

Electronic Supplementary Information

**Significant effect of heterojunction quality on
photoelectrochemical water splitting in bilayer
photoelectrodes: Rb_xWO_3 thin films on $\text{RbLaNb}_2\text{O}_7$ layers**

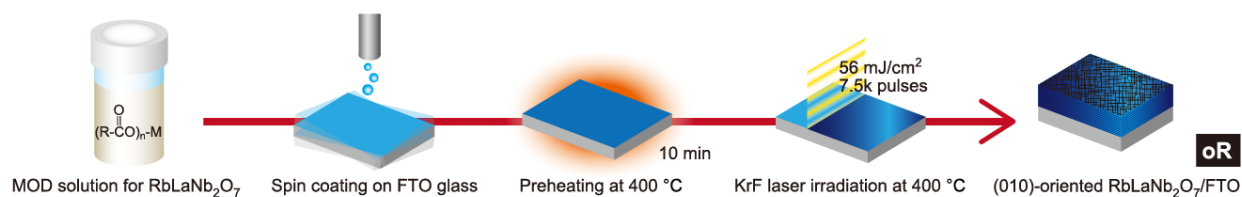
Tomohiko Nakajima,* Takako Nakamura, and Tetsuo Tsuchiya

Advanced Manufacturing Research Institute, National Institute of Advanced Industrial Science and Technology,
Tsukuba Central 5, 1-1-1 Higashi, Tsukuba, Ibaraki 305-8565, Japan.

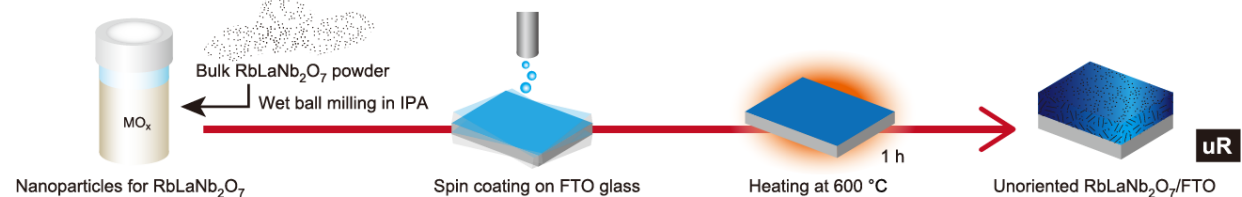
Sample preparation

Substrate preparation

(010)-oriented $\text{RbLaNb}_2\text{O}_7$ on FTO glass

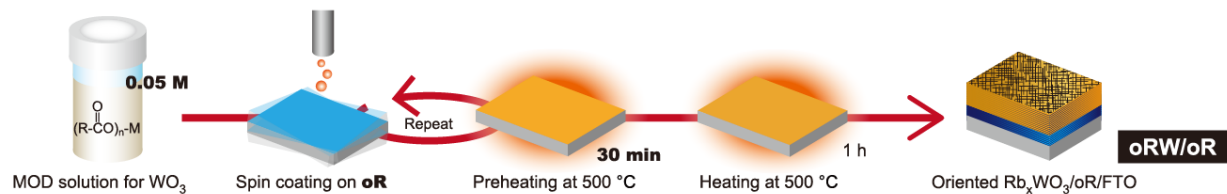


Unoriented $\text{RbLaNb}_2\text{O}_7$ on FTO glass

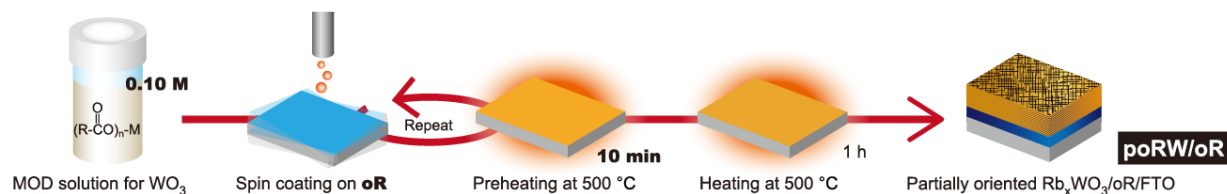


Rb_xWO_3 film preparation

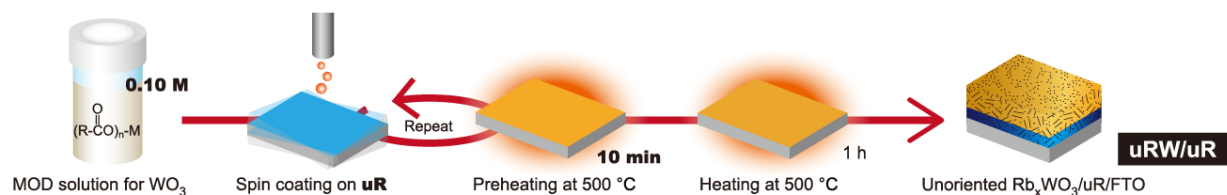
Oriented Rb_xWO_3 film on oR



Partially oriented Rb_xWO_3 film on oR



Unoriented Rb_xWO_3 film on uR



Unoriented Rb_xWO_3 film on bare FTO

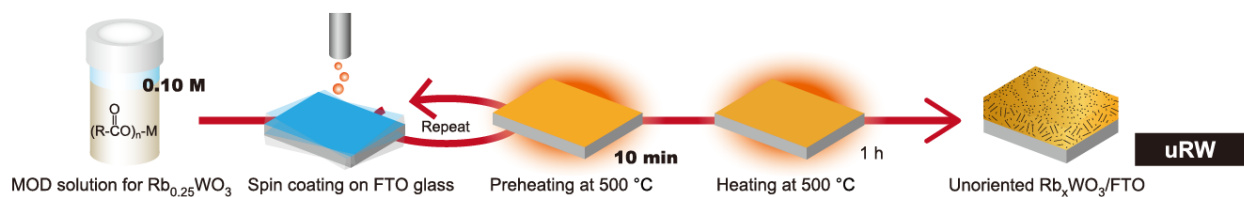


Figure S1: Process flow chart of prepared samples oR, uR, oRW/oR, poRW/oR, uRW/uR and uRW.