*Supporting Information for*

**Enhancing water oxidation efficiency of hematite thin films by using oxygen deficient atmosphere**

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FIG. S1. IPCE measured at 1.23 VRHE for hematite film synthesized during 2 hours with additional thermal treatment at 750 °C per 30 minutes in different atmosphere; Air (black dot), O2 (blue dot) and N2 (red dot). Aqueous electrolyte: 1mol L-1 of NaOH with pH adjusted at 13.6.