

Electronic supplementary information (ESI)

Light-matter interaction of single semiconducting AlGaIn nanowire and noble metal Au nanoparticle in the sub-diffraction limit

A. K. Sivadasan,* Kishore K. Madapu, Sandip Dhara*

Nanomaterials and Sensor Section, Surface and Nanoscience Division, Indira Gandhi Centre for Atomic Research, Homi Bhabha National Institute, Kalpakkam-60310, Tamil Nadu, India

E-mail: sivankondazhy@gmail.com ; dhara@igcar.gov.in

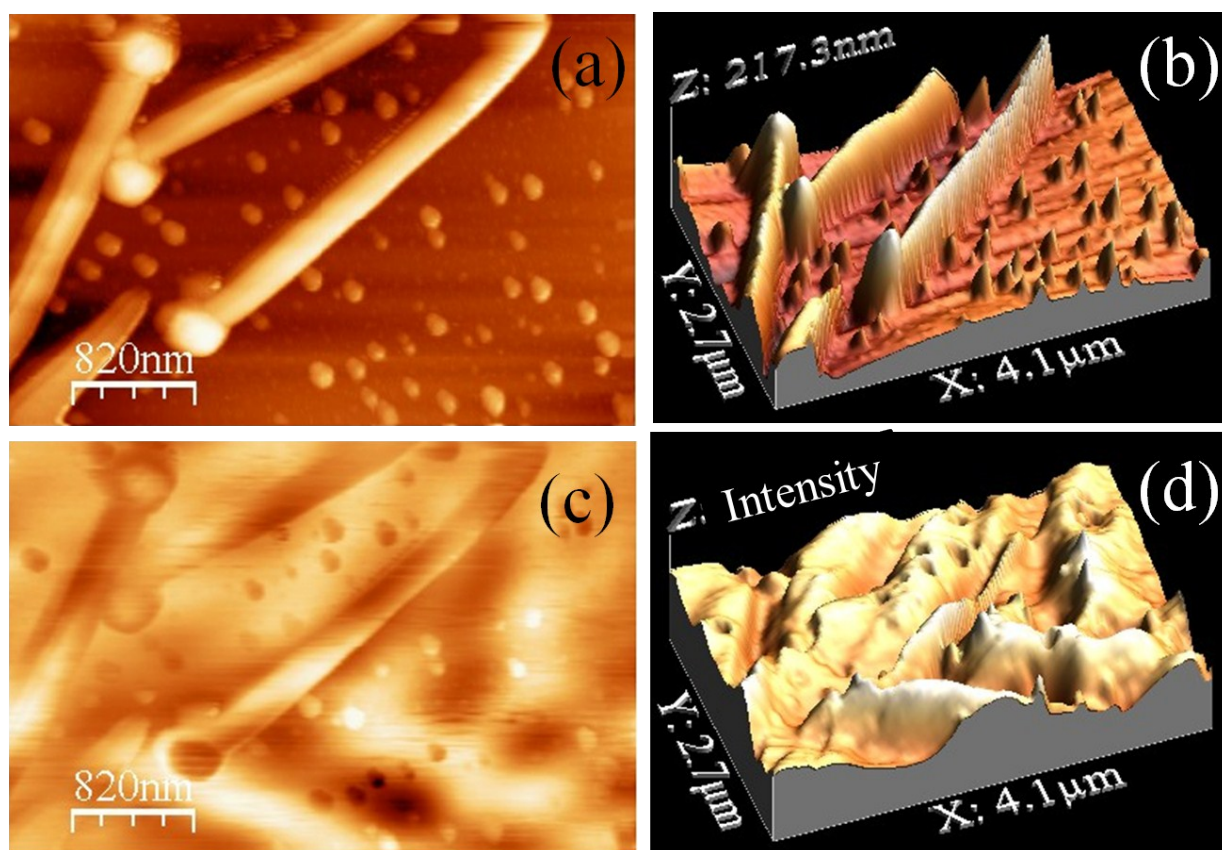


Fig. S1 The topographic (a) 2D and (b) 3D AFM and the corresponding (c) 2D and (d) 3D optical NSOM images of few AlGaIn NWs as well as Au NPs participated in the VLS growth process.

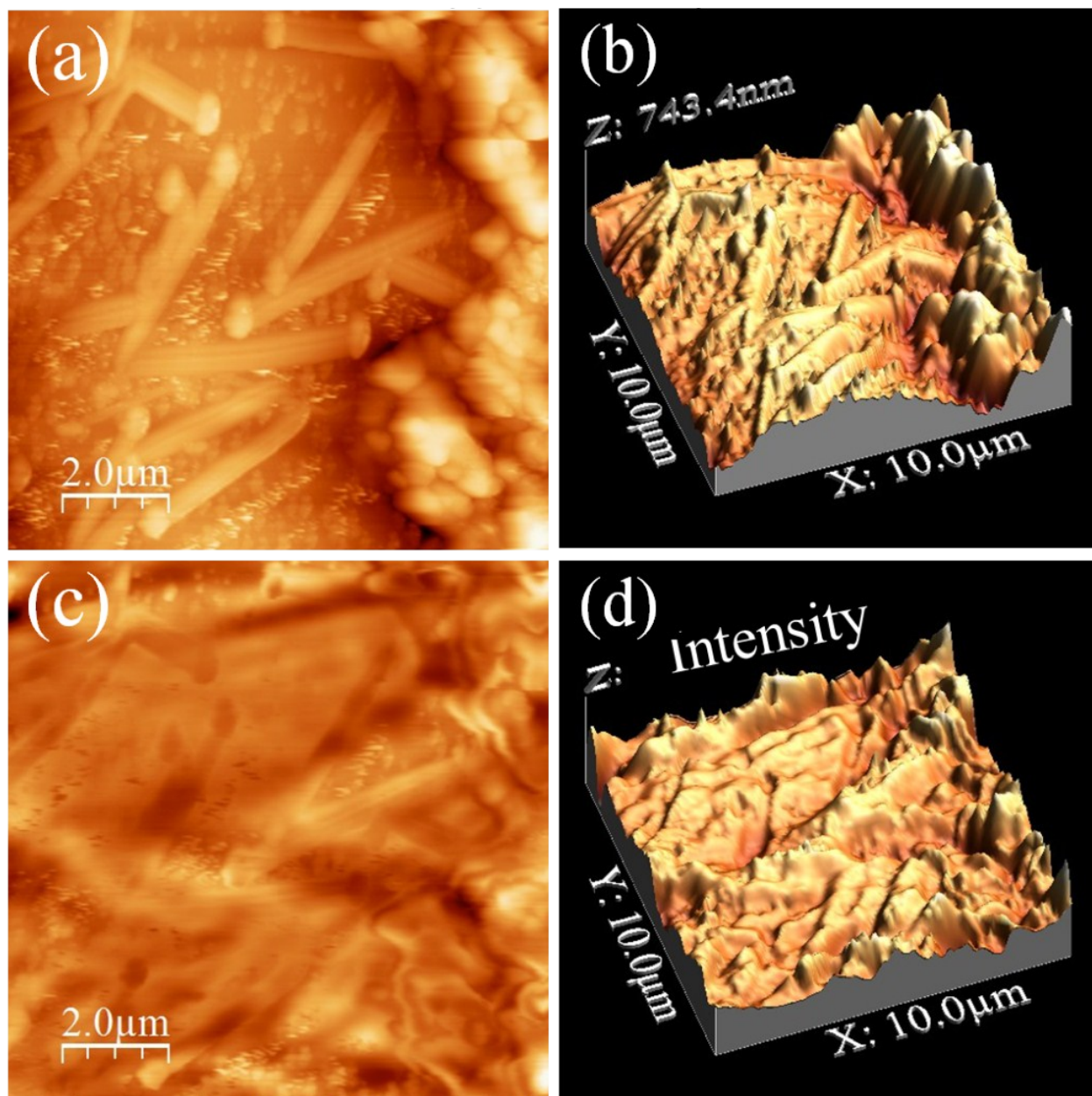


Fig. S2 The topographic (a) 2D and (b) 3D AFM and the corresponding (c) 2D and (d) 3D optical NSOM images of an ensemble of AlGaIn NWs as well as Au NPs participated in the VLS growth process.

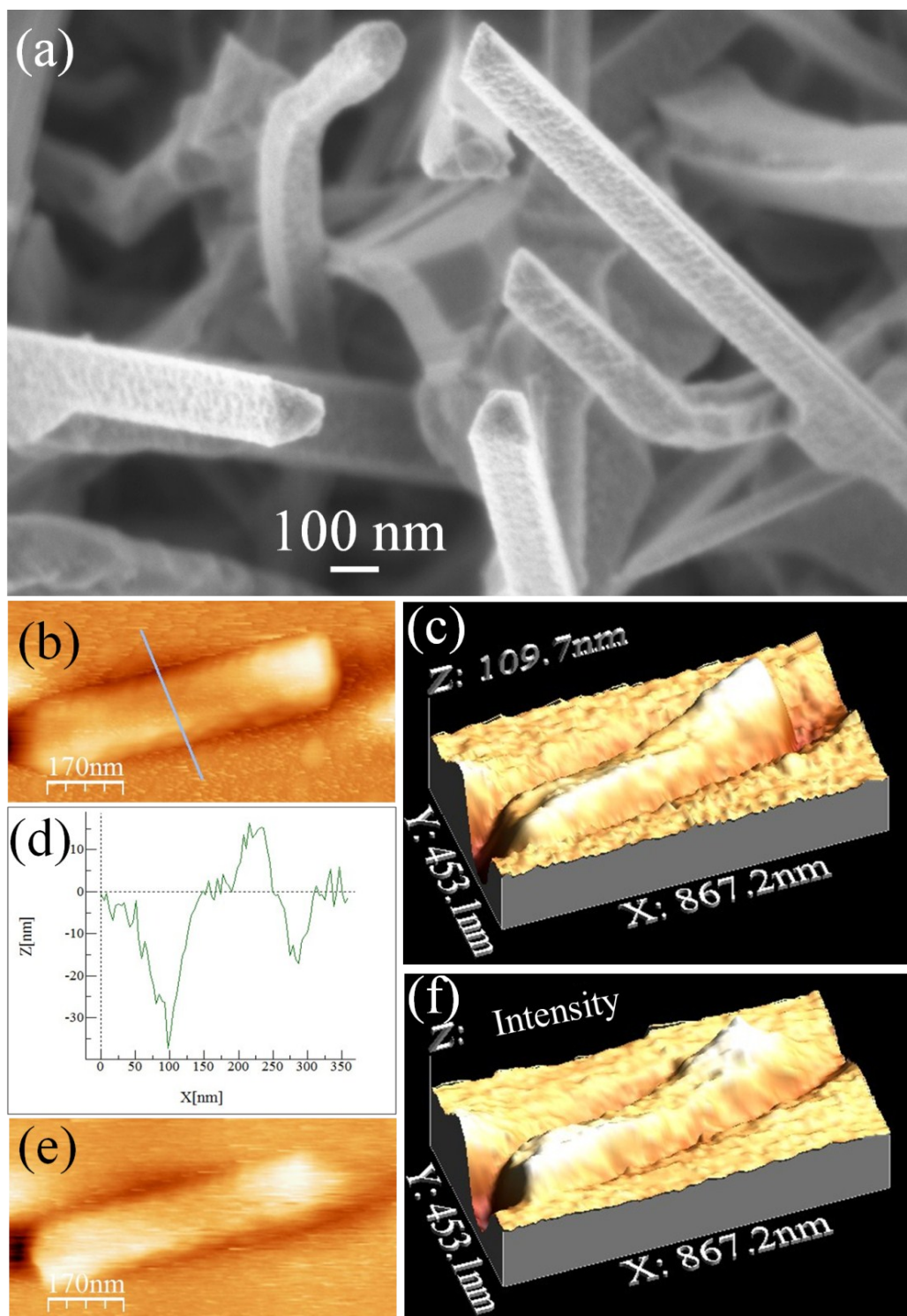


Fig. S3 (a) FESEM image of triangular AlGaIn nanowires. The topographic (b) 2D and (c) 3D AFM images of a nanostructure. (d) The height variation of AFM cantilever along the line across the nanostructure as shown in (b) and the corresponding (e) 2D and (f) 3D optical NSOM images of a nanostructure with prominent scattering compared to absorption of light.

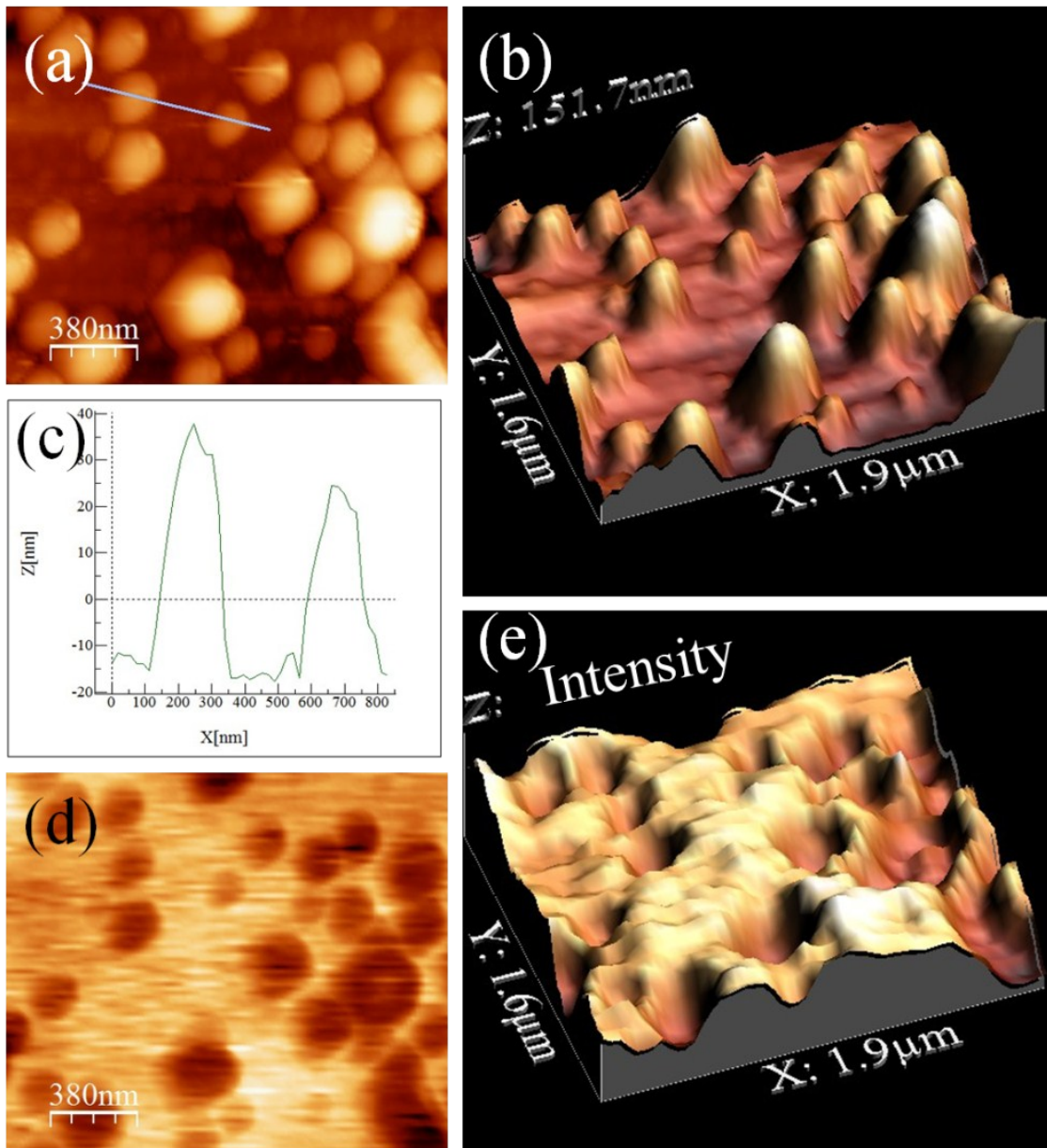


Fig. S4 The topographic (a) 2D and (b) 3D AFM images of an ensemble of Au NPs. (c) The height variation of AFM cantilever along the line across two Au NPs as shown in (a) and the corresponding (d) 2D and (e) 3D optical NSOM images of an ensemble of Au NPs.