

Supporting Information

Simultaneous NIR photoluminescence and mechanoluminescence from Cr³⁺ activated MgGa₂O₄ phosphors with multifunctions for optical sensing

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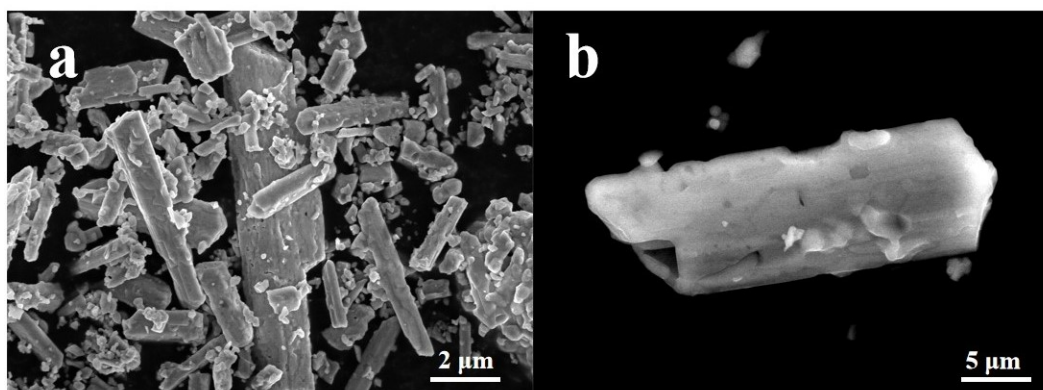


Fig. S1 (a) The SEM image of MgO:2%Cr³⁺ samples. (b) SEM partial enlarged image of MgO:2%Cr³⁺ samples.

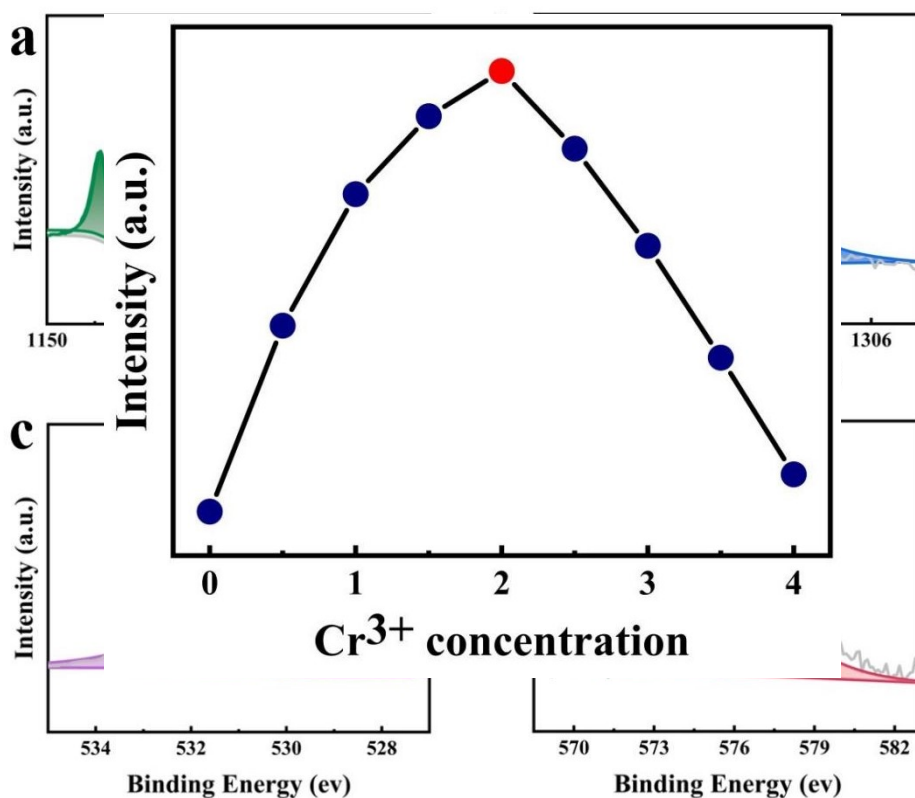


Fig. S2 (a) The XPS elemental mapping of Ga in MGO:Cr³⁺ samples. (b) The XPS elemental mapping of Mg in MGO:Cr³⁺ samples. (c) The XPS elemental mapping of O in MGO:Cr³⁺ samples. (d) The XPS elemental mapping of Cr in MGO:Cr³⁺ samples.

Fig. S3 The intensities of MGO: $x\%$ Cr³⁺ ($x = 0-4$) under 460 nm excitation.

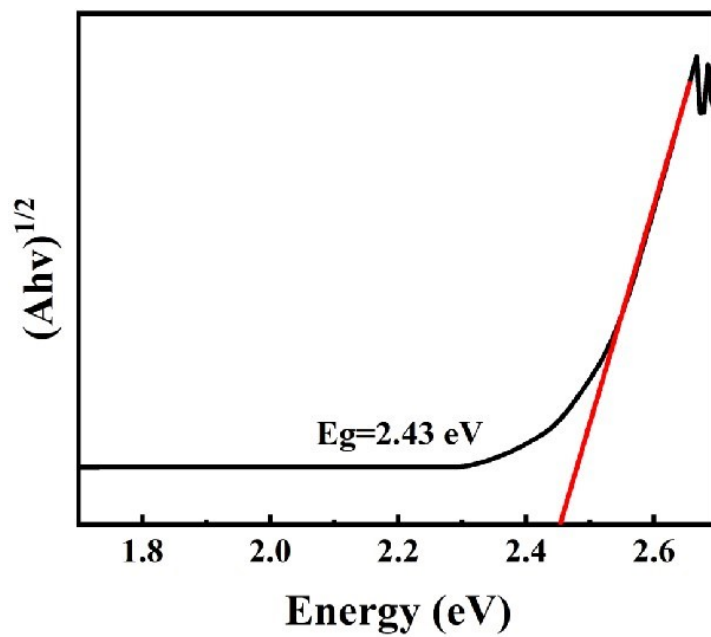


Fig. S4 The plot of $[F(R_{\infty})h\nu]^2$ versus energy (eV) of MGO:Cr³⁺ sample.



Fig. S5 Visualization of dynamic pressure tracker with a handwriting "CJLU".