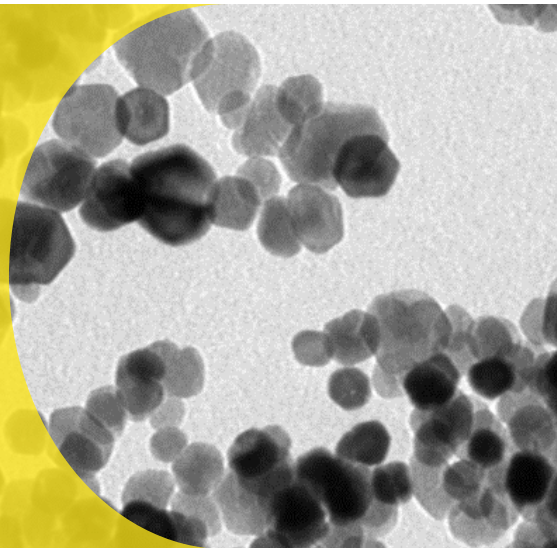




$\text{CeO}_2$

Cerium dioxide datasheet



## Our offer

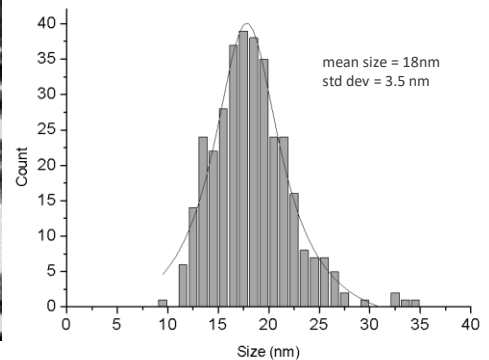
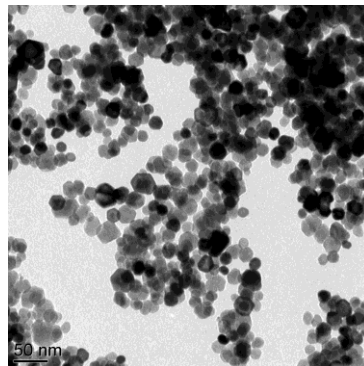
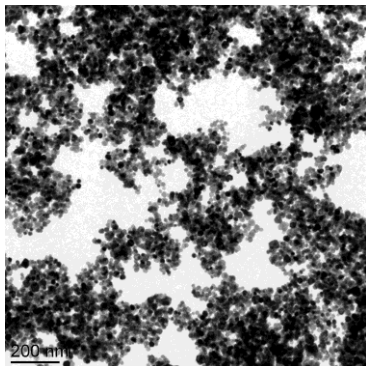
We offer ceria nanoparticles dispersed in water. Dispersions in other media are under development. Our nanoparticles can be used as abrasive materials in chemical mechanical polishing slurries. High crystallinity, low organic content and narrow size distribution make it an excellent CMP material.

They also find application as nanofillers in composite materials, for example in high refractive index composites and UV-protection coatings. Cerium oxide nanoparticles can be doped, e.g., with gadolinium oxide, to be used in electrolyte and electrode materials.

## Main properties

Chemical formula	CeO <sub>2</sub> or Ce <sub>1-x</sub> Gd <sub>x</sub> O <sub>2</sub> (x up to 0.2) or Ce <sub>1-x</sub> Y <sub>x</sub> O <sub>2</sub> (x up to 0.1)
Crystal structure	Cubic
Morphology	Polyhedral
Average particle size	18 nm for CeO <sub>2</sub> , size depends on doping for other grades
Density (theoretical)	7.22 g/cm <sup>3</sup> for CeO <sub>2</sub>
Refractive index (theoretical)	~2.35
Dispersion medium	Water, dispersion in other media is under development
Type of functionalization	Depends on dispersion medium and application requirements

## Nanoparticle size and morphology



Samples and Safety Data Sheet are available.

Provided data are typical values, they are not contractual.

Revised 02/2021