

Absolute up-conversion quantum efficiency reaching 4% in β -NaYF₄:Yb³⁺,Er³⁺ micro-cylinders achieved by Li⁺/Na⁺ ion-exchange

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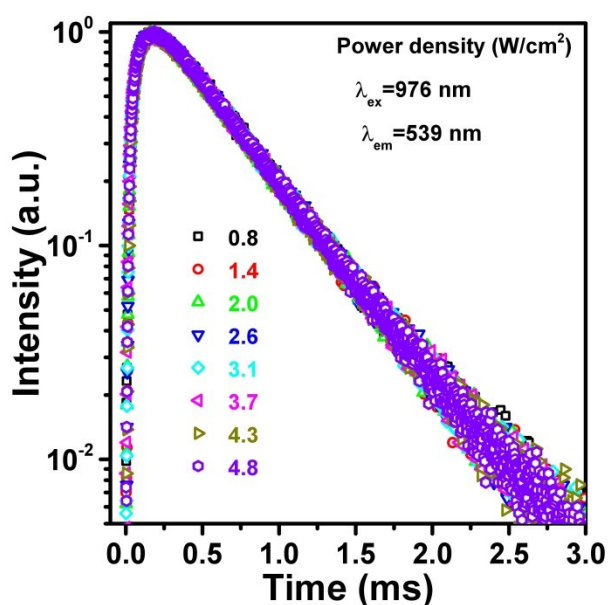


Fig. S1. The variation of decay curves of green UC emission for Li⁺/Na⁺ IEM β -NaYF₄:20%Yb³⁺,2%Er³⁺ synthesized with LiF/NaF = 40/60 dependent on the pump power density (976 nm, 0.8 – 4.8 W/cm²).