Supplementary Materials

Supplementary Materials sections were cited in the main text as Figures S1 and S2, Tables S1 and S2.

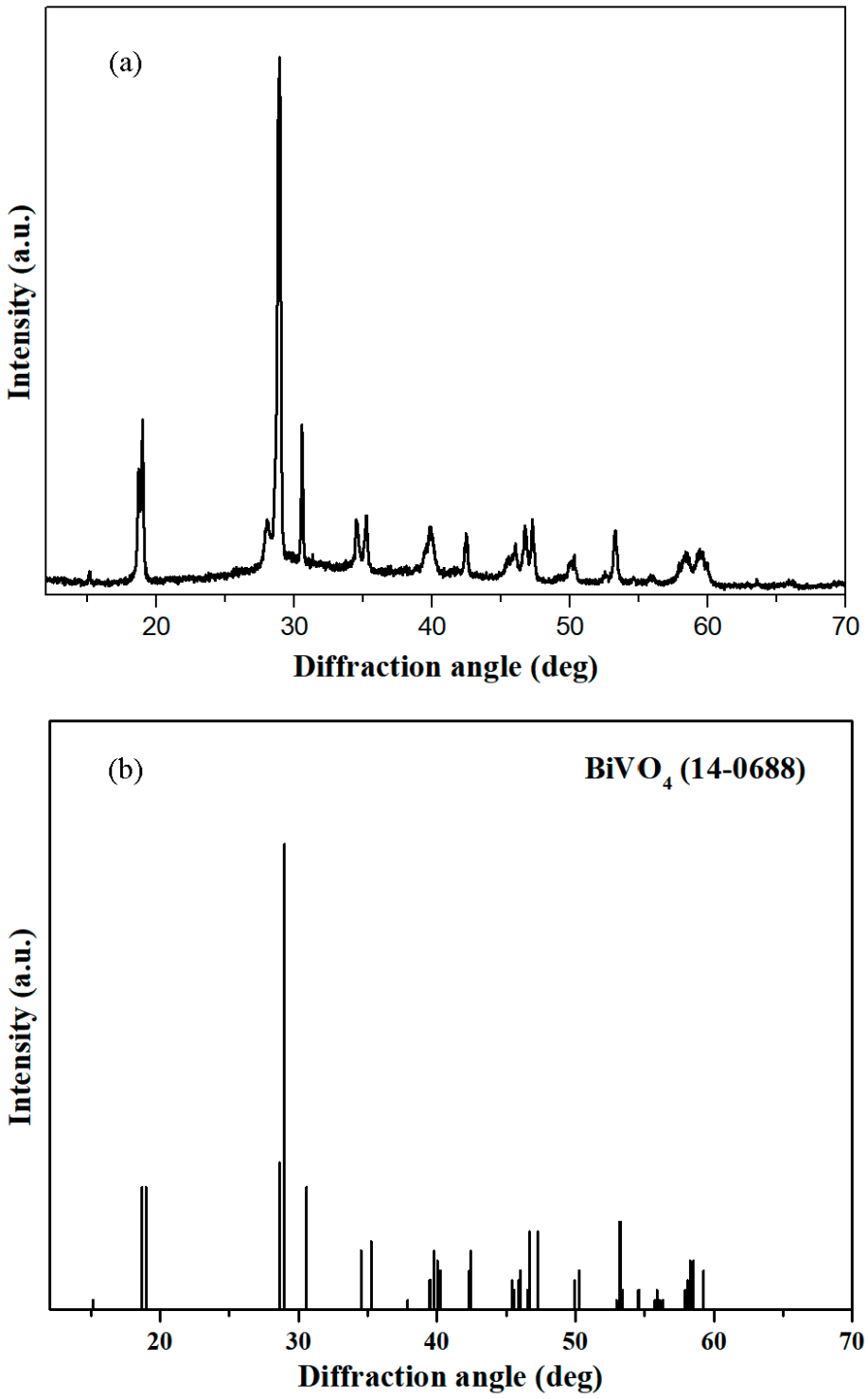

Figure S1. The XRD pattern (**a**) and the standard PDF card (**b**) of pure $BiVO_4$.

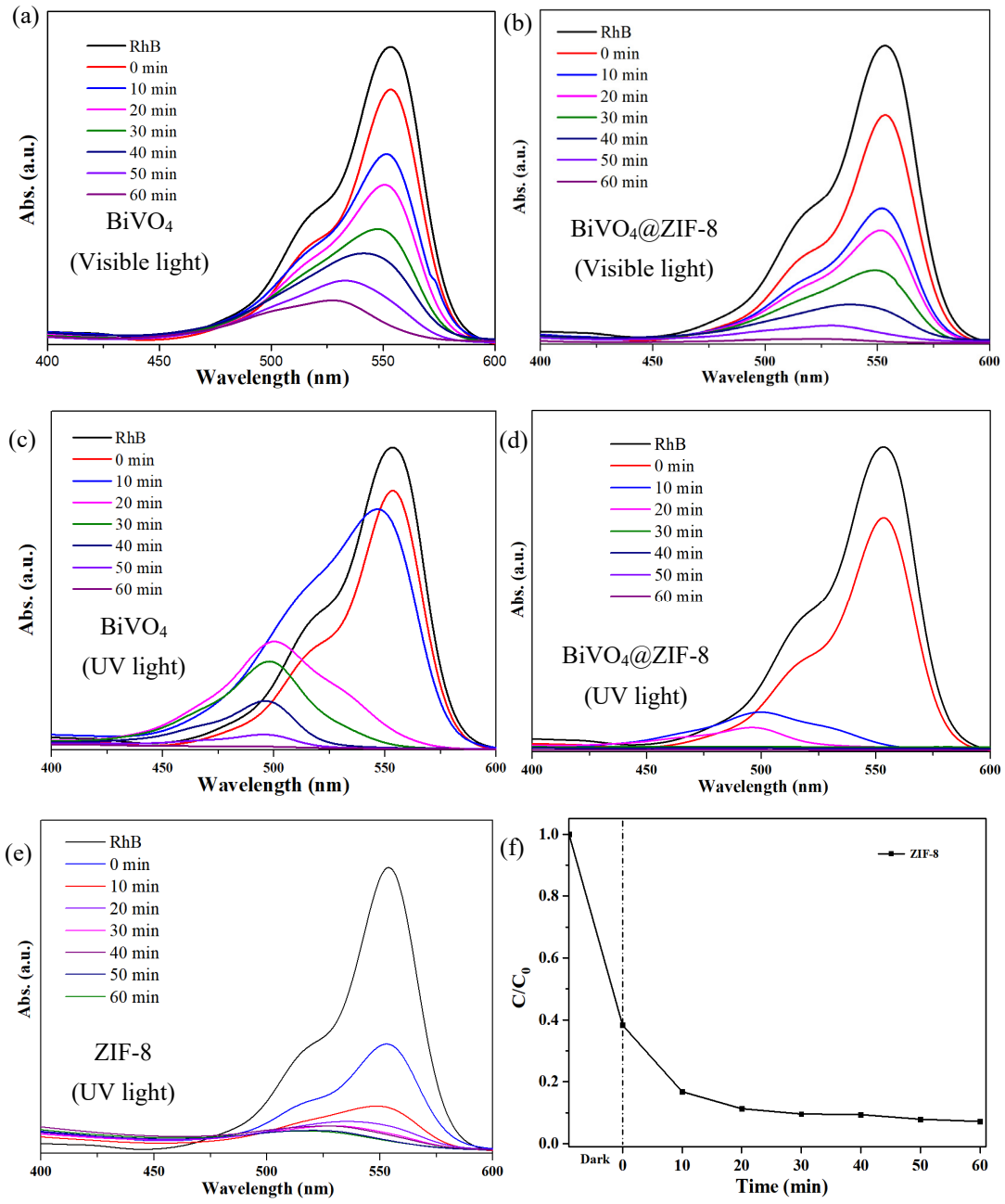

Figure S2. The light absorption spectra of RhB solution after photo-degraded by $BiVO_4$ (**a**) and $BiVO_4$@ZIF-8 (**b**) in visible light; $BiVO_4$ (**c**), $BiVO_4$@ZIF-8 (**d**) and pure ZIF-8 (**e**) in UV light; (**f**) The photo degradation efficiency of pure ZIF-8 under UV light.

Table S1. The performances of photocatalysts based on different $BiVO_4$ composite materials.

Photocatalyst	Morphology	Efficiency *	Ref.
Monoclinic-$BiVO_4$	Nanorods	60	[1]
Ag_2O@$BiVO_4$	Nanofiber	60	[2]
$BiVO_6$@TiO_2	Heterojunction structures	180	[3]
$AgNO_3$@$BiVO_4$	Dendritic-like	20	[4]
$BiVO_4$	Mesoporous	180	[5]
CdS@$BiVO_4$	Hollow cubes	50	[6]
ZnO@MoS_2@$BiVO_4$	Heterojunction structures	>180	[7]
ZIF-8@$BiVO_4$	Hierarchical structures	20	This work

* Time needed (minutes) for 90% degradation.

Table S2. The performances of photocatalysts based on different MOF composite materials.

Photocatalyst	Morphology	Efficiency *	Ref.
ZnO/CdS@ZIF-8	Nanorods	>120	[8]
ZIF-8@$Zn_{1-x}Ni_xO$	Nanoboxes	15	[9]
Mn_3O_4@ZIF-8	Nanoparticles	30	[10]
Bi_2S_3@ZIF-8	Nanorods	50 (Visible light)	[11]
Bi_2MoO_6@ZIF-8	Mesoporous ball	>100	[12]
ZIF-8@g-C3N4	Nanoparticles	30	[13]
ZIF-8@$BiVO_4$	Hierarchical structures	20	This work

* Time needed (minutes) for 90% degradation.

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