



Technical Data Sheet

ACS Material PEG-Modified Upconverting Nanoparticles

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Contact Information:

Manufacturer: ACS Material, LLC.

Address: 959 E Walnut St., Suite 100,
Pasadena, CA 91106, USA

Phone: (866)-227-0656

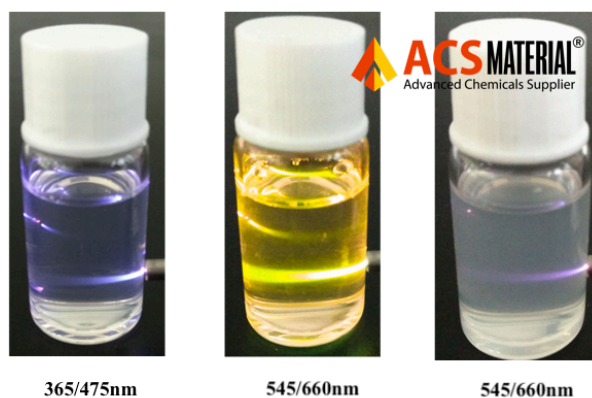
Fax: (781)-518-0284

E-Mail: contact@acsmaterial.com

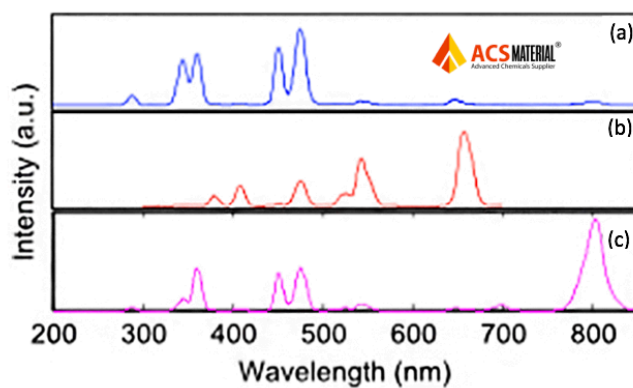
Revision: 091718

1. Characterizations

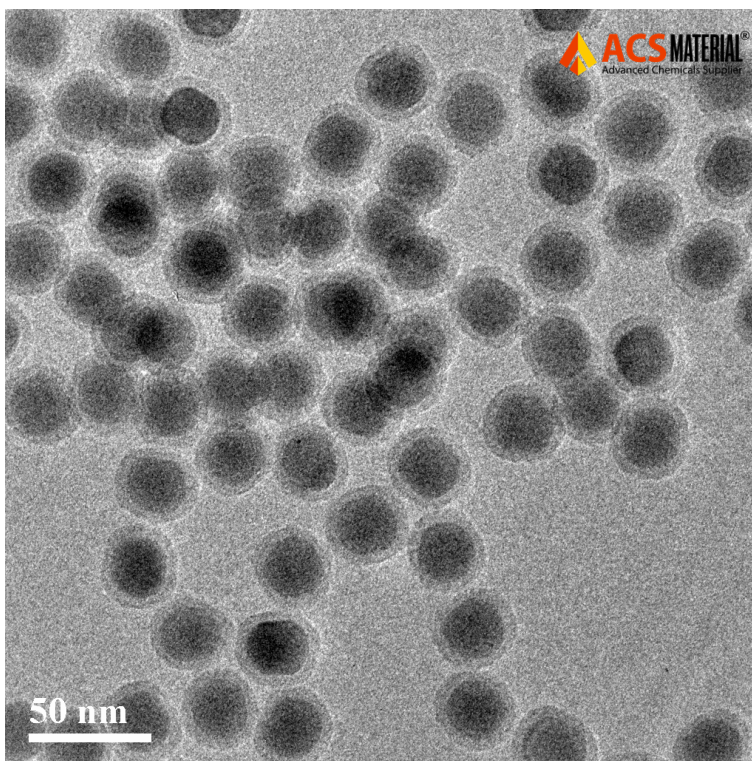
Composition	PEG-Modified Upconverting Nanoparticles	
Diameter	35 nm	
Appearance	Ivory white solution	
Crystal formula	NaYREF ₄ (RE: Yb, Er, Tm, Gd, Mn, Lu) @PEG	
Concentration	5 mg/mL	
Solvent	Water	
Dispersity of powder	Water or aqueous medium	
Excitation wavelength	975 nm	
Sensitizer	Ytterbium (Yb 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



Fluorescence Image upon Excitation at 975 nm of ACS Material PEG-Modified Upconverting Nanoparticles



Upconversion Emission Spectra Upon Excitation at 975 nm: a) 365/475nm, b) 545/660 nm, c) 804 nm of ACS Material PEG-Modified Upconverting Nanoparticles



TEM Image of ACS Material PEG-Modified Upconverting Nanoparticles

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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