

Table S1

Host material	Incorporated site	Space group	Emission peak position (nm)	FWHM (nm)	Type of emission peak	Reference
$(\text{Zn,Mg})_3\text{Ga}_2\text{Ge}_2\text{O}_{10}:\text{Cr}^{3+}$	Ga	Solid solution	700	45	Narrow	20
$(\text{Zn,Mg})(\text{Ga,Al})_2\text{O}_4:\text{Cr}^{3+}$	Ga, Al	Fd-3mZ	710	35	Narrow	21
$(\text{Y,Gd})\text{Al}_3(\text{BO}_3)_4:\text{Cr}^{3+}$	Al	R32	720	130	Broad	22
$\text{Ca}_3\text{Sc}_2\text{Si}_3\text{O}_{12}:\text{Cr}^{3+}$	Sc	Iad	760	95	Broad	24
$\text{Ca}_2(\text{La,Lu})(\text{Hf,Zr})_2\text{Al}_3\text{O}_{12}:\text{Cr}^{3+}$	Hf, Zr	Iad	780	145	Broad	25
$\text{ScBO}_3:\text{Cr}^{3+}$	Sc	Rc	800	120	Broad	23
$\text{La}_2\text{MgZrO}_6:\text{Cr}^{3+}$	La	Fm-3m	825	210	Broad	18
$(\text{Li,Na})(\text{In,Sc})(\text{Si,Ge})_2\text{O}_6:\text{Cr}^{3+}$	In, Sc	C2/c	840	143	Broad	26
$\text{La}_3\text{Ga}_5\text{GeO}_{14}:\text{Cr}^{3+}$	Ga	P321	750, 920	330	Broad	27

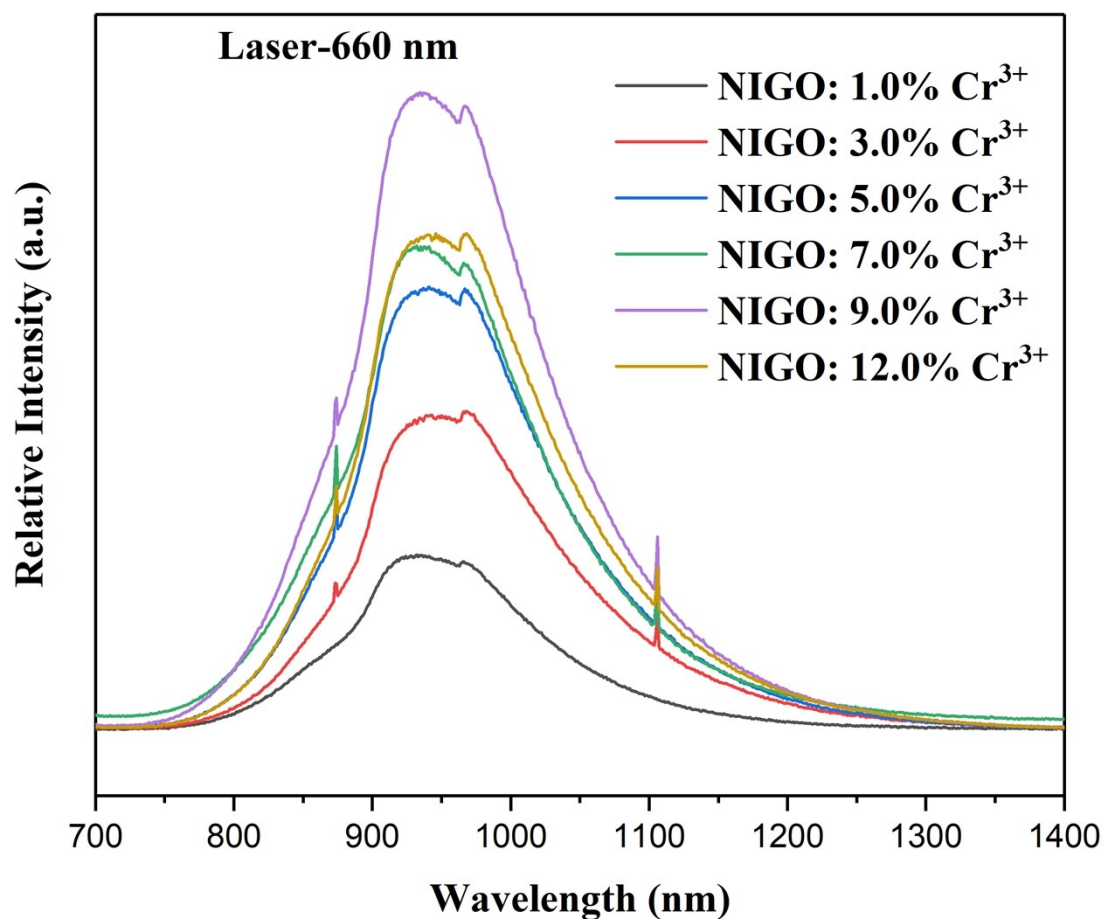


Figure S1

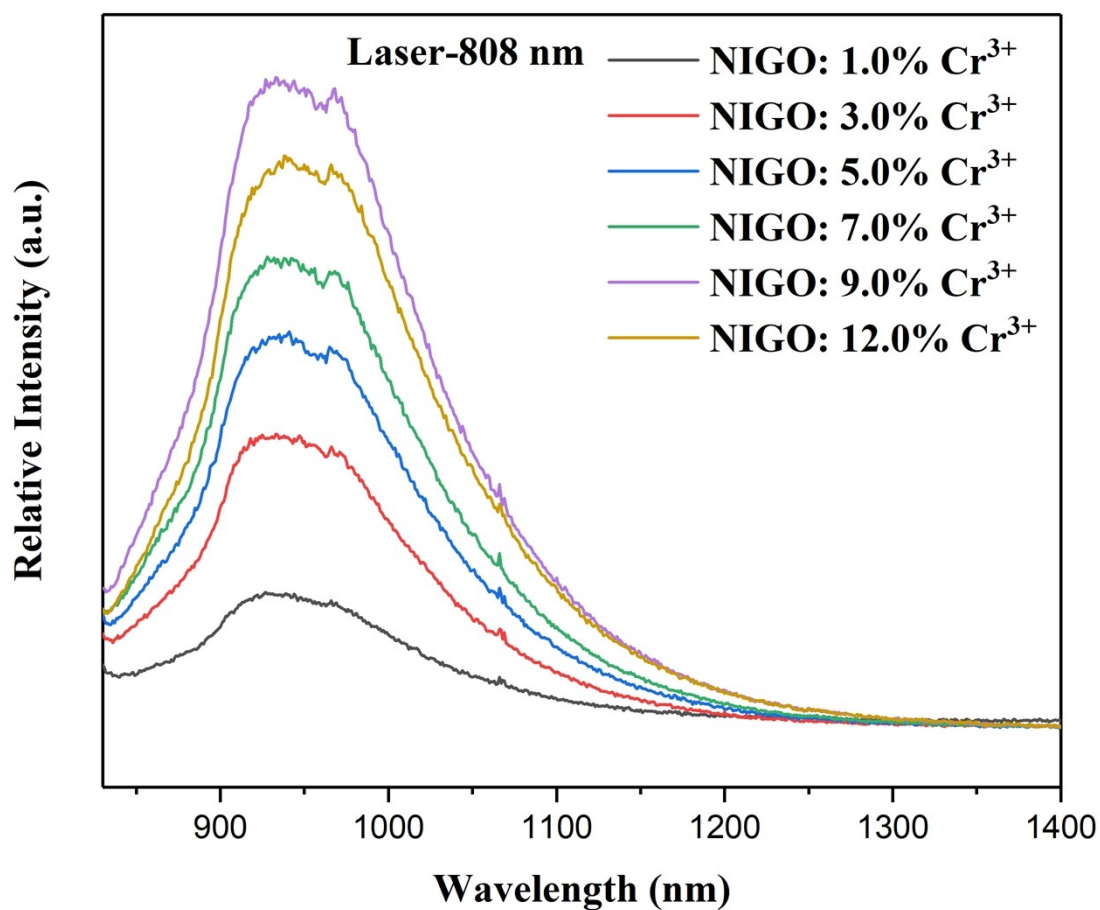


Figure S2

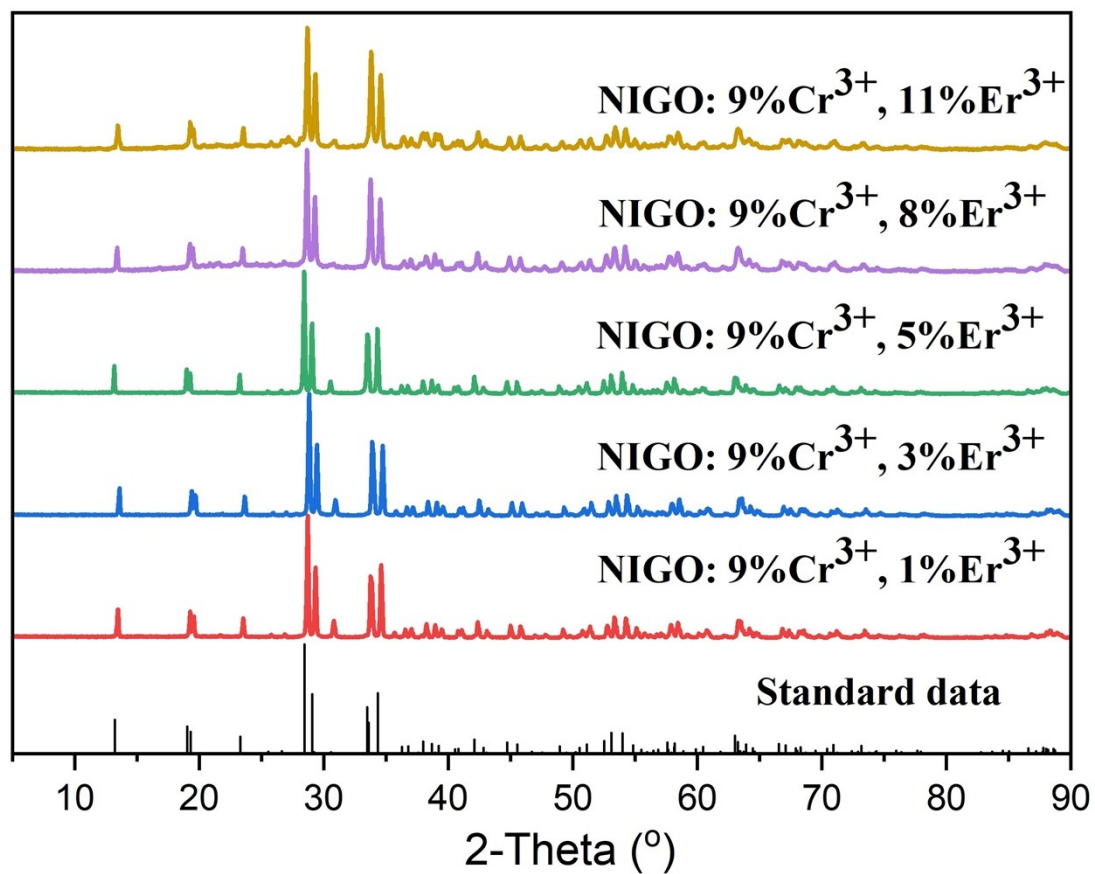


Figure S3

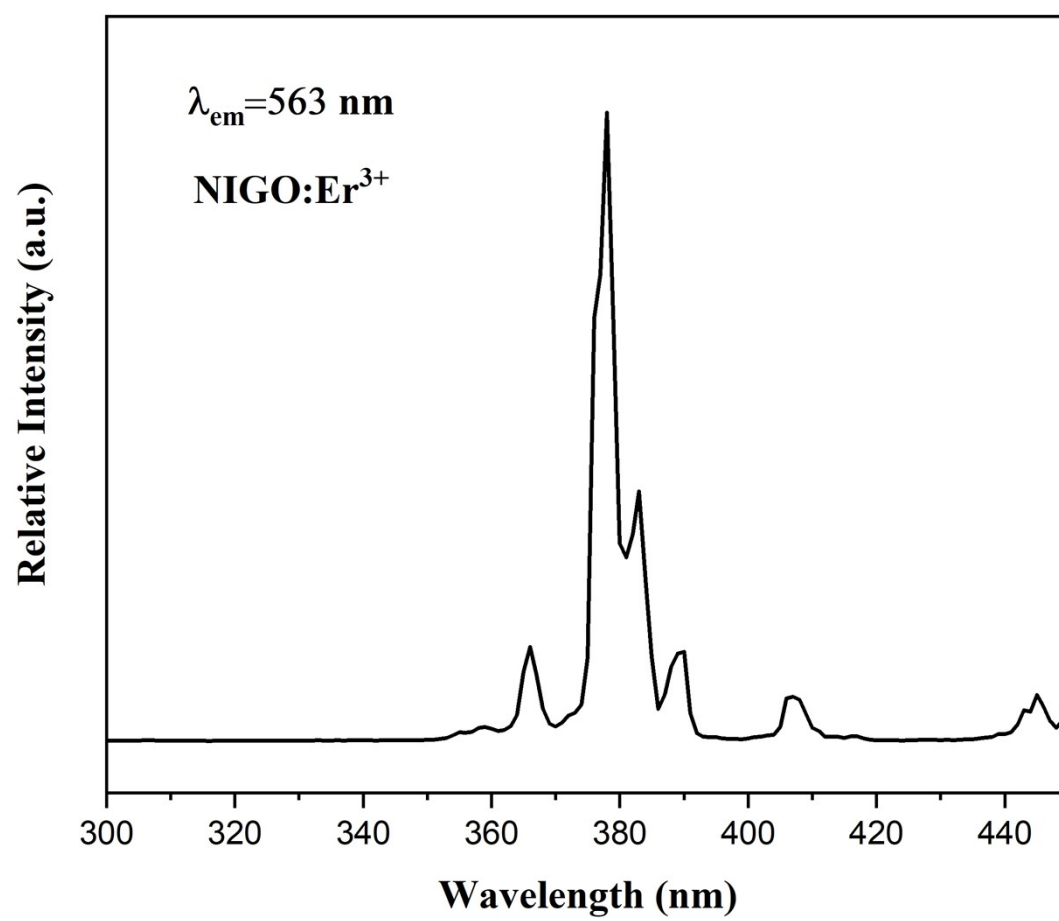


Figure S4

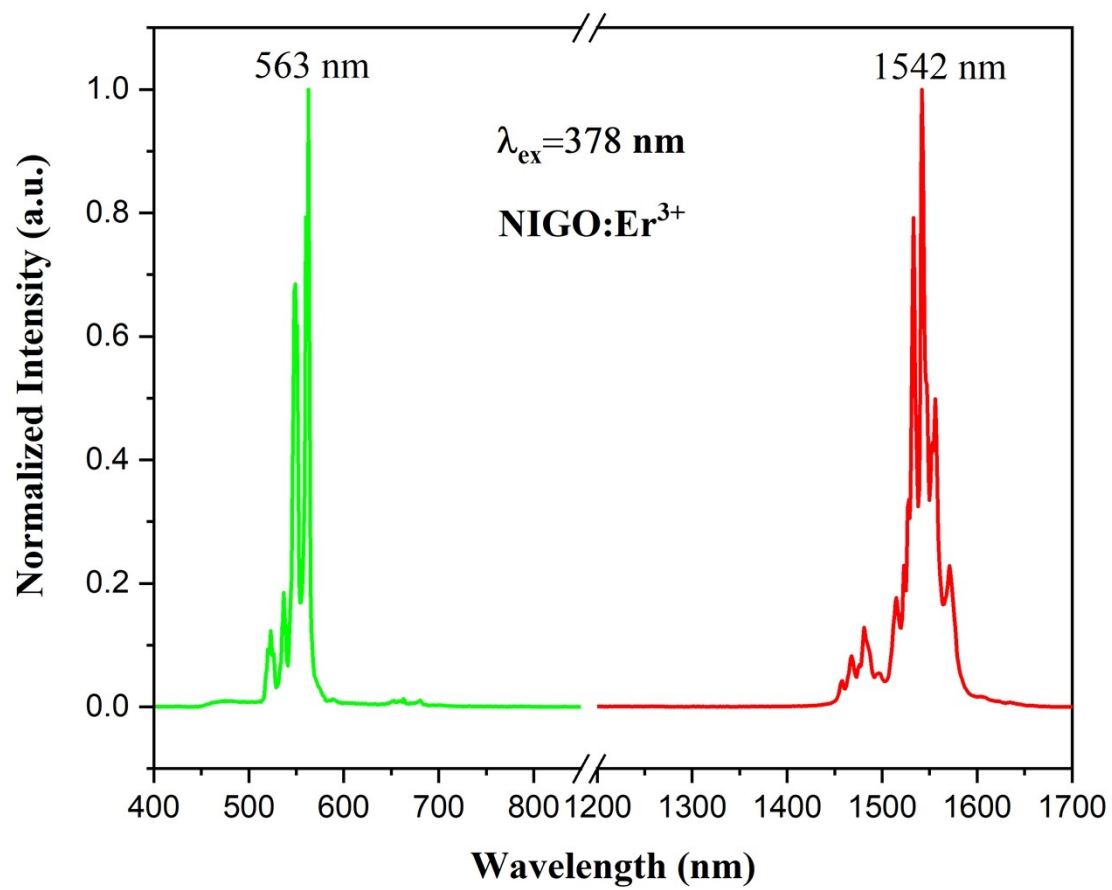


Figure S5

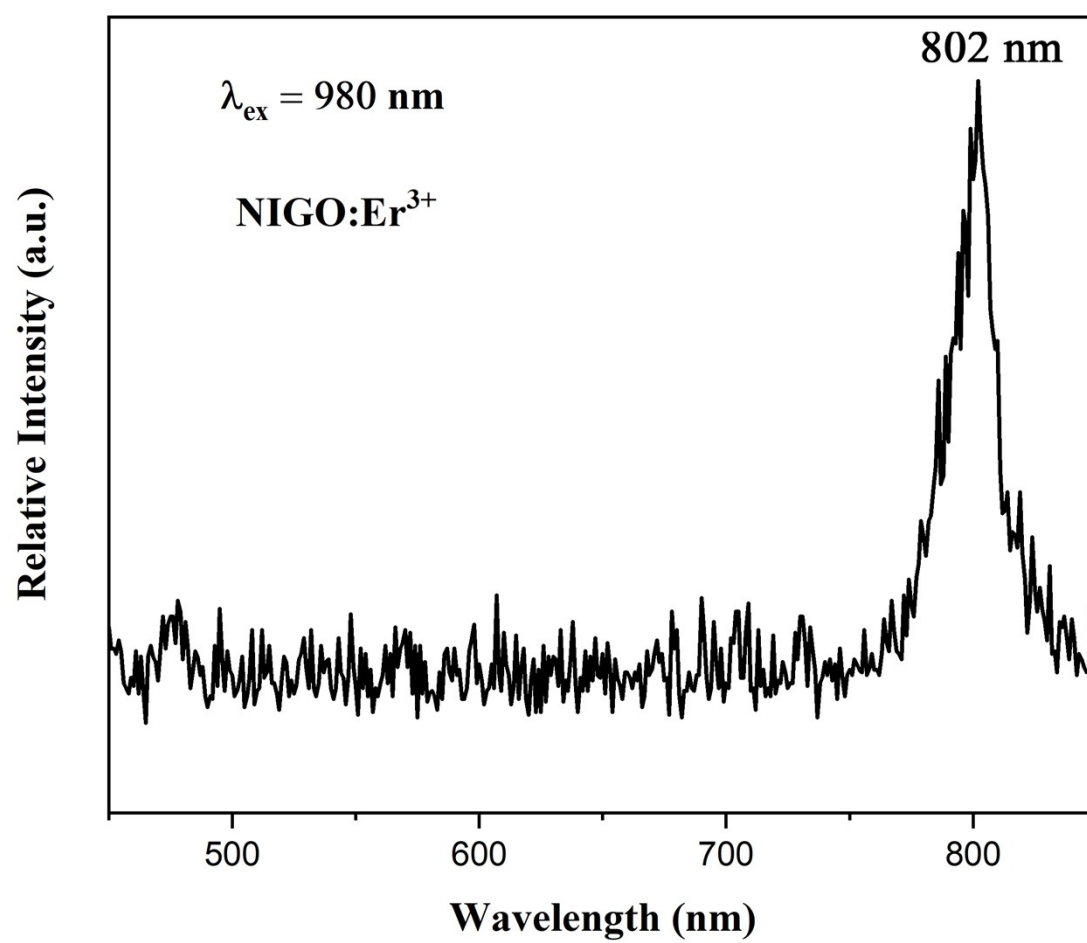


Figure S6

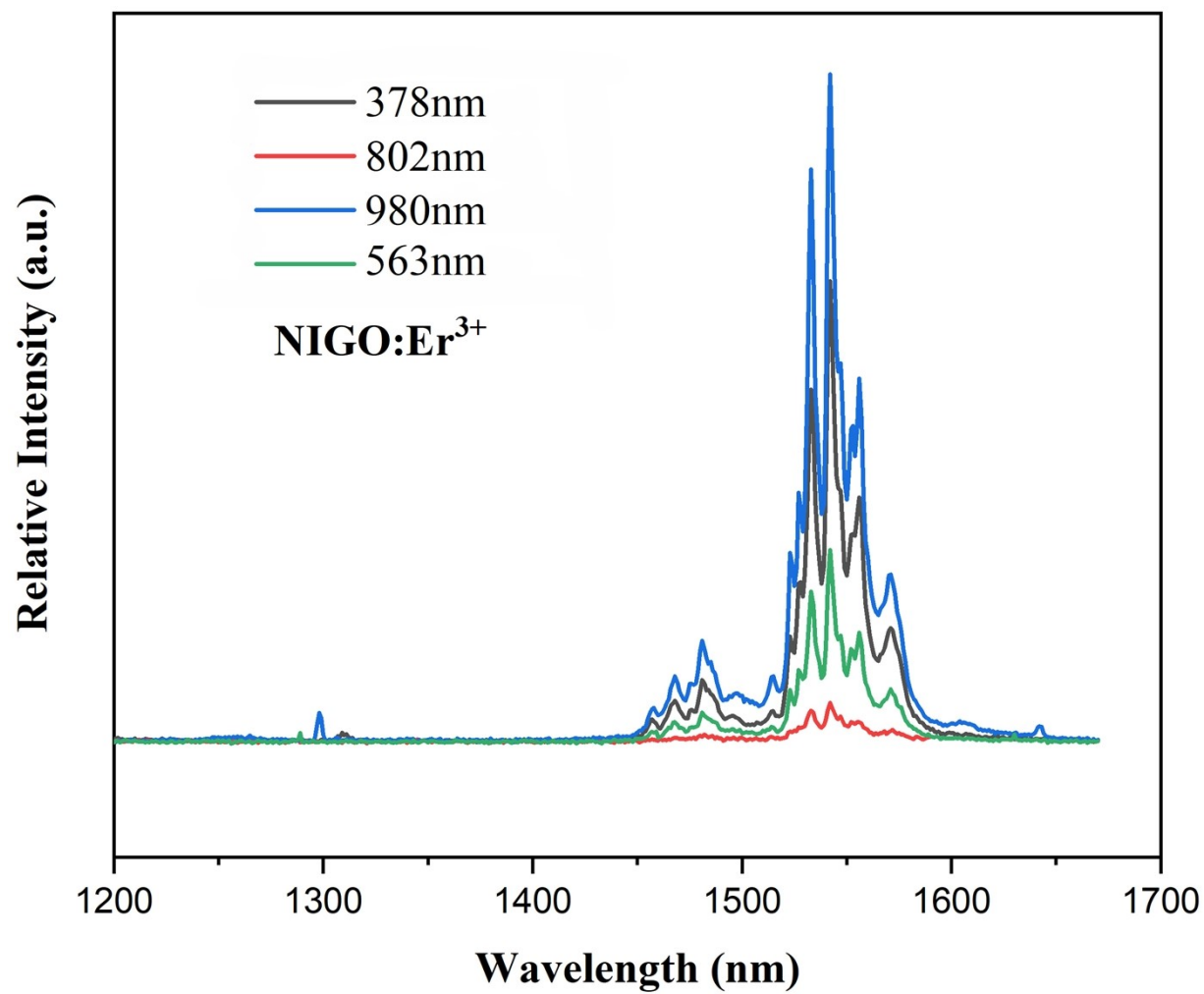


Figure S7

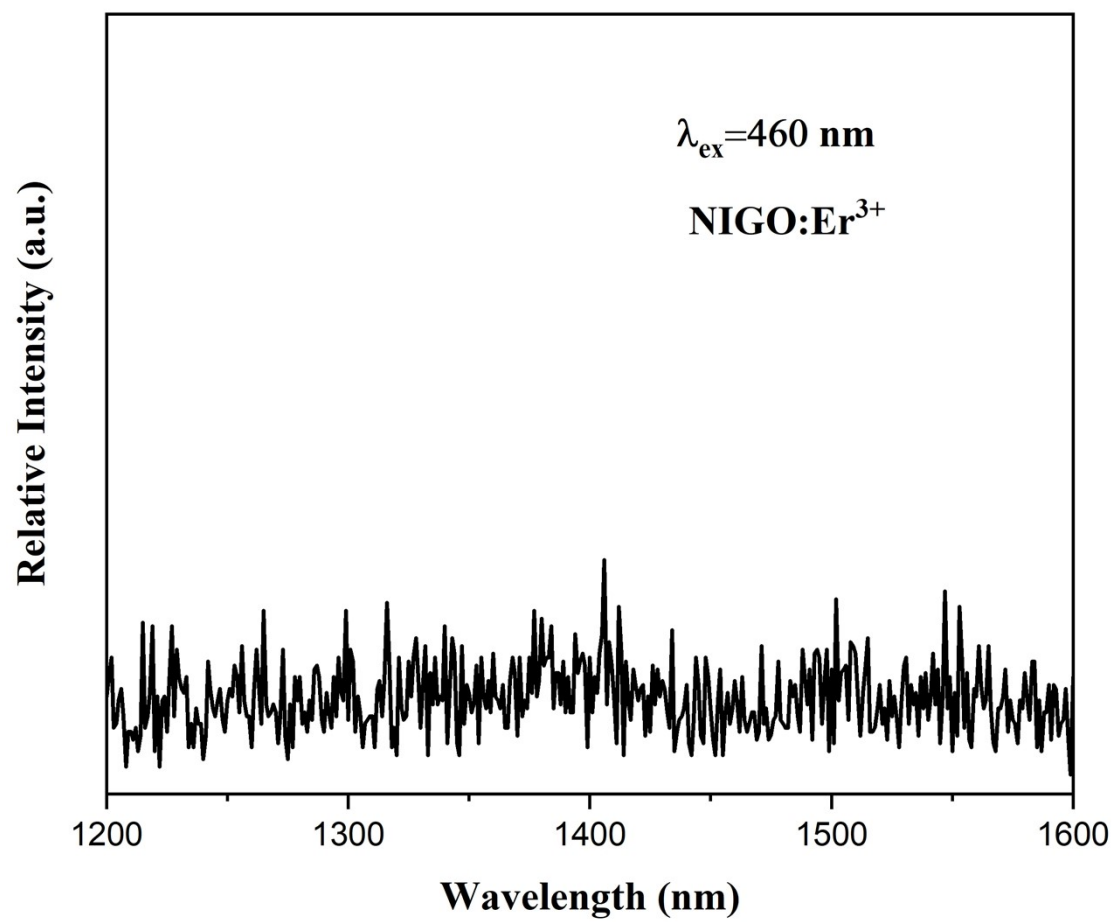


Figure S8

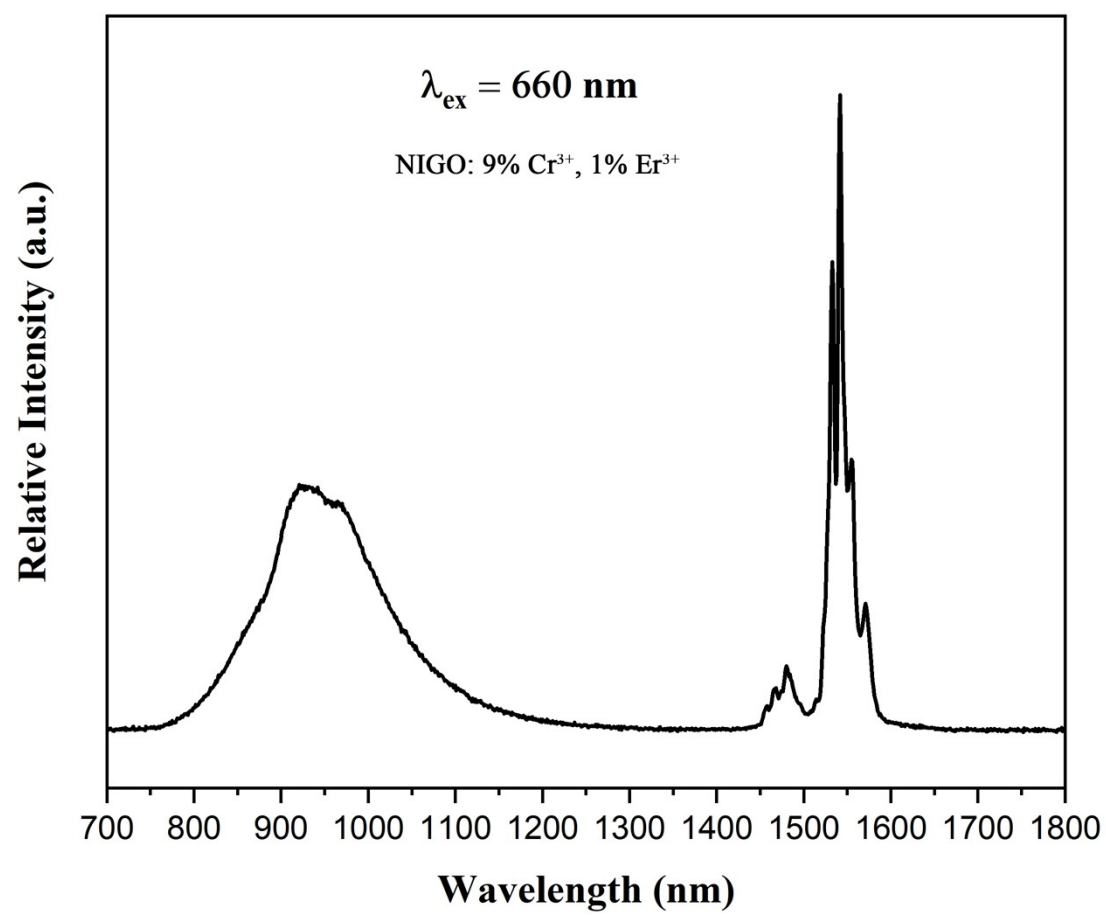


Figure S9

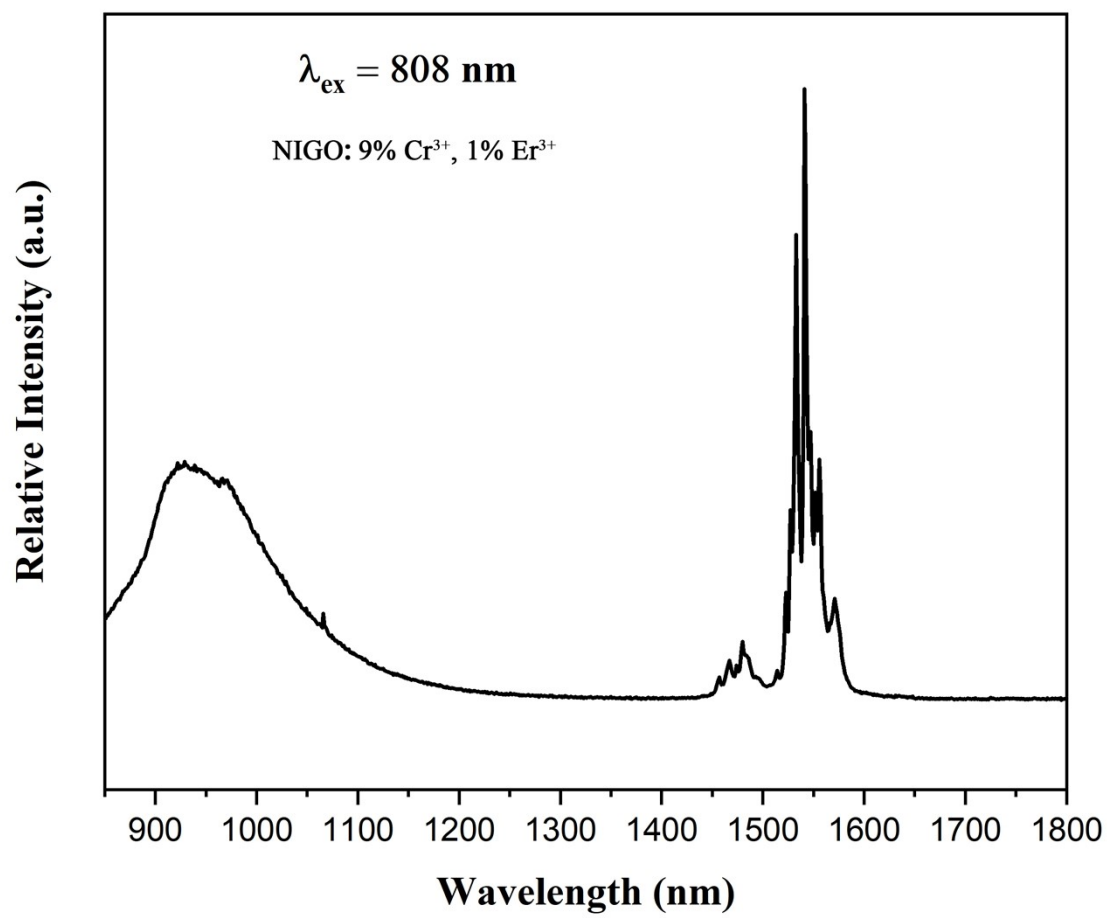


Figure S10

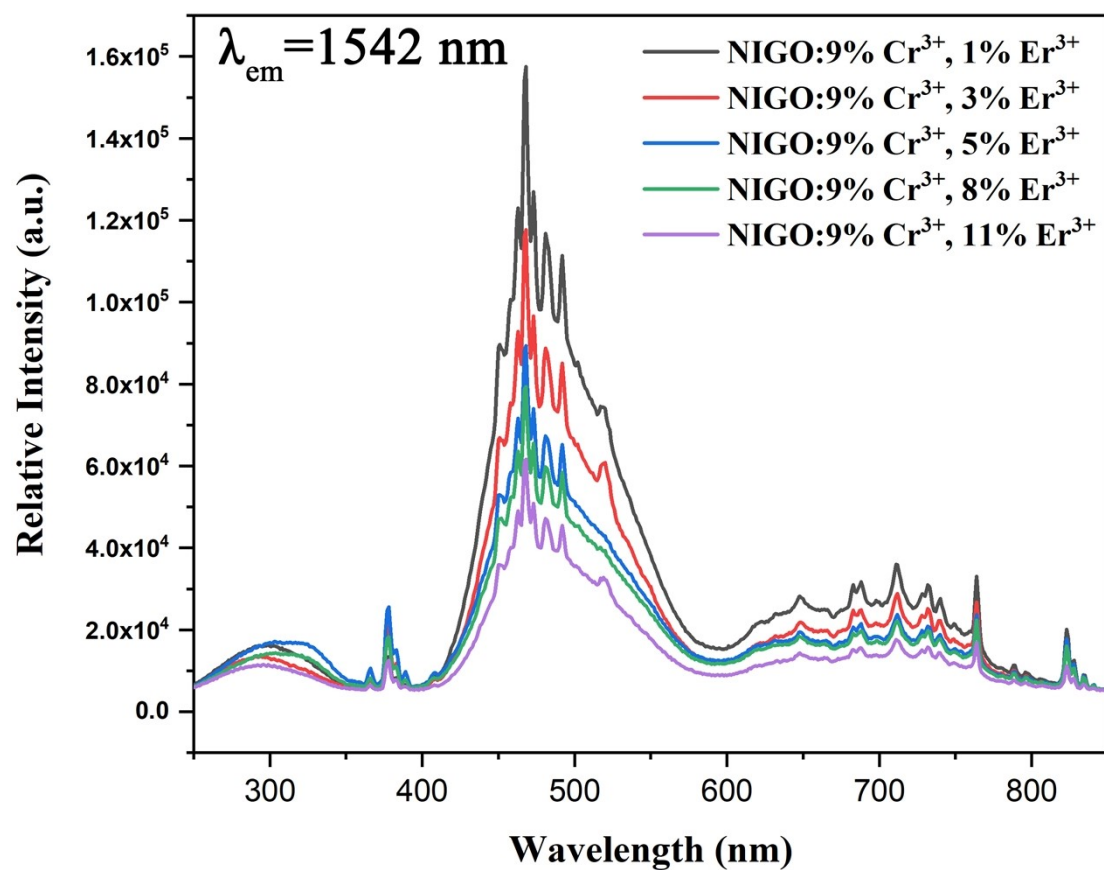


Figure S11

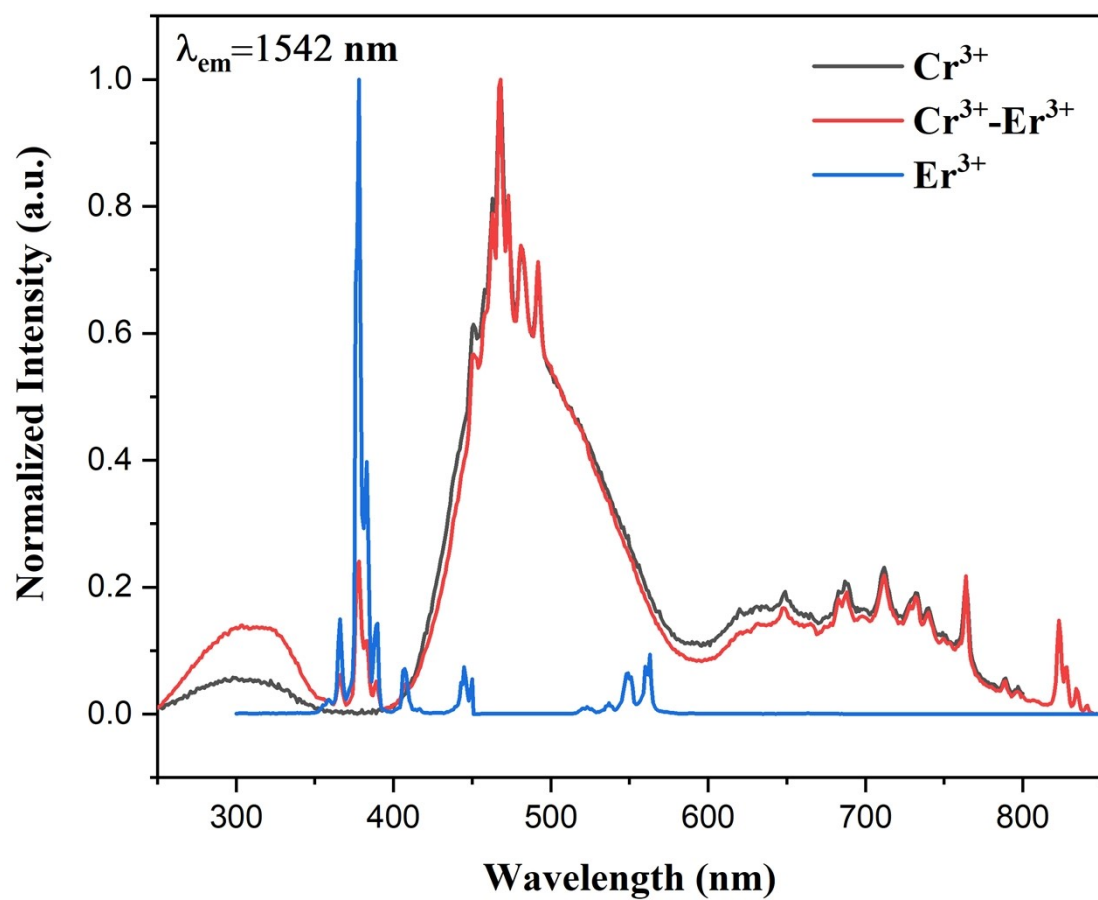


Figure S12

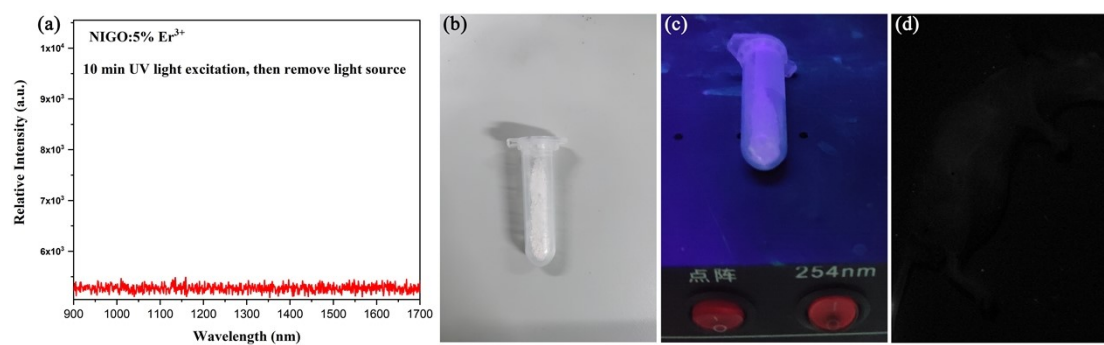


Figure S13