

Supporting Information

Near-White Emission observed in Dy doped AlN

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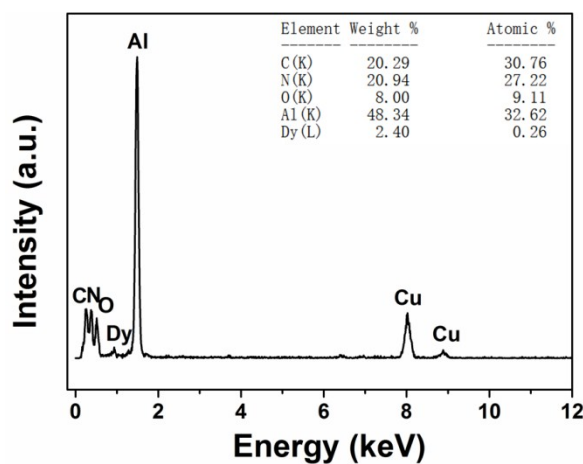


Fig. S1 EDX spectrum of AlN:0.3 mol% Dy sample prepared at 900 °C.

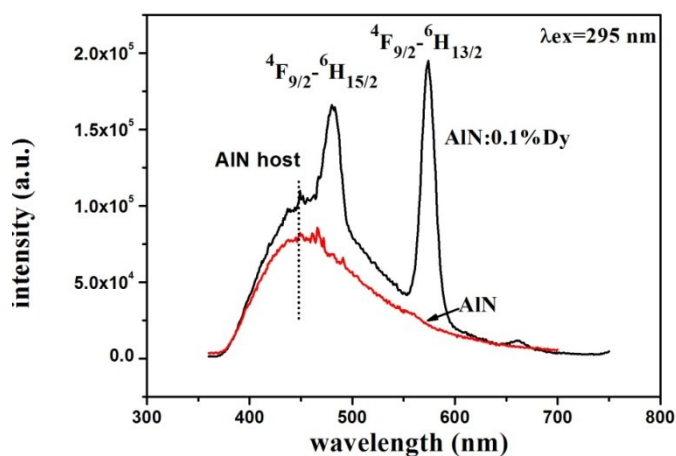


Fig. S2 Photoluminescence emission spectra of (a) undoped AlN and (b) AlN doped with Dy samples.

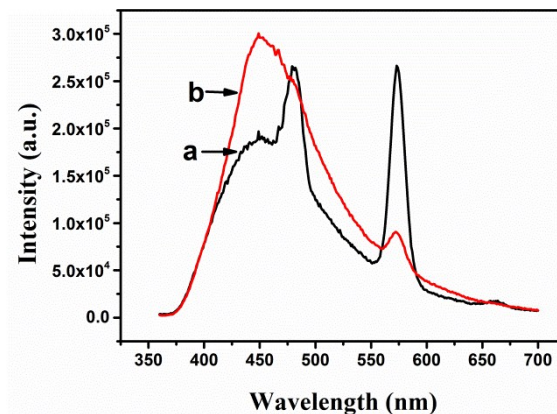


Fig. S3 Photoluminescence emission spectra of AlN:0.3 mol% Dy excited at (a) 294 nm and (b) 350 nm.

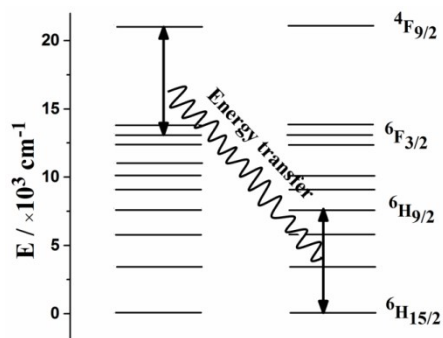


Fig. S4 Diagram of cross relaxation processes between Dy³⁺ ions.

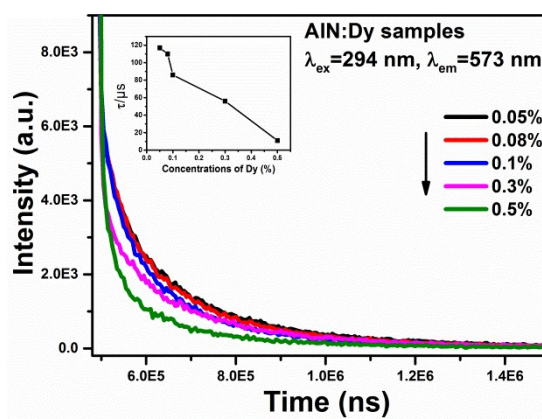


Fig. S5 Photoluminescence decay curves of AlN:Dy samples under excitation at 294 nm.

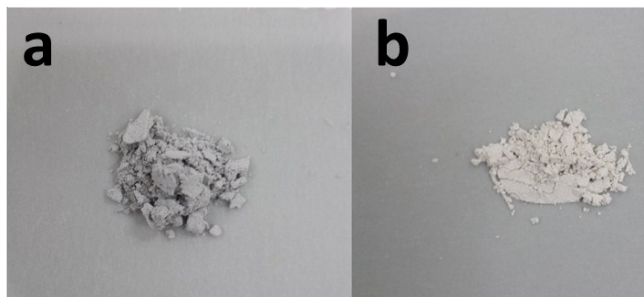


Fig. S6 Digital photographs of AlN:0.1 mol % Dy sample before (a) and after (b) post-thermal treatment.

Table S1 Quantum yields in AlN: Dy samples

Samples	Quantum yield (Φ)
AlN:0.05 mol% Dy	0.02
AlN:0.08 mol% Dy	0.03
AlN:0.1 mol% Dy	0.03
AlN:0.3 mol% Dy	0.03
AlN:0.5 mol% Dy	0.01