

Electronic Supplementary Information for
Microstructural changes caused by Ba and Pr doping in nanosized $\text{Bi}_2\text{Ce}_2\text{O}_7$

leading to interesting optical, magnetic, and catalytic property

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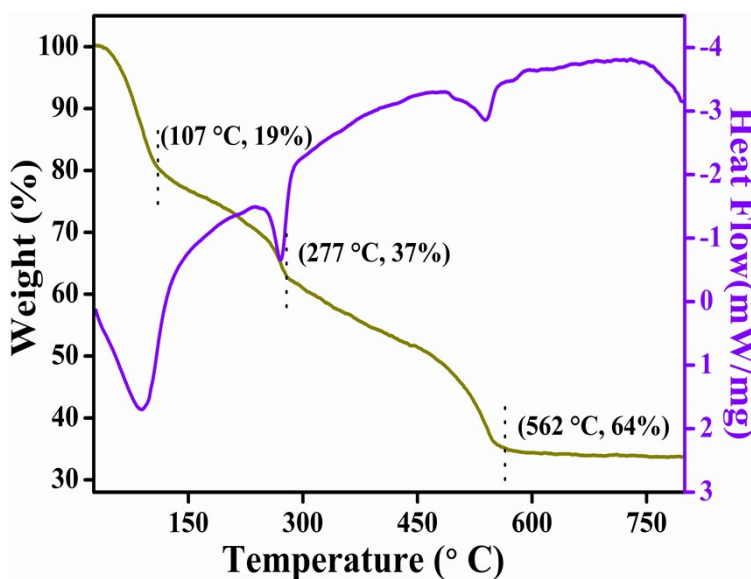


Fig. S1 TG trace of the co-precipitated hydroxide precursor consisting of 50 mol% each of Bi and Ce.

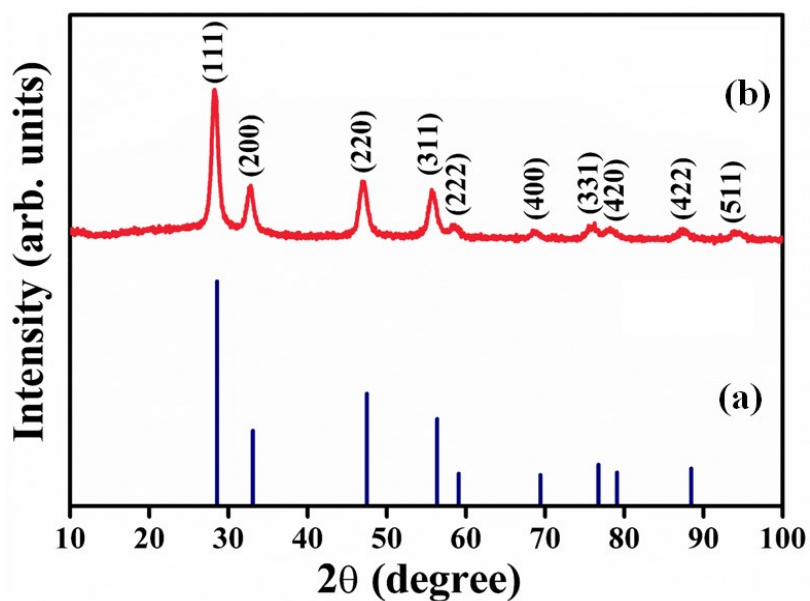


Fig. S2 (a) Line profile of CeO_2 (ICSD no. 98-002-9046) and (b) PXRd pattern of the product obtained after the calcination of the precursor consisting 50 *mol%* each of Bi and Ce.

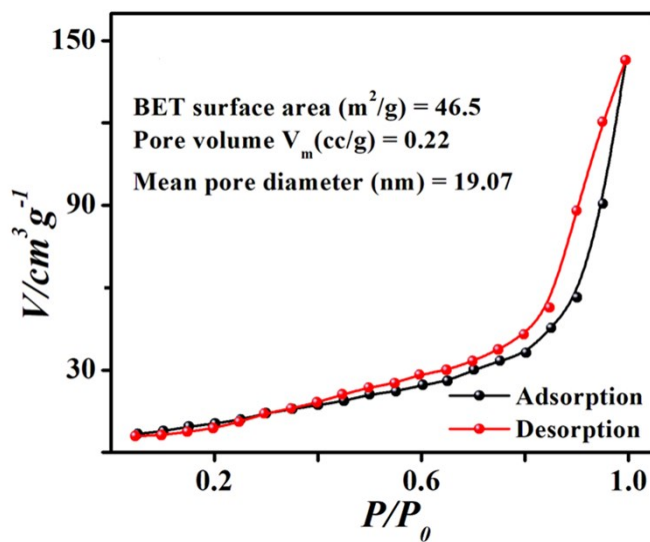


Fig. S3 N_2 adsorption-desorption BET surface area isotherms of BCO.

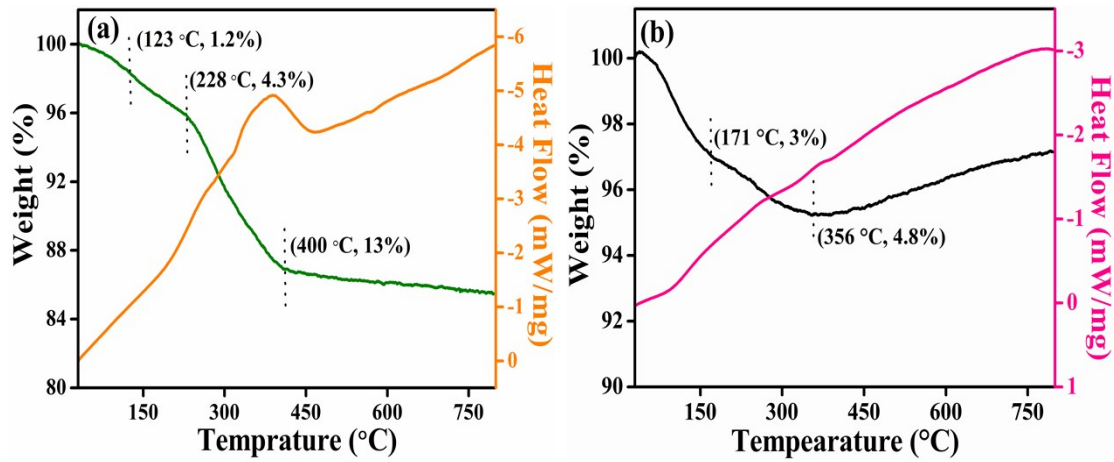


Fig. S4 TG trace of (a) BCPO and (b) BCBO precursors.

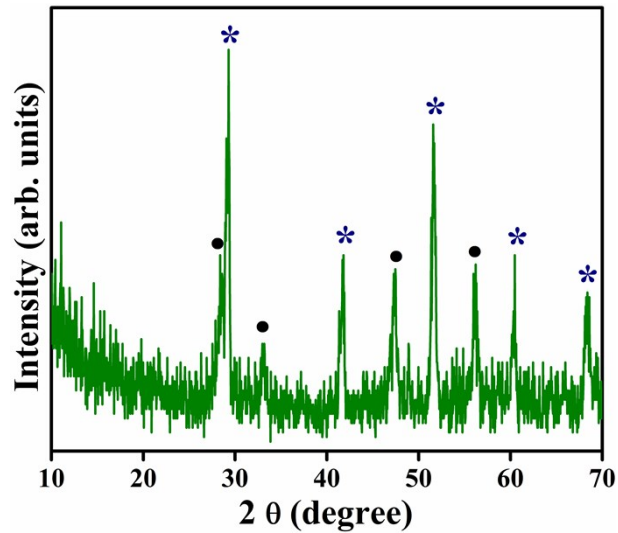


Fig. S5 PXRD pattern of the product obtained after the calcination of the precursor consisting bismuth substitution by barium in BCO. Reflections marked with ‘circle’ and ‘asterisk’ correspond to CeO_2 (ICSD no. 98-002-9046) and $\text{Ba}_2\text{Bi}_2\text{O}_6$ (ICSD no. 98-002-8164), respectively.

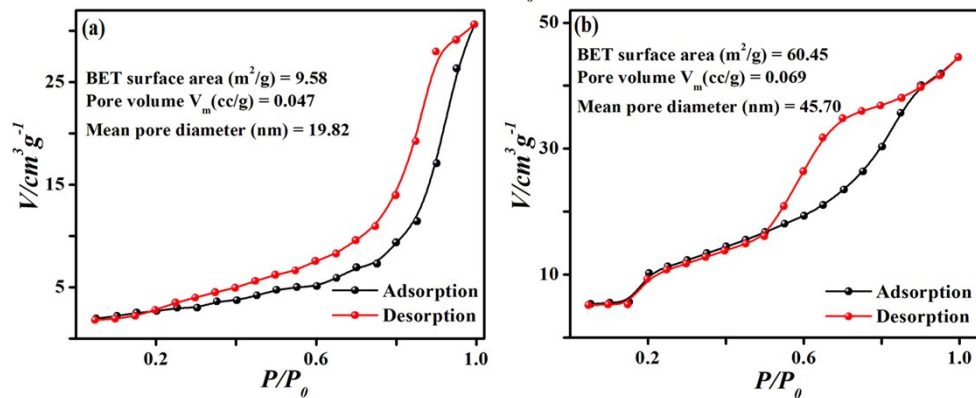


Fig. S6 N₂ adsorption-desorption BET surface area isotherms of (a) BCPO and (b) BCBO.

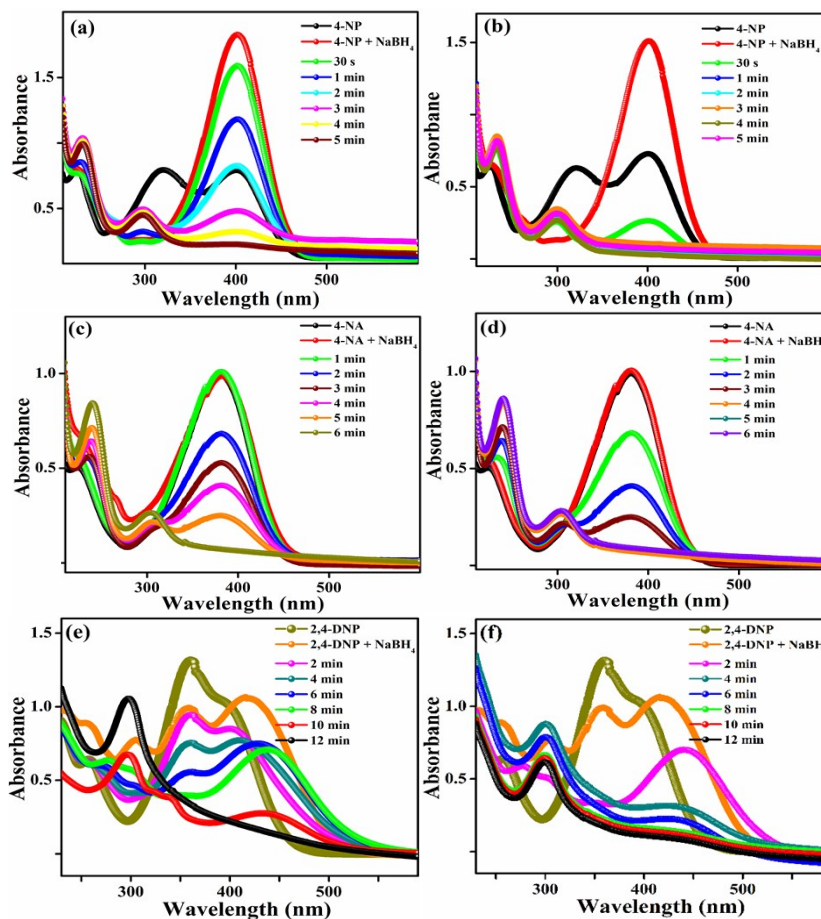


Fig. S7 Time-dependent UV-visible spectra of 4-NP ((a) & (b)), 4-NA ((c) & (d)), 2, 4 DNP ((e) & (f)) in the presence of 5 mg of NaBH₄ and 5 mg of BCPO and BCBO samples.