



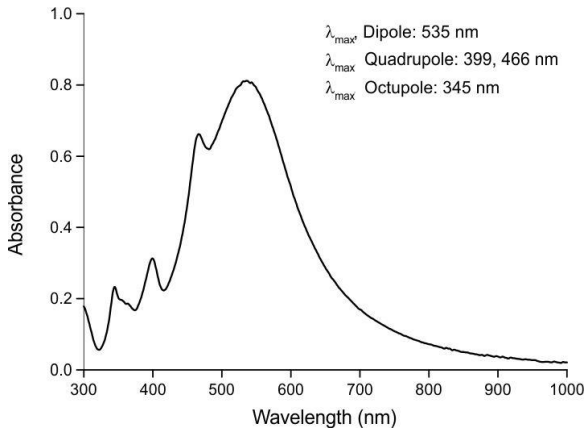
Product description

High quality, shape controlled and narrow size distribution silver nanocubes with exhibit of surface plasmon resonance at visible regions. At 70nm edge length, the main dipole resonance at 535nm. The quadrupole and octupole modes are visible at 466, 399 and 345 nm, respectively. It is idea for surface enhanced Raman scattering (SERS), plasmonic based sensors, energy harvesting materials and etc..

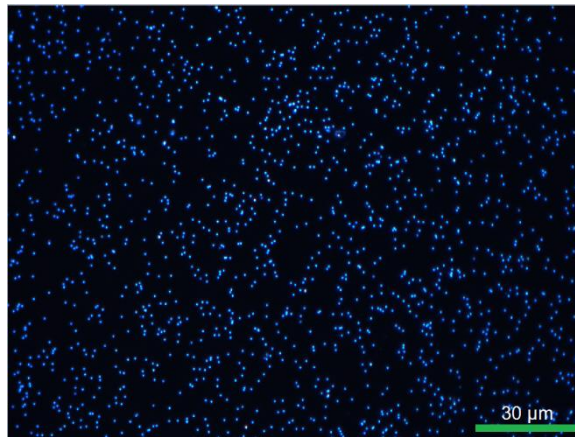
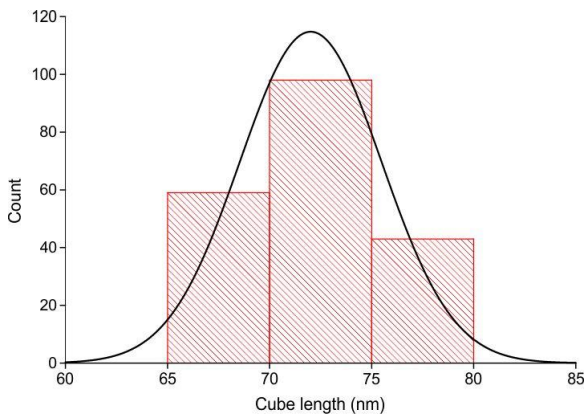
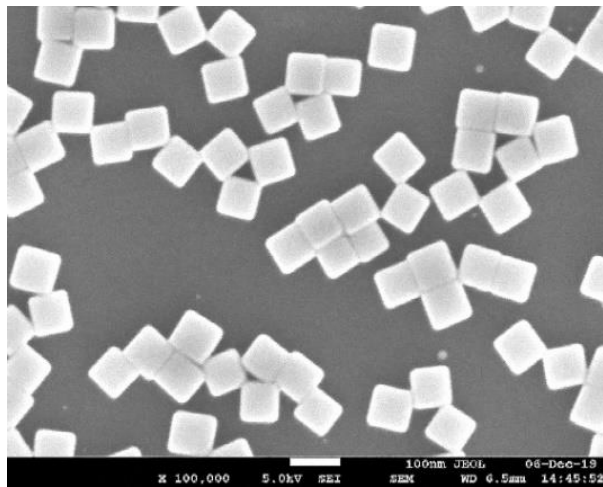
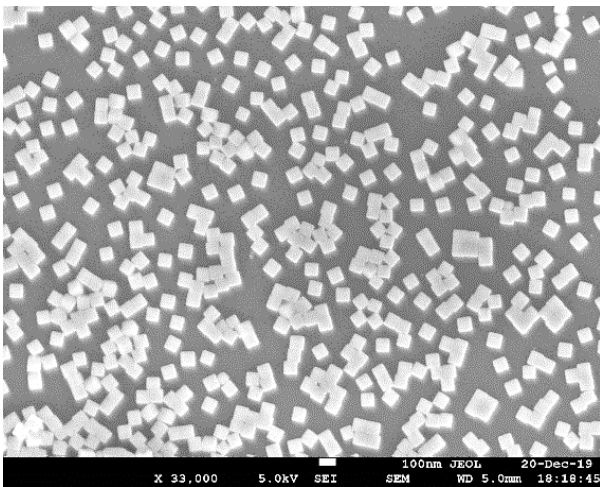
Product Sheet

| | |
|---|---|
| Product name | Ag-NC-70, Silver nanocubes of 70 nm |
| Lot number | SDCTE00073A |
| Cube length (\pm standard deviation): | 72.0 \pm 3.5 nm |
| Coefficient of Variance (%): | 4.83% |
| Particle concentration | 0.05 mg/mL |
| Surface capping agent: | Poly(vinylpyrrolidone), MW= 55,000 |
| Solvent (dispersed in): | Ethanol (PVP 0.2 mg/mL) |
| Hydrodynamic diameter: | 131 nm |
| Surface charge (Zeta potential): | -25.8 mV |
| Storage and instruction before use | |
| Storing Condition | Please store and keep the solution in 4 °C fridge and prevent light exposure. |
| Solvent used | Ethanol. To prevent evaporation, keep the lip/cap tightly closed. Apply additional parafilm to seal the cap. |
| Instruction before use | NP will sediment and forma aggregation over time. to ensure good dispersion of Ag nanocubes in the solution before use, please (1) sonicate for 1 minute followed by quick vortex, <i>OR</i> (2) manually shake to ensure the sediment is evenly dispersed. |
| Characterization instruments | |
| Cube size statistics: | JEOL JSM-7600F Schottky Field Emission Scanning Electron Microscope (FE-SEM); ImageJ |
| Dark Field micrograph: | Olympus BX51 upright DIC microscope. |
| UV-vis spectral properties: | Cary 60 UV-vis spectrometer |
| Mass concentration (ICP-MS): | Thermofisher iCAP6000 |
| Hydrodynamic diameter/Zeta potential: | Zetasizer Nano ZSP |
| pH: | Metrohm 827 pH Lab |

Extinction spectrum (UV-vis):



Morphology, cube length and its size distribution:



Dark field optical microscopic image.