Supplementary information

Visible light-driven photocatalytic properties of polyphosphodiester-protected silver nanocomposites

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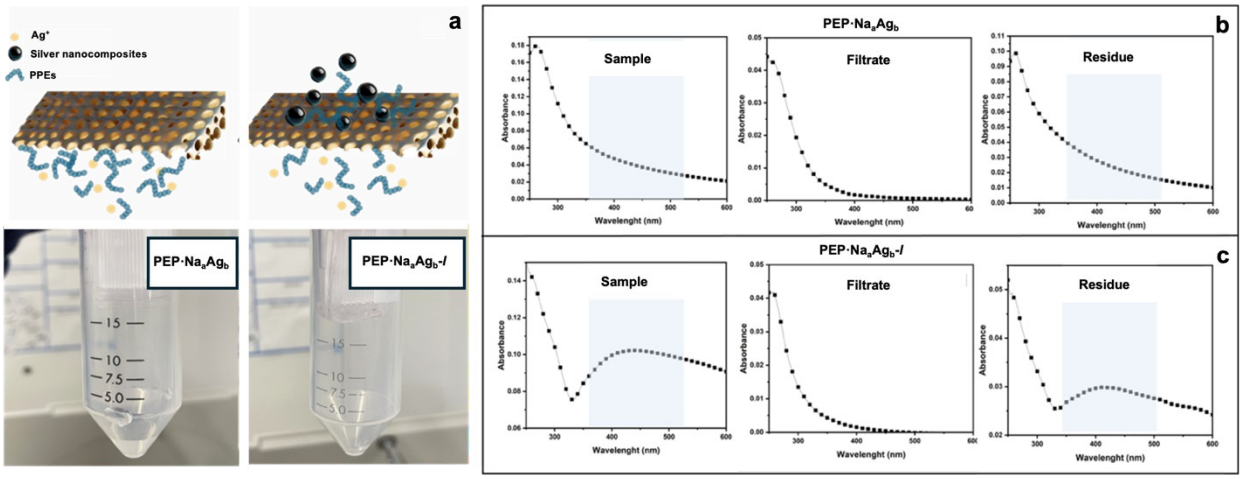

Figure S1. The photograph of centrifuge membrane filtration of PEP·Na_aAg_b and PEP·Na_aAg_b-*I*(a).

The UV-Vis spectra of PEP·Na_aAg_b(b), and PEP·Na_aAg_b-*I*(c).

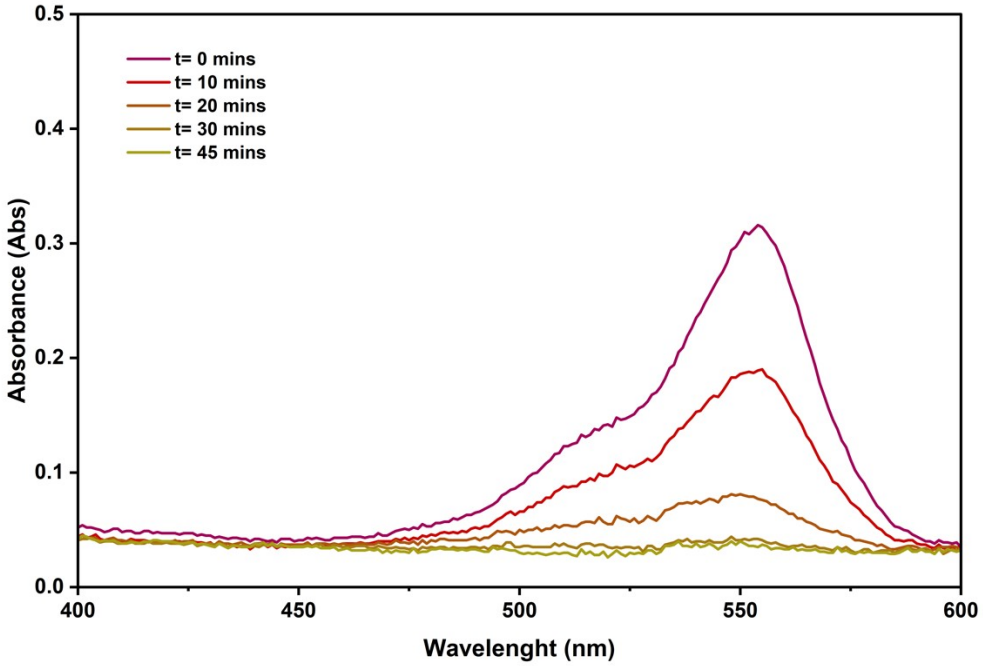

Figure S2. The UV-vis spectra showing RhB degradation by supernatant of PEP·Na_5Ag_1-*I* after centrifuge 15000 rpm for 5 minutes.

Table S1. Comparison of the reaction rate constants under visible light of silver-based photocatalyst with the previous report.

Photocatalyst	C_0 of dye ($mg \cdot L^{-1}$)	Time (min)	Catalyst amount ($mg \cdot L^{-1}$)	Reaction rate constant k (min^{-1})	Reference
$Ag_2O/BiVO_3$ nanofibers	RhB, 10	100	/	0.0391	[1]
Ag_2O/TiO_2 composite	MB, 20	60	500	0.0350	[2]
$Ag/Ag_2O/ZnO$ nanocomposites	RhB, 10	60	10000	0.0510	[3]
Ag-ZnO/rGO nanocomposites	RhB, 10	90	1200	0.0358	[4]
$Ag@Ag_2O/BiOCl$ composite	RhB, 10	120	1000	0.0189	[5]
$Ag/Ag(I)-TiO_2$ nanoparticles	MO, 20	30	5000	0.0100	[6]
$Ag_2O/AgBr–CeO_2$	RhB, 10	60	500	0.0481	[7]
Ag_2O/TiO_2 composite	RhB, 4.8	80	1333	0.0277	[8]
Ag_2O-ZnO-TiO_2 nanocomposites	RhB, 20	120	1000	0.0129	[9]
PEP·Na_aAg_b-*I* ($Ag/AgO/Ag_2O$)	RhB, 3.3	90	250	0.0746	Our study

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