

## Electronic Supplementary Information

### **Mechanistic insights into the acetate-accelerated synthesis of crystalline ceria nanoparticles**

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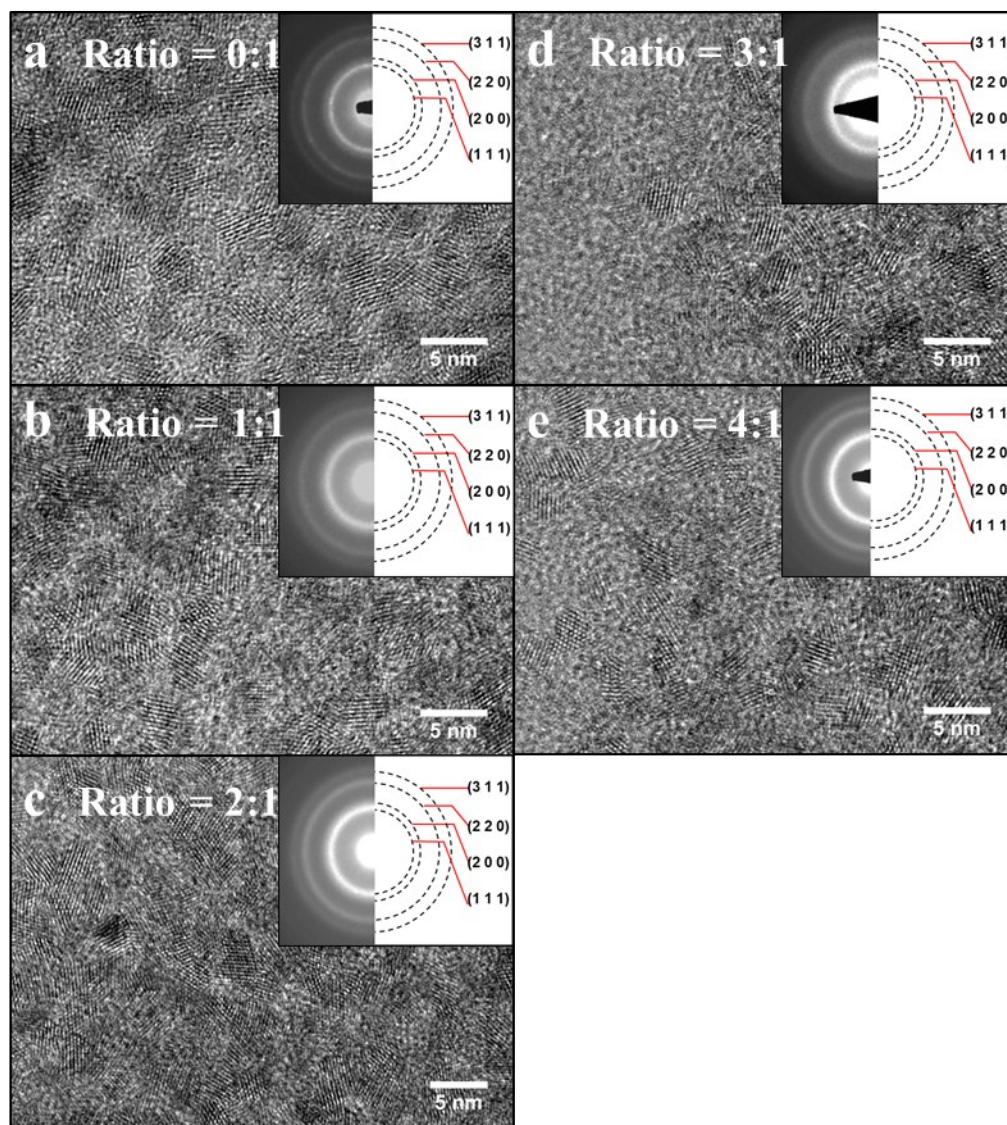
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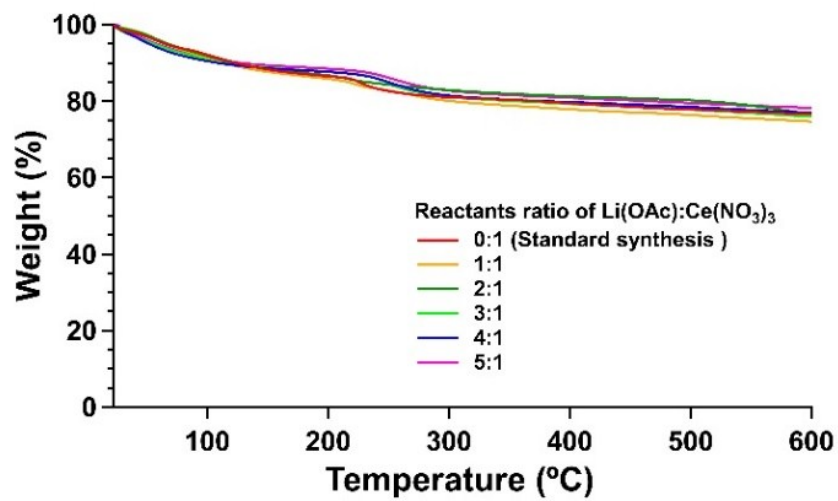
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**Fig. S1** TEM images of ceria NPs produced using of reactants ratios (LiOAc and  $\text{Ce}(\text{NO}_3)_3$ ) of (a) 0:1, (b) 1:1, (c) 2:1, (d) 3:1, and (e) 4:1. (insets) Indexed corresponding SAED patterns.



**Fig. S2** TGA results for ceria NPs produced using LiOAc and Ce(NO<sub>3</sub>)<sub>3</sub> reactants with ratios of 0:1, 1:1, 2:1, 3:1, 4:1, and 5:1.