

Supplementary information

Enhanced overall water splitting under visible light irradiation over Ir and La-codoped NaTaO_3 by post KCl flux treatment

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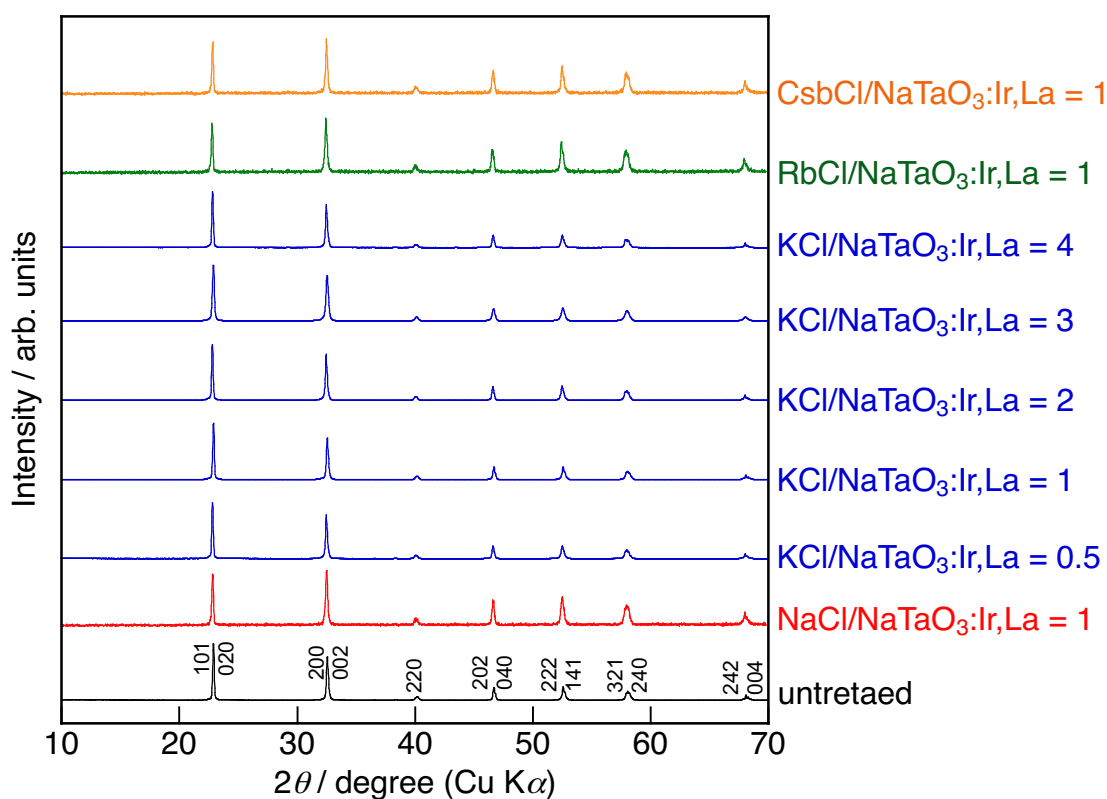


Figure S1. XRD patterns of untreated, NaCl flux-treated, KCl flux-treated, RbCl flux-treated, and CsCl flux-treated NaTaO_3 :Ir(0.1%),La(0.2%).

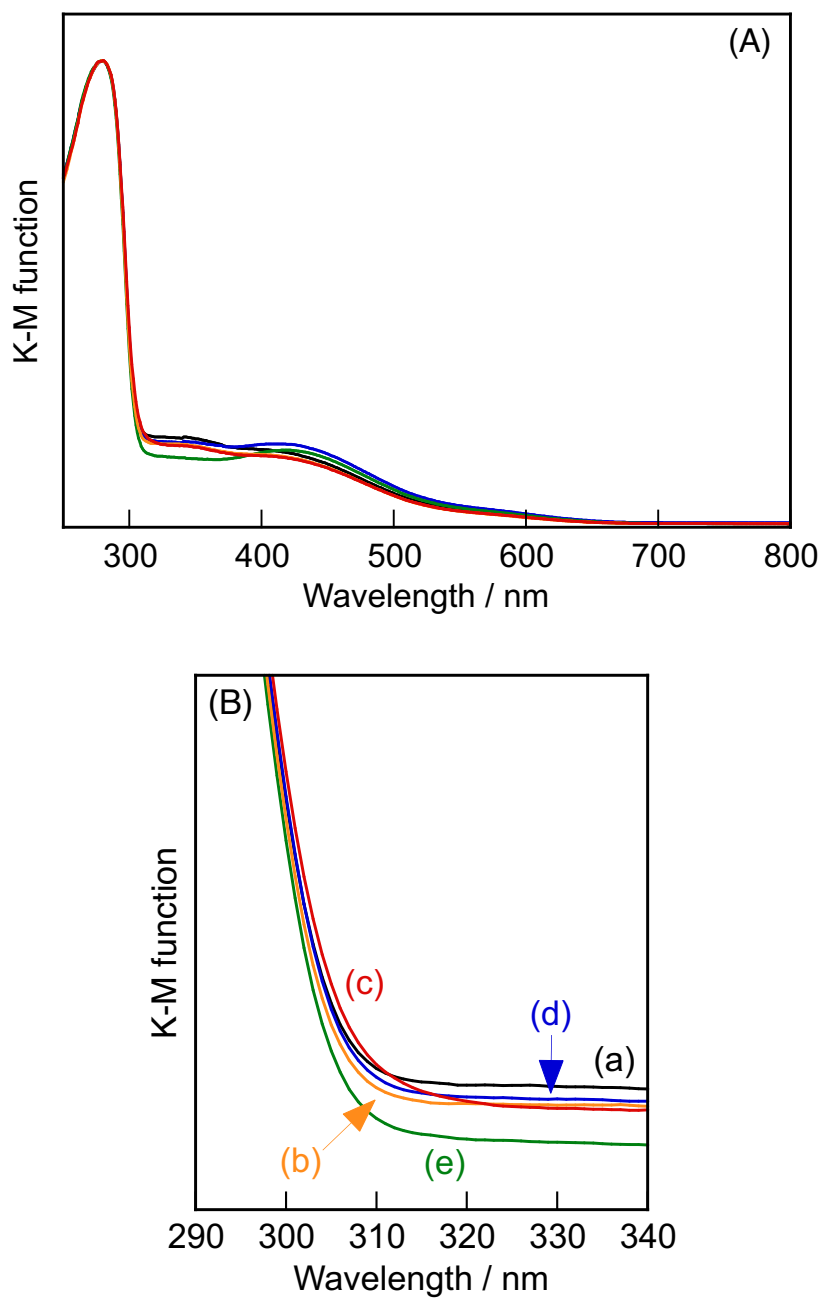


Figure S2. Diffuse reflectance spectra of (a) untreated, (b) NaCl flux-treated, (c) KCl flux-treated, (d) RbCl flux-treated, and (e) CsCl flux-treated NaTaO₃:Ir(0.1%),La(0.2%). Range: (A) 250-800 nm and (B) 290-340 nm.

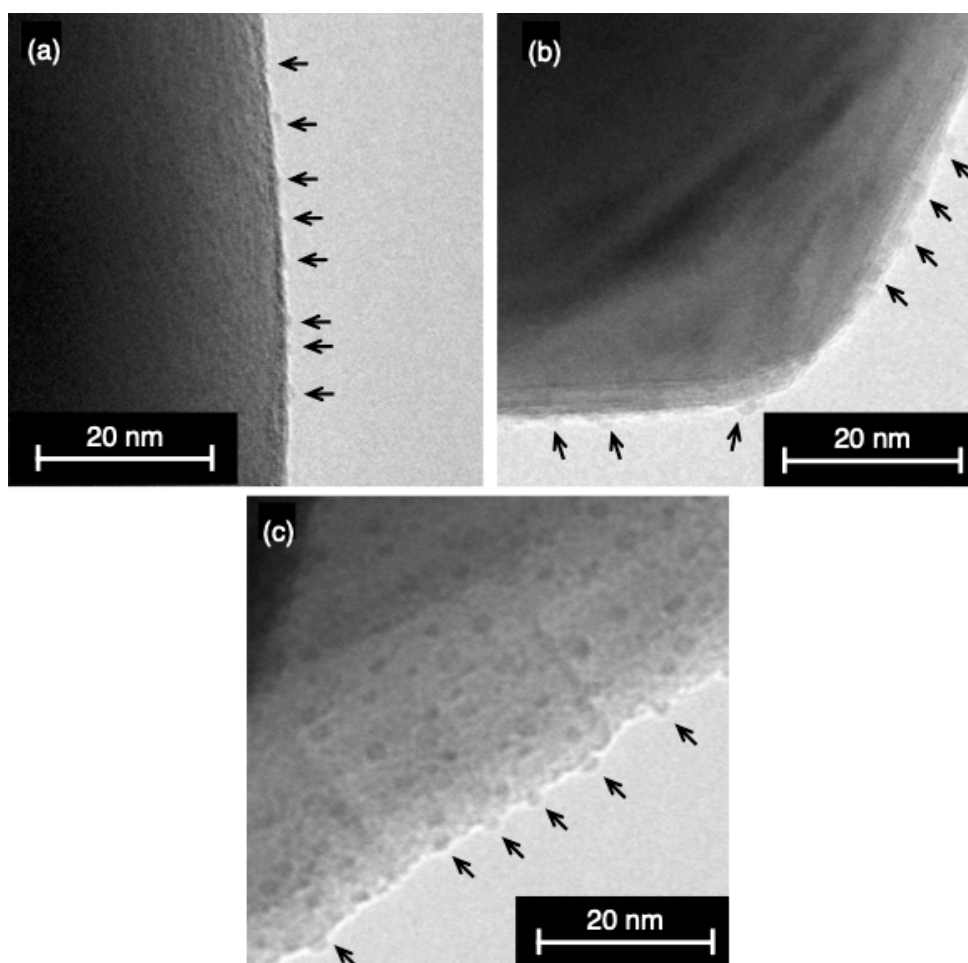


Figure S3. TEM images taken at different areas of PbO_2 (2 wt% as Pb)-photodeposited $\text{NaTaO}_3\text{:Ir}(0.1\%),\text{La}(0.2\%)$ (a) without and (b,c) with a KCl flux treatment. $\text{KCl}/\text{NaTaO}_3\text{:Ir,La} =$ (b) 0.5 and (c) 2.

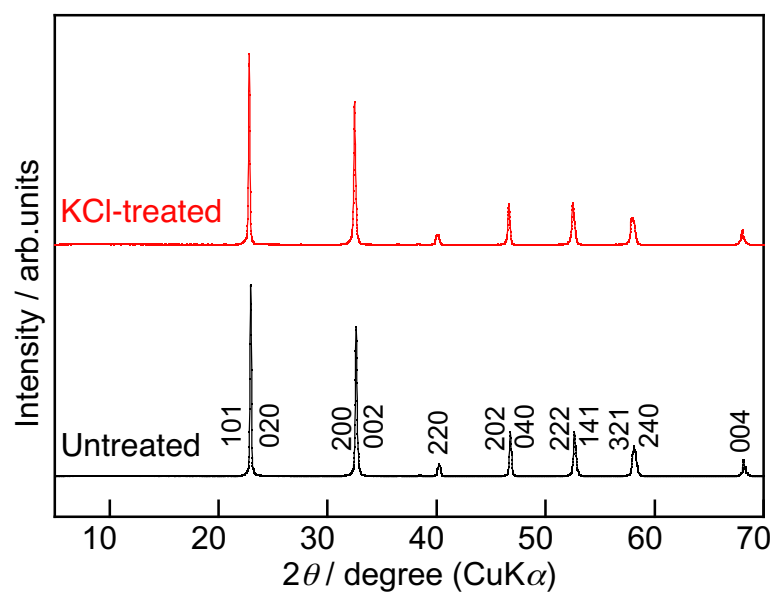


Figure S4. XRD patterns of untreated and KCl flux-treated $\text{NaTaO}_3\text{:La}(0.2\%)$. $\text{KCl}/\text{NaTaO}_3\text{:La} = 3$.

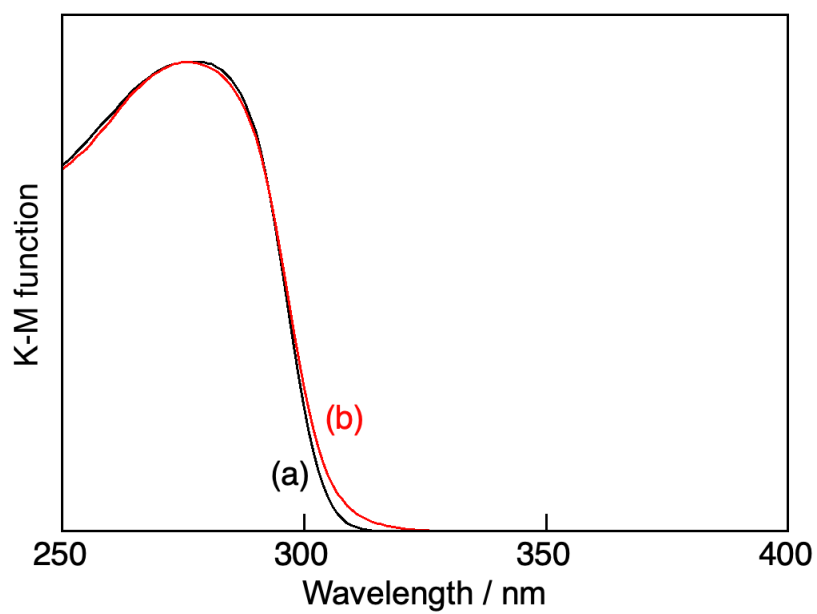


Figure S5. Diffuse reflectance spectra of (a) untreated and (b) KCl fux-treated $\text{NaTaO}_3\text{:La}(0.2\%)$. $\text{KCl}/\text{NaTaO}_3\text{:La} = 3$.