

Electronic Supplementary Information

Construction of Ce³⁺ doped CeO₂/Bi₂MoO₆ heterojunction with a mutual component activation system for highly enhancing visible-light photocatalytic activity for removal of TC or Cr (VI)

Gui Yang ^a, Yujun Liang ^{a,*}, Kai Li ^a, Jian Yang ^a, Rui Xu ^b, Xianjun Xie ^{b,*}

^a *Engineering Research Center of Nano-Geomaterials of Ministry of Education, Faculty of Materials Science and Chemistry, China University of Geosciences, Wuhan 430074, China*

^b *State Key Laboratory of Biogeology and Environmental Geology & School of Environmental Studies, China University of Geosciences, Wuhan 430074, China.*

*Corresponding author: Tel.: +86 27 67884814; fax: +86 27 67883733.

E-mail address: yujunliang@sohu.com (Yujun Liang); xjxie@cug.edu.cn (Xianjun Xie)

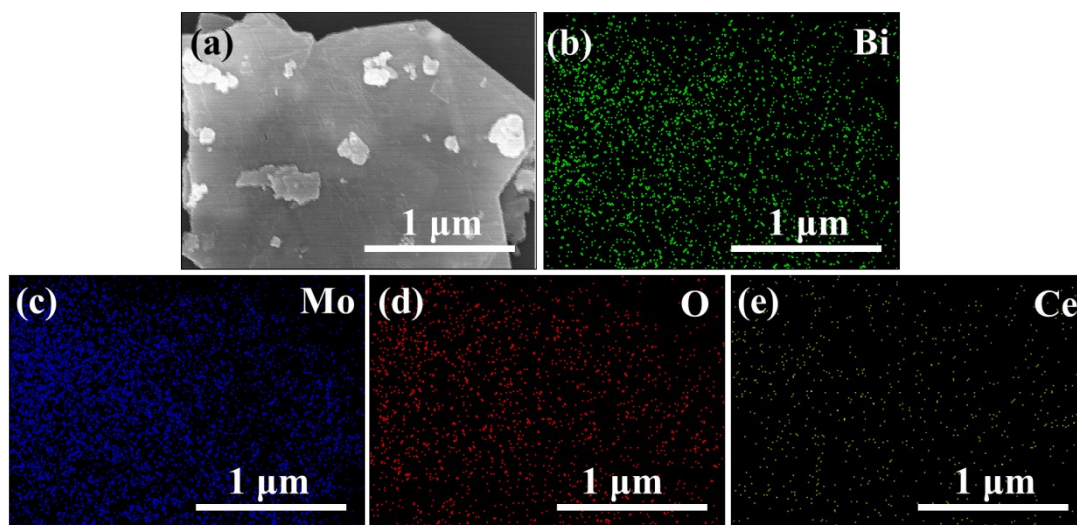


Fig. S1 EDS elemental mapping images of 20% C-BMO sample prepared by molten salt method.

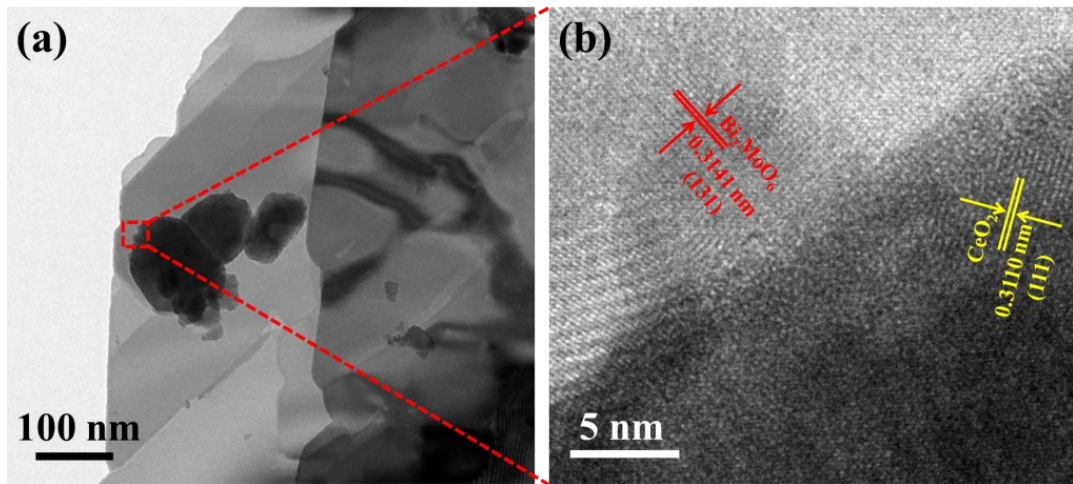


Fig. S2 (a) TEM image C-BMO heterojunction, (b) HRTEM image of C-BMO heterojunction.

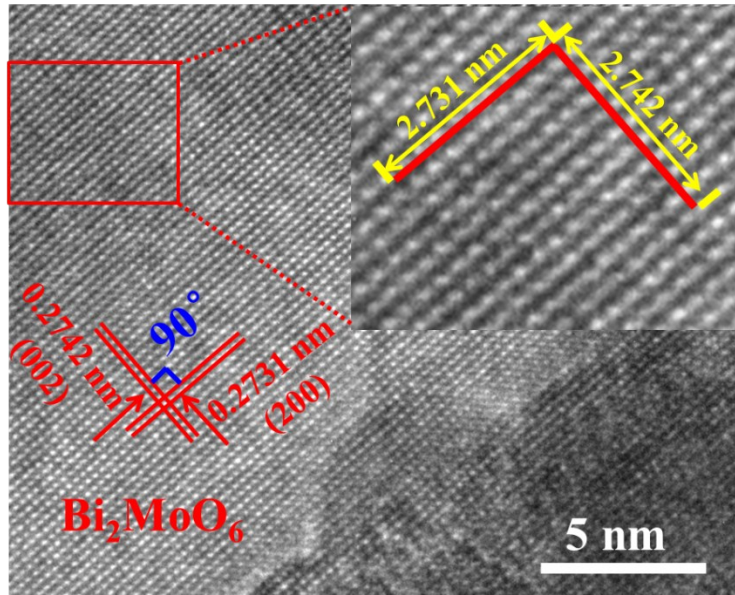


Fig. S3 HRTEM image of C-BMO heterojunction considering only the Bi_2MoO_6 .

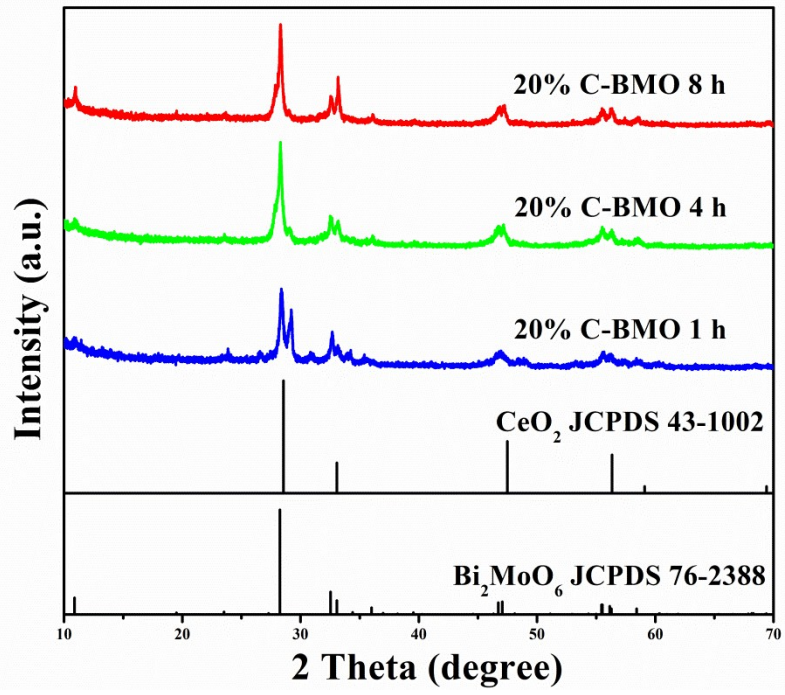


Fig. S4 XRD patterns of 20% C-BMO at different calcination times.

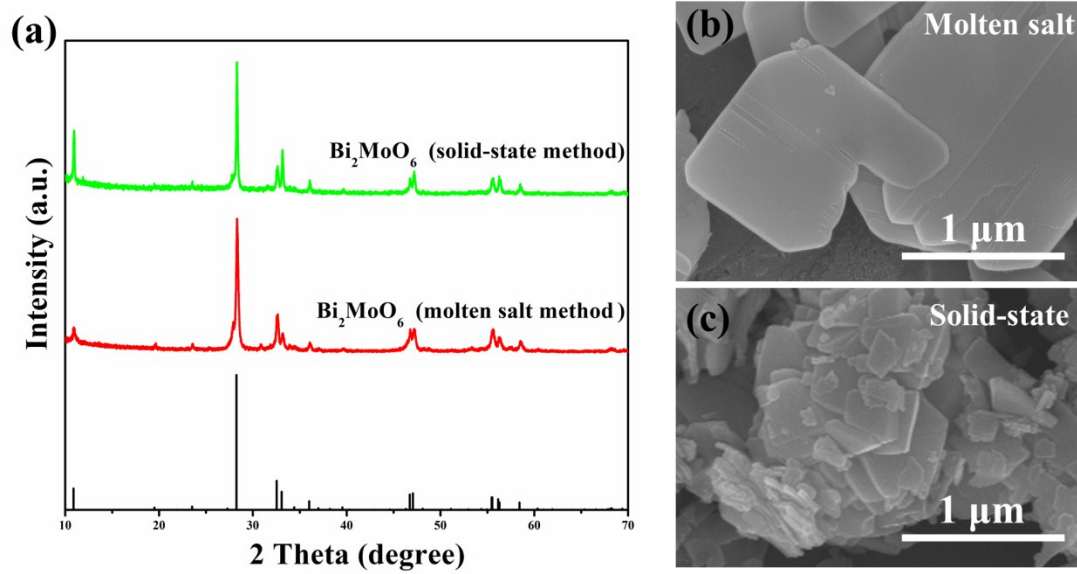


Fig. S5 The XRD and SEM of Bi_2MoO_6 synthesized by molten salt method and solid-state reaction.

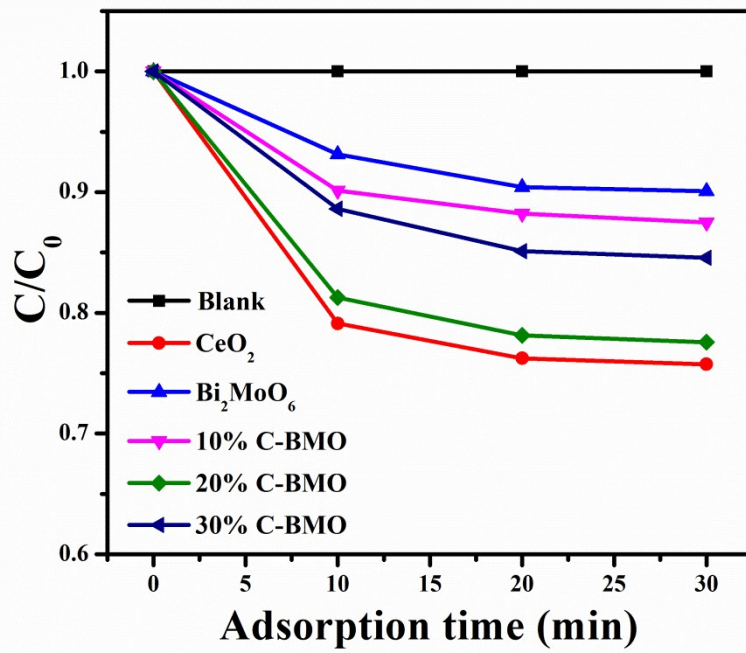


Fig. S6 The adsorption performance of as-prepared samples for the removal of TC in the dark.

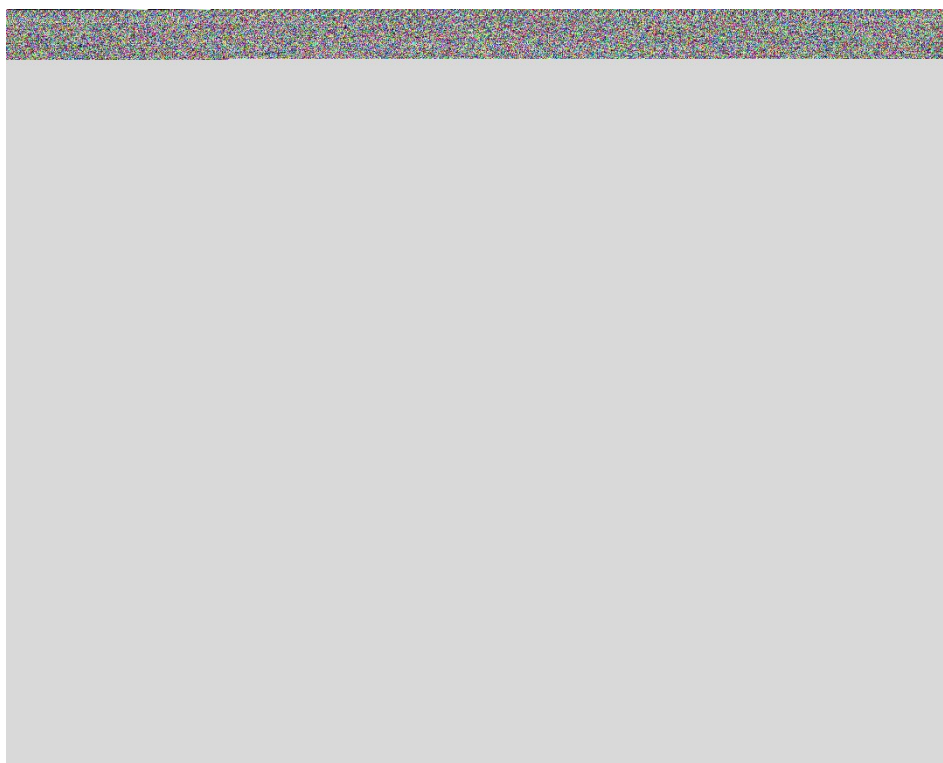


Fig. S7 The adsorption performance of as-prepared samples for the removal of Cr (VI)
in the dark.

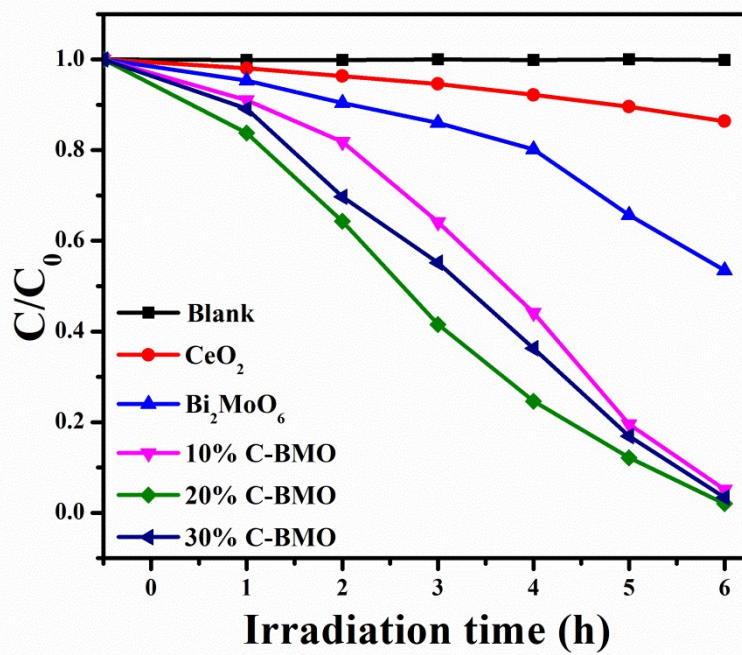


Fig. S8 Photodegradations of RhB over as-prepared products under visible irradiation.

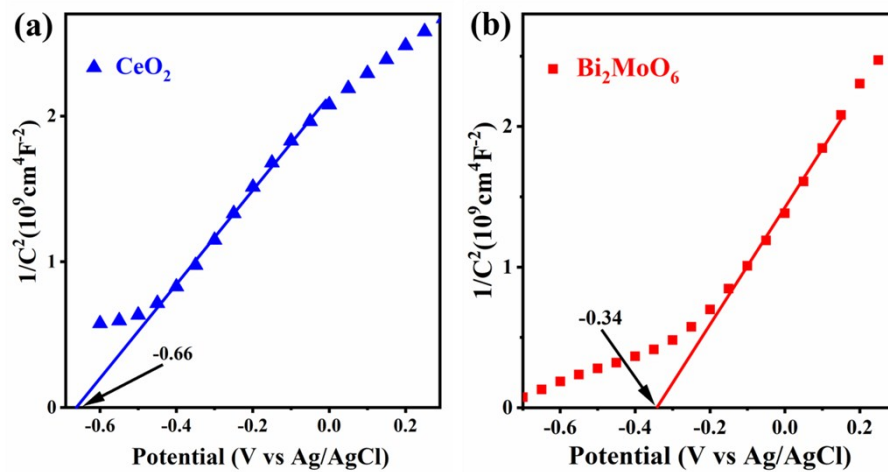


Fig. S9 Mott-Schottky plots of (a) CeO_2 and (a) Bi_2MoO_6 .