

## Supplementary Information

### Effects of NO<sub>3</sub><sup>-</sup>, Cl<sup>-</sup>, and CH<sub>3</sub>COO<sup>-</sup> anions and diethylene glycol on the morphological, structural, antidiabetic, and cell viability properties of CeO<sub>2</sub> nanoparticles

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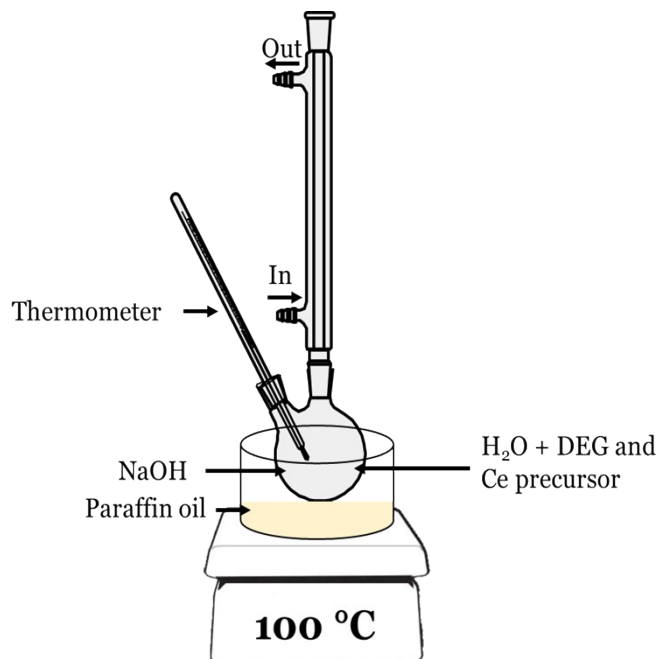
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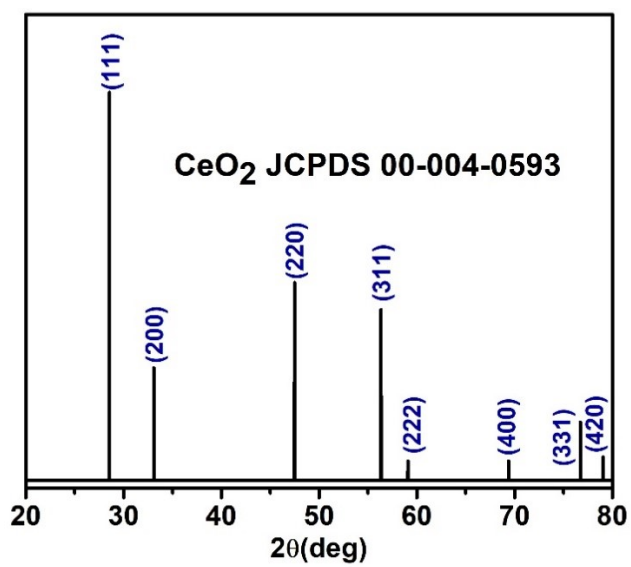
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**Table S1.** The amount of diethylene glycol and water used in the synthesis of CN, CC and CA samples.

Samples	Amount of diethylene glycol (mL)	Water (mL)
CN1/ CC1/ CA1	0.00	25.00
CN2/ CC2/ CA2	5.00	20.00
CN3/ CC3/ CA3	10.00	15.00
CN4/ CC4/ CA4	15.00	10.00
CN5/ CC5/ CA5	20.00	5.00
CN6/ CC6/ CA6	25.00	0.00



**Figure S1.** Schematic diagram of the synthesis procedure.



**Figure S2.** Standard XRD pattern of cubic CeO<sub>2</sub>.

**Table S2.** Summary of the inhibition of  $\alpha$ -glucosidase activity (%).

Samples	Inhibition of $\alpha$ -glucosidase activity (%)								
	CN			CC			CA		
	0.5	1.5	2.5	0.5	1.5	2.5	0.5	1.5	2.5
<b>C-Com</b>	34.74±3.70	25.13±3.34	30.91±0.04	34.74±3.70	25.13±3.34	30.91±0.04	32.67±1.18	24.72±6.82	28.16±2.58
<b>1</b>	40.86±2.34	42.29±0.93	42.15±1.69	36.78±4.96	40.31±1.04	33.87±2.98	9.40±6.32	3.02±2.45	2.34±0.34
<b>2</b>	33.69±5.04	38.95±3.81	37.58±2.78	37.41±0.45	37.66±3.30	38.43±1.50	3.87±0.00	2.96±2.43	2.04±0.61
<b>3</b>	30.42±12.73	39.03±3.99	40.15±2.77	43.33±1.11	36.78±9.23	41.57±1.54	-	1.37±0.8	8.87±11.52
<b>4</b>	43.15±2.05	41.12±0.90	33.69±5.65	30.92±7.24	29.79±1.92	37.77±3.14	2.93±2.3	-	17.04±2.51
<b>5</b>	36.08±2.10	33.69±5.65	36.99±1.89	42.83±3.63	28.92±6.85	34.48±1.75	0.56±0.08	0.30±2.38	17.12±1.66
<b>6</b>	41.70±2.91	40.92±2.19	41.07±1.69	39.38±2.97	44.35±7.60	38.56±10.05	5.59±1.07	2.42±2.52	2.04±0.61