

Supporting Information

Copper sulfide nanosheets with shape-tunable plasmonic properties in the NIR

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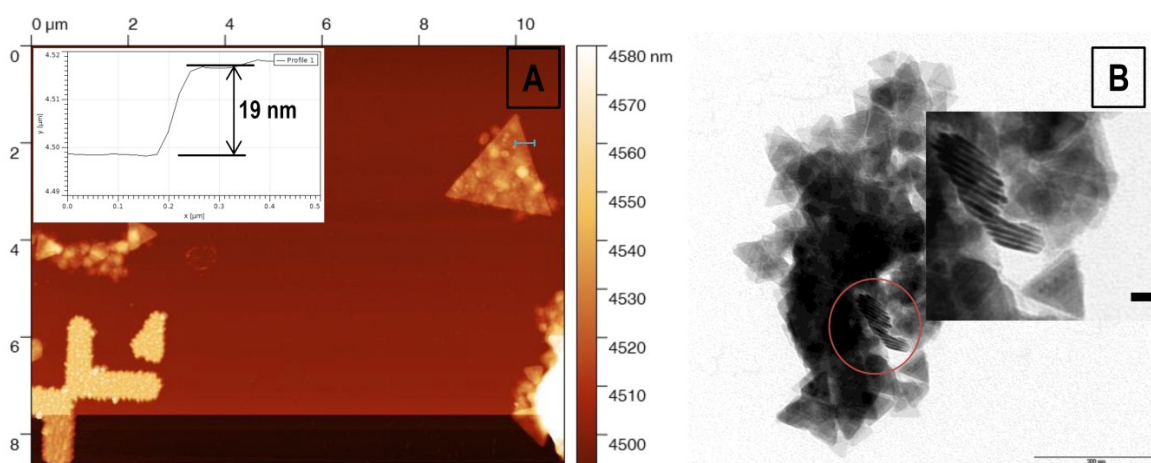


Figure S1. (A) AFM image of a gold marker-field on Si/SiO₂ with individual triangular NSs. Inset: measured profile of micron-sized NSs with a thickness of about 19 nm. (B) TEM image of the sample from Fig. 2C with orthogonal stacking of NCs. Scale in the main picture 200 nm, scale in the inset 20 nm. Average thickness of NCs \approx 3.2 nm.

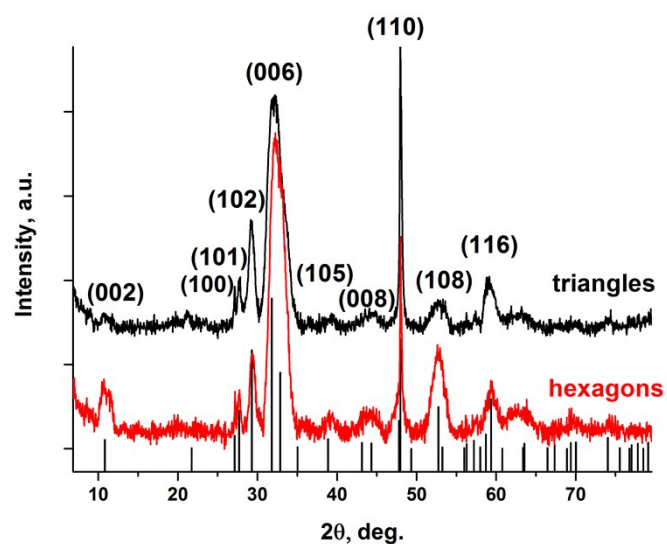


Figure S2. XRD spectra of triangular and hexagonal nanoplatelets evidencing the covellite crystal structure. Reference: covellite XRD pattern from PDF# 01-074-1234.

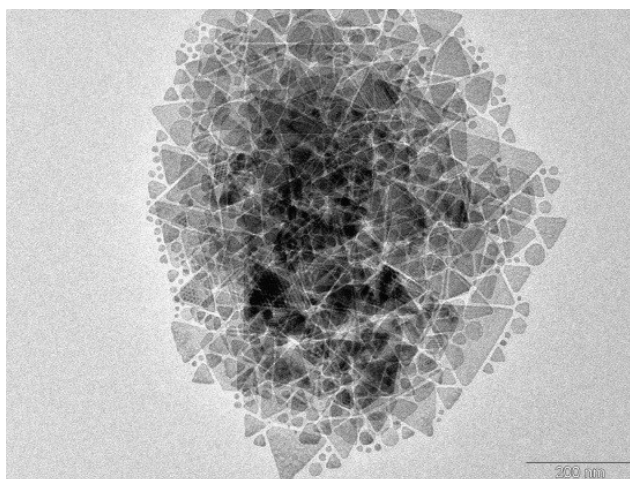


Figure S3. TEM image of CuS NCs upon addition of monomer at 150°C, 50% of OLAM substituted by DPE.

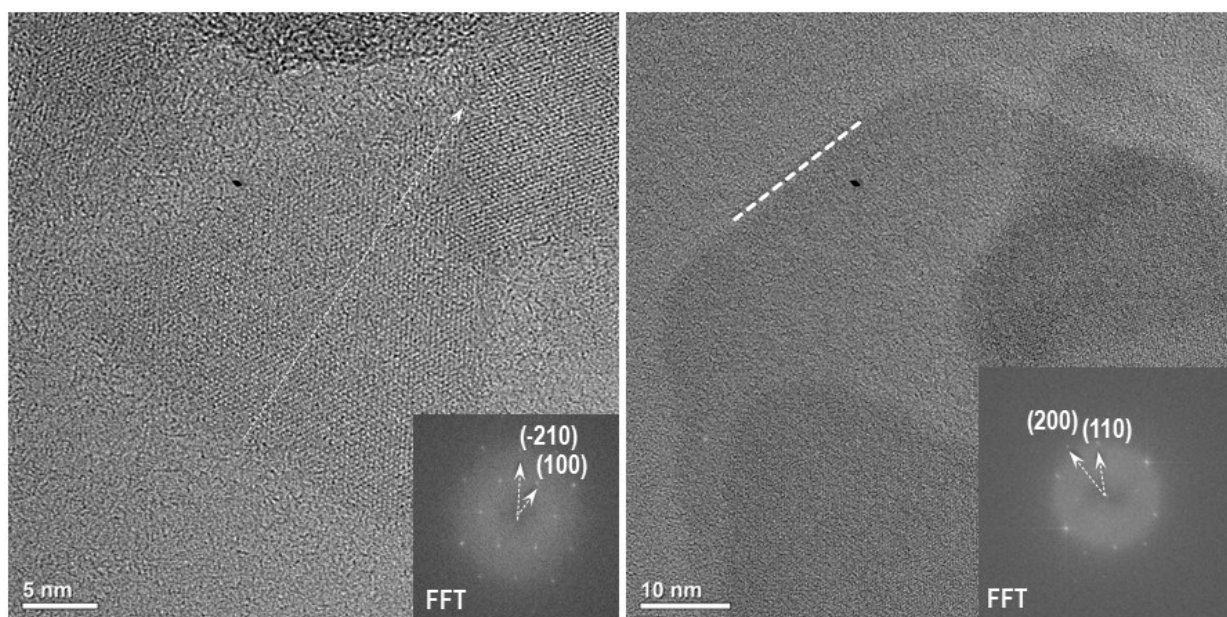


Figure S4. HRTEM image of a CuS triangular (left) and hexagonal (right) nanoprisms with the assignment of the crystal orientation in respect to the edges. Inset: fast Fourier transformation of the HRTEM image in the central area.

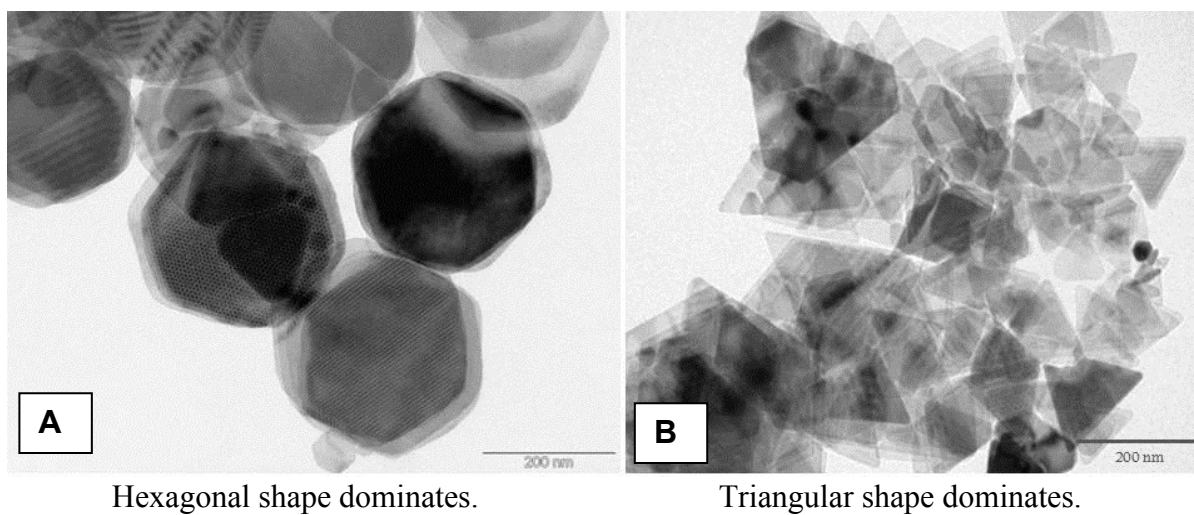


Figure S5. TEM of two samples at identical conditions (duration 60 min). (A) Without precursor addition; (B) with precursor addition, keeping the system in kinetic mode.

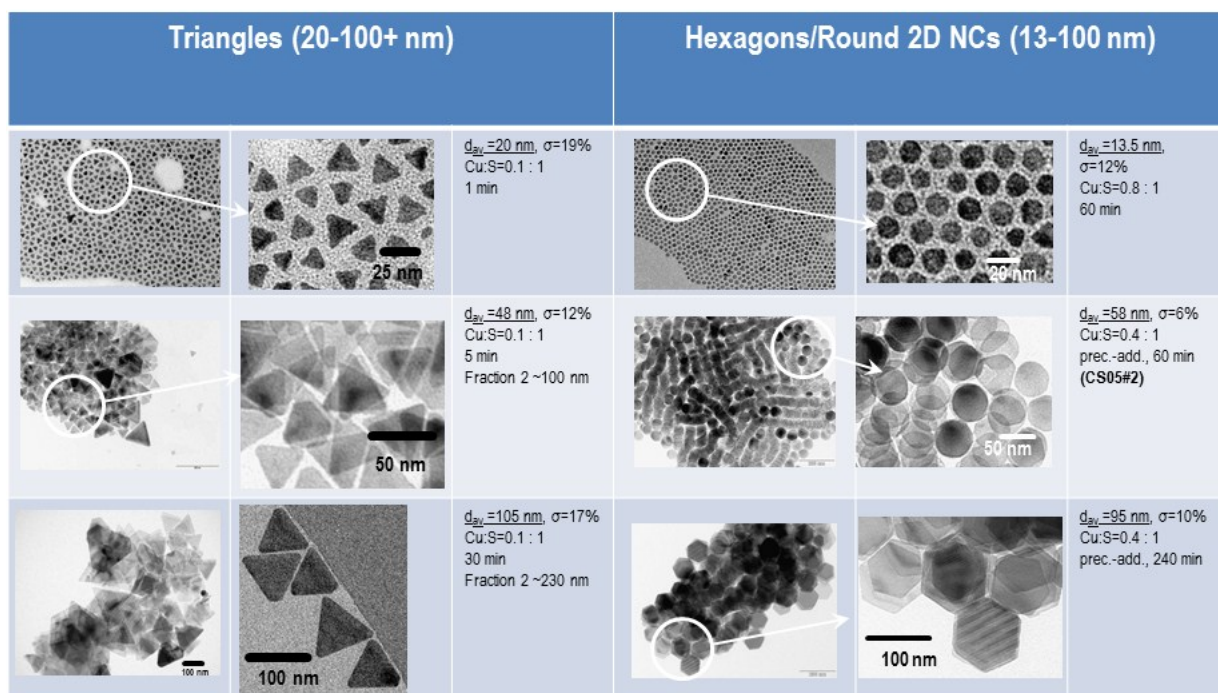


Figure S6. Kaleidoscope of synthesized CuS NCs with details about applied procedures and conditions.

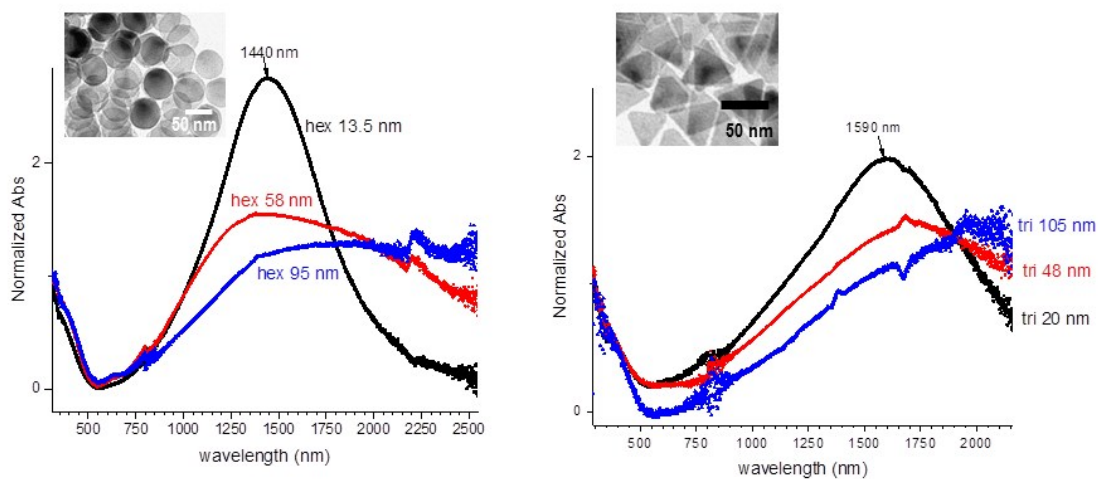


Figure S7. Optical characterization of CuS NCs synthesized in triangular and hexangular shape: UV-VIS-NIR absorption spectra.

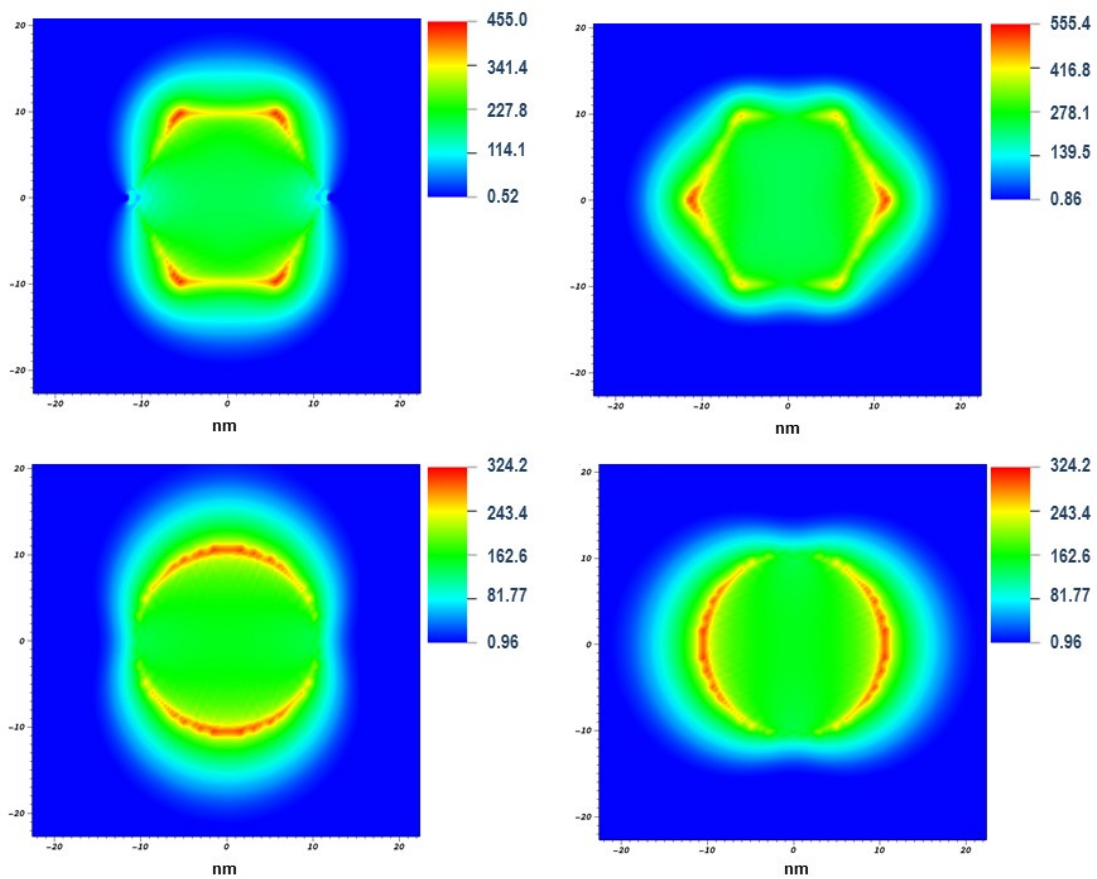


Figure S8. Near-field mapping of the CuS NCs surface for hexangular and cylindrical shape of equivalent volume (1562 nm^3) at a wavelength of 1350 nm (absorption maximum).