

Electronic Supplementary Material (ESI) for New Journal of Chemistry

The effect of vanadium substitution on photoluminescent properties of $\text{KSrLa}(\text{PO}_4)_x(\text{VO}_4)_{2-x}:\text{Eu}^{3+}$ phosphors: A new variant of phosphovanadates

Bal Govind Vats^a*, Santosh K. Gupta^b*, Meera Keskar^a, Rohan Phatak^a, S. Mukherjee^b and S. Kannan^a

^aFuel Chemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085

^bRadiochemistry Division, Bhabha Atomic Research Centre, Trombay, Mumbai-400085

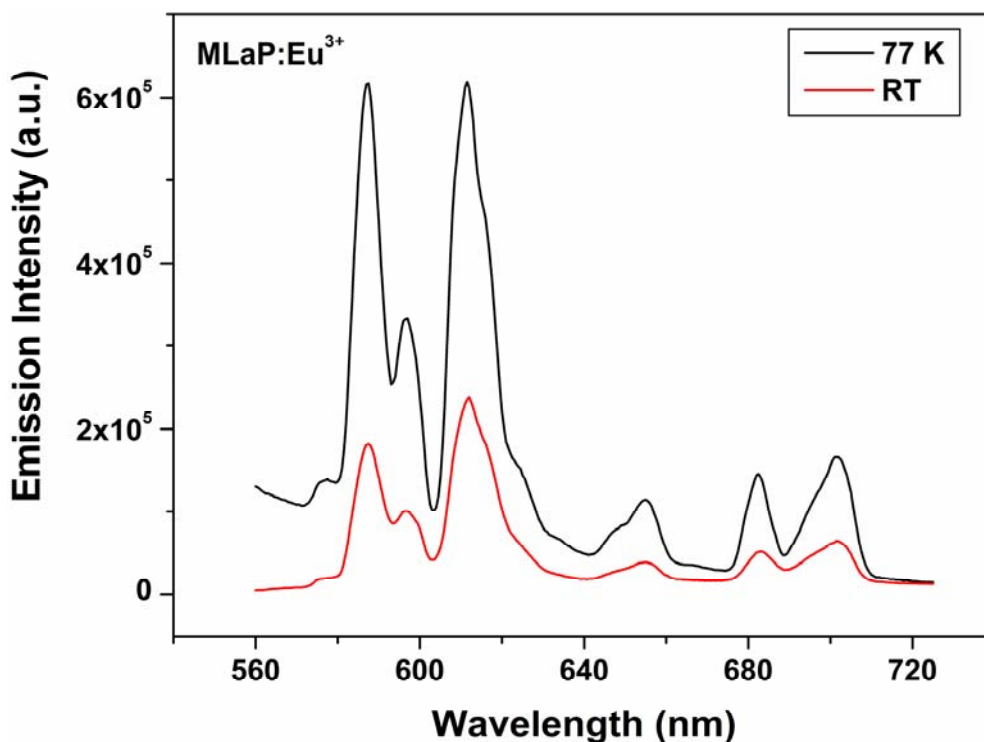


Figure S1: Emission spectra of $\text{MLaP}:\text{Eu}^{3+}$ at 77 and 300 K.

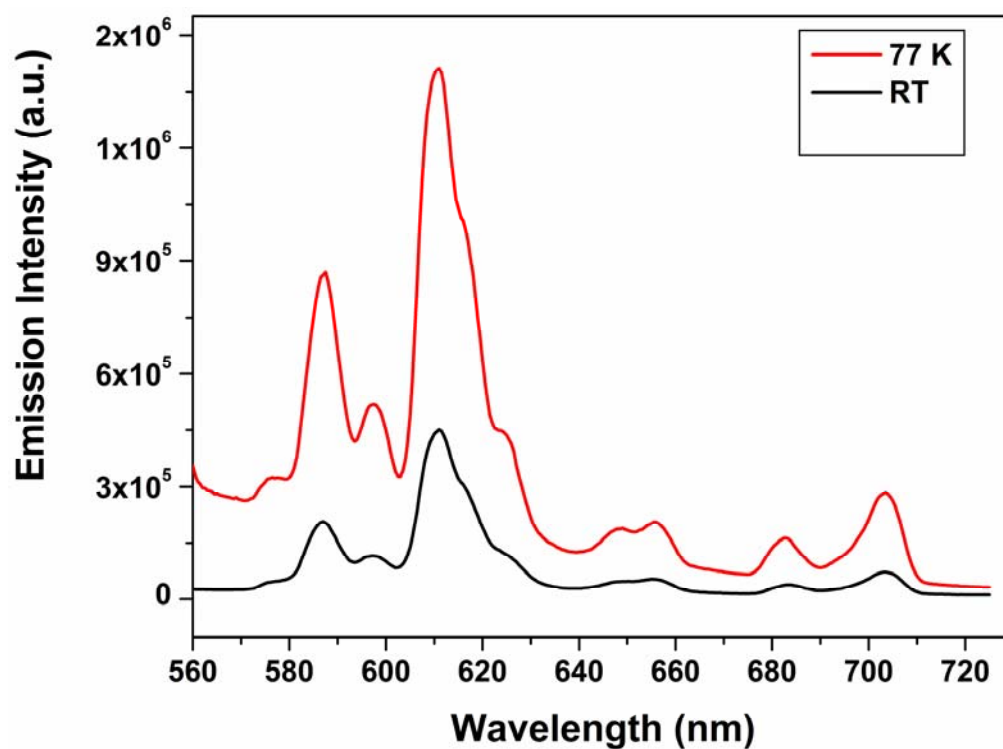


Figure S2: Emission spectra of MLaPV:Eu³⁺ at 77 and 300 K.

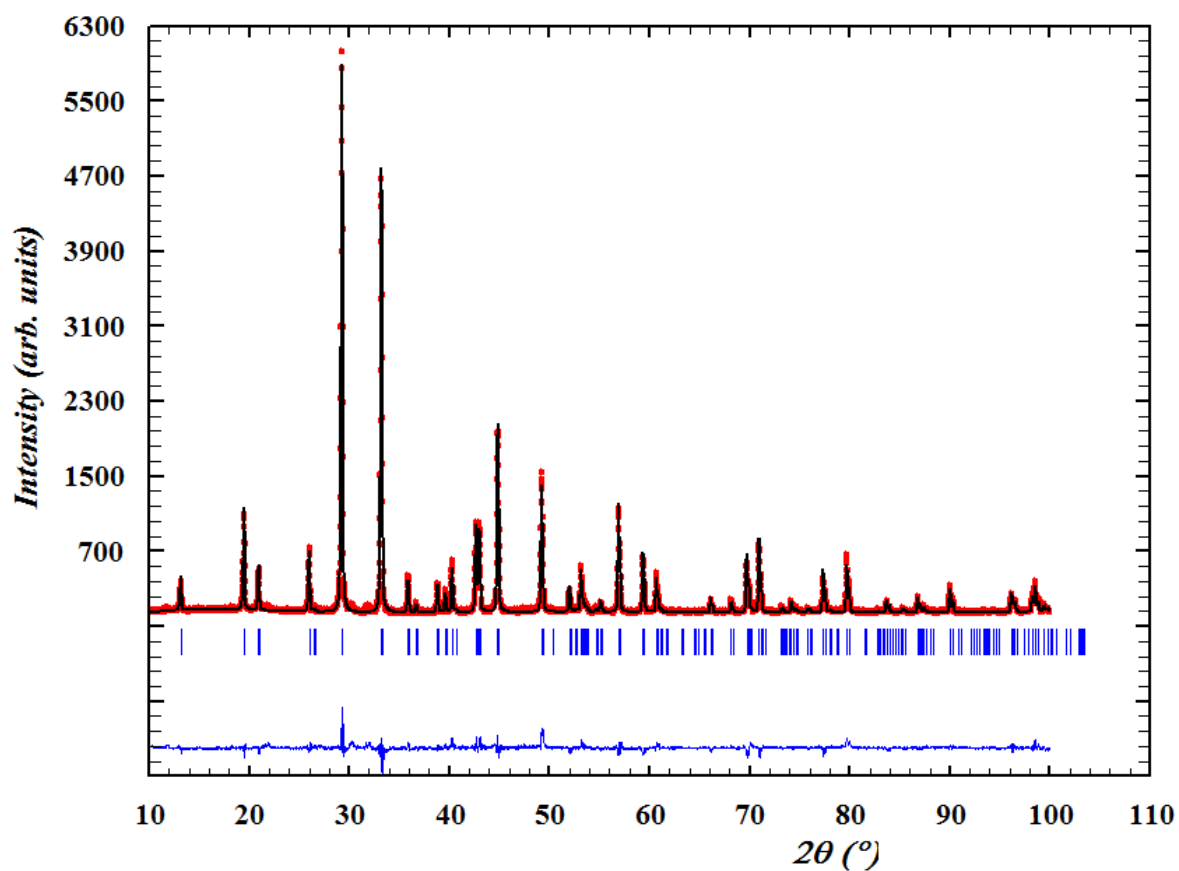


Figure S3: Observed (red), calculated (black) and difference pattern (blue) of KSrLa(PO₄)₂ phase at room temperature after rietveld refinement.

Table-S1: Rietveld refinement parameters for $\text{KSrLa}(\text{PO}_4)_2$

$\text{KSrLa}(\text{PO}_4)_2$	
Crystal System	rhombohedral
Space group	$R\bar{3}m$ (166)
Z	3
Cell parameters	$a=b=5.3905$ (1) ; $c=20.1393$ (4) $\alpha=90^\circ$; $\beta=90^\circ$; $\gamma=120^\circ$
Cell volume	506.800 (13)
χ^2	1.96
Rp	9.28
Rwp	12.3