

## Product Information

### NIR-excited upconverting core-shell microrods

**Cat. No.:** X26-05-ZQ847

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

**Synonym:** NIR-responsive core-shell microrods; Upconverting core-shell microstructures; NIR-excited 1D core-shell nanophosphors

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

#### Product Information

<b>Description</b>	The core-shell microrods typically utilize a high-purity, low-phonon-energy fluoride matrix, most frequently sodium yttrium fluoride (NaYF <sub>4</sub> ) or sodium gadolinium fluoride (NaGdF <sub>4</sub> ). The inner active core is heavily co-doped with trivalent lanthanide ions, where Yb <sup>3+</sup> or Nd <sup>3+</sup> serves as the primary sensitizer to capture incoming NIR photons (typically at ~980 nm or ~800 nm), and Er <sup>3+</sup> , Tm <sup>3+</sup> , or Ho <sup>3+</sup> acts as the activator to emit visible or UV light. The outer passivating shell consists of an undoped or specifically co-doped isomorphic crystal layer (such as NaYF <sub>4</sub> or CaF <sub>2</sub> ) epitaxially grown over the core.
<b>Source</b>	Custom synthesis
<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.