

Supplemental Informations

Fig.S1 EDS spectrum of $\text{Bi}_3\text{TaO}_7\text{-NA}$ (a) and $\text{Bi}_3\text{TaO}_7\text{-A}$ (b)

Fig.S2 EDS spectrum of $\text{Bi}_3\text{TaO}_7\text{-A}$ with different annealing temperature 650 °C (a), 700 °C (b) and 750 °C (c)

Fig.S3 Photocurrent density-time curves of $\text{Bi}_3\text{TaO}_7\text{-A}$

Fig.S4 The XPS spectrum of $\text{Bi}_3\text{TaO}_7\text{-NA}$

Tab.S1 Equivalent-circuit fitting parameters of $\text{Bi}_3\text{TaO}_7\text{-NA}$ and $\text{Bi}_3\text{TaO}_7\text{-A}$ (650 °C, 700 °C and 750 °C)

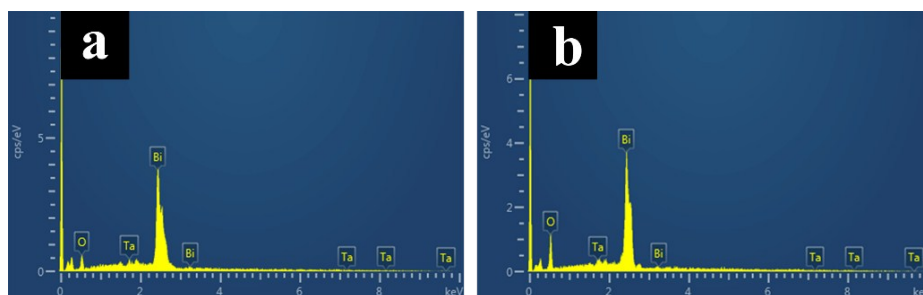


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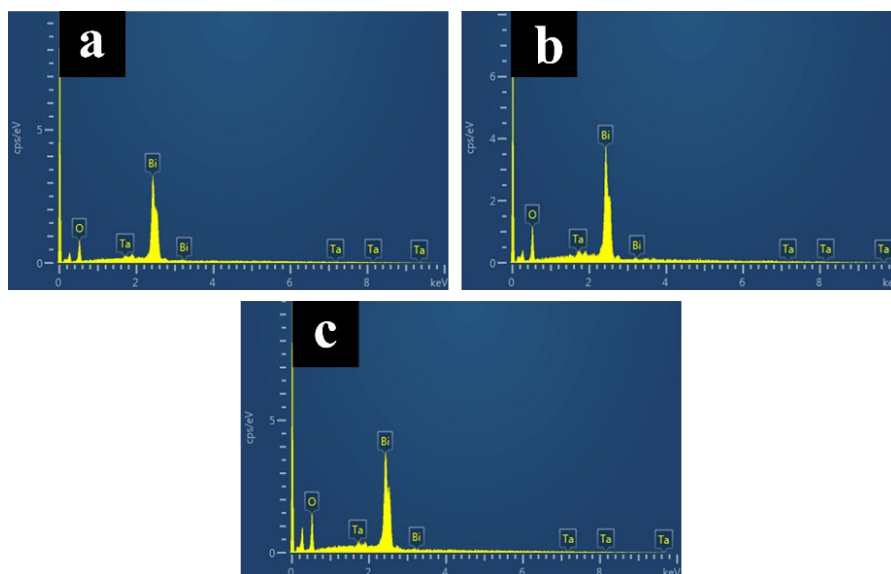


Fig.S2 EDS spectrum of $\text{Bi}_3\text{TaO}_7\text{-A}$ with different annealing temperature 650 °C (a), 700 °C (b) and 750 °C (c)

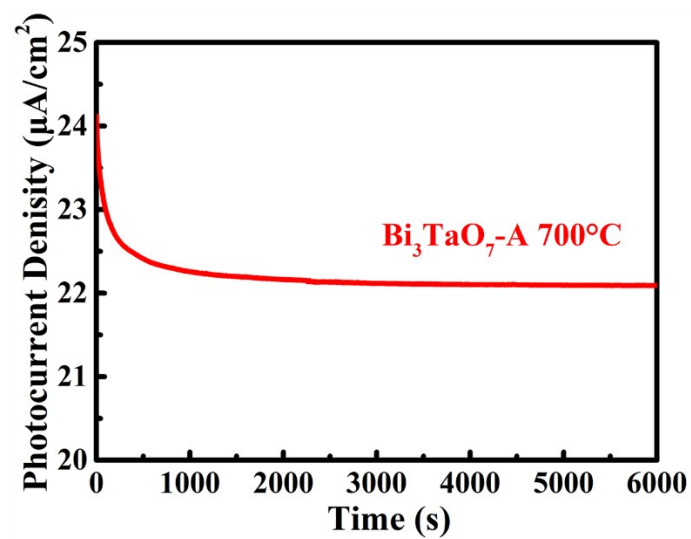


Fig.S3 Photocurrent density-time curves of $\text{Bi}_3\text{TaO}_7\text{-A}$

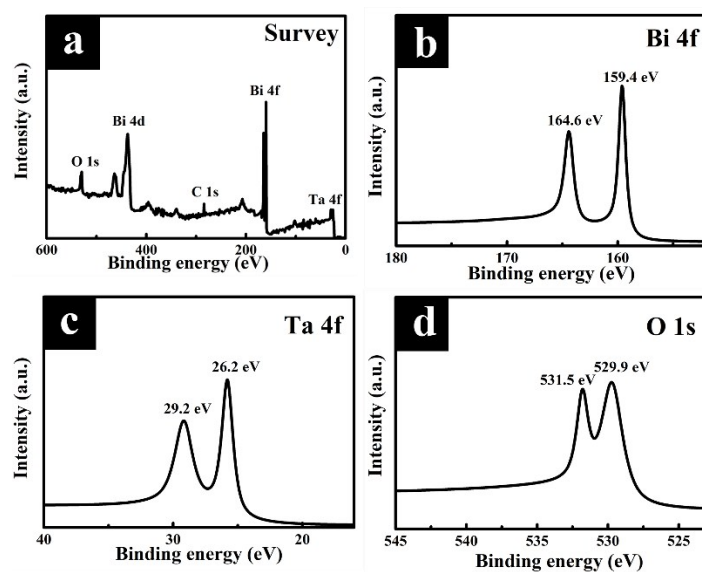


Fig.S4 The XPS spectrum of $\text{Bi}_3\text{TaO}_7\text{-NA}$

Tab.S1 Equivalent-circuit fitting parameters of Bi₃TaO₇-NA and Bi₃TaO₇-A (650 °C, 700 °C and 750 °C)

System	Series resistance, R _s (Ω)	Resistance, R _t (Ω)	Frequency power	CPE, Y ₀ (× 10 ⁻⁶ F)
Bi ₃ TaO ₇	26.07	3598	0.9335	12.43
Bi ₃ TaO ₇ -A 650 °C	23.63	1340	0.9549	17.79
Bi ₃ TaO ₇ -A 700 °C	38.86	1168	0.9099	13.19
Bi ₃ TaO ₇ -A 750 °C	21.82	1290	0.9455	21.04