Figure S1. (a) XRD patterns of Bi(OHC\textsubscript{2}O\textsubscript{4})\textperiodcentered 2H\textsubscript{2}O-BiOCl precursors(sp1-sp3), Bi(OHC\textsubscript{2}O\textsubscript{4})\textperiodcentered 2H\textsubscript{2}O and BiOCl; (b) SEM image of pure Bi(OHC\textsubscript{2}O\textsubscript{4})\textperiodcentered 2H\textsubscript{2}O.

Figure S2. IR spectra of MO, S2, S2(dark adsorption), S2(after photocatalysis)
**Figure S3.** Samples of S2, S2(dark adsorption), S2(after photocatalysis)

**Figure S4.** (a) Photocatalytic degradation curves of phenol (mol•L⁻¹) using different photocatalysts, (b) UV-Vis absorption spectra of phenol S2 as photocatalyst under solar light irradiation.