

Product Information

NaYF₄@CaF₂ core-shell UCNPs

Cat. No.: X26-05-ZQ802

Size: 100 mg; 250 mg; 500 mg; 1 g; 5 g

Synonym: CaF₂-passivated NaYF₄ core-shell; Calcium fluoride-coated UCNPs; NaYF₄/CaF₂ core-shell nanostructures

This product is for research use only and is not intended for diagnostic use.

Product Information

Description	This heterostructure consists of a sodium yttrium fluoride (NaYF ₄) active core epitaxially overgrown with a calcium fluoride (CaF ₂) shell. The CaF ₂ layer provides a protective barrier with a very low lattice mismatch, which effectively passivates surface defects and suppresses vibrational quenching. The resulting core-shell architecture significantly enhances the upconversion quantum yield compared to bare cores.
Source	Custom synthesis
Form	Solid or powder
Purity	≥95%
Impurities	No visible impurities to the naked eye.
Identity	HPLC/MS/NMR
Stability	This product is stable for one year when stored at the recommended temperature in lyophilized powder.
Quality Level	Research grade
Storage	Store at -20°C.