Sr-substituted $La_{2-x}Sr_xNi_{0.8}Co_{0.2}O_{4+\delta}$ ($0 \leq x \leq 0.8$): Impact on Oxygen Stoichiometry and Electrochemical Properties

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Supplementary materials:

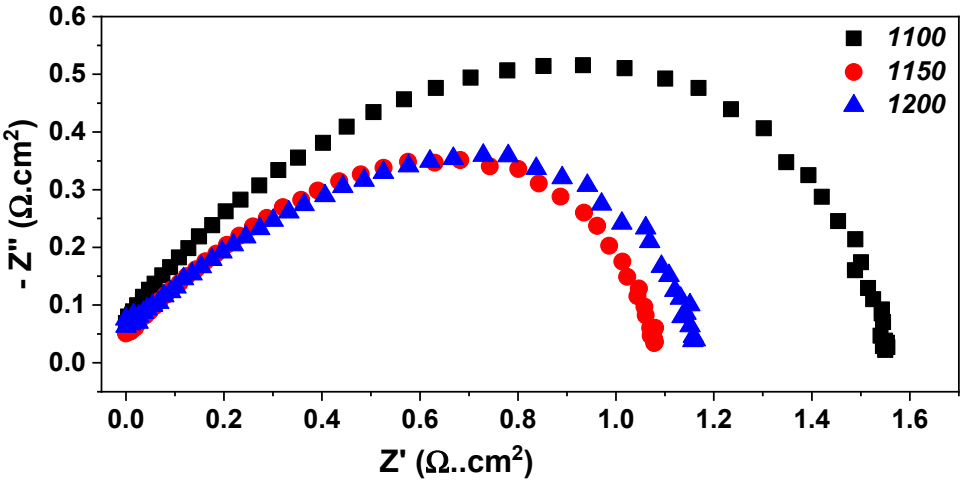

Figure S1. Impedance spectra of LNCO symmetrical half-cells as a function of sintering temperature (1100, 1150 and 1200 °C) under OCV conditions in air, at 700 °C.

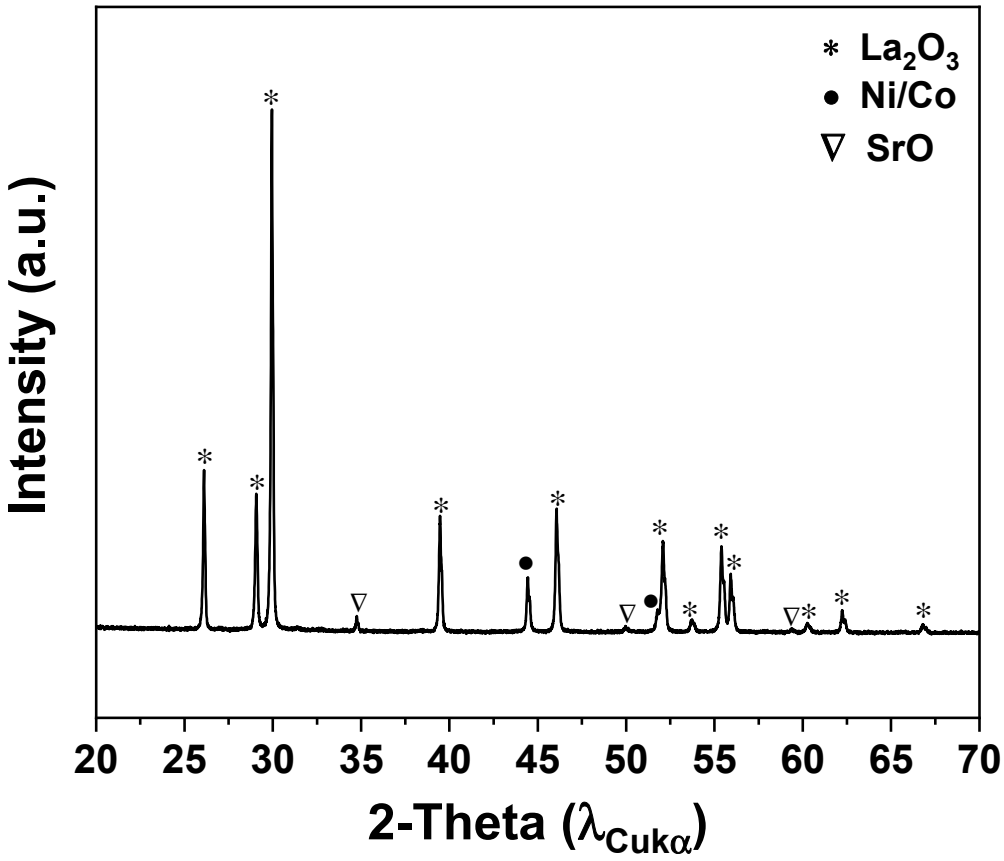

Figure S2. XRD pattern of LSNCO10 after TGA measurement under Ar-4%H_2 atmosphere.

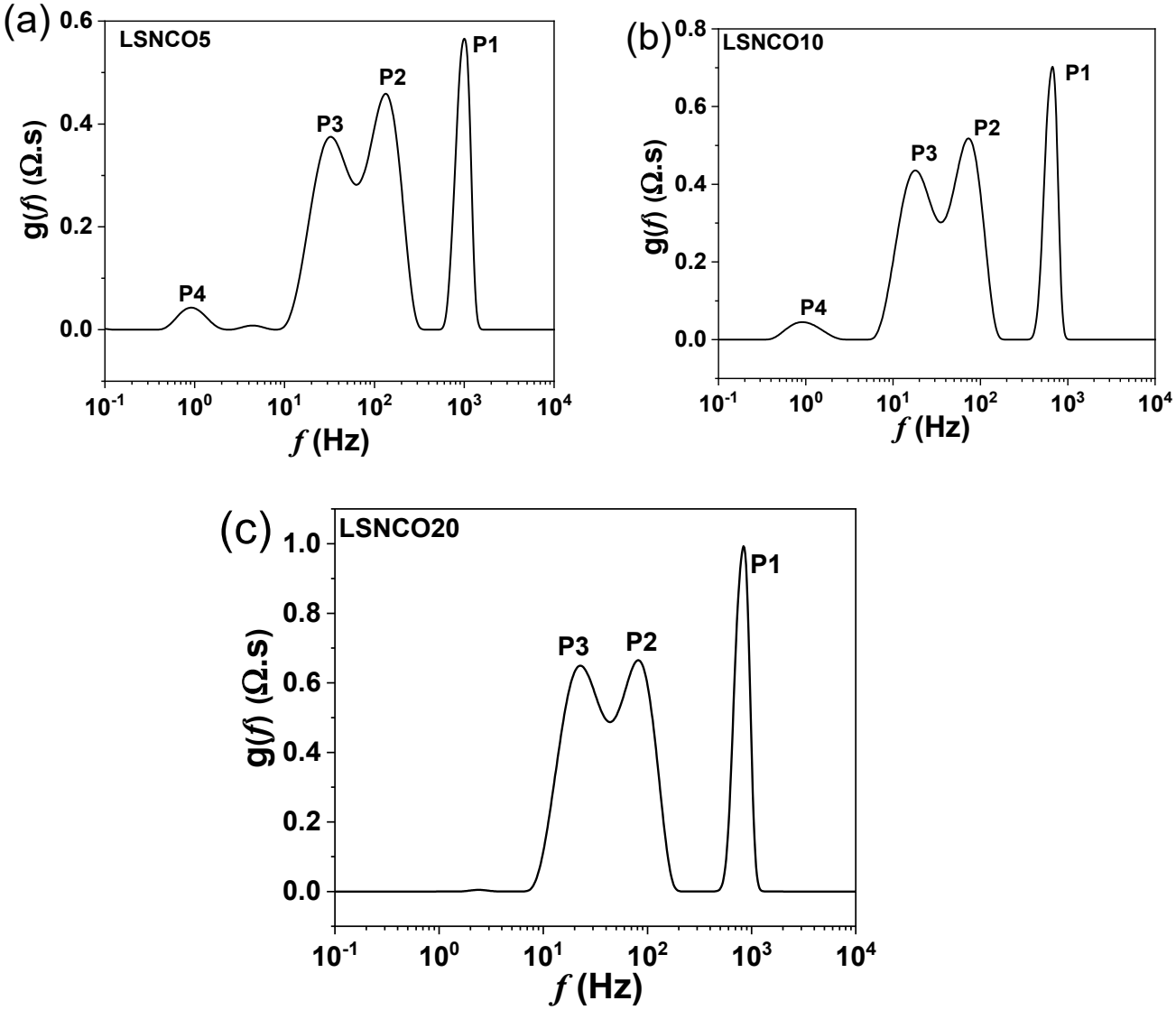

Figure S3. DRT plots of (a) LSNCO5, (b) LSNCO10, and (c) LSNCO20 symmetrical half-cells at 800 °C under OCV conditions in air.

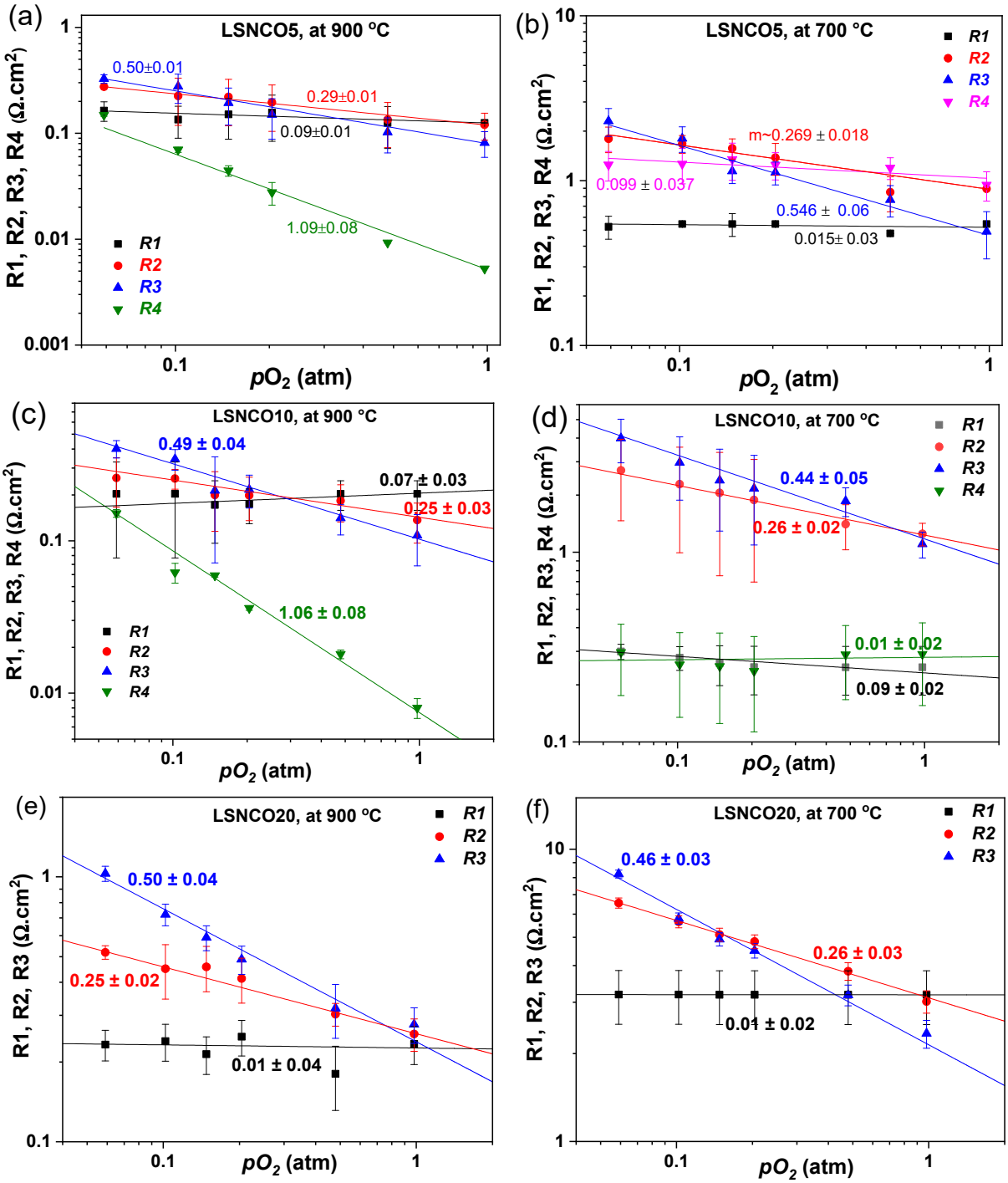

Figure S4. Variation of polarization resistances of LSNCO5, LSNCO10 and LSNCO20 symmetrical half-cell as a function of pO2 at 900 and 700 °C. (a) LSNCO5, at 900 °C. (b) LSNCO5, at 700 °C. (c) LSNCO10, at 900 °C. (d) LSNCO10, at 700 °C. (e) LSNCO20, at 900 °C. (f) LSNCO20, at 700 °C.

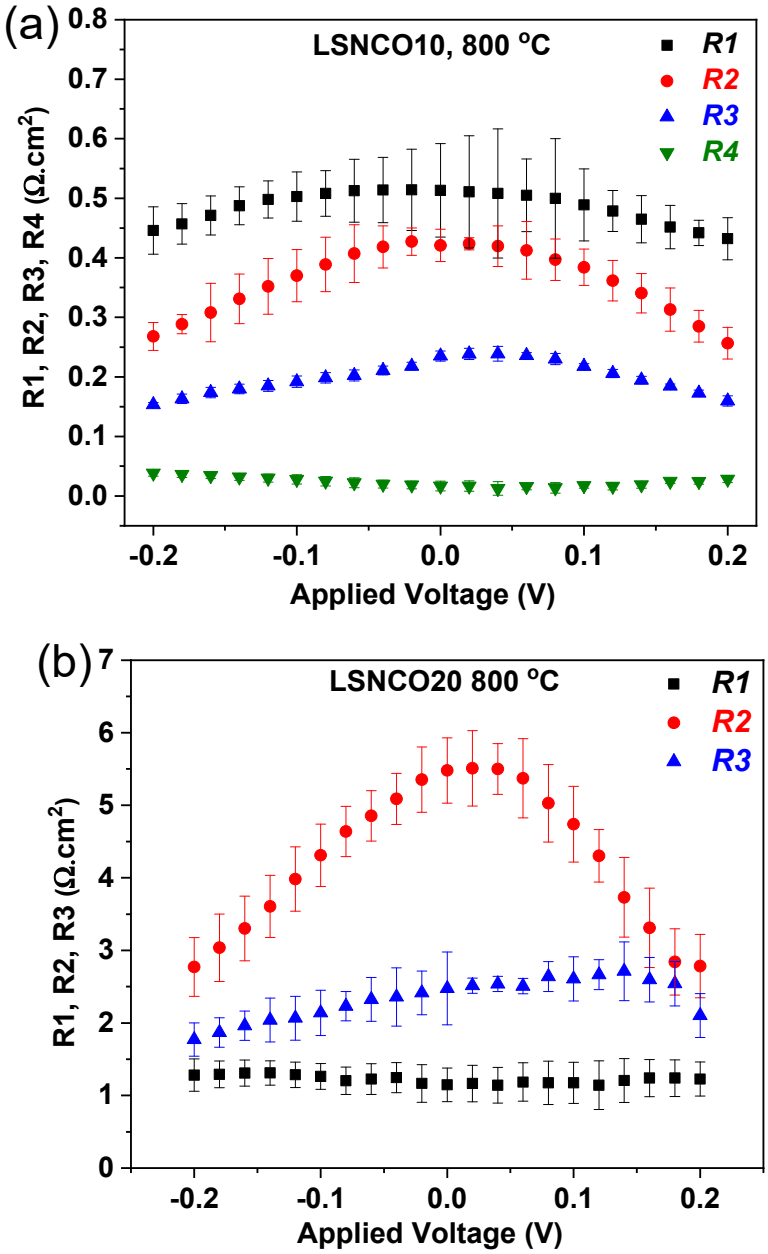

Figure S5. Variation of separate individual resistances as a function of applied voltage for (a) LSNCO10, and (b) LSNCO20 symmetrical half-cells at 800 °C in air.