



Technical Data Sheet

ACS Material SiO₂-NH₂ Modified Upconverting Nanoparticles

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Revision: 103122

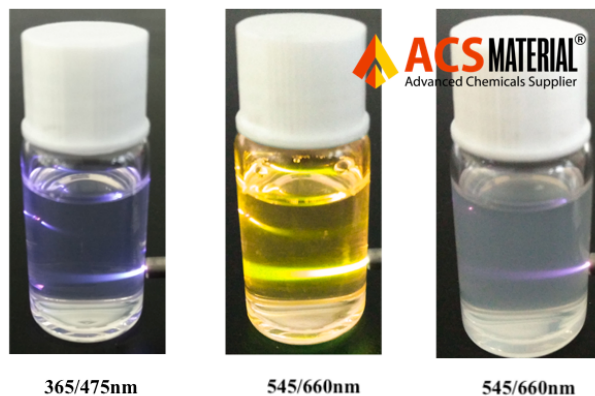
1. Characterizations

Composition	SiO ₂ -NH ₂ Modified Upconverting Nanoparticles	
Diameter	35 nm	
Appearance	Ivory white solution or Clear*	
Crystal formula	NaYREF ₄ (RE: Yb, Er, Tm, Gd, Mn, Lu) @dSiO ₂ -NH ₂	
Concentration	5 mg/mL~10 mg/mL*	
Solvent	Water	
Dispersity of powder	Water or aqueous medium	
Excitation wavelength	975 nm	
Sensitizer	Ytterbium (Yb ³⁺)	
Activator	Emission wavelength	Fluorescence
Thulium (Tm ³⁺)	365/475 nm	Purple-Blue
Erbium (Er ³⁺)	545/660 nm	Green-Yellow
Thulium (Tm ³⁺)	804 nm	Near-infrared

*The concentration and product color will vary per batch.

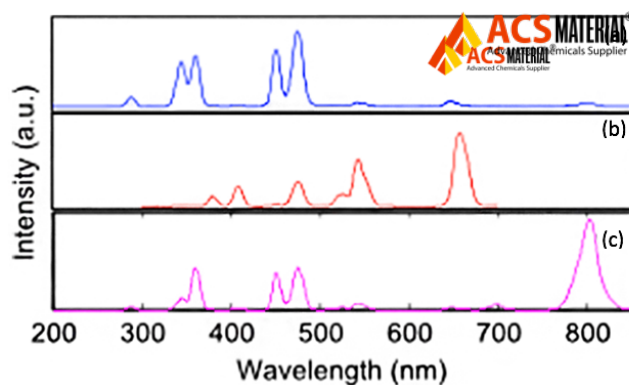
Storage: Sealed, stored at 4-8°C.

Shelf life: ~6 months

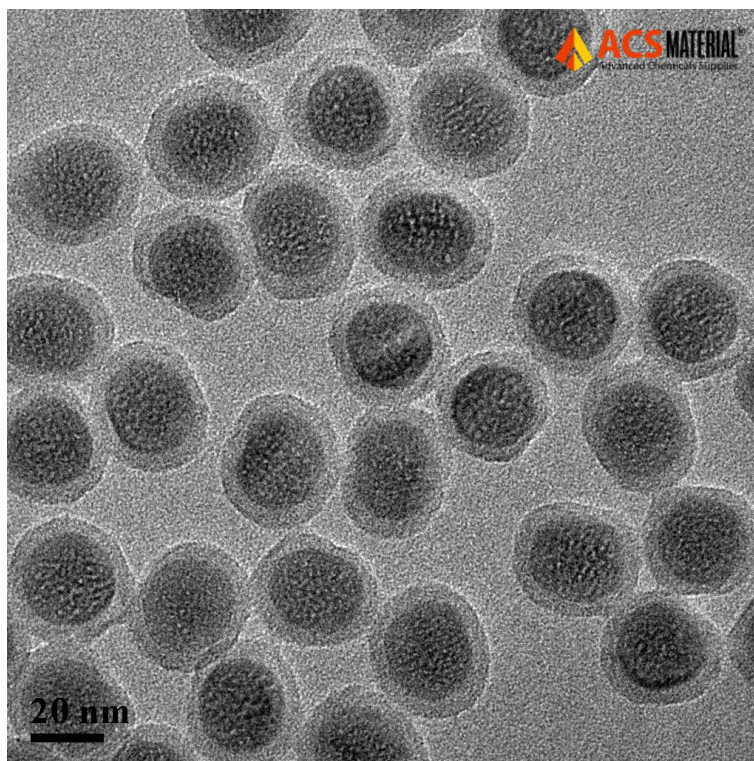


Fluorescence Image of ACS Material SiO₂-NH₂ Modified Upconverting Nanoparticles

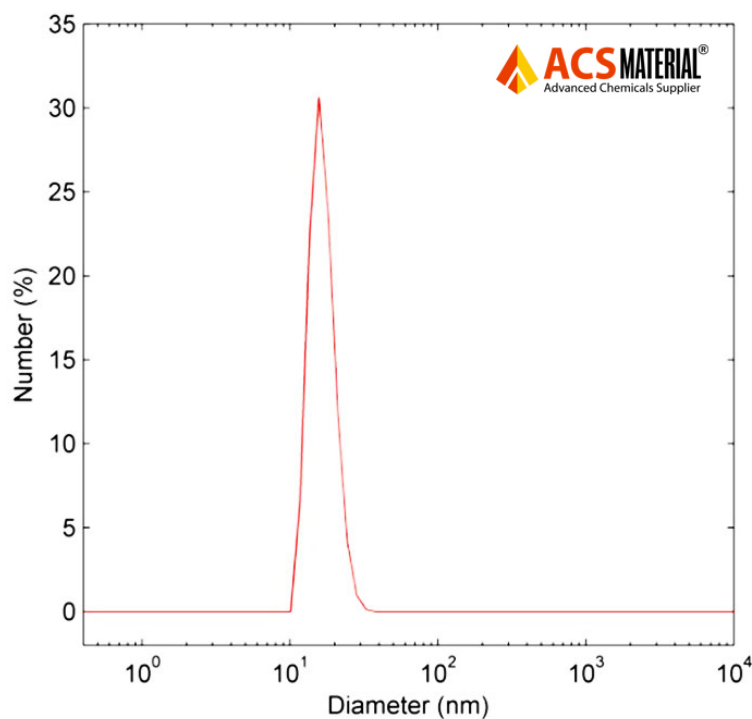
Excitation at 975 nm (reference only)



Fluorescence Spectra: a) 365/475nm, b) 545/660 nm, c) 804 nm of ACS Material SiO₂-NH₂ Modified Upconverting Nanoparticles, Excitation at 975 nm for reference only



TEM Image of ACS Material SiO₂-NH₂ Modified Upconverting Nanoparticles



Typical Particle Size Distribution Image of ACS Material SiO₂-NH₂ Modified Upconverting Nanoparticles
From Dynamic Light Scattering Measurement

3. Application Fields

For scientific research only. Not to be used for any animal or human diagnostic/therapeutic purposes.

- ◆ Fluorescence imaging.
- ◆ Biodetection.
- ◆ Photodynamic therapy.
- ◆ Photoactivation of anti-cancer drugs and biomolecules *etc.*

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