

## Product Information

### TiO<sub>2</sub> modified UCNPs

**Cat. No.:** X26-05-ZQ889

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

**Synonym:** Titania-modified UCNPs; TiO<sub>2</sub>-decorated upconversion nanoparticles; TiO<sub>2</sub>-UCNP nanocomposites

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

#### Product Information

<b>Description</b>	This material features an upconverting rare-earth fluoride core structurally coupled with a titanium dioxide (TiO <sub>2</sub> ) semiconductor outer layer or matrix. The architecture forms an inorganic heterojunction where the upconverted ultraviolet or visible photons match the bandgap energy of the TiO <sub>2</sub> phase. This configuration allows for the generation of electron-hole pairs within the semiconductor under near-infrared illumination.
<b>Source</b>	Custom synthesis
<b>Functional Group</b>	TiO <sub>2</sub>
<b>Form</b>	Solid or powder
<b>Purity</b>	≥95%
<b>Impurities</b>	No visible impurities to the naked eye.
<b>Identity</b>	HPLC/MS/NMR
<b>Stability</b>	This product is stable for one year when stored at the recommended temperature in lyophilized powder.
<b>Quality Level</b>	Research grade
<b>Storage</b>	Store at -20°C.