

Supporting Information

Photocatalytic reduction of CO₂ and proton using water as electron donor over potassium tantalate nanoflakes

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Borosilicate glass transmittance

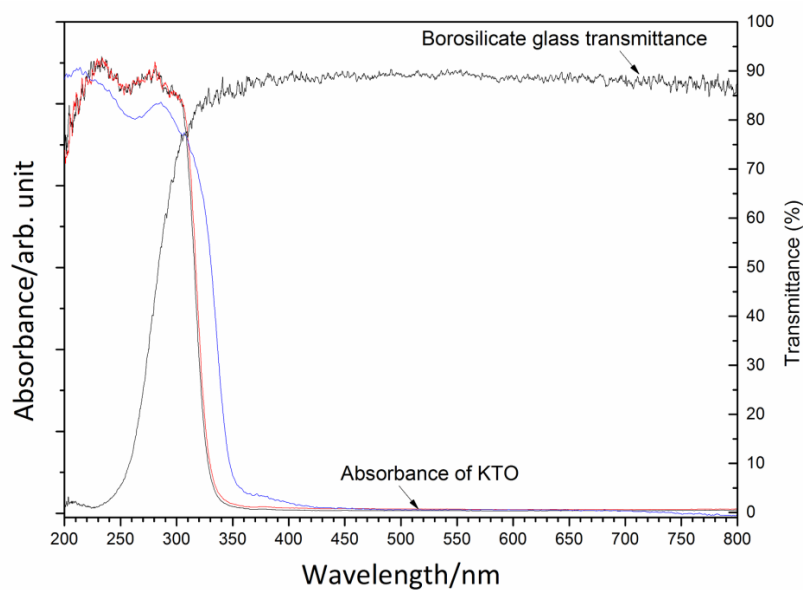


Figure S1: Transmittance spectrum of borosilicate glass and absorbance spectrum of KTO.

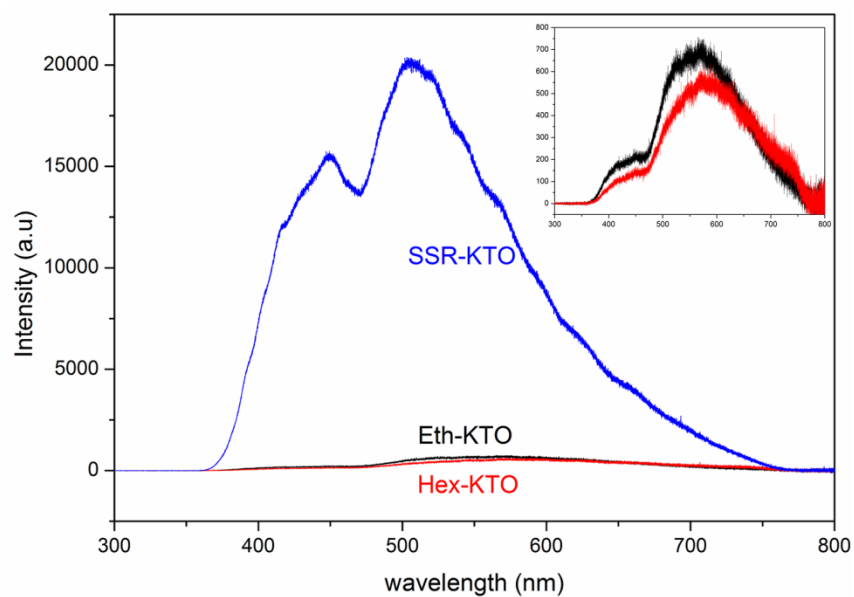


Figure S2: Photoluminescence spectra of KTaO₃ prepared in different conditions measured at room temperature. Blue line: SSR-KTO; Red line: Hex-KTO; and Black line: Eth-KTO. (Inset: the enlarge view of Eth-KTO and Hex-KTO spectra)

Whole pattern fitting (LeBail method) results:

Lebail fitting results	SSR-KTO	Eth-KTO	Hex-KTO
Rbragg (%) (represents the goodness of fit, <5% is acceptable)	1.826	1.456	2.316
Lattice parameter (Å)	3.9884(1)	3.9874(4)	3.989(1)
Volume (Å³)	63.443(3)	63.40(2)	63.45(4)
Crystallite size (nm)	161(3)	45.5(5)	32(1)

Table S1: Whole pattern fitting of the XRD data. Numbers in parentheses represents the standard error value.