

**A series of novel rare-earth bismuth tungstate compounds LnBiW₂O₉ (Ln = Ce, Sm, Eu, Er):
Synthesis, crystal structure, optical and electronic properties**

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Supporting information

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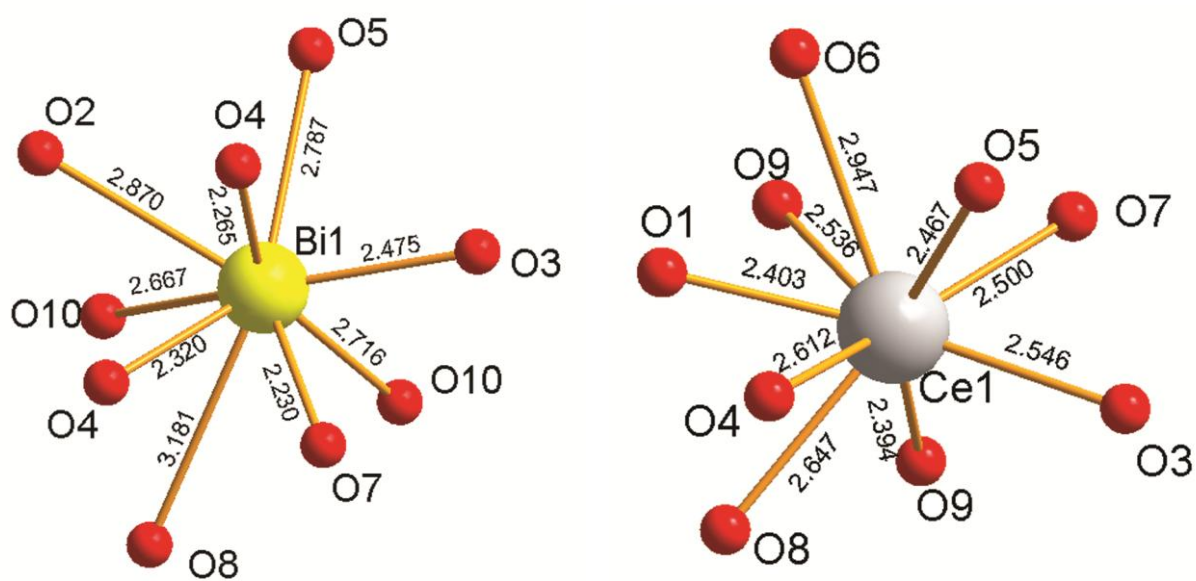
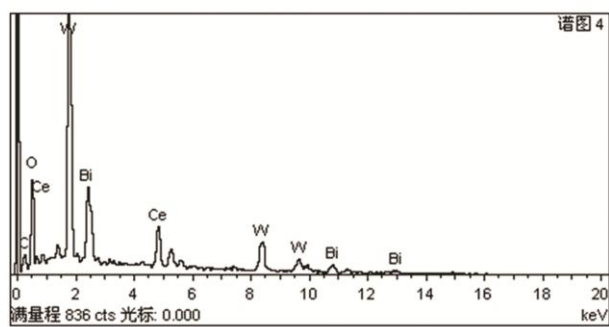
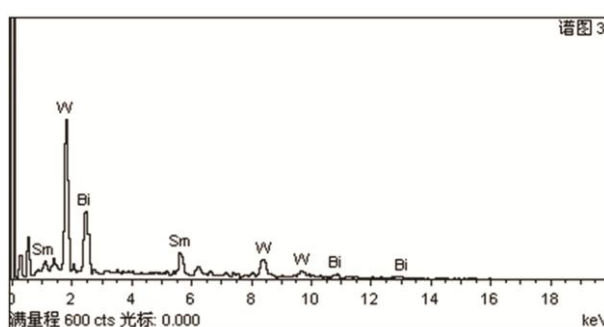


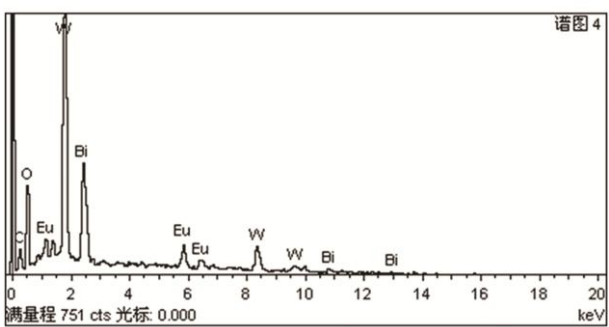
Figure S1. The coordinate environment of Bi(1) and Ce(1) ions in CeBiW₂O₉



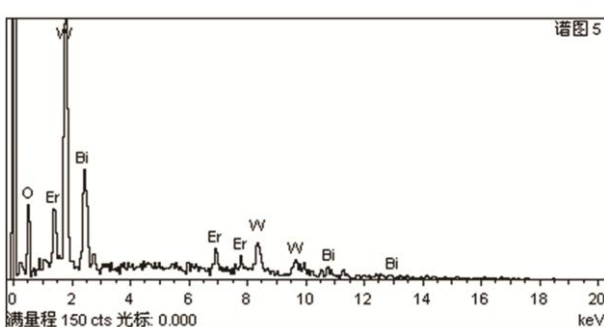
(a)



(b)

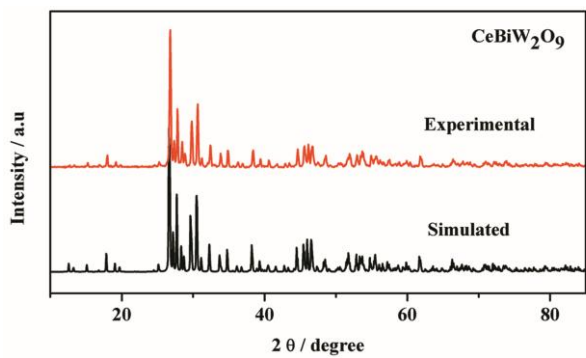


(c)

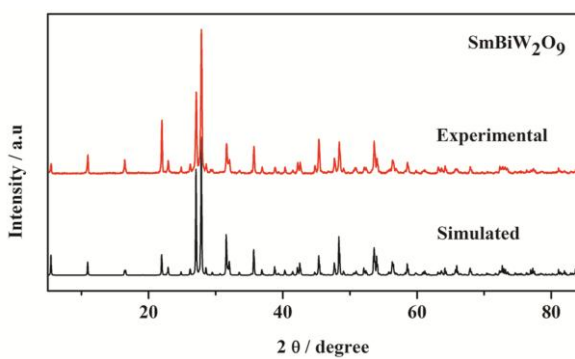


(d)

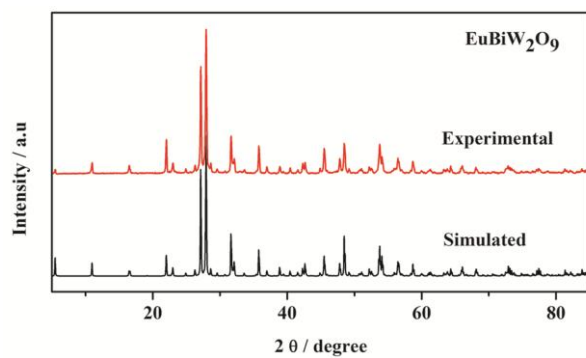
Figure S2. The elemental analysis for **1-4** (a-d)



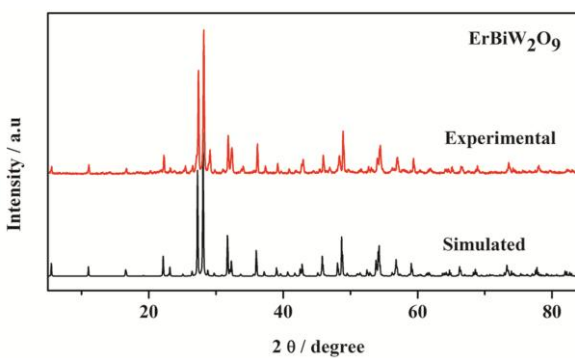
(a)



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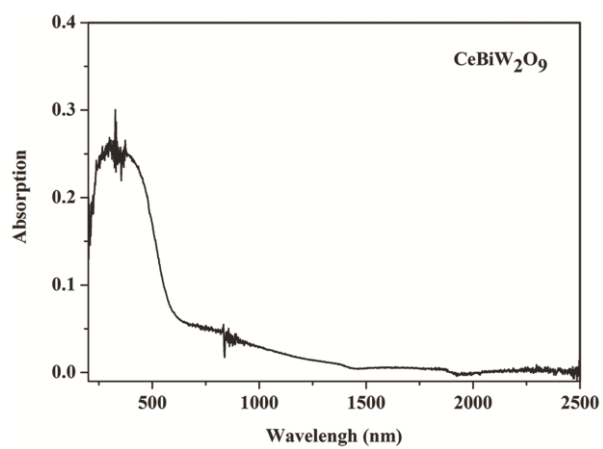


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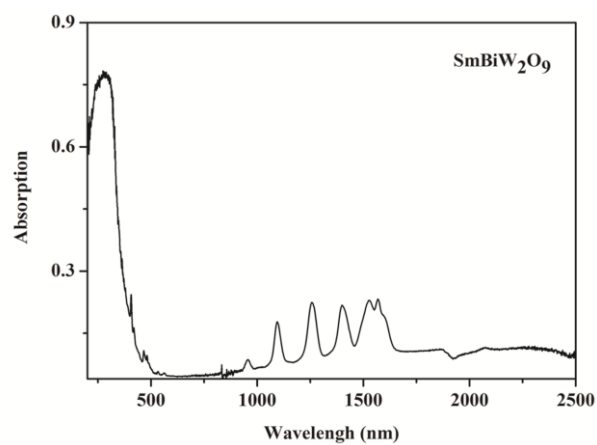


(d)

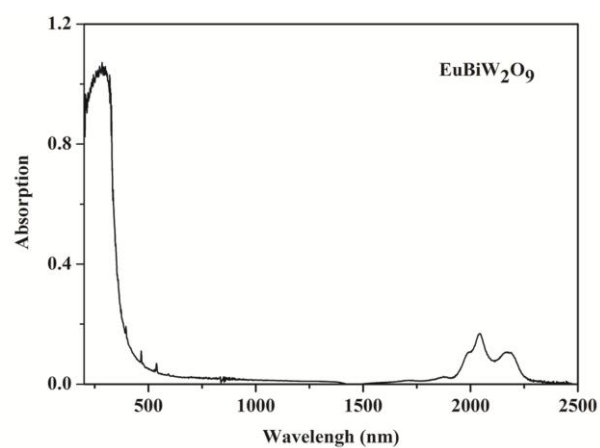
Figure S3. Simulated and experimental X-ray powder diffraction patterns for **1-4** (a-d)



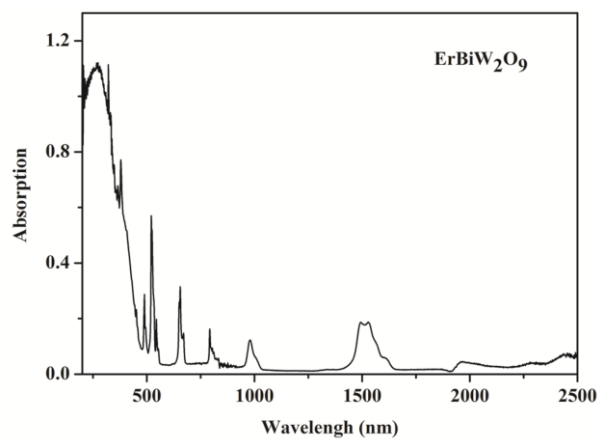
(a)



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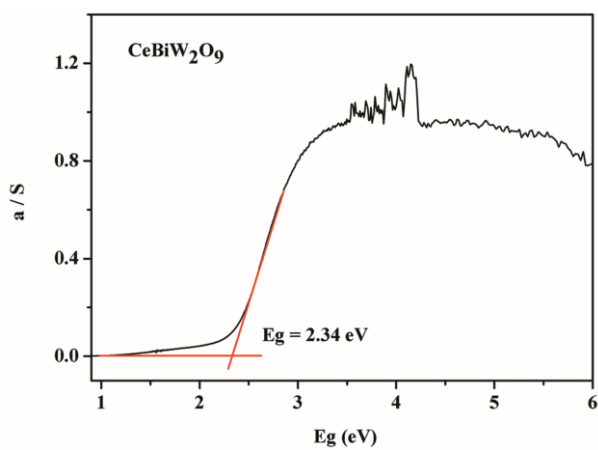


(c)

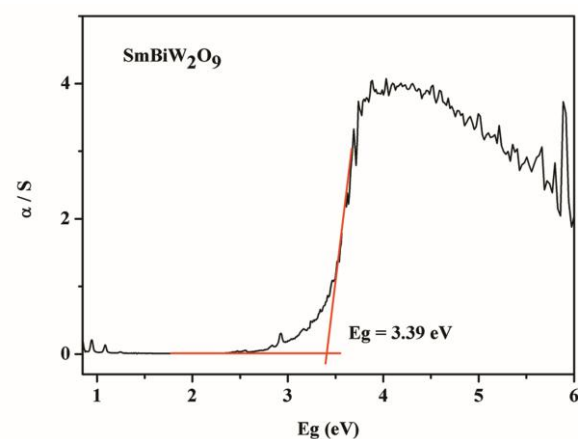


(d)

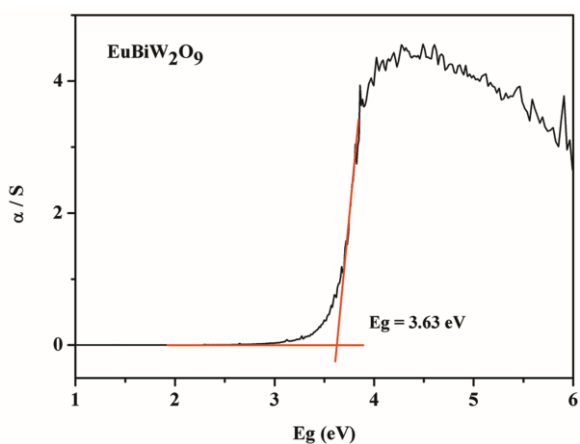
Figure S4. UV absorption spectra for **1-4** (a-d)



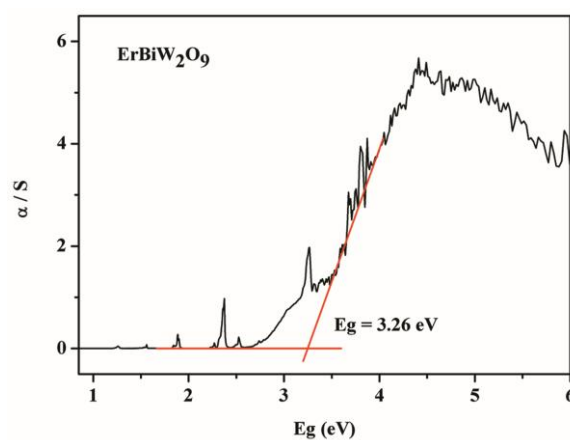
(a)



(b)

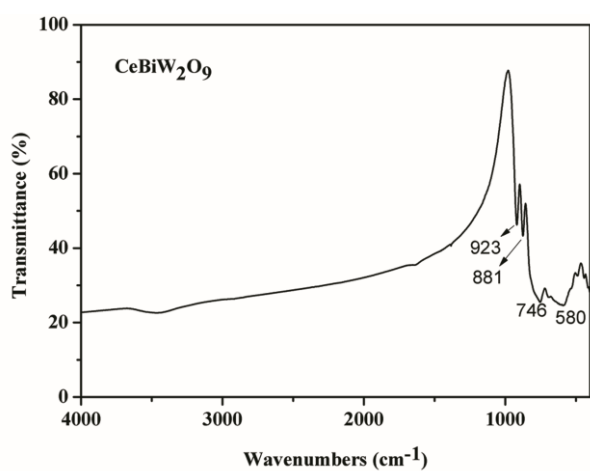


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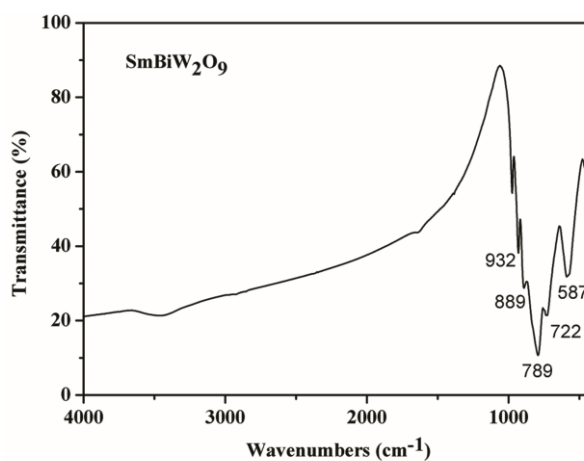


(d)

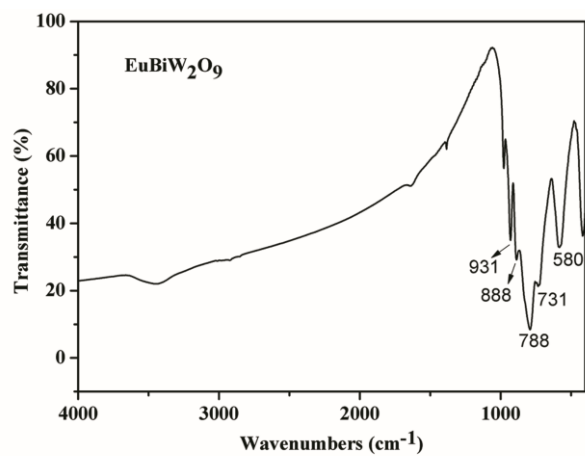
Figure S5. Optical diffuse reflectance spectra for **1-4** (a-d)



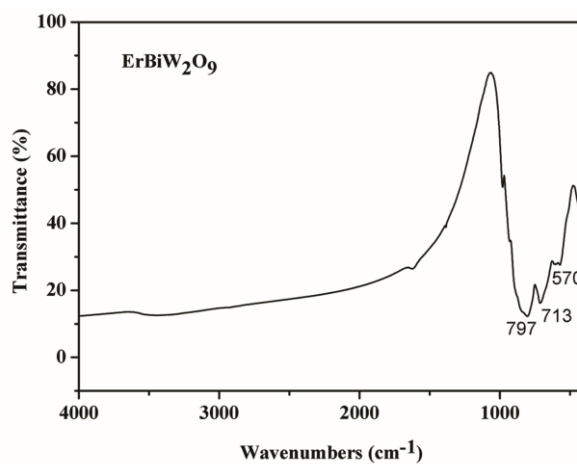
(a)



(b)



(c)



(d)

Figure S6. The infrared spectra for **1-4** (a-d)