

Supplementary Information

Rh,Sb-codoped SrTiO₃ cubic nanoparticles encapsulated by ZnIn₂S₄ nanosheets for efficient visible-light-driven hydrogen evolution

Junzhe Jiang^{a,b}, Yiquan Zhan^{a,b}, Bingxue Li^a, Quan Li^c, Yongsheng Liu^{a,b,*}, Jinbiao Liu^{a,*}, Liqing Li^{a,b,*}, Yoshihisa Sakata^d

^a Jiangxi Province Key Laboratory of Functional Crystalline Materials Chemistry, School of Chemistry and Chemical Engineering, Jiangxi University of Science and Technology, Ganzhou 341000, Jiangxi Province, China

^b Yichun Lithium New Energy Industry Research Institute, Jiangxi University of Science and Technology, Yichun 336023, Jiangxi Province, China

^c School of Energy and Mechanical Engineering, Jiangxi University of Science and Technology, Nanchang 330013, Jiangxi Province, China

^d Graduate School of Sciences and Technology for Innovation, Yamaguchi University, Ube 755-8611, Yamaguchi Prefecture, Japan

* Corresponding authors.

Email address:

lys90s@126.com (Y. Liu), liujinbiao@jxust.edu.cn (J. Liu), liliqing79@126.com (L. Li)

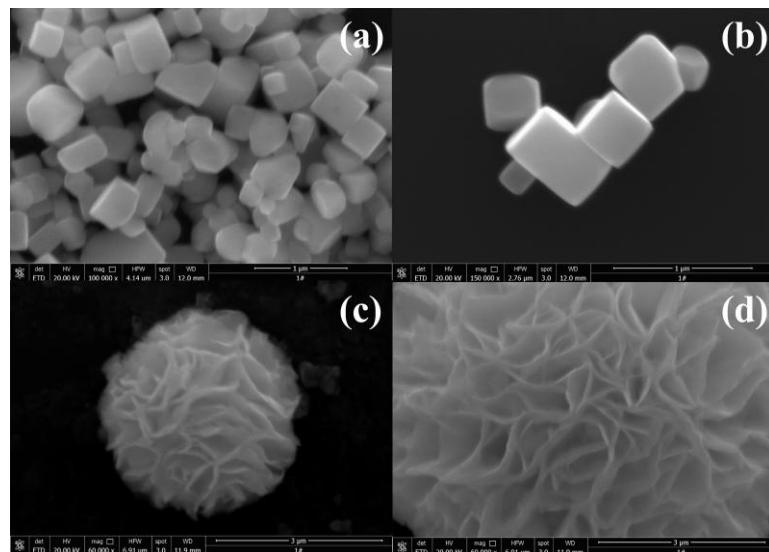


Fig. S1. SEM images for (a,b) Rh,Sb-STO and (c,d) pristine ZIS samples.

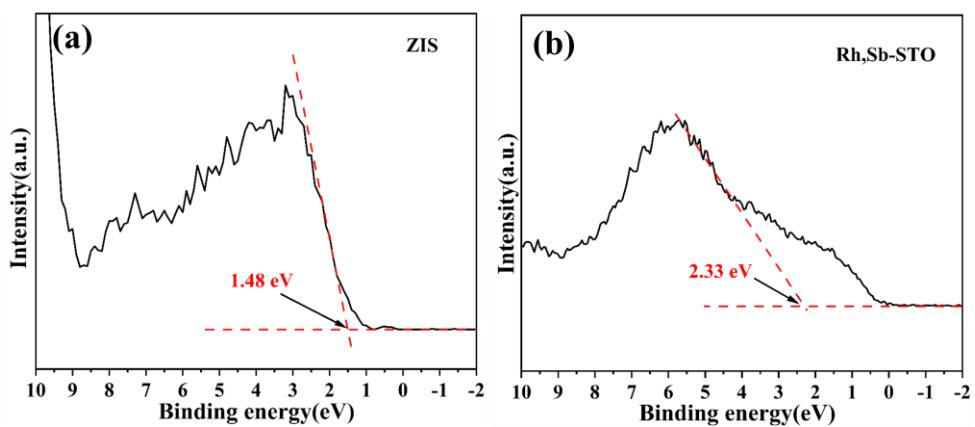


Fig. S2. VB XPS spectra of (a) pristine ZIS and (b) Rh,Sb-STO.

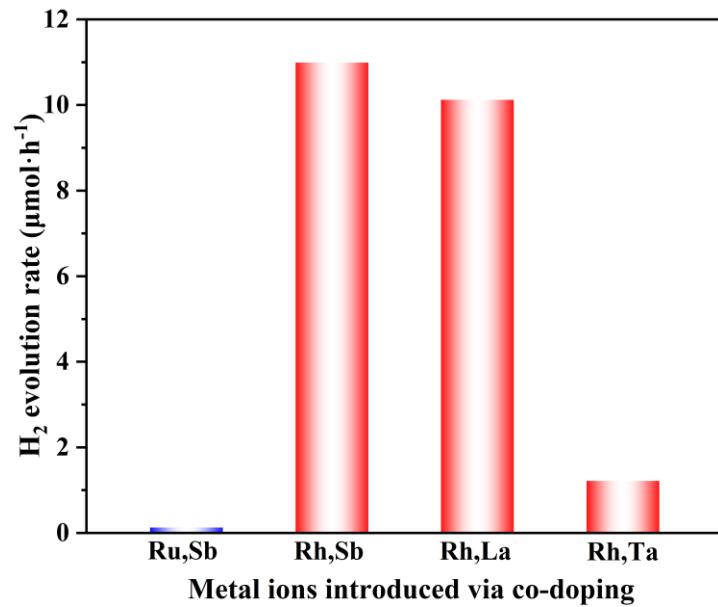


Fig. S3. Influence of doping metal ion pair on the photocatalytic hydrogen evolution rates over STO with 0.05 wt.% Pt. All the doping concentration of metal ion were maintained at 2 mol%.

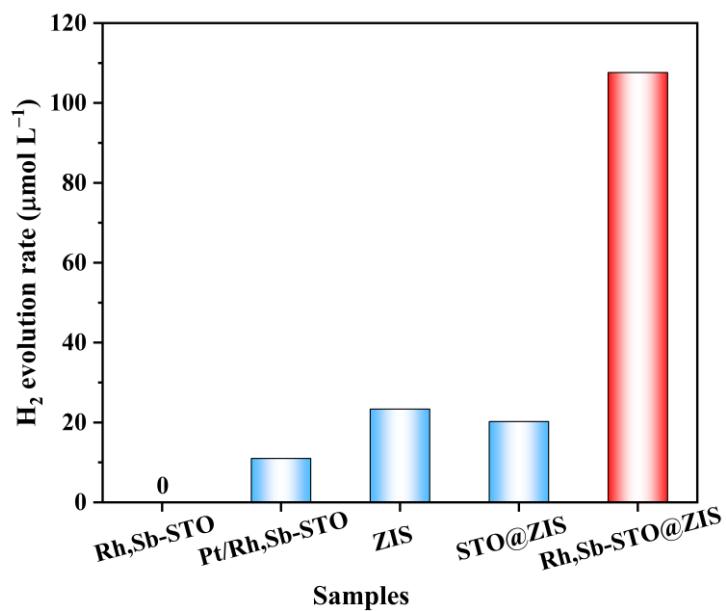


Fig. S4. Photocatalytic H_2 evolution rate over ZIS, 0.5STO@ZIS, and 0.5Rh,Sb-STO@ZIS samples under visible light irradiation.

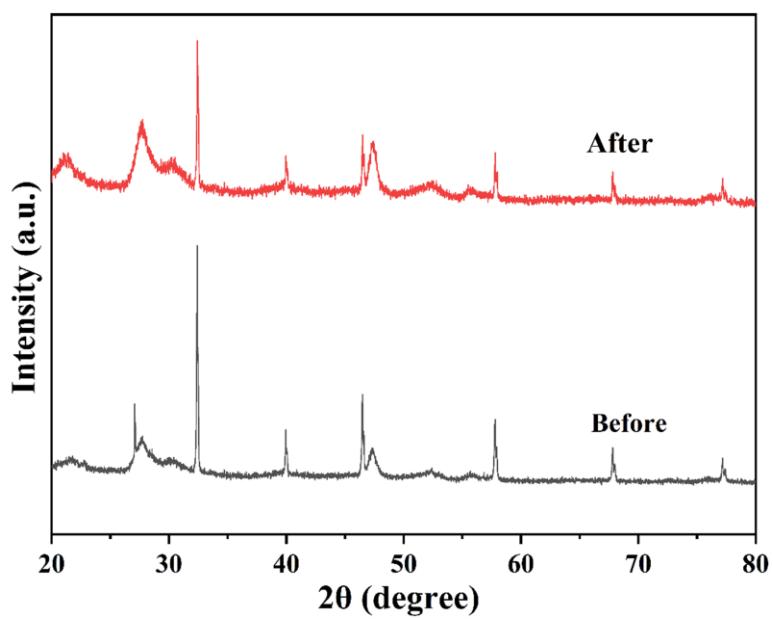


Fig. S5. XRD patterns of 0.5Rh,Sb-STO/ZIS before and after photocatalytic H_2O splitting reaction.