

Supplementary Information
 β -Bi₂O₃ reduction by laser irradiation in liquid environment

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Table S1. Content (%) of Bi⁰, Bi²⁺ and Bi³⁺ in initial and laser irradiated samples, calculated by peak deconvolution reported in Fig.S1.

SAMPLE	%Bi ⁰	%Bi ²⁺	%Bi ³⁺
BOET		18.7	81.3
BOET35	4.7	95.3	
BOET70	15.3	84.7	
BOET140	33.1	66.9	

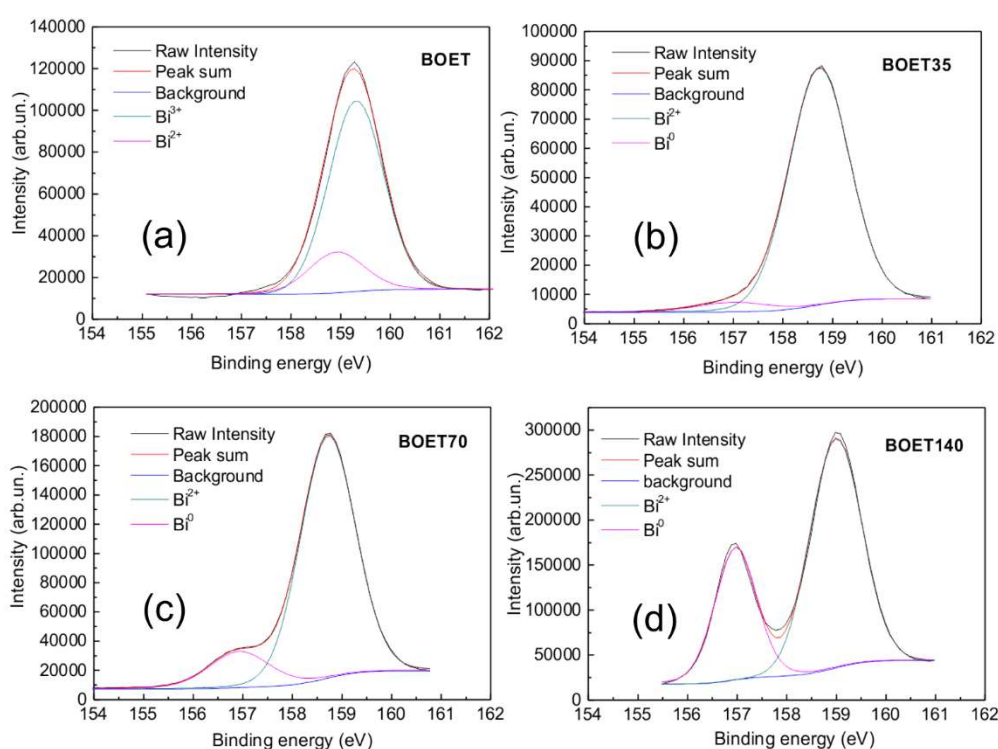


Fig.S1 Deconvolution of Bi_{4f_{7/2}} XPS spectra of BOET (a), BOET35 (b), BOET70 (c) and BOET140 (d) reporting the metal Bi and the Bi oxide components, respectively. The Bi_{4f_{7/2}} binding energies for Bi⁰ and Bi³⁺ were fixed at 157.0 eV and 159.3 eV, respectively, while contributions due to sub-oxides were found at 158.8 eV. In the case of BOET140 the sub-oxide peak is upshifted to 159 eV due to the presence of C=O contamination, as confirmed by the C1s spectrum (see Fig.5c)