are normalized to the (111) diffraction. It is clear that the (111) peak is enhanced in the sample.

### Supporting information 3



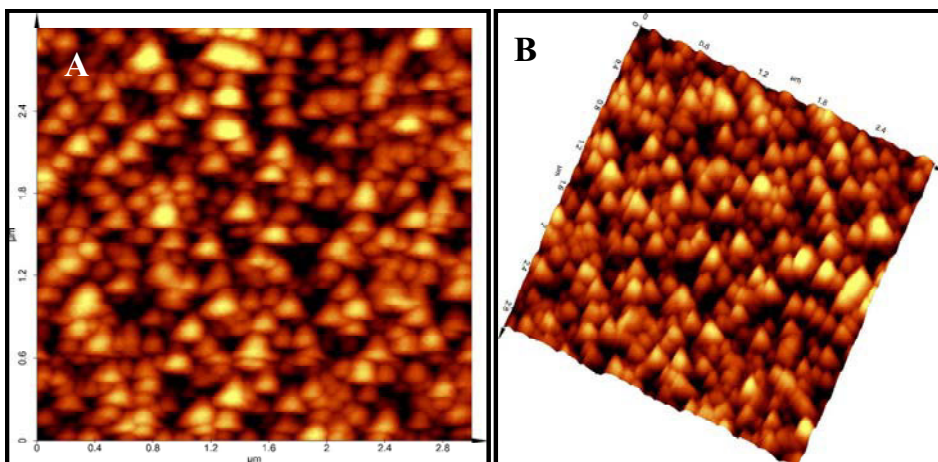
**Figure S3.** A) Contact mode AFM image ( $2\ \mu\text{m} \times 2\ \mu\text{m}$ ) of the ITO after 1 h reaction by applying a potential of 0.11 V in the opposite direction and (B) three dimensional view ( $2\ \mu\text{m} \times 2\ \mu\text{m}$ ) of the same image.

### Supporting information 4



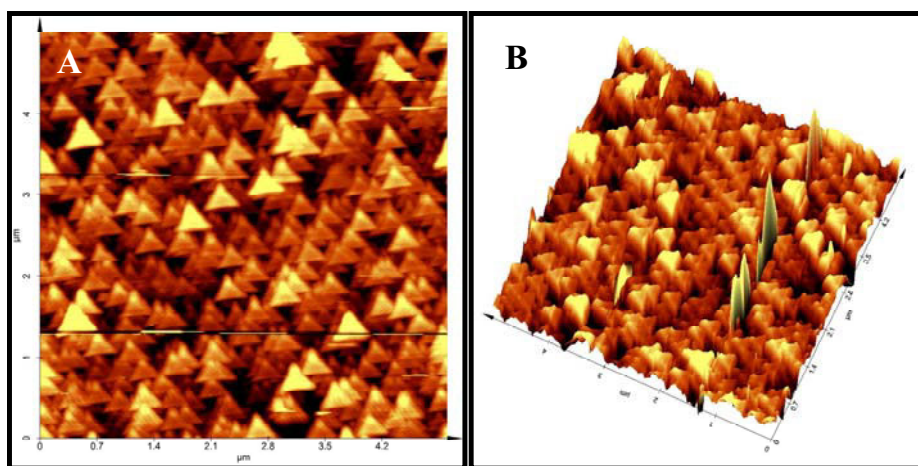
**Figure S4.** A) Contact mode AFM image ( $2\ \mu\text{m} \times 2\ \mu\text{m}$ ) NTs formed when 1.4 ml of 10 mM  $\text{Au}^{3+}$  was used (after 1 h reaction by applying a potential of 0.1 V) and (B) three dimensional view ( $2\ \mu\text{m} \times 2\ \mu\text{m}$ ) of the image.

### Supporting information 5



**Figure S5.** A) Contact mode AFM image ( $2\ \mu\text{m} \times 2\ \mu\text{m}$ ) NTs formed when 0.5 ml of 10 mM  $\text{Au}^{3+}$  was used (after 1 h reaction by applying a potential of 0.1 V) and (B) three dimensional view ( $2\ \mu\text{m} \times 2\ \mu\text{m}$ ) of the image.

### Supporting information 6



**Figure S6.** A) Large area contact mode AFM image ( $5\ \mu\text{m} \times 5\ \mu\text{m}$ ) of nanotriangles formed on ITO after 1 h of growth and (B) three dimensional view ( $5\ \mu\text{m} \times 5\ \mu\text{m}$ ) of the nanotriangles.