

**Constructing of efficient dual activating ratiometric  $\text{YVO}_4:\text{Nd}^{3+}/\text{Eu}^{3+}$  nanothermometer: co-doping or mixture**

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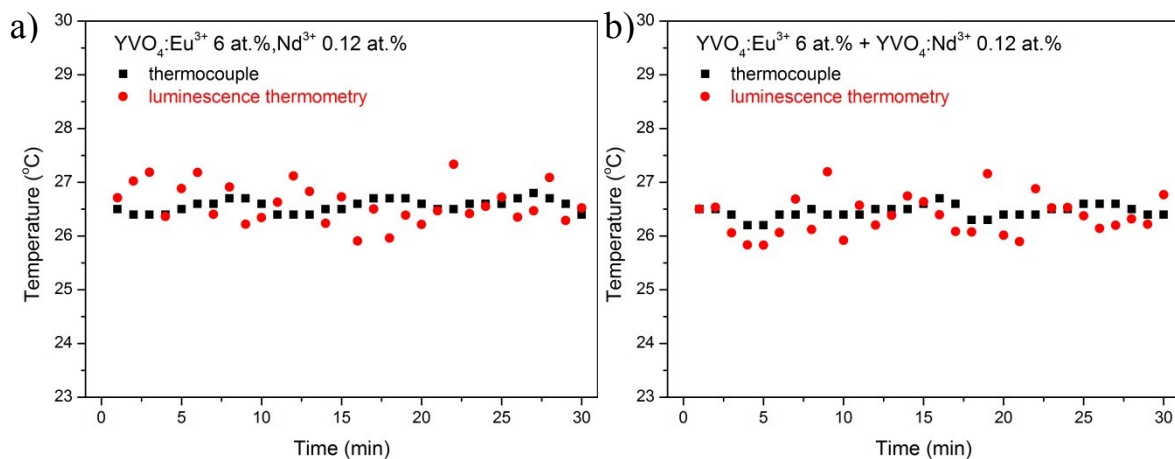
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The prolonged temperature measurements were carried out at room temperature upon 590 nm diode excitation. Thermal sensing was performed using two independent techniques: luminescence thermometry and thermocouple. As can be seen from Figure S1, continuous excitation of  $\text{YVO}_4:\text{Nd}^{3+}/\text{Eu}^{3+}$  NPs with used diode does not cause raising of the observed temperature.



**Figure S1.** Evolution of a) co-doped and b) mixed  $\text{YVO}_4:\text{Nd}^{3+}/\text{Eu}^{3+}$  samples temperature measured with luminescence thermometry and thermocouple.