

Supporting Figures

Balancing Intermediate State Decay Rates for Efficient Pr³⁺ Visible-to-UVC Upconversion: The case of β -Y₂Si₂O₇:Pr³⁺

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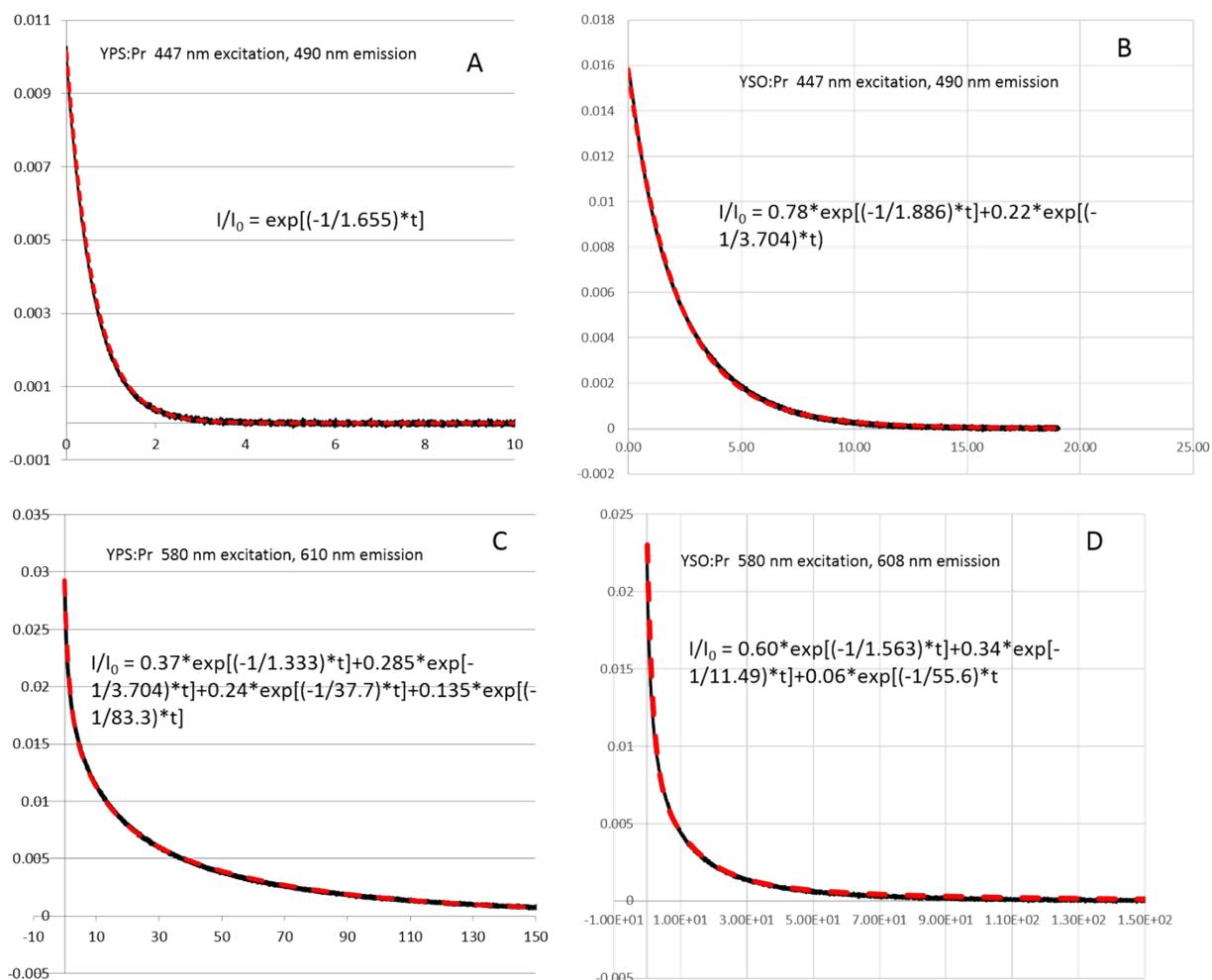


Figure S1. Corrected luminescence decay curves (black) and decay fits (red dashed) for YPS:Pr³⁺ and YSO:Pr³⁺ emissions under pulsed excitation. Y-axis is intensity, zeroed using the straight, fully decayed regions of the curves. X-axis is time in μs , zeroed using the onset of exponential decay following initial signal rise.

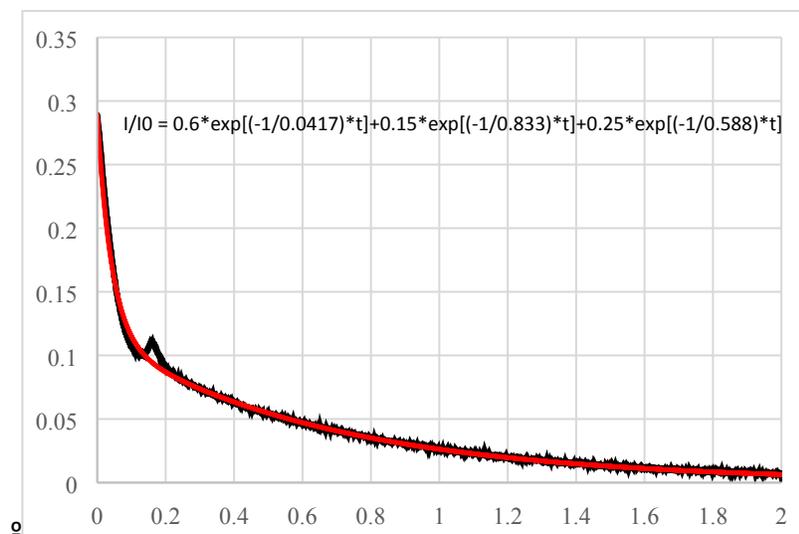


Figure S2. Decay curve (black) and decay fit (red dashed) of YPS:Pr³⁺ ³P₂ emission at 455 nm. Excitation wavelength = 435 nm. X-axis units are μ s.

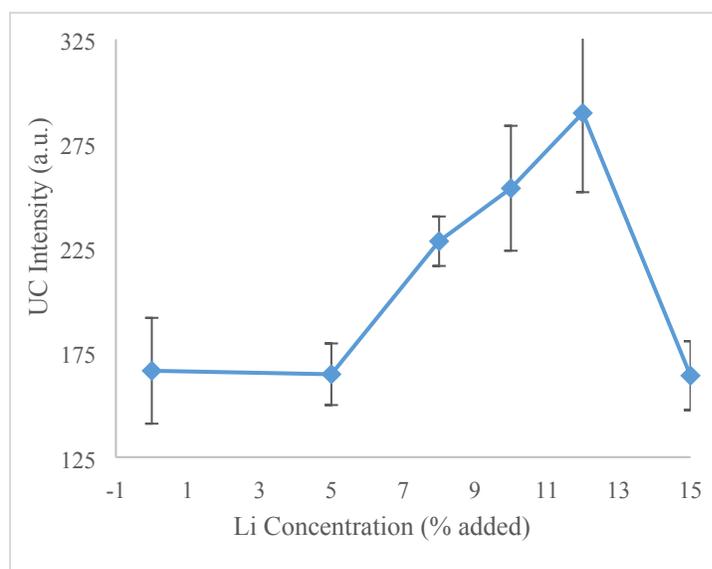


Figure S3. YPS:Pr³⁺ ceramics optimization of lithium concentration, expressed as mol.% versus Y³⁺ stoichiometry. Pr³⁺ concentration was fixed at 1.5 mol.%. Error bars show standard deviation of three separately prepared samples.