

Electronic Supplementary Information Available for “Supercritical Hydrothermal Synthesis of Hydrophilic Polymer-Modified Water-Dispersible CeO₂ Nanoparticles”

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Supplementary Figures

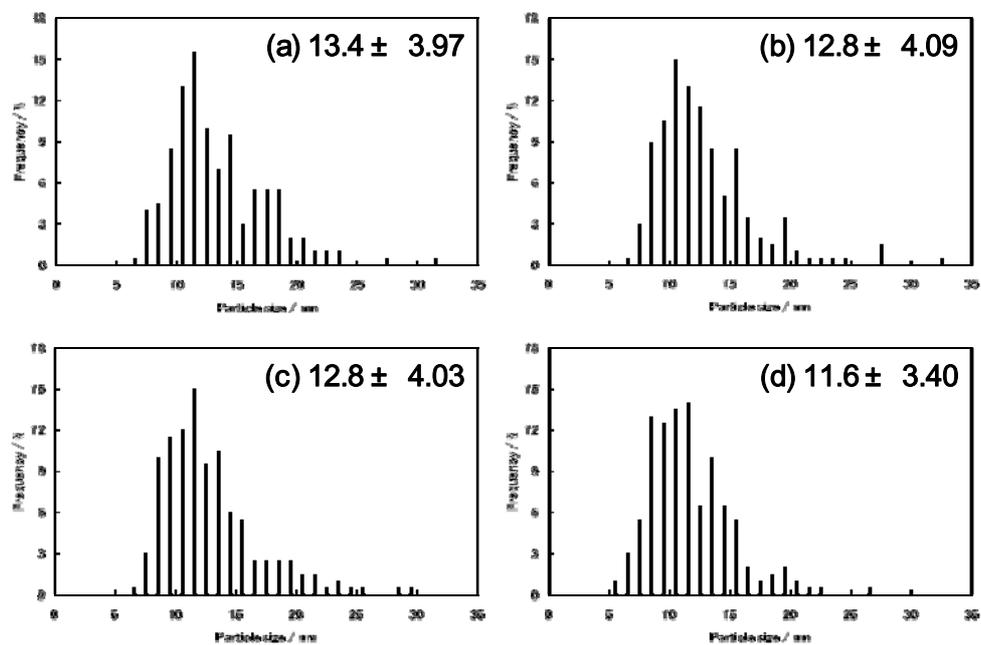


Figure S1. The arithmetic mean particle diameter and the size distributions from TEM images of prepared CeO₂ nanoparticles: (a) PVA500-modified, (b) PVA1000-modified, (c) PAA-modified, and (d) unmodified.

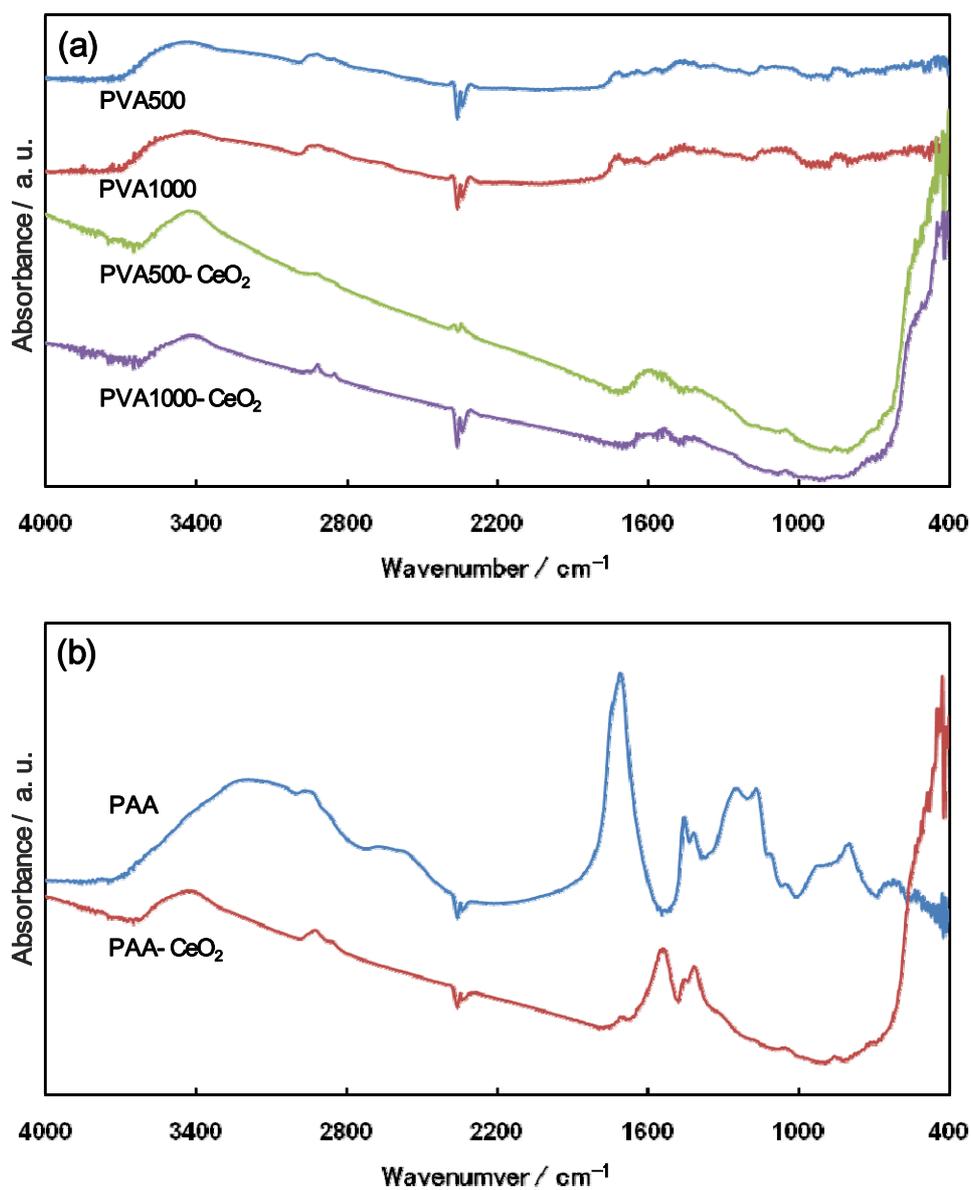


Figure S2. FT-IR spectra of original polymers and polymer-modified CeO₂ nanoparticles: (a) blue line: PVA500, red line: PVA1000, green line: PVA500-modified CeO₂ nanoparticles and purple line: PVA1000-modified CeO₂ nanoparticles; (b) blue line: PAA, and red line: PAA-modified CeO₂ nanoparticles.

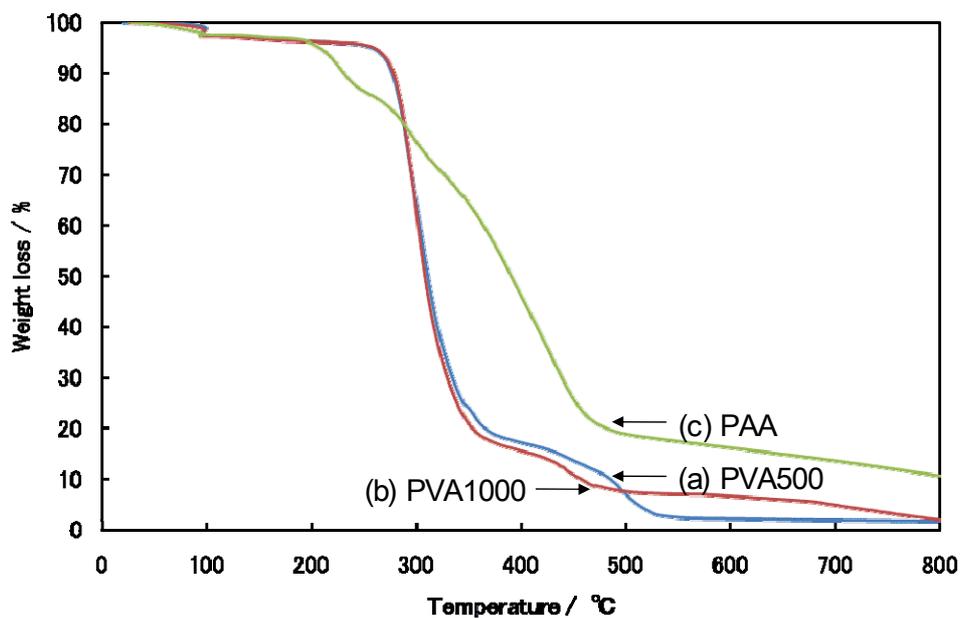


Figure S3. TGA curves of original polymers: (a) PVA500; (b) PVA1000; and (c) PAA. The measurements were conducted at a ramp rate of 10 °C/min under an argon atmosphere.

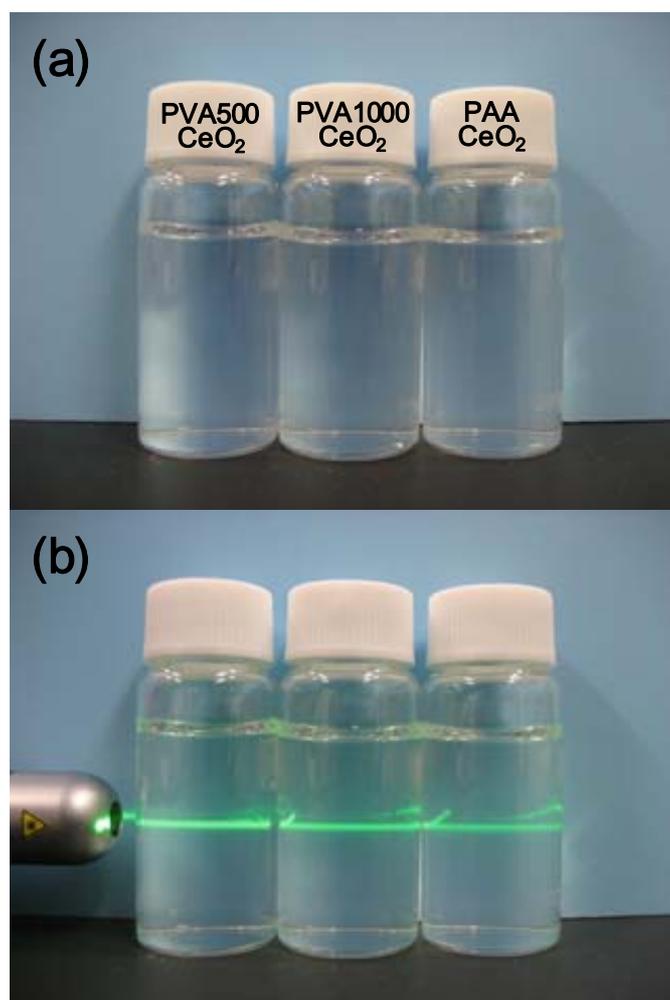


Figure S4. (a) Photographs showing polymer-modified CeO₂ nanoparticles in dispersed water. (b) Laser irradiated on the dispersed water to confirm the nanoparticles in water.