Supporting Information

Simultaneous Adjustment of Afterglow Wavelength and Intensity in Indium-Substituted $Ga_{1.99-x}In_xO_3:0.01Cr^{3+}$

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1. Tables

Table S1. The parameters of persistent luminescence decay curve fitting.

samples	τ_1	A_1	τ_2	A_2	τ_3	A_3	τ_{av}
$Ga_{1.99}O_3$:0.01Cr^{3+}	4.046	0.621	40.227	0.247	278.23	0.136	217.44s
$Ga_{1.85}In_{0.14}O_3$:0.01Cr^{3+}	8.021	0.429	73.068	0.392	292.16	0.141	193.35s
$Ga_{1.65}In_{0.34}O_3$:0.01Cr^{3+}	20.035	0.072	31.152	0.502	159.32	0.391	131.51s
$Ga_{1.45}In_{0.54}O_3$:0.01Cr^{3+}	14.616	0.140	27.905	0.458	146.65	0.366	120.57s
$Ga_{1.25}In_{0.74}O_3$:0.01Cr^{3+}	26.001	0.054	26.006	0.393	97.13	0.481	82.96s
$Ga_{1.05}In_{0.94}O_3$:0.01Cr^{3+}	2.371	0.623	2.371	0.255	47.94	0.142	37.25s
$Ga_{0.85}In_{1.14}O_3$:0.01Cr^{3+}	1.933	0.957	1.933	0.202	21.19	0.201	14.56s
$Ga_{0.75}In_{1.24}O_3$:0.01Cr^{3+}	1.064	0.969	9.309	0.142	22.80	0.214	17.24s

$\tau_{av}=(A_1\tau_1^2+A_2\tau_2^2+A_3\tau_3^2)/(A_1\tau_1+A_2\tau_2+A_3\tau_3)$

2. Figures

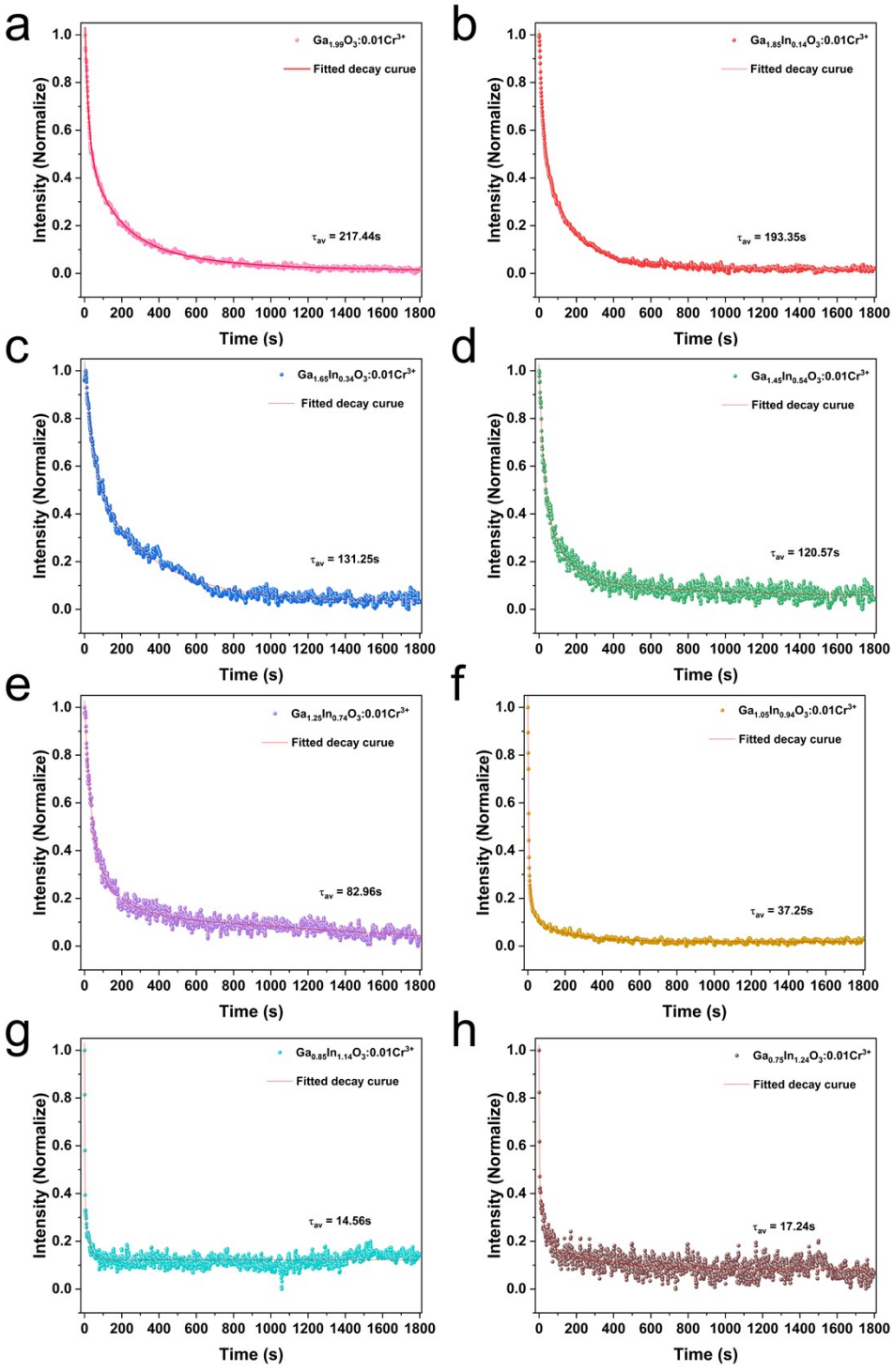

Figure 1. Persistent luminescence decay curves of (a) $Ga_{1.99}O_3$:0.01Cr^{3+}, (b) $Ga_{1.85}In_{0.14}O_3$:0.01Cr^{3+}, (c) $Ga_{1.65}In_{0.34}O_3$:0.01Cr^{3+}, (d) $Ga_{1.45}In_{0.54}O_3$:0.01Cr^{3+}, (e) $Ga_{1.25}In_{0.74}O_3$:0.01Cr^{3+}, (f) $Ga_{1.05}In_{0.94}O_3$:0.01Cr^{3+}, (g) $Ga_{0.85}In_{1.14}O_3$:0.01Cr^{3+}, and (h) $Ga_{0.75}In_{1.24}O_3$:0.01Cr^{3+} after UV irradiation for 5min.

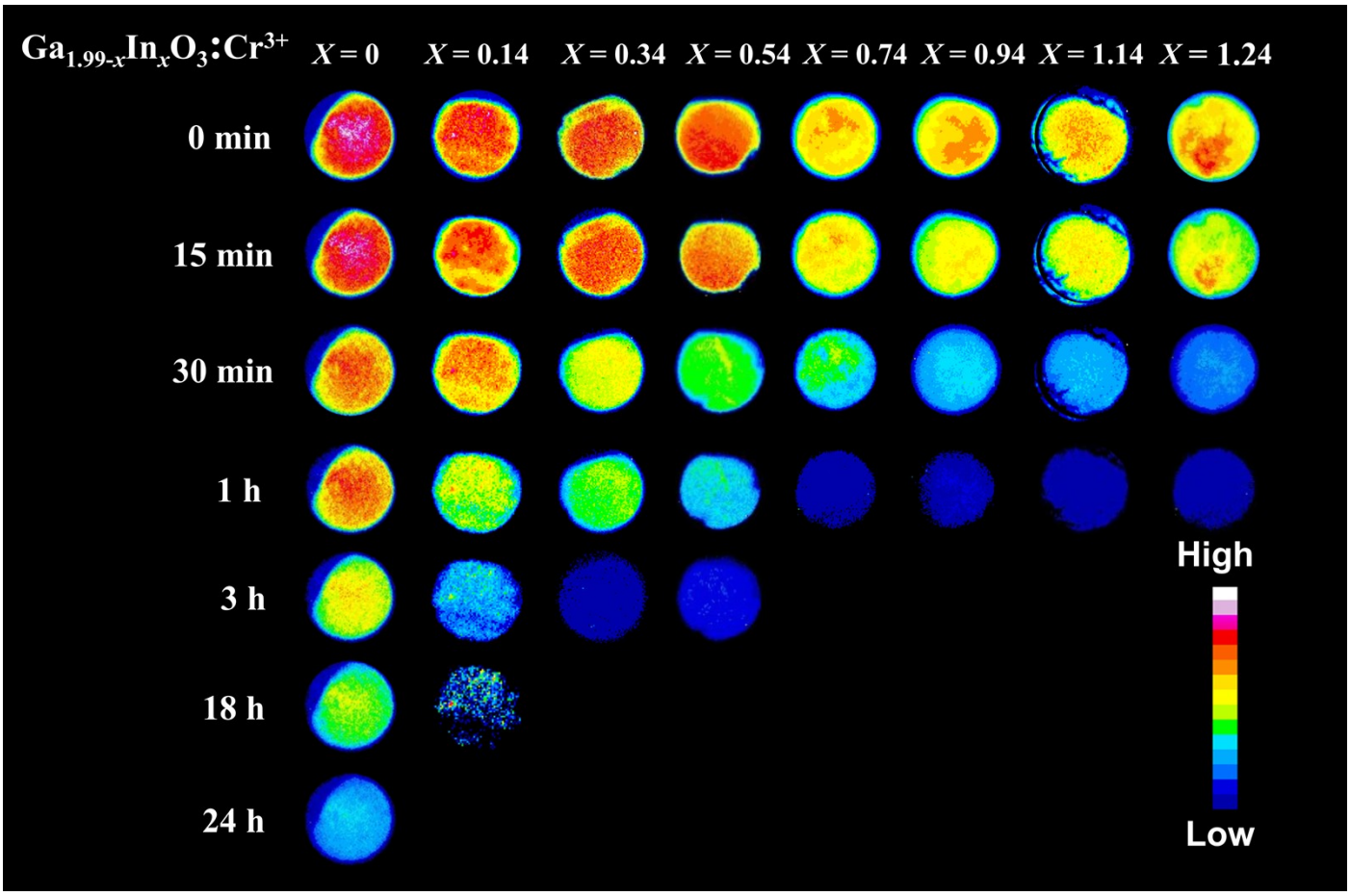

Figure 2. Afterglow decay images of GIO: Cr were recorded by a CCD camera after 5 minutes of irradiation with 254 nm UV light.

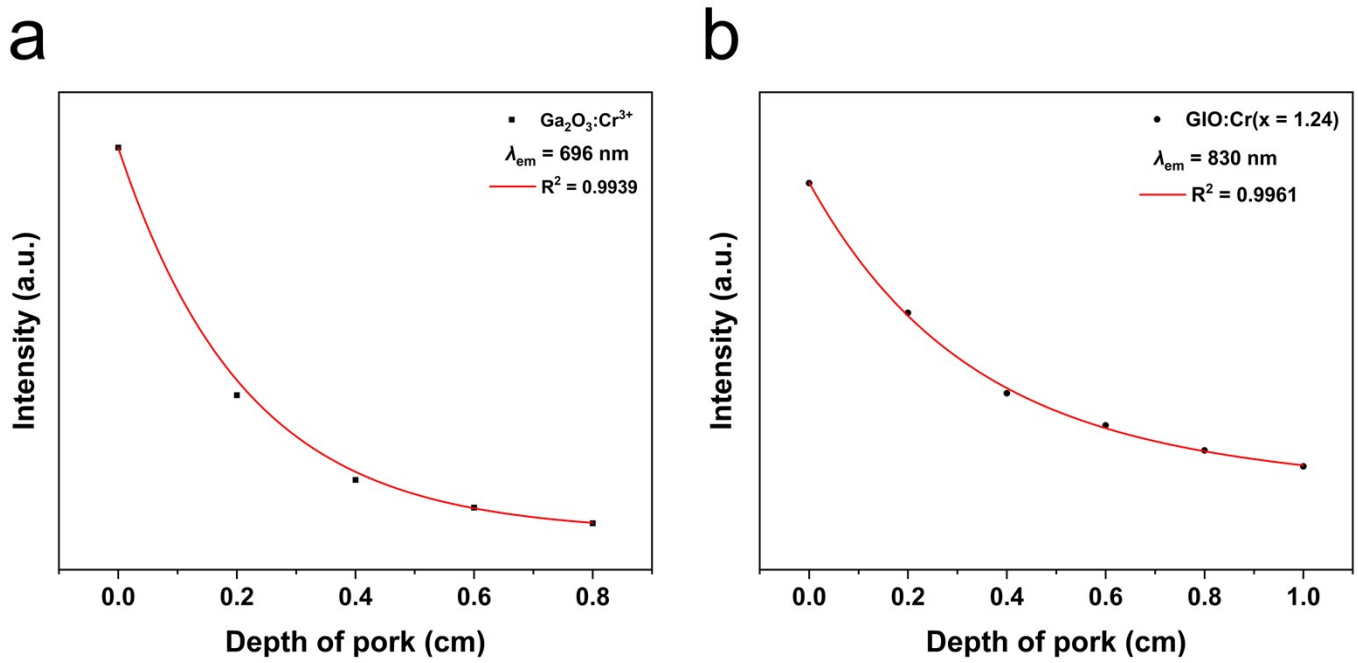

Figure 3. The relationship between the persistent luminescence intensity of (a) $Ga_2O_3:Cr^{3+}$ and (b) $Ga_{0.75}In_{1.24}O_3:0.01Cr^{3+}$ with different pork tissue thicknesses.