

Supporting Information

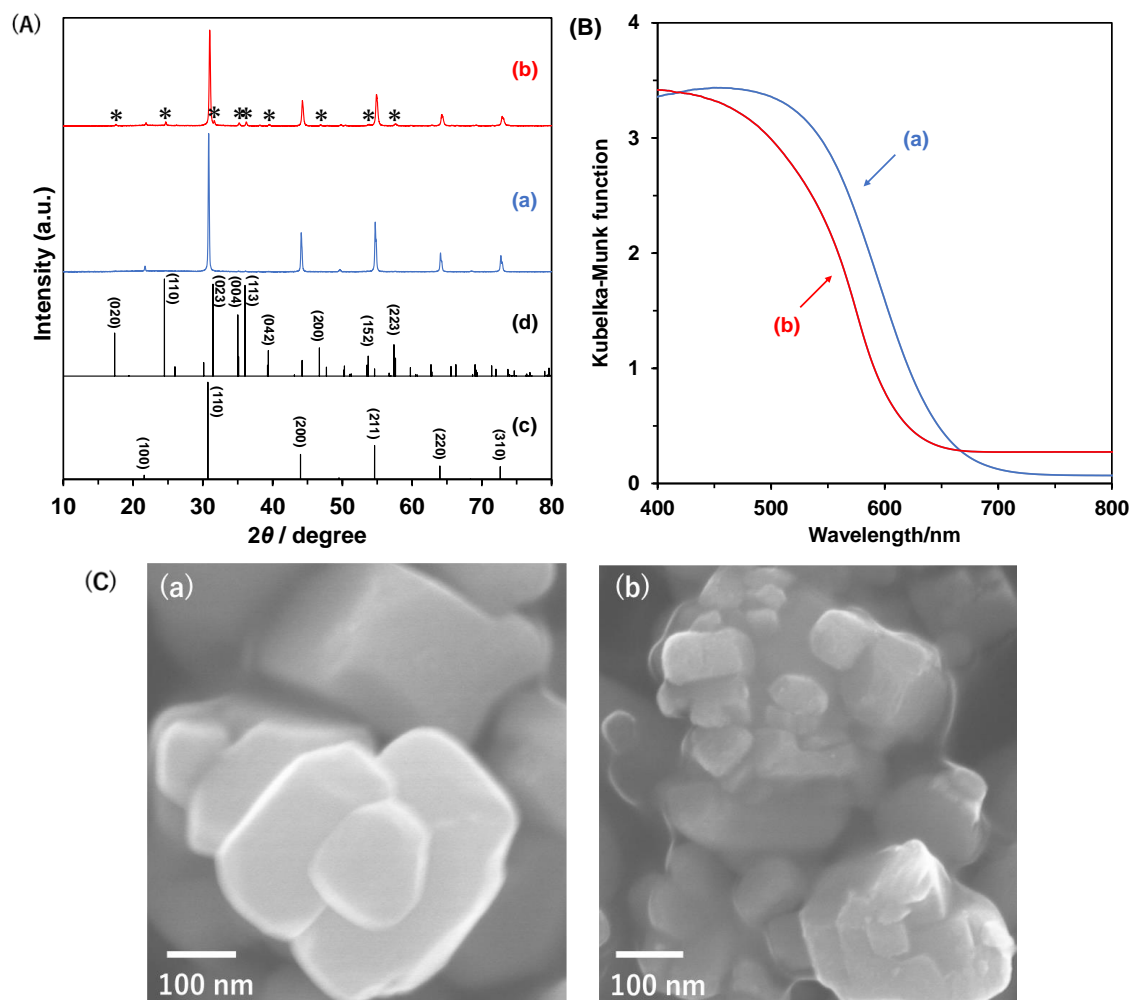


Figure S1. (A) XRD patterns, (B) DRS data, and (C) SEM images obtained for (a) BaTaO_2N and (b) $\text{BaTaO}_2\text{N:Mg}$. The XRD pattern labeled (c) in panel (A) is that for cubic BaTaO_2N (ICDD PDF 01-084-1748) [22], which is included as a reference, and the asterisk (*) symbols indicate peaks related to Ta_3N_5 (ICDD PDF 01-079-1533) [23].

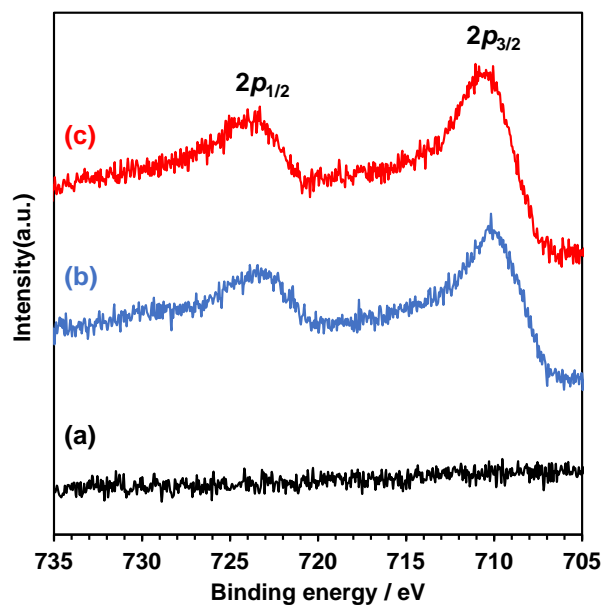


Figure S2. Fe 2*p* XPS spectra of BaTaO₂N:Mg loaded with (a) no cocatalyst, (b) FeO_x by photodeposition, and (c) Pt by impregnation-hydrogen reduction with subsequent photodeposition of FeO_x. Fe and Pt were both loaded at 0.5 wt% to provide sufficient analytical sensitivity.