

# Supplementary Materials

## Evaluation of Structural and Functional Properties of $\text{La}_{0.6}\text{Sr}_{0.4}\text{MnO}_3$ Perovskite Prepared by the Fast Solution Combustion Approach

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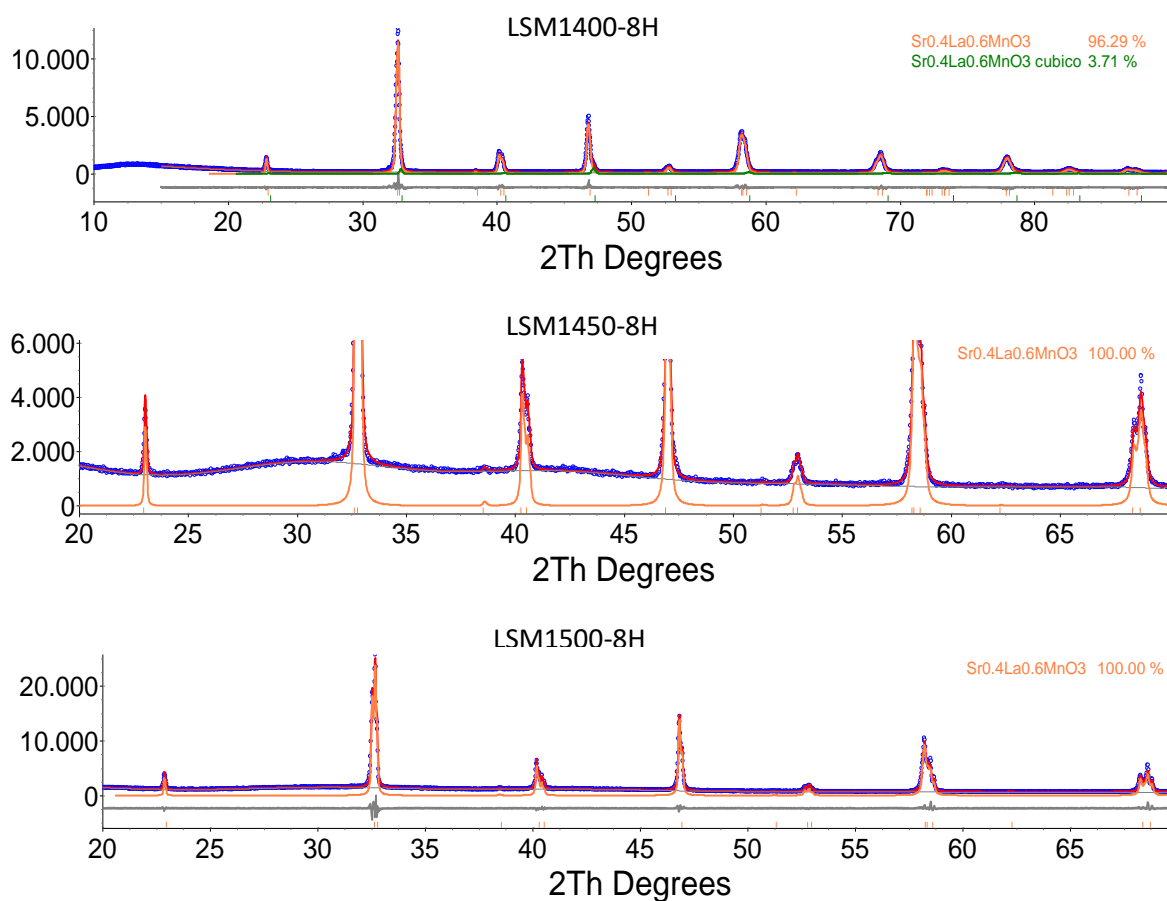
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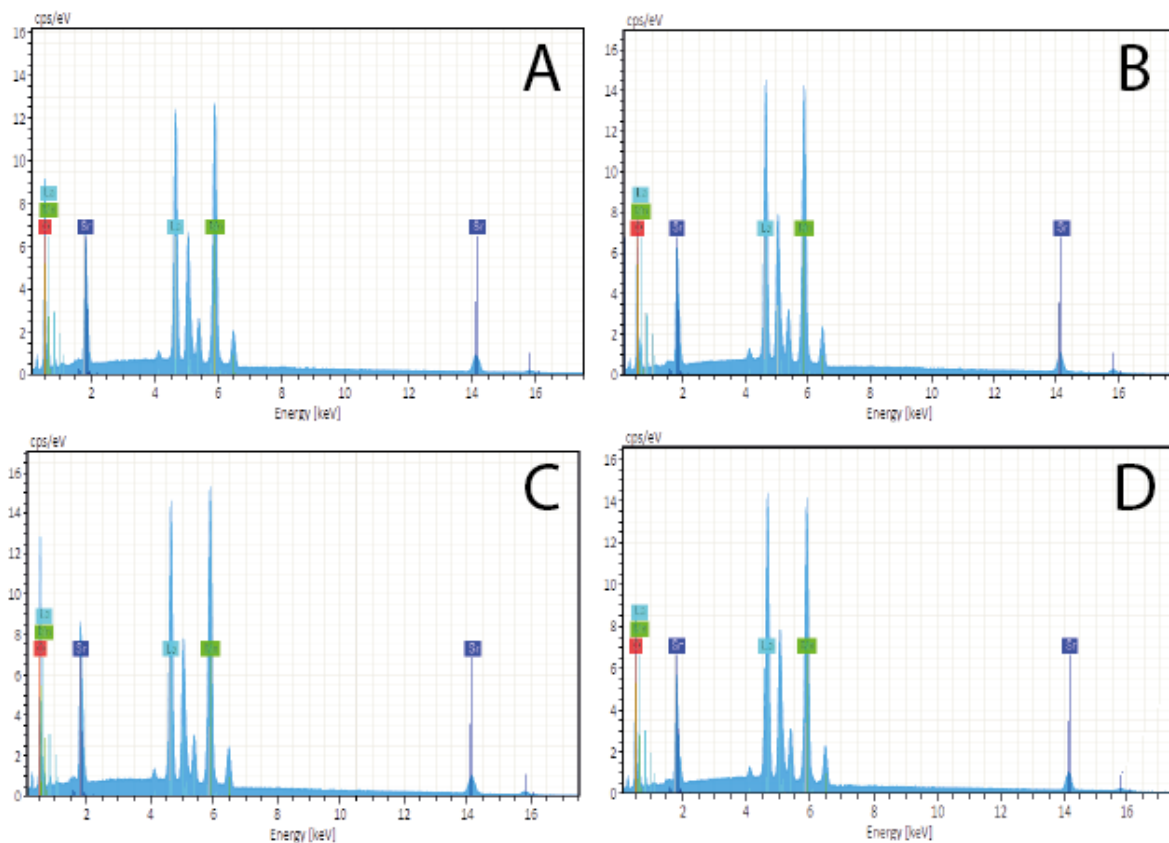
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## Results and discussion:



**Figure S1.** Rietveld refinement of XRD patterns of  $\text{La}_{0.6}\text{Sr}_{0.4}\text{MnO}_3$  by considering only the rhombohedral R-3c (indicated in red) and also the cubic Pm-3m polymorphs (indicated in green). The difference between experimental data and the fitted simulated pattern is plotted as a continuous gray line at the bottom. (Blue open circles: Experimental data; Green solid line: Cubic phase; Orange solid line: Rhombohedral phase; Red solid line: Fitted data).



**Figure S2.** EDS Mapping of the combusted and calcined LSM powders (A) LSM500, (B) LSM1400, (C) LSM1450, (D) LSM1500.