

## ***Supplementary Material***

### **Towards blue long-lasting luminescence of Eu/Nd doped calcium-aluminate nanostructured platelets via molten salt route**

Rocío Estefanía Rojas-Hernandez<sup>\*, †, ‖</sup> , Fernando Rubio-Marcos<sup>†</sup>, Aida Serrano<sup>†</sup>, Eduardo Salas<sup>\*</sup>, I.

Hussainova<sup>‖</sup>, José Francisco Fernandez<sup>†</sup>

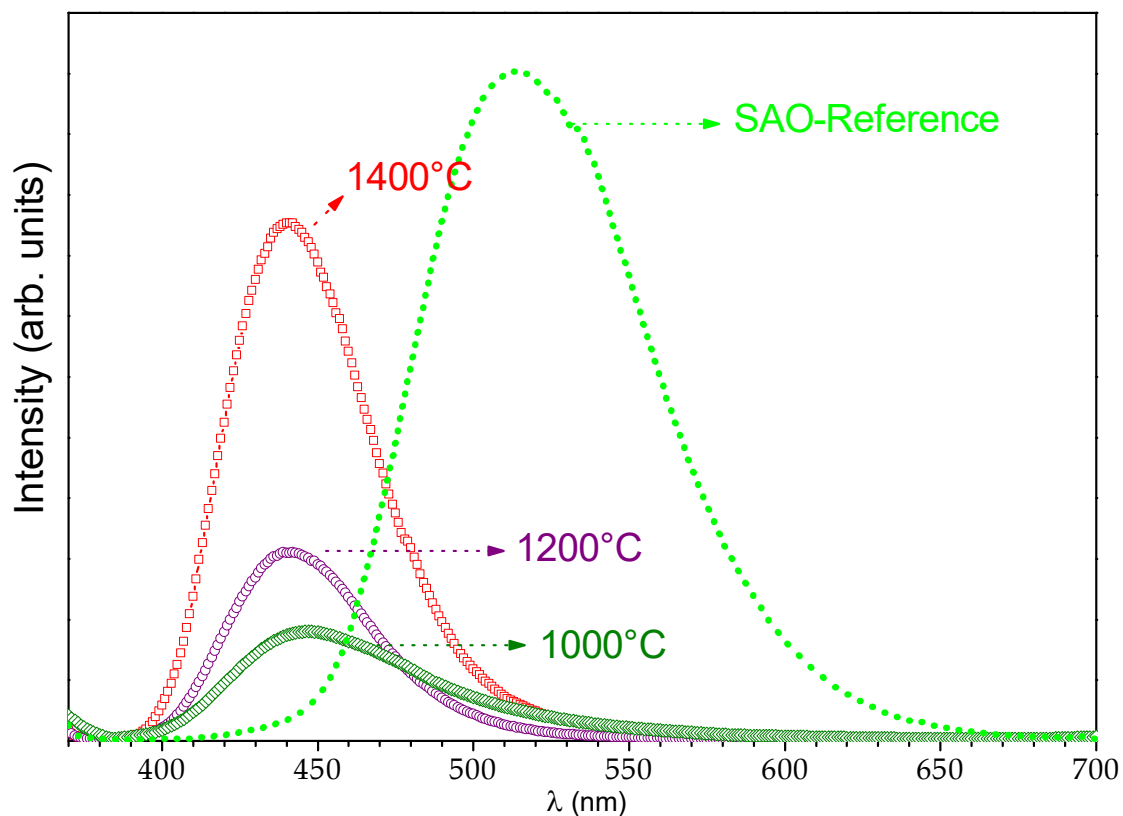
<sup>†</sup> *Electroceramic Department, Instituto de Cerámica y Vidrio, CSIC, Kelsen 5, 28049, Madrid, Spain*

<sup>‖</sup> *Department of Materials Engineering, Tallinn University of Technology, Ehitajate 5, 19180 Tallinn, Estonia*

<sup>\*</sup> *Spanish CRG BM25 SpLine beamline, The European Synchrotron, 38043 Grenoble, France, and Instituto de Ciencia de Materiales de Madrid, CSIC, 28049, Madrid, Spain.*

### Supplementary Information 1:

**Figure S1** shows the PL emission spectrum of the particles synthesized in  $N_2-H_2$  atmosphere heated at 1000 (green-line with diamonds), 1200 (purple-line with circles), and 1400 °C (red-line with squares) compared with the commercial powder as received based on  $SrAl_2O_4:Eu, Dy$  material (SAO-Reference).



**Figure S1** Photoluminescence spectra of the synthesized CAO: Eu, Nd phosphor heated at 1000 (green-line with diamonds), 1200 (purple-line with circles), and 1400 °C (red-line with squares) for 2 hours in 90 $N_2$ -10 $H_2$ , employing a salt/CAO molar ratio of 3:1 in comparison to a commercial powder (from Jinan Chenghao Technology Co., Ltd) as received.