Electronic Supplementary Material (ESI) for Journal of Materials Chemistry C.


# Supplementary Information

## Morphology-controlled facile surfactant-free synthesis of 3D flower-like BiOI:$Eu^{3+}$ or $Tb^{3+}$ microarchitectures and their photoluminescence properties

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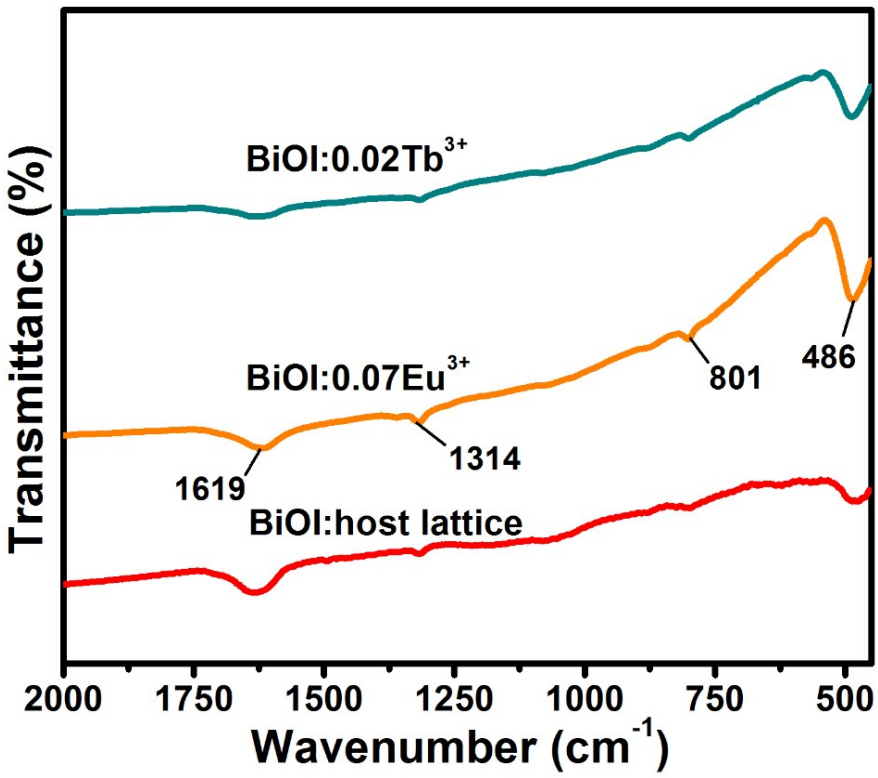


**Fig. S1.** FTIR spectra of the BiOI, BiOI:0.07$Eu^{3+}$ and BiOI:0.02$Tb^{3+}$ 3D flower-like microarchitectures.

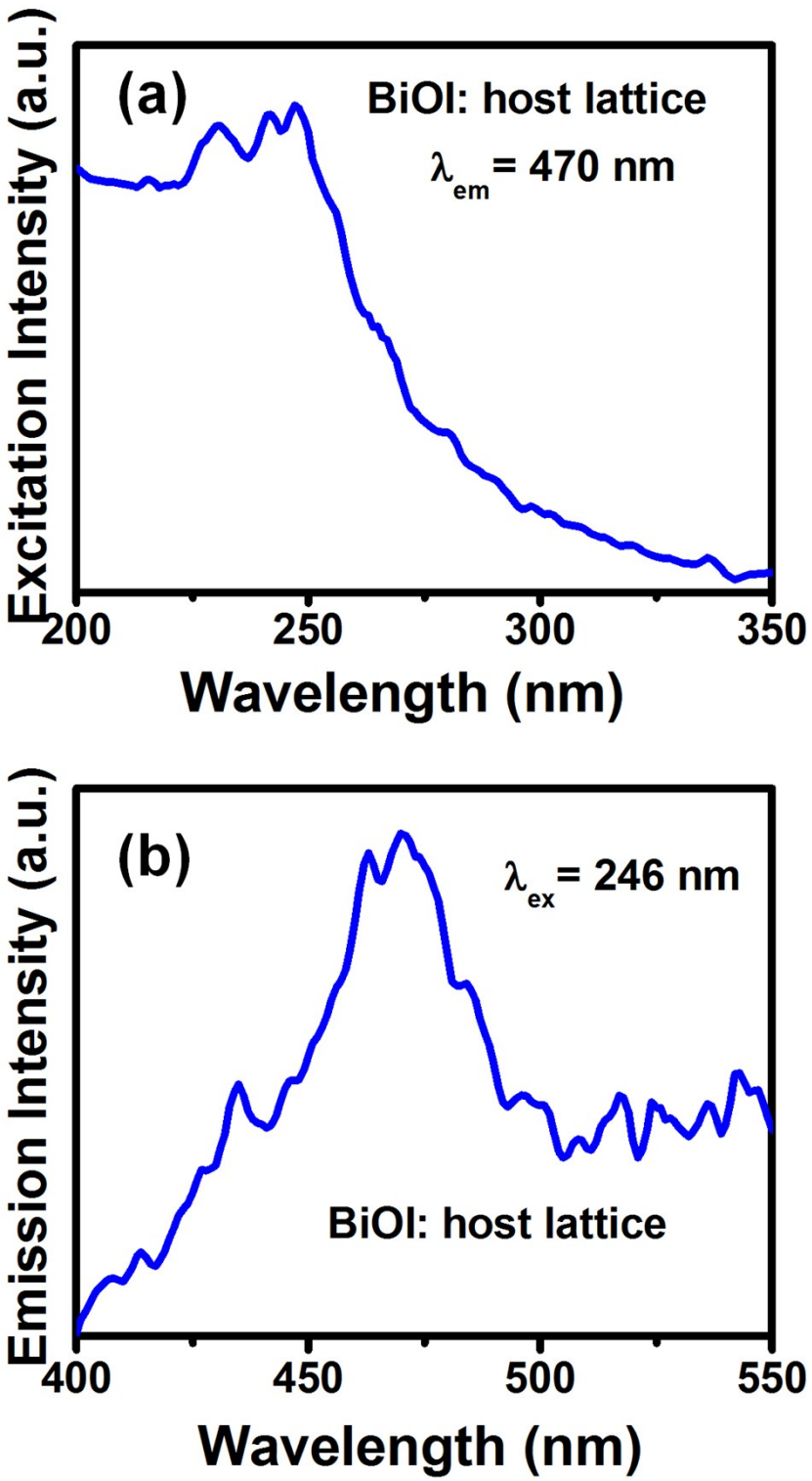


**Fig. S2.** (a) PLE and (b) PL emission spectrum of the BiOI 3D flower-like microarchitectures.

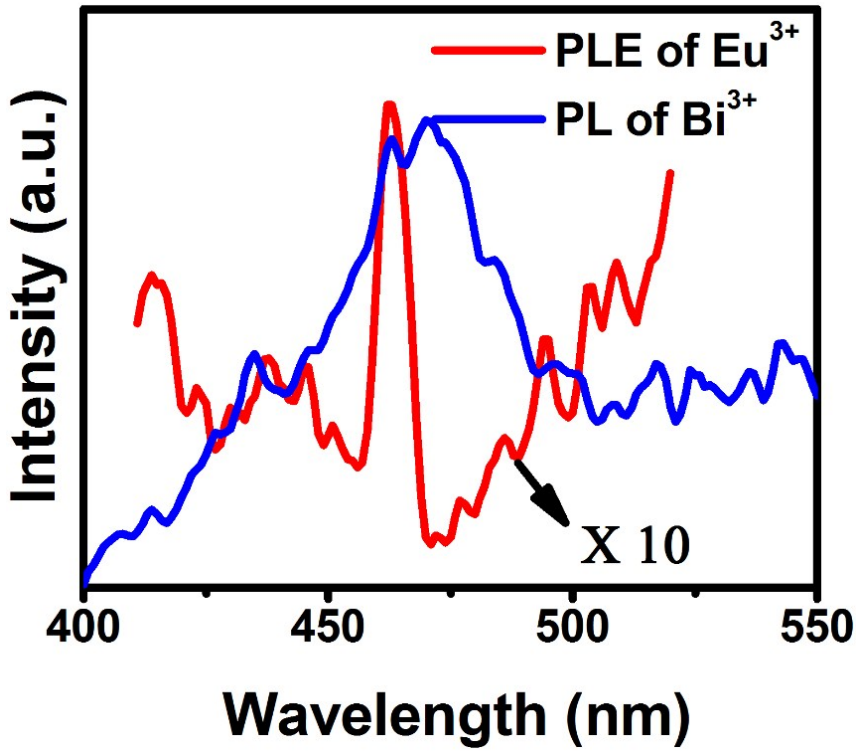


**Fig. S3.** Spectral overlap of PLE spectrum of BiOI:$Eu^{3+}$ phosphor under 616 nm emission wavelength and PL emission spectrum of the $BiOI^{3+}$ phosphor under 246 nm excitation wavelength.

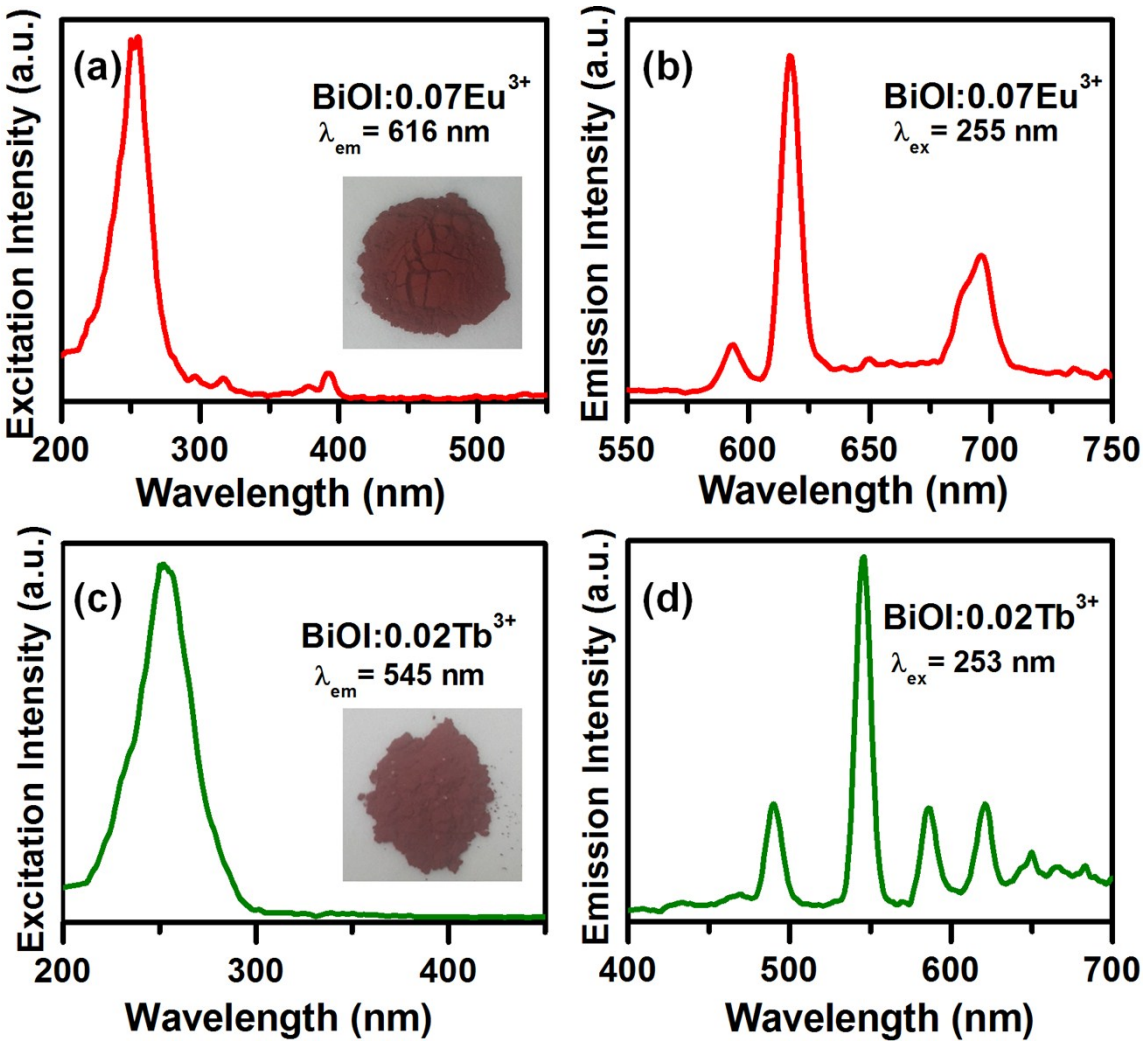


**Fig. S4**. (a) PLE and (b) PL emission spectra of the 3D flower-like BiOI:$Eu^{3+}$ microarchitectures after 70 days. (c) PLE and (d) PL emission spectra of the 3D flower-like BiOI:$Tb^{3+}$ microarchitectures after 70 days. The insets of (a) and (c) show the synthesized BiOI:$Eu^{3+}$ and BiOI:$Tb^{3+}$ red color powder samples, respectively.