Electronic Supplementary Material (ESI) for New Journal of Chemistry.
This journal is © The Royal Society of Chemistry and the Centre National de la Recherche Scientifique 2020

Supplementary Information

Characterization of structural and electrochemical properties of (La,Sr)(Al,Mg)$O_{4-\delta}$ perovskites

C. Mariño[a,b], J. Basbus[c], J. A. Alonso[d], L. Troncoso[a,*]

[a] Departamento de Metalurgia, Universidad de Santiago de Chile, Avenida Libertador Bernardo O'Higgins, 3363, Estación central, Santiago, Chile

[b] Instituto de Materiales y Procesos Termomecánicos, Universidad Austral de Chile, General Lagos, 2086, Valdivia, 5111187, Chile

[c] Centro Atómico Bariloche (CAB), INN-CNEA-CONICET, S. C. de Bariloche, Rio Negro, 8400, Argentina

[d] Instituto de Ciencia de Materiales de Madrid (ICMM), CSIC, Cantoblanco, Madrid, 28049, Spain

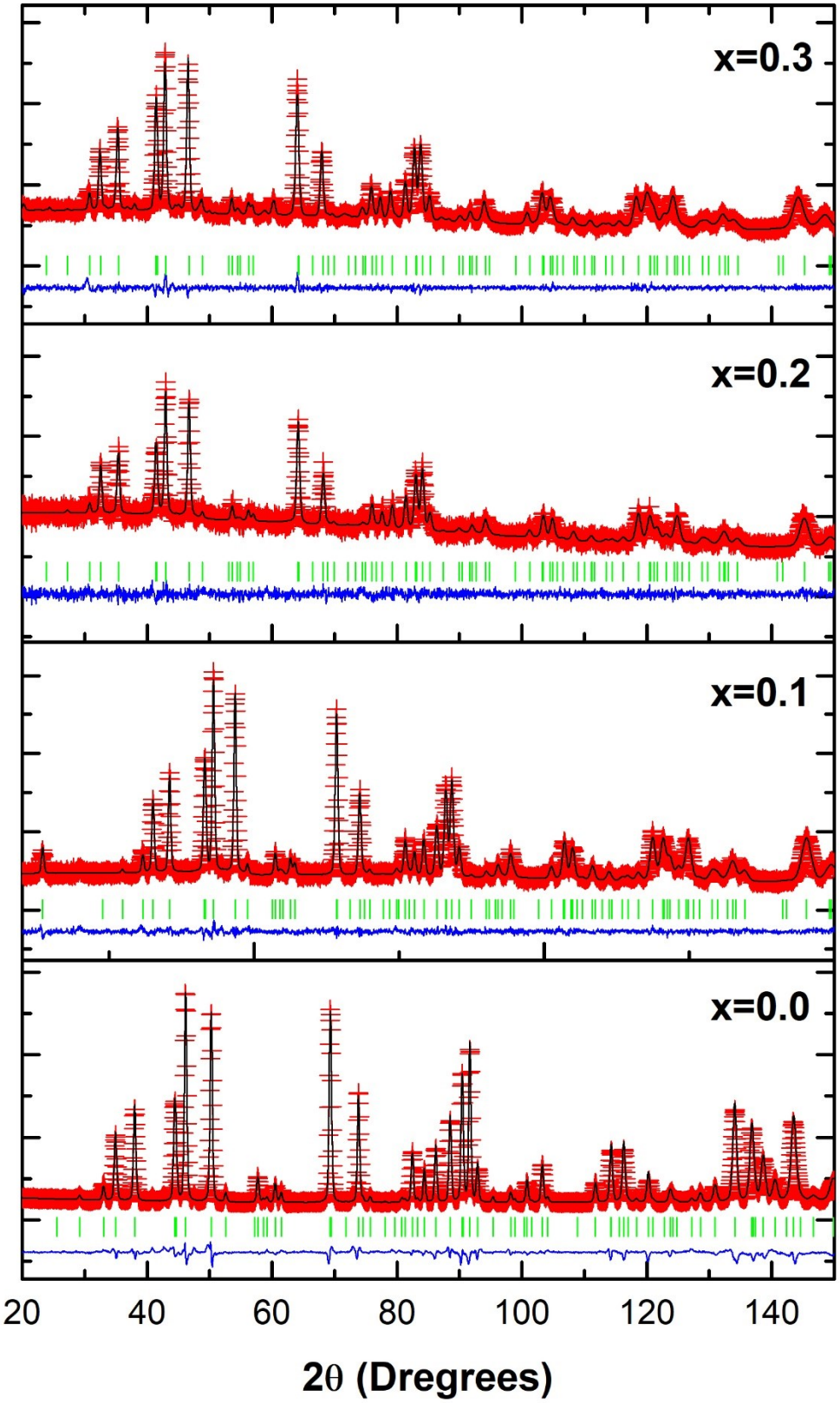


Figure S1. NDP patterns obtained for $LaSrAl_{1-x}Mg_xO_{4-\delta}$ whit (x =0.0-0.3)

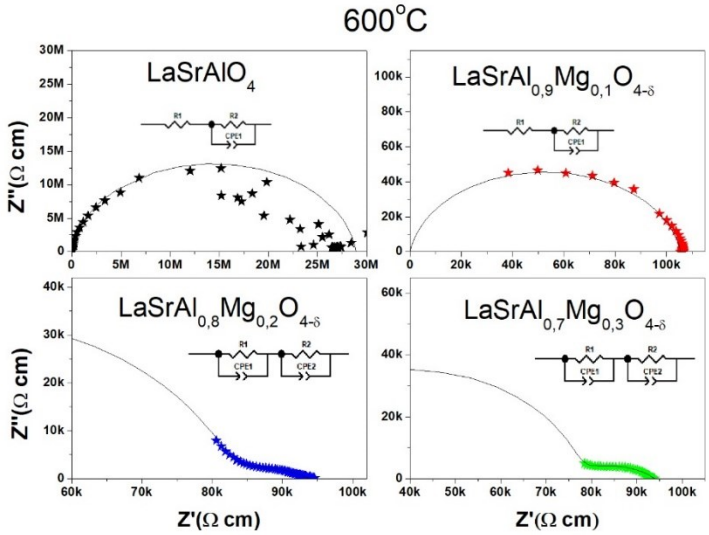
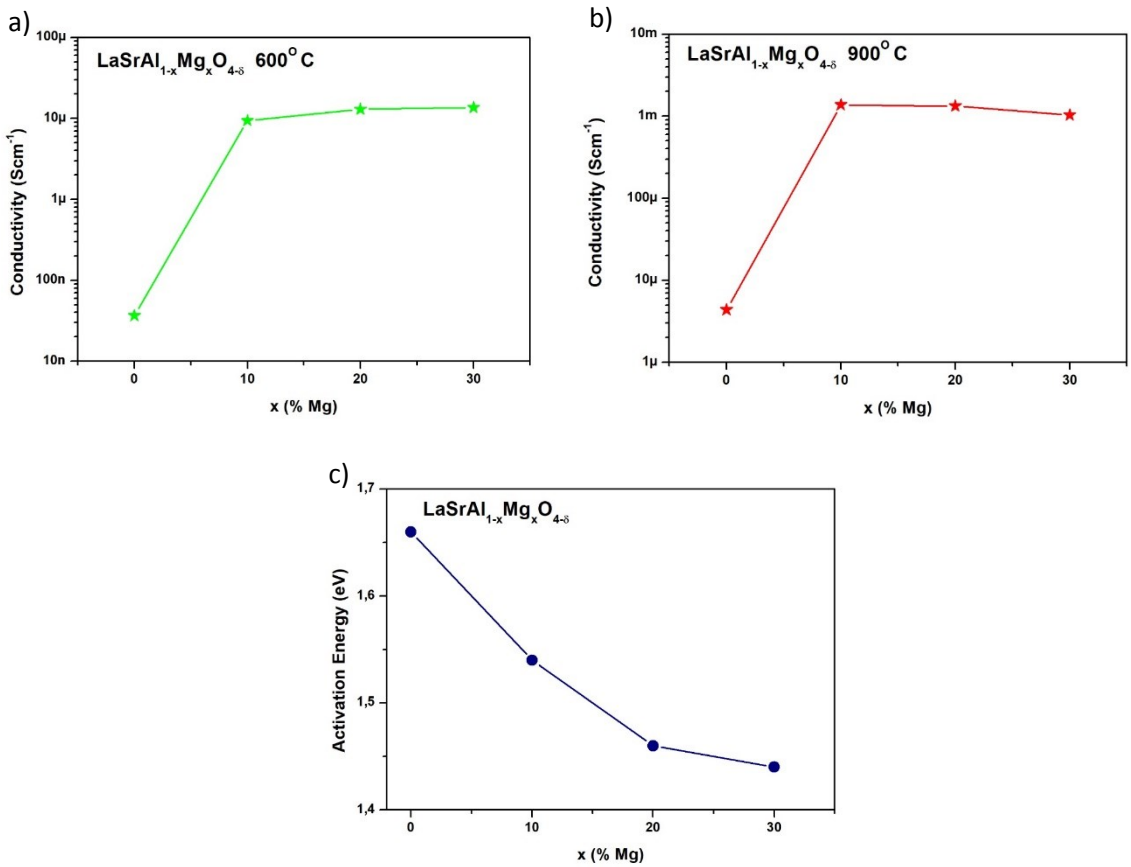


Figure S2. Impedance spectra of $LaSrAl_{1-x}Mg_xO_{4-\delta}$ (x = 0.1-0.3) collected in air at 600°C



with their respective EEC.

Figure S3. a) Conductivities values at a) 600°C and b) 900 °C in air and (c) activation energies of $LaSrAl_{1-x}Mg_xO_{4-\delta}$ as a function of Mg content.