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

Supporting Information

Upconversion enhancement through engineering local crystal field in Yb^{3+} and Er^{3+} codoped $BaWO_4$ along with excellent temperature sensing performance

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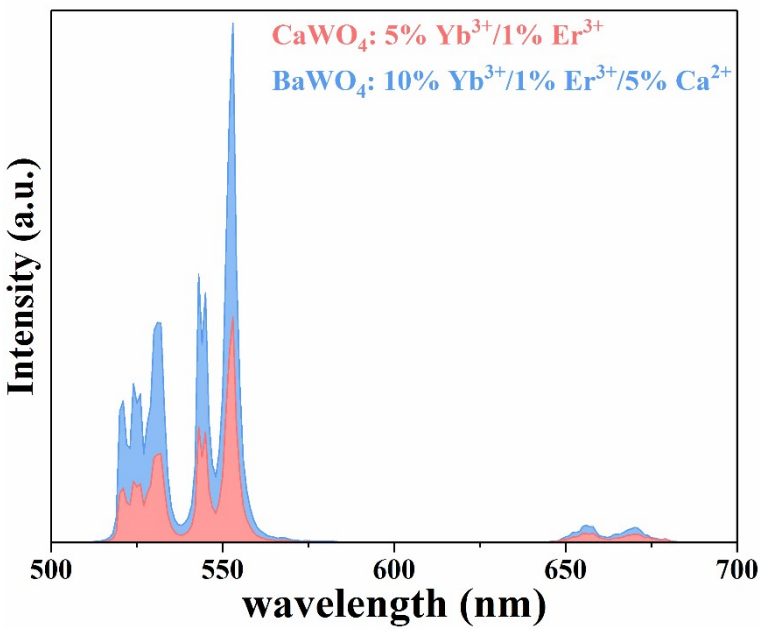

Figure S1 UC spectra of $BaWO_4$: 10% Yb^{3+}/1% Er^{3+}/5% Ca^{2+} and $CaWO_4$: 5% Yb^{3+}/1% Er^{3+} excited by 980 nm wavelength.

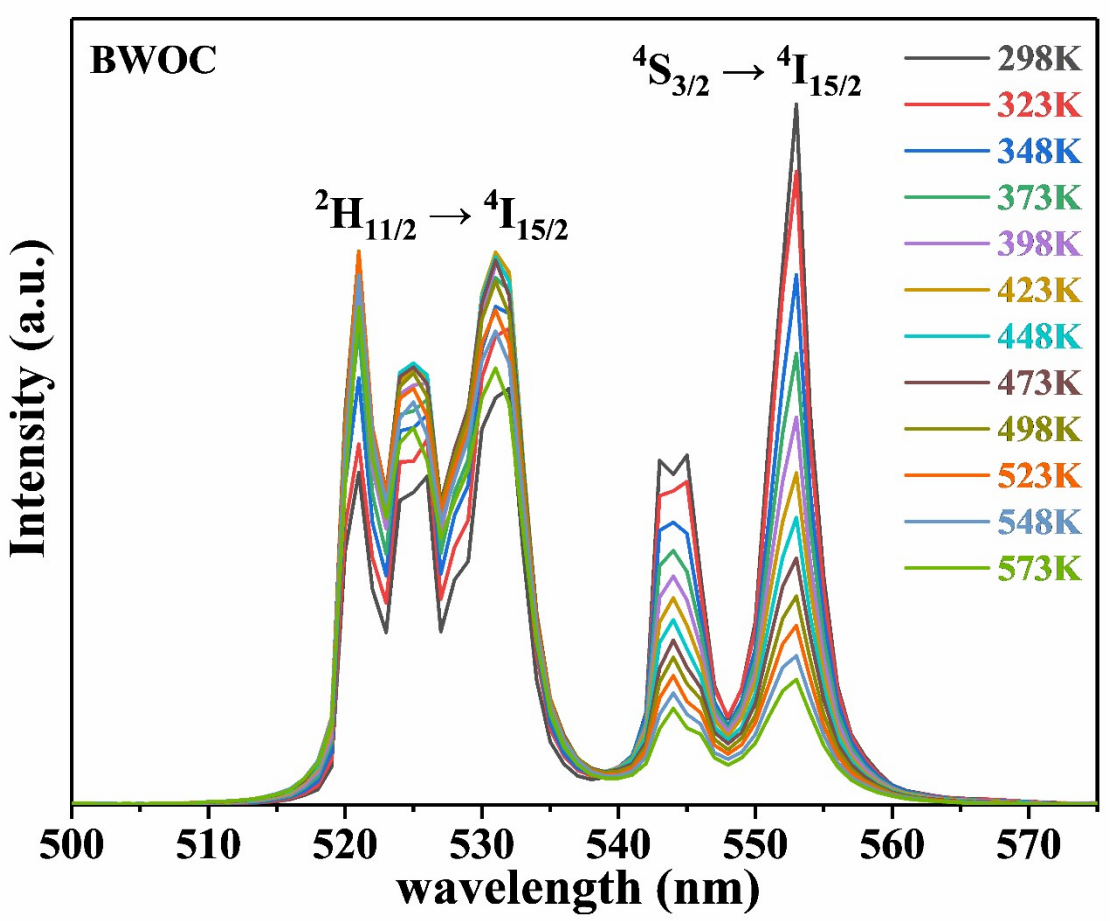

Figure S2 Temperature-dependent green UC spectra under the excitation of 980 nm wavelength in BWOC.

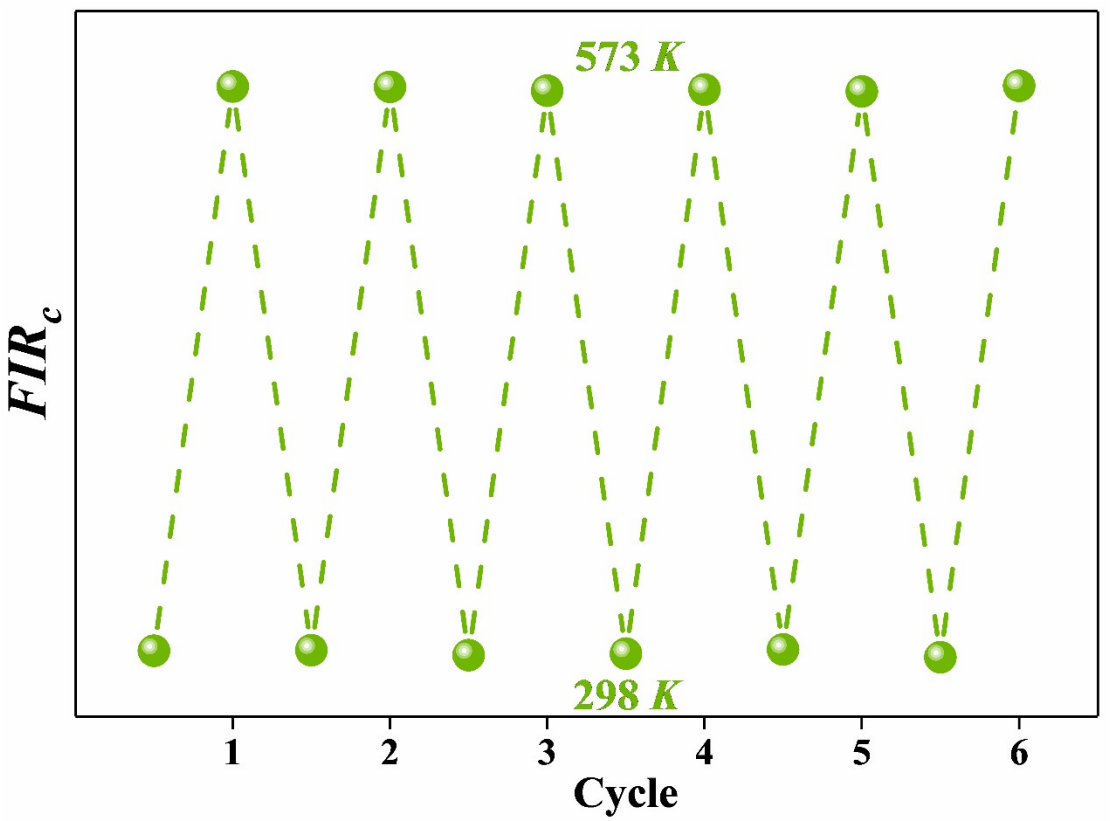

Figure S3 The repeatability studies in the temperature cycling between 298 *K* and 573 *K*.

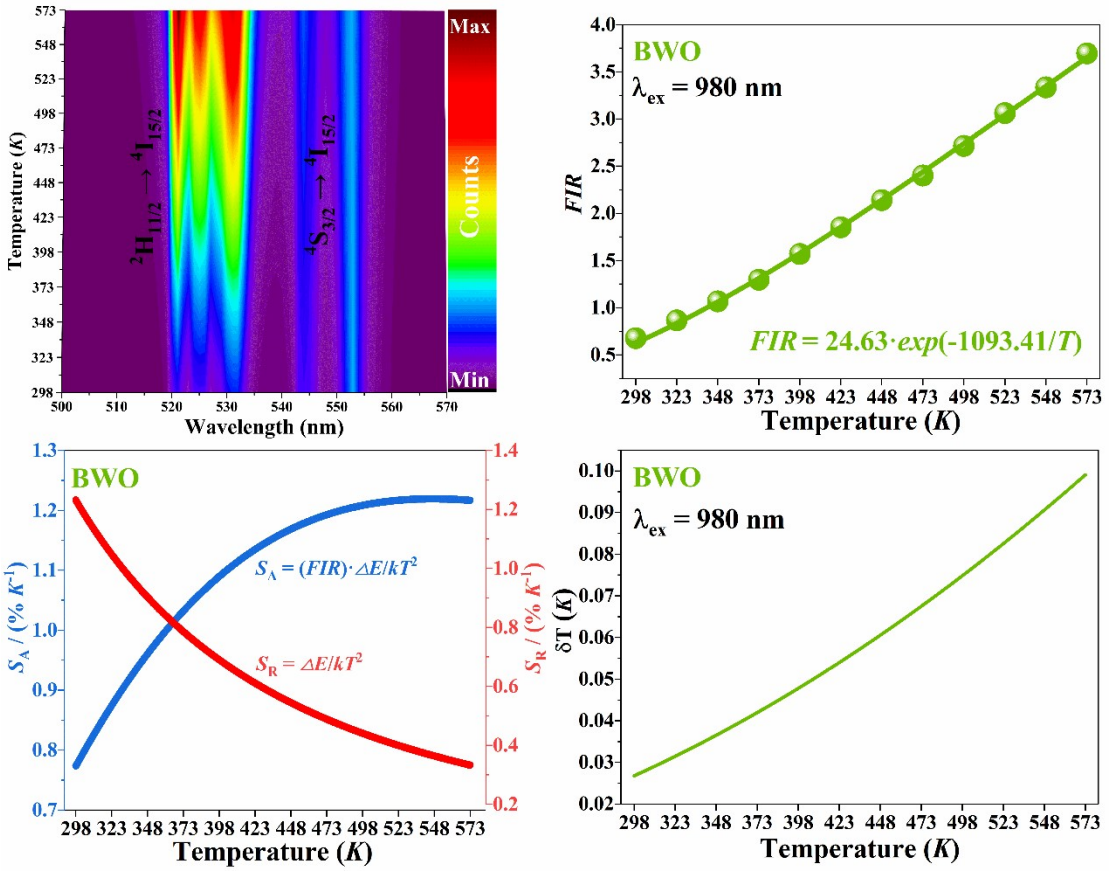

Figure S4 Temperature-dependent (a) green UC spectra normalized at 553 nm and (b) *FIR* between $^2H_{11/2} \rightarrow {}^4I_{15/2}$ and $^4S_{3/2} \rightarrow {}^4I_{15/2}$ transition as well as the corresponding temperature sensing (c) sensitivity and (d) resolution in BWO.

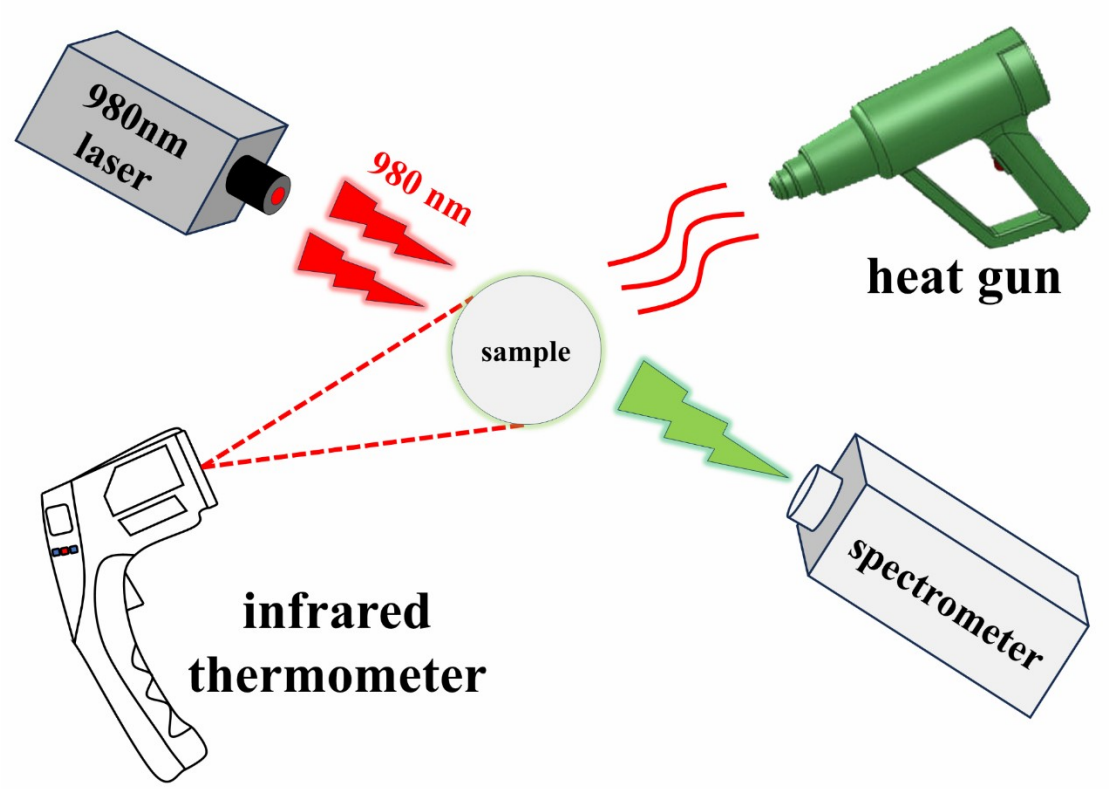

Figure S5 The diagram of the experimental setup used to verify the accuracy of BWO and BWOC for temperature sensing.