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Electronic Supplementary Information

Decrease of the required dopant concentration for δ-Bi_2O_3 crystal stabilization through thermal quenching during single-step flame spray pyrolysis

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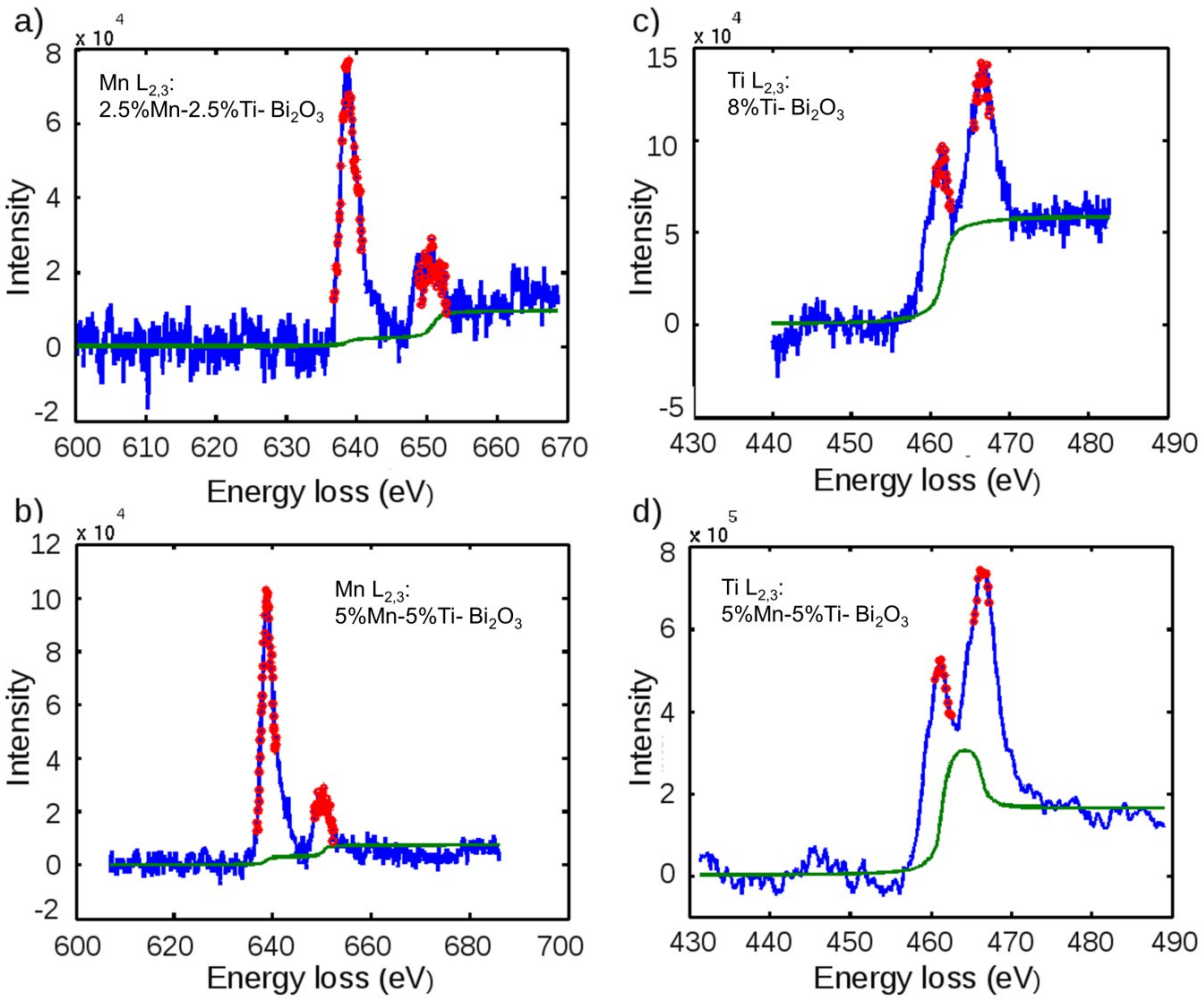

Fig. S1 EELS spectrum of $L_{2,3}$ edge of Mn or Ti containing Bi_2O_3. (a) Mn $L_{2,3}$ edge spectra of 2.5%Mn-2.5%Ti-Bi_2O_3 (b) Mn $L_{2,3}$ edge spectra of 5%Mn-5%Ti-Bi_2O_3 (c) Ti $L_{2,3}$ edge spectra of 8%Ti-Bi_2O_3 (d) Ti $L_{2,3}$ edge spectra of 5%Mn-5%Ti-Bi_2O_3. The EELS data confirm the oxidation states of Mn to be +2.

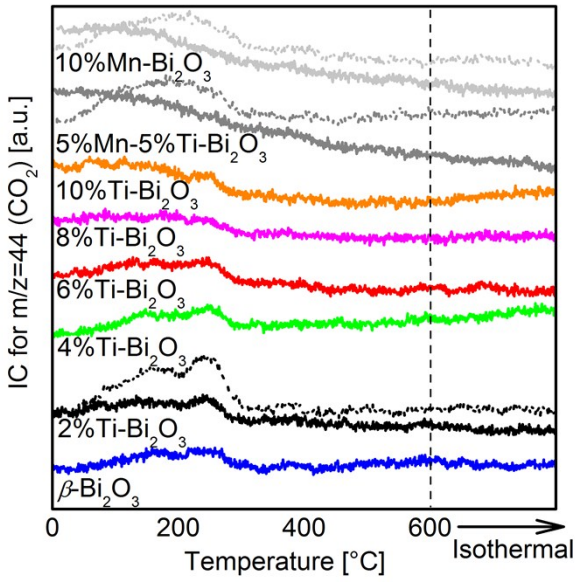

Fig. S2 Ion current (IC) for m/z=44 (CO_2) during H_2-TPRs of the as-prepared samples synthesized by FSP indicate small CO_2 desorption, which was amplified during H_2-TPRs conducted with 50 mg of sample (dotted line).