Electronic Supplementary Information (ESI)

Ultrafine Au Nanoparticles Anchored on Bi$_2$MoO$_6$ with Abundant Surface Oxygen Vacancies for Efficient Oxygen Molecule Activation

Li Guo$^a$, Qiang Zhao$^a$, Huidong Shen$^a$, Xuanxuan Han$^a$, Kailai Zhang$^a$, Danjun Wang $^a$.*, Feng Fu$^{a,*}$, Bin Xu$^b$.*

$^a$ Shaanxi Key Laboratory of Chemical Reaction Engineering, School of Chemistry & Chemical Engineering, Yan’an University, Yan’an 716000, China.

$^b$ State Key Laboratory of Organic-Inorganic Composites Bejing Key Laboratory of Electrochemical Process and Technology for Materials, Beijing University of Chemical Technology Beijing 100029, China.

*Corresponding author 1: Danjun Wang
E-mail: wangdj761118@163.com; Tel: +86-911-2332037

*Corresponding author 2: Feng Fu
E-mail: yadxfufeng@126.com; Tel: +86-911-2332003

*Corresponding author 3: Bin Xu
E-mail: binxumail@163.com; Tel: +86-10-64434907
Fig. S1 XPS spectra of BMO, Au/BMO-B was before calcined and BMO-A was calcined at 250°C for 2 h. (a) The survey spectra and the high resolution XPS spectra of the sample, (b) Mo 3d and (c) Au 4f for 4wt% Au/BMO was before and after calcination.
Fig. S2 FE-SEM images of (a,b) 1wt% Au/BMO, (c,d) 2wt% Au/BMO, (e,f) 4wt% Au/BMO, and (g, h) 6wt% Au/BMO heterostructures.
Fig. S3 Photocatalytic degradation activity of phenol over BMO, 4wt%BMO-PR, BMO-A, and wt%BMO-PR under visible light illumination
Fig. 54 Mott-Schottky plots of (a) BMO and (b) Au/BMO samples.
Fig. S5 Valence band XPS spectra of (a) BMO and (b) Au/BMO.
Fig. S6 Band diagram of BMO and Au/BMO.