Electronic Supplementary Material (ESI) for Nanoscale.

Supporting Information

Triangle-, tripod-, and tetrapod-branched ITO nanocrystals for anisotropic infrared plasmonics

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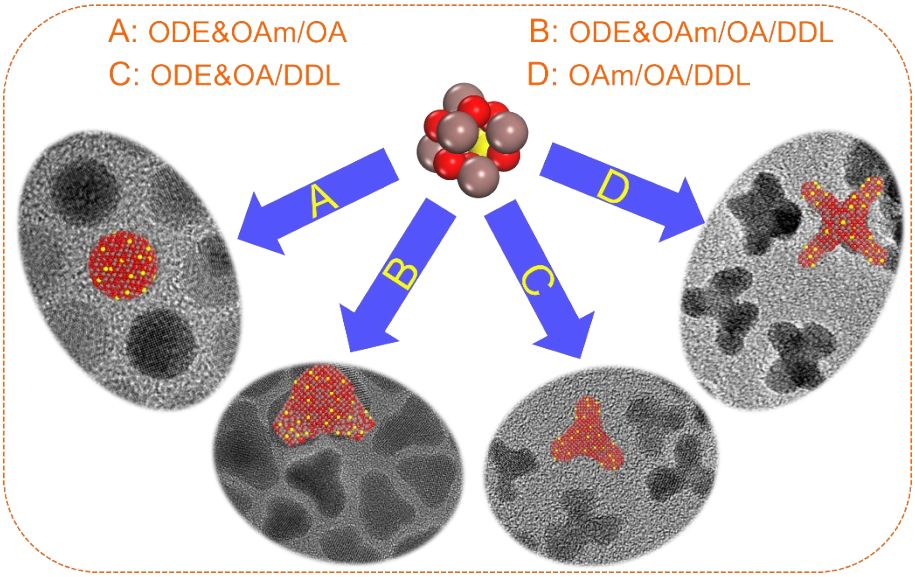

Fig S1 The schematic illustration of forming shape ITO NCs form new nuclei by tuning the content of solvent and surfactants.

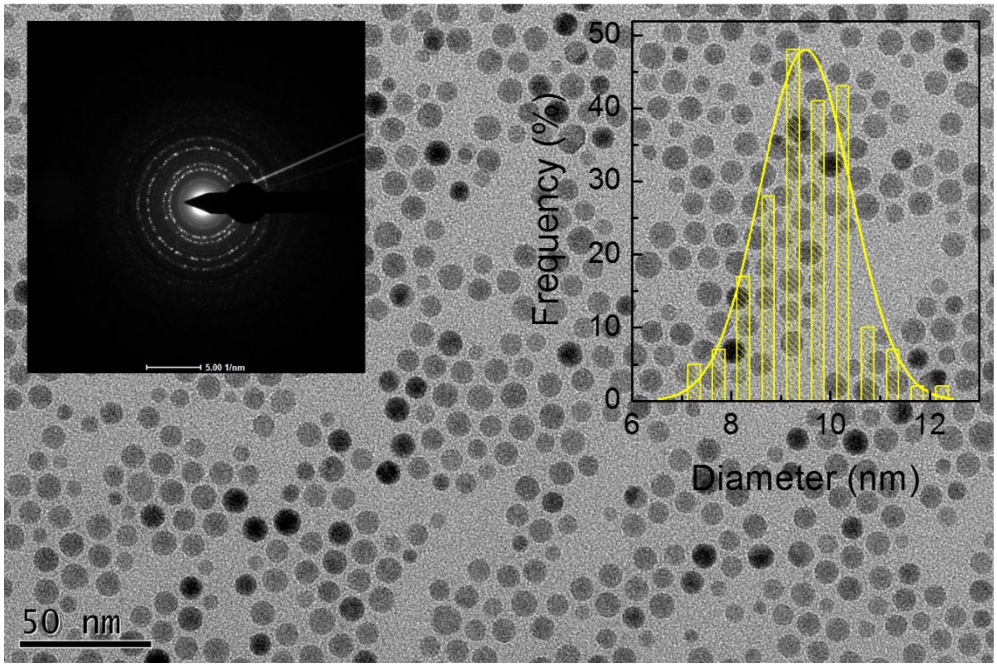

Fig S2 Selected area electron diffraction pattern (left inset) and size distribution (right inset) of the spherical ITO NCs.

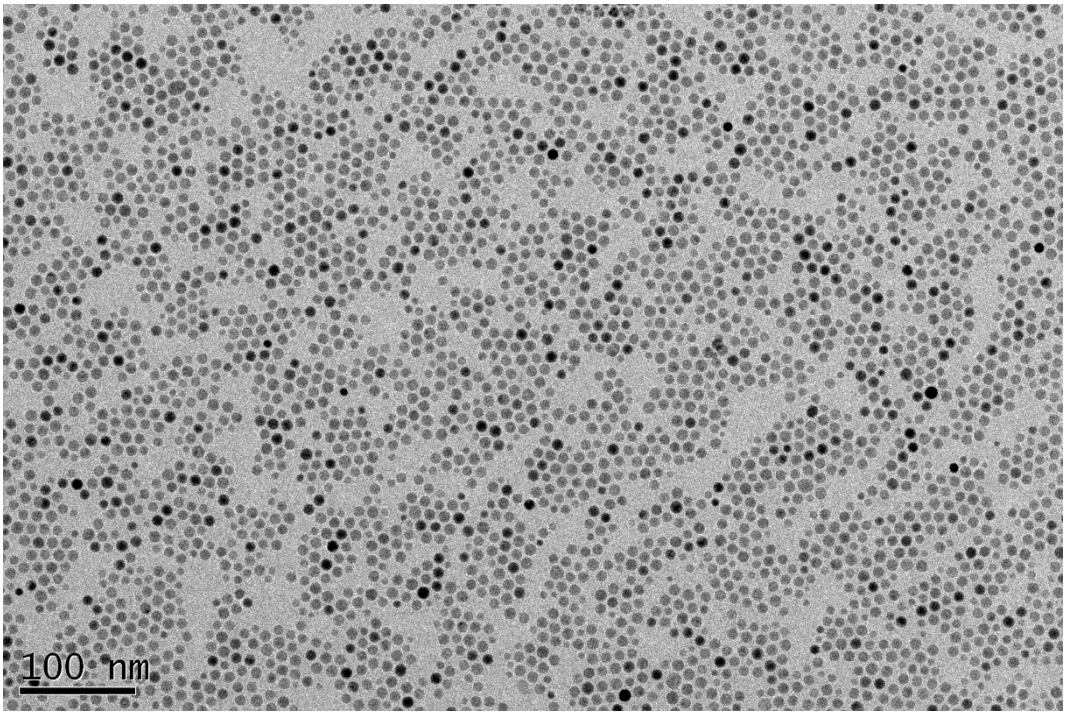

Fig S3 A large scale TEM image of spherical ITO NCs.

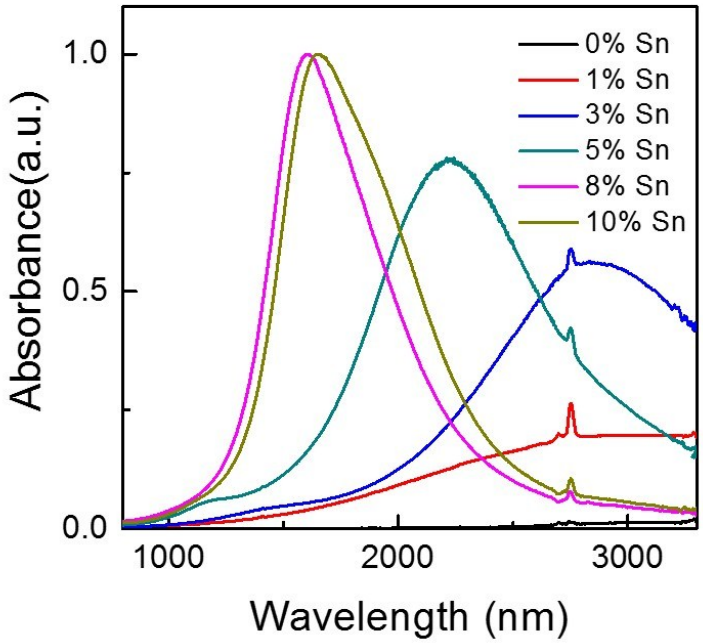

Fig S4 Absorption spectra of ITO NCs with different nominal doping concentrations. 8% Sn sample shows the highest resonance frequency and the same nominal ratio was used for further synthesis of anisotropic particles.

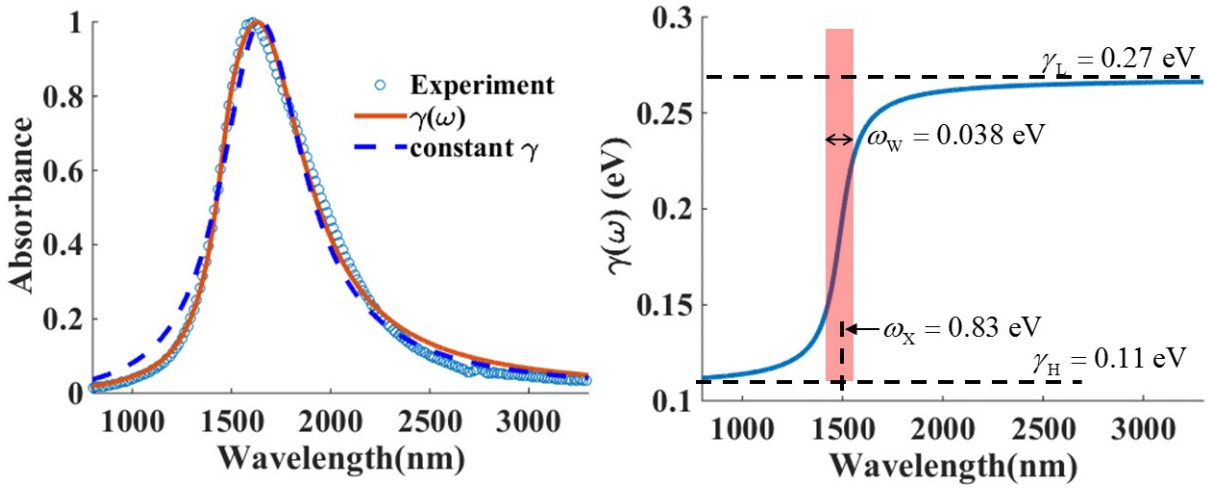

Fig S5 Fitting the experimental absorption spectrum with the Drude model assuming a constant γ and a frequency-dependent $\gamma(\omega)$.

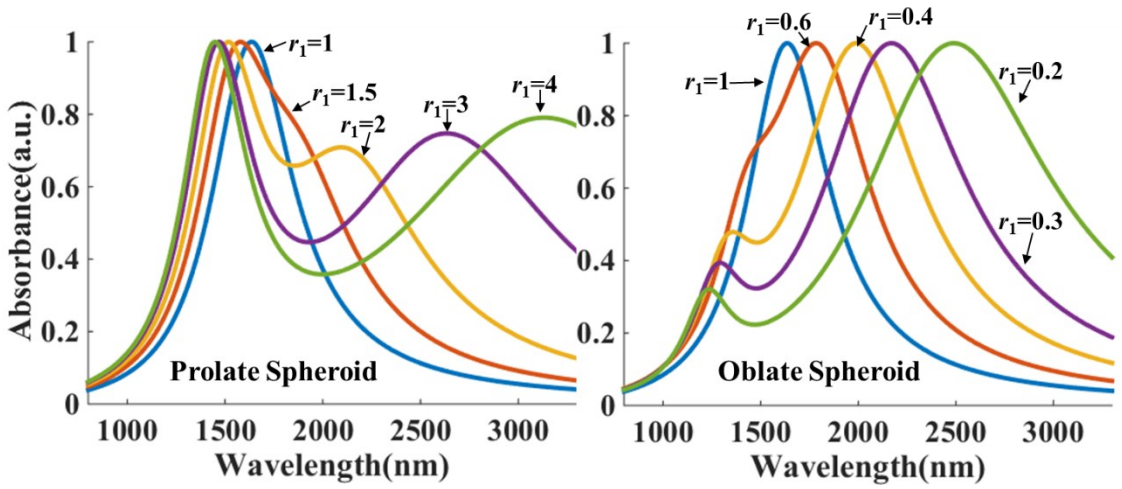

Fig S6 Calculated extinction cross section of prolate and oblate spheroids with different aspect ratios r_1. r_1 is defined as the ratio between the length of the axis symmetry to the length of the axis perpendicular to it. $r_1>1$ indicates a prolate spheroid and $r_1<1$ corresponds to an oblate spheroid.