

Figures Captions

Fig. 1. X-ray diffractogram of the LNPNO5 powder.

Fig. 2. SEM image and particle size distribution of the as-prepared LNPNO5 powder.

Fig. 3. Cross-section of the symmetrical cell: LNPNO5/GDC-YSZ/GDC/GDC-YSZ/LNPNO5.

Fig. 4. XPS spectra for (a) survey (b) O 1s and (c) Ni 2p + La 3d_{3/2} of La_{1.5}Nd_{0.3}Pr_{0.2}NiO_{4.16} cathode material.

Fig. 5. XRD patterns of: a) 8YSZ and GDC, b) 8YSZ (50%) + GDC (50%) after heating at 1350 °C during 3 days.

Fig. 6. XRD pattern of the LNPNO5 / GDC-YSZ mixture after heating at 800 °C for 3 days.

Fig. 7. Nyquist diagrams of Pt/ GDC-YSZ/GDC/ GDC-YSZ/Pt cell, recorded in air, at 400 °C (a) and 700 °C (b).

Fig. 8. Arrhenius diagrams: capacitance of the GDC (a) electrolyte, GDC+YSZ (b) interfacial layer, and LNPNO5 (c) cathode material deposited on GDC electrolyte with YSZ+GDC interfacial layer.

Fig. 9. Arrhenius diagrams: ionic conductivity of the GDC electrolyte and GDC with the deposited interfacial layer.

Fig. 10. Nyquist diagrams of the LNPNO5 / GDC-YSZ / GDC cell recorded at: 400, 500, 600, 700, and 800 °C with an amplitude of 50 mV under air.

Fig. 11. Arrhenius diagram of the ASR of the LNPNO5 cathode material deposited on the GDC electrolyte coated with the GDC-YSZ interfacial layer.

Fig. 1.

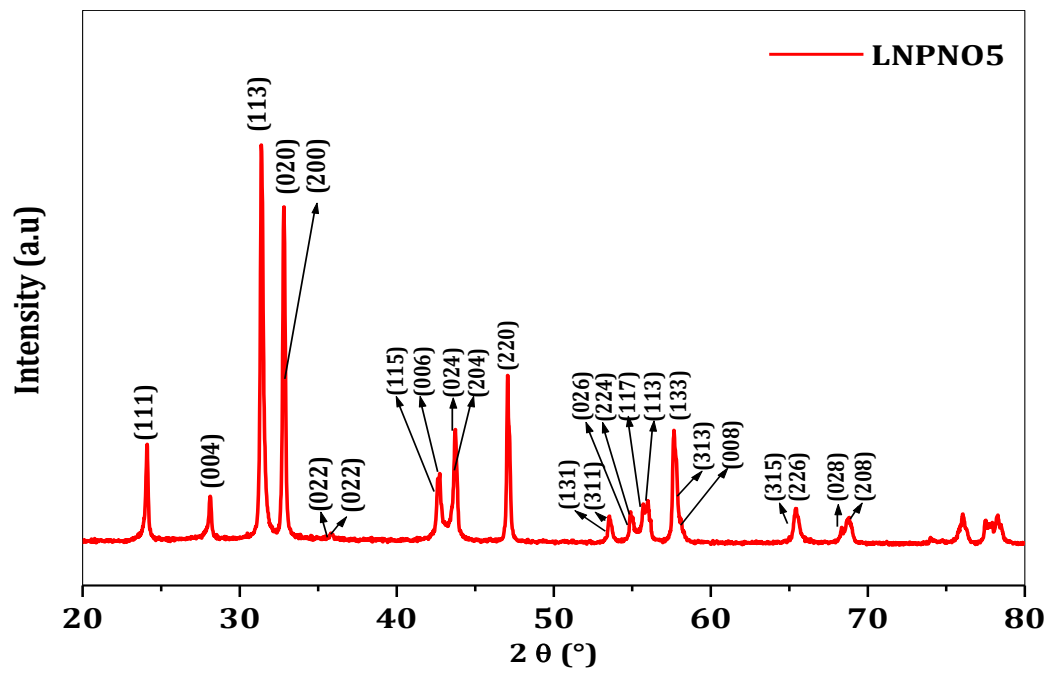


Fig. 2.

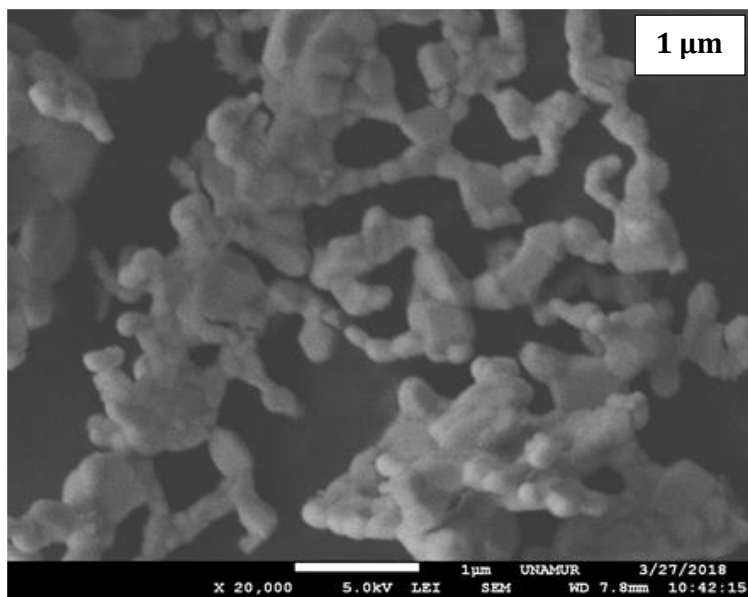


Fig. 3.

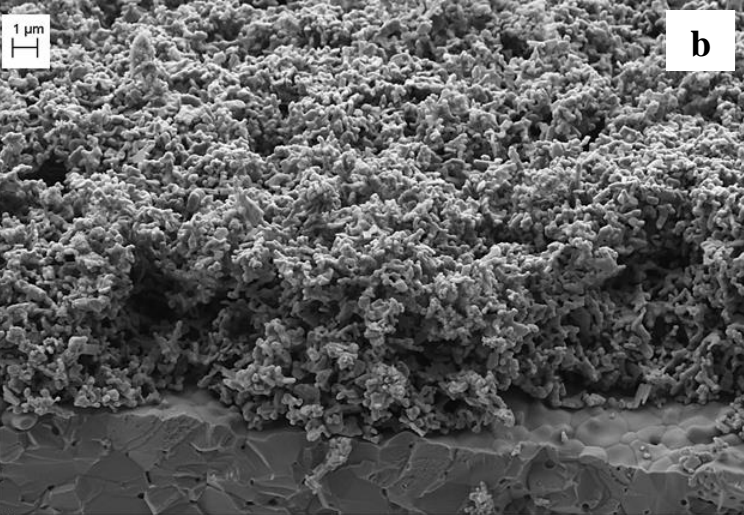
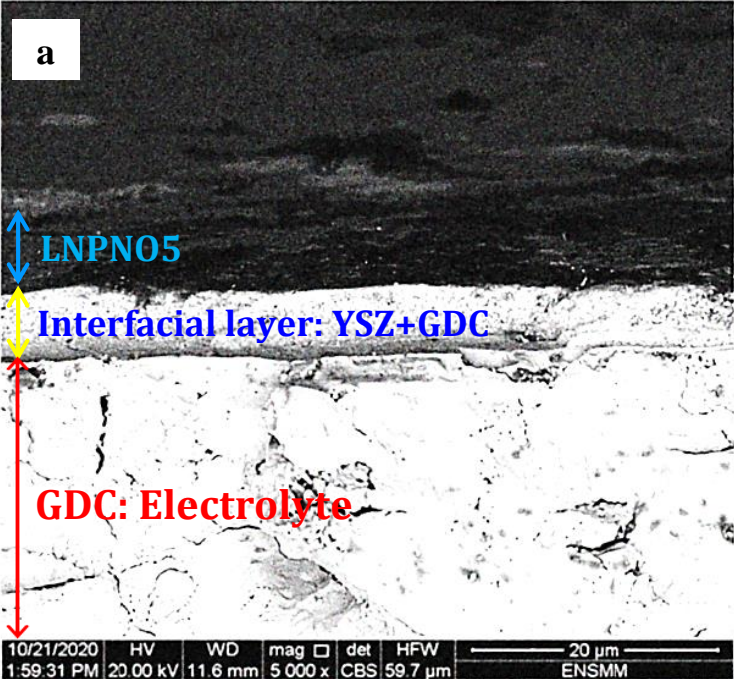


Fig. 4.

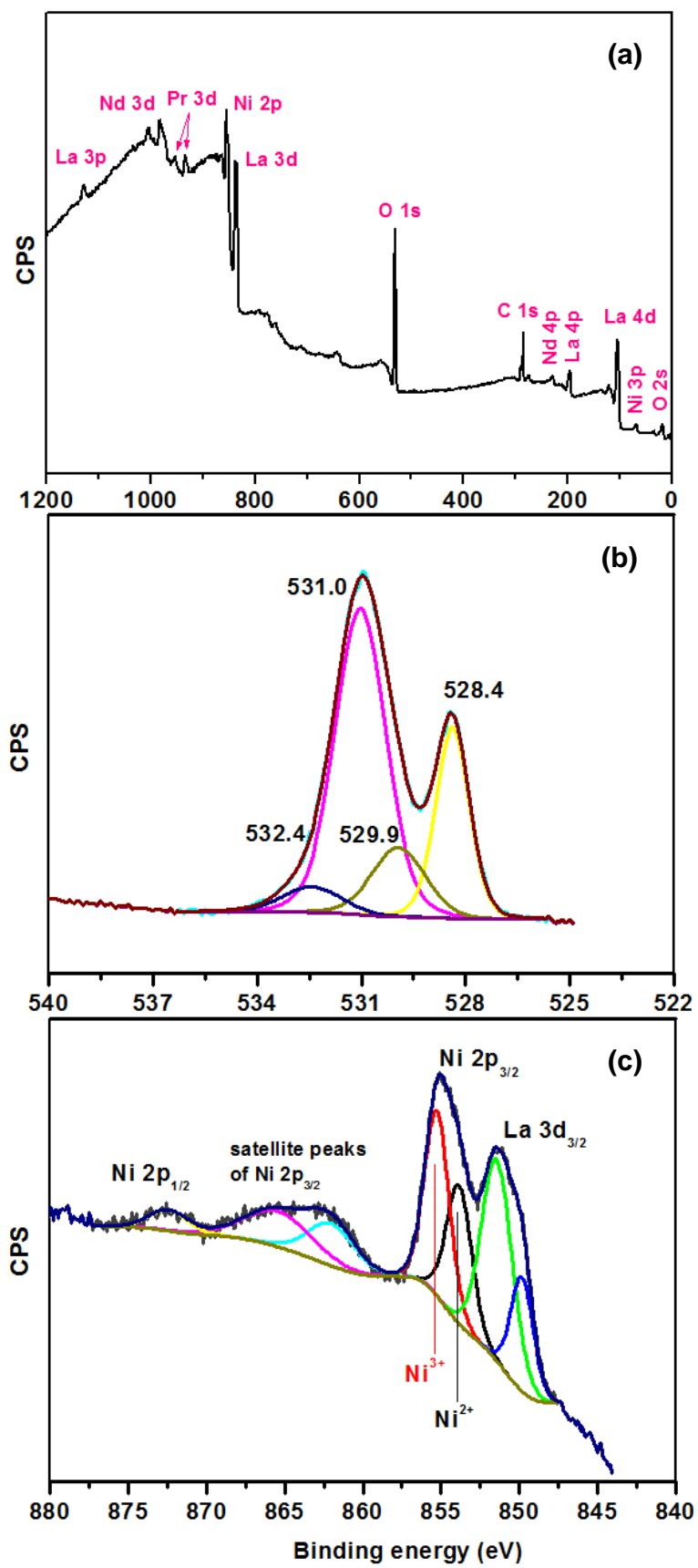


Fig. 5.

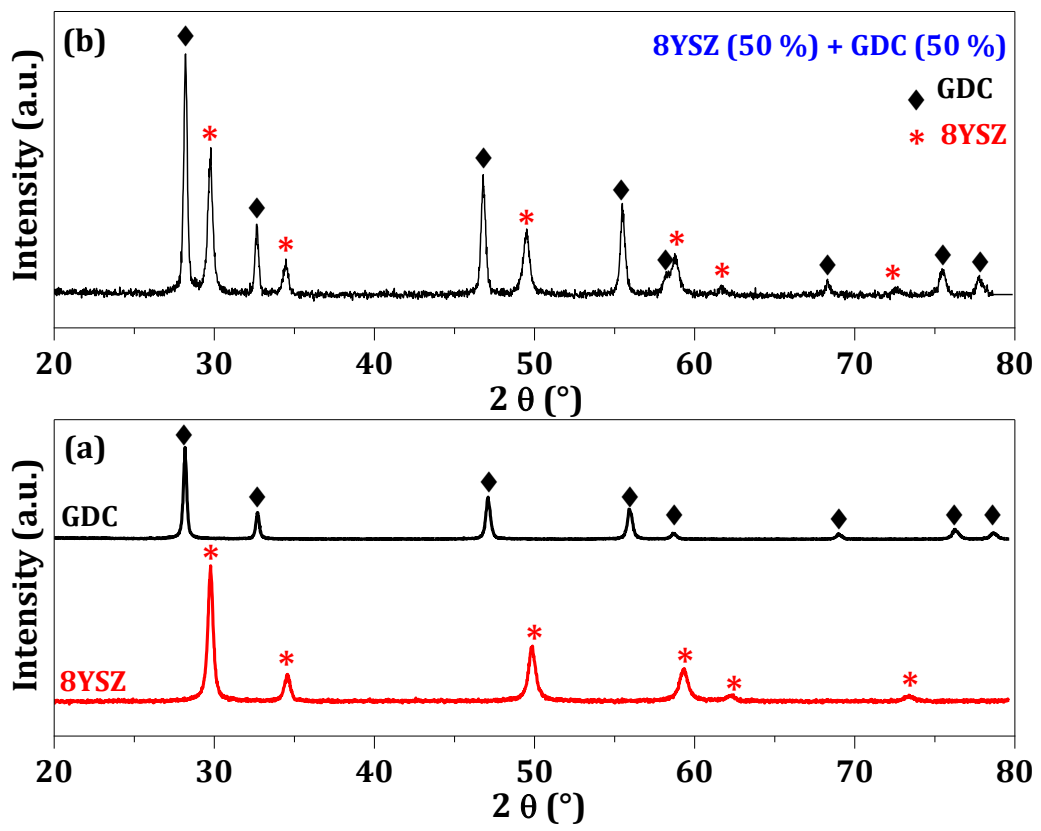


Fig. 6.

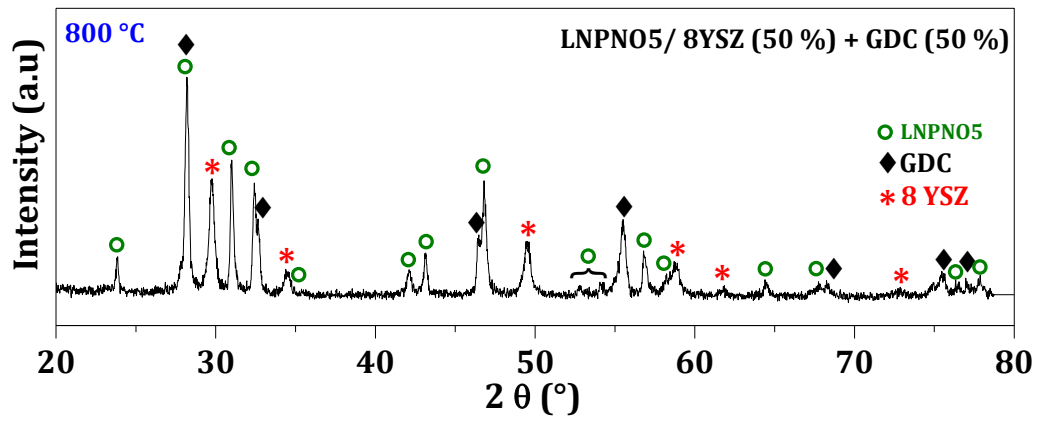


Fig. 7.

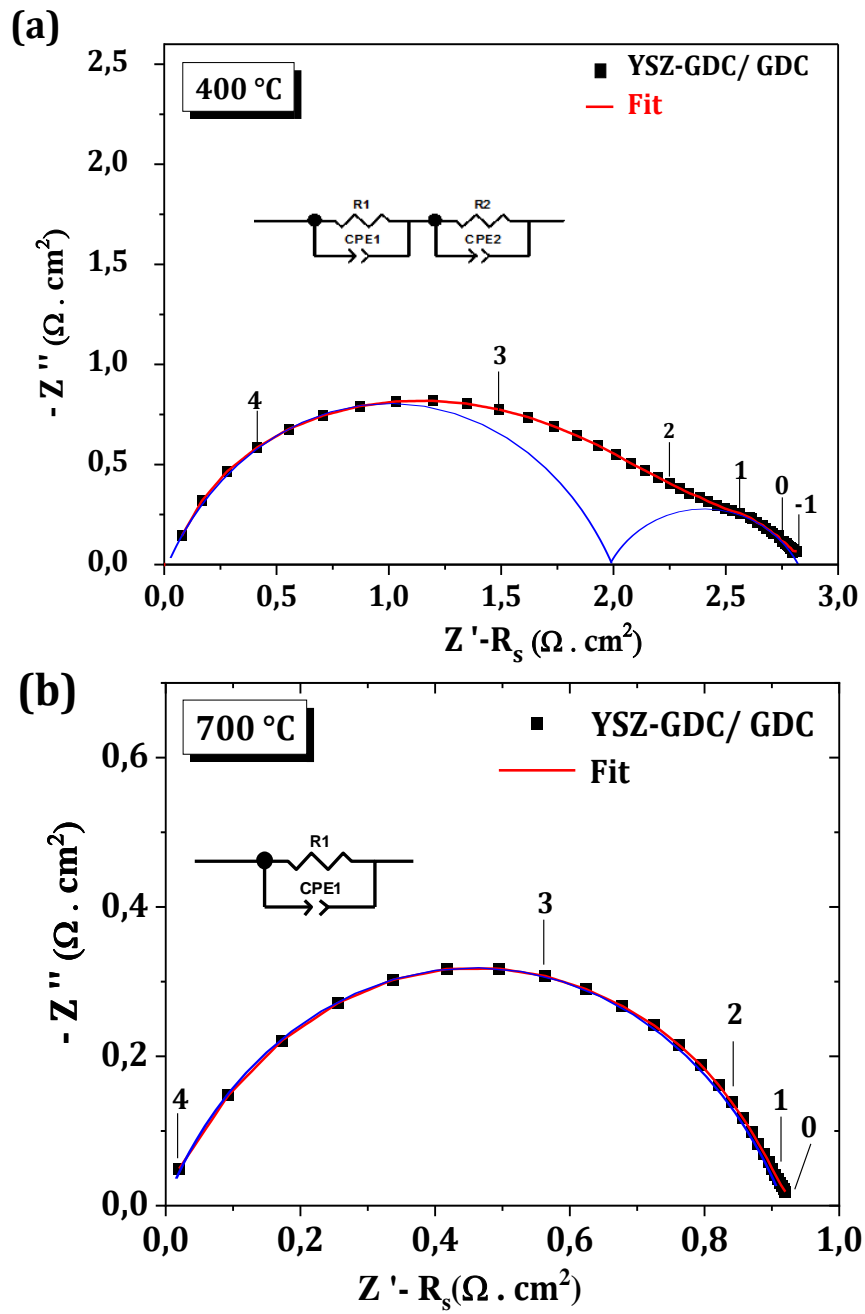
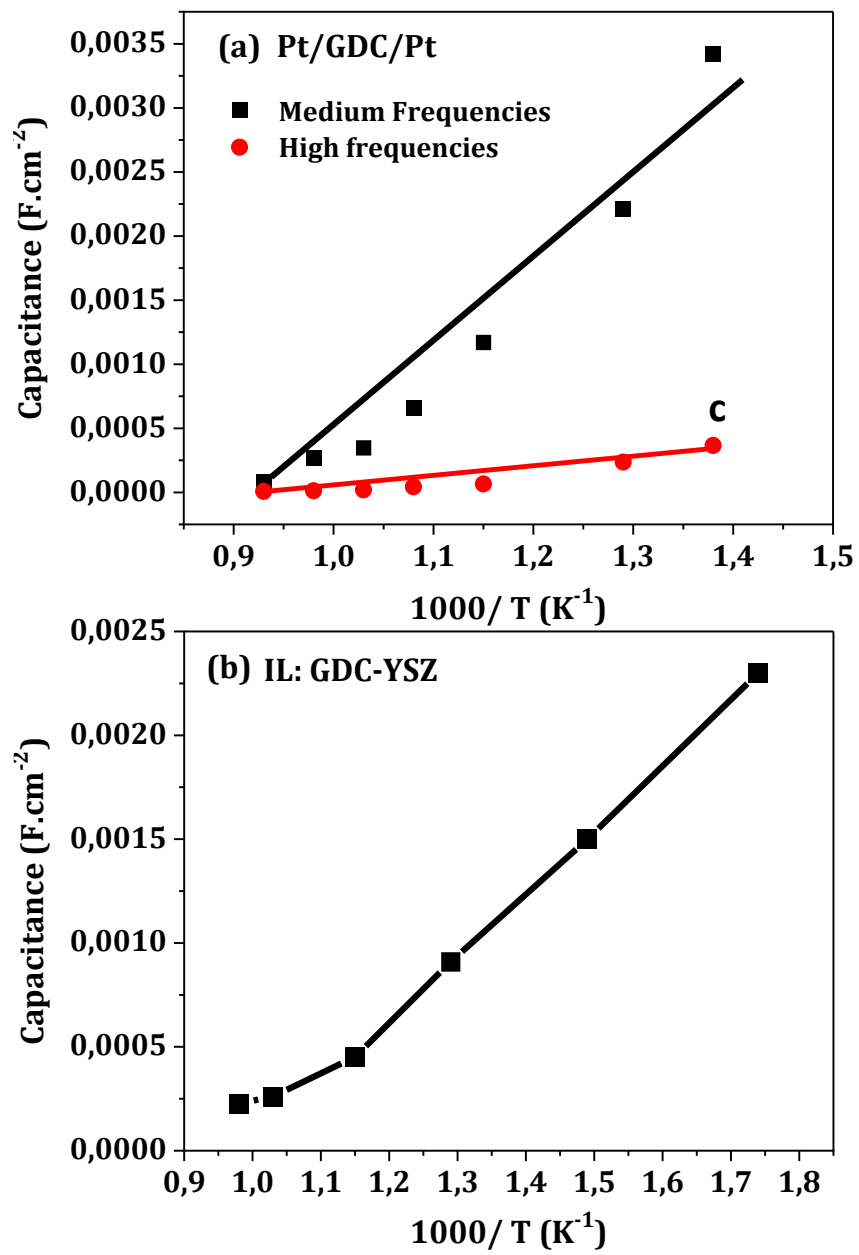


Fig. 8.



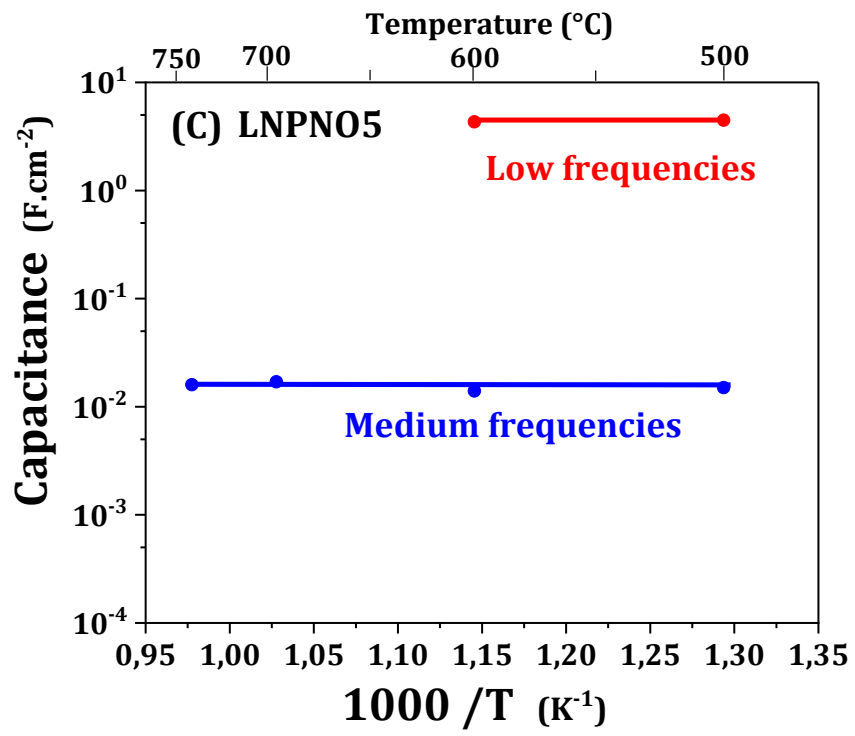


Fig. 9.

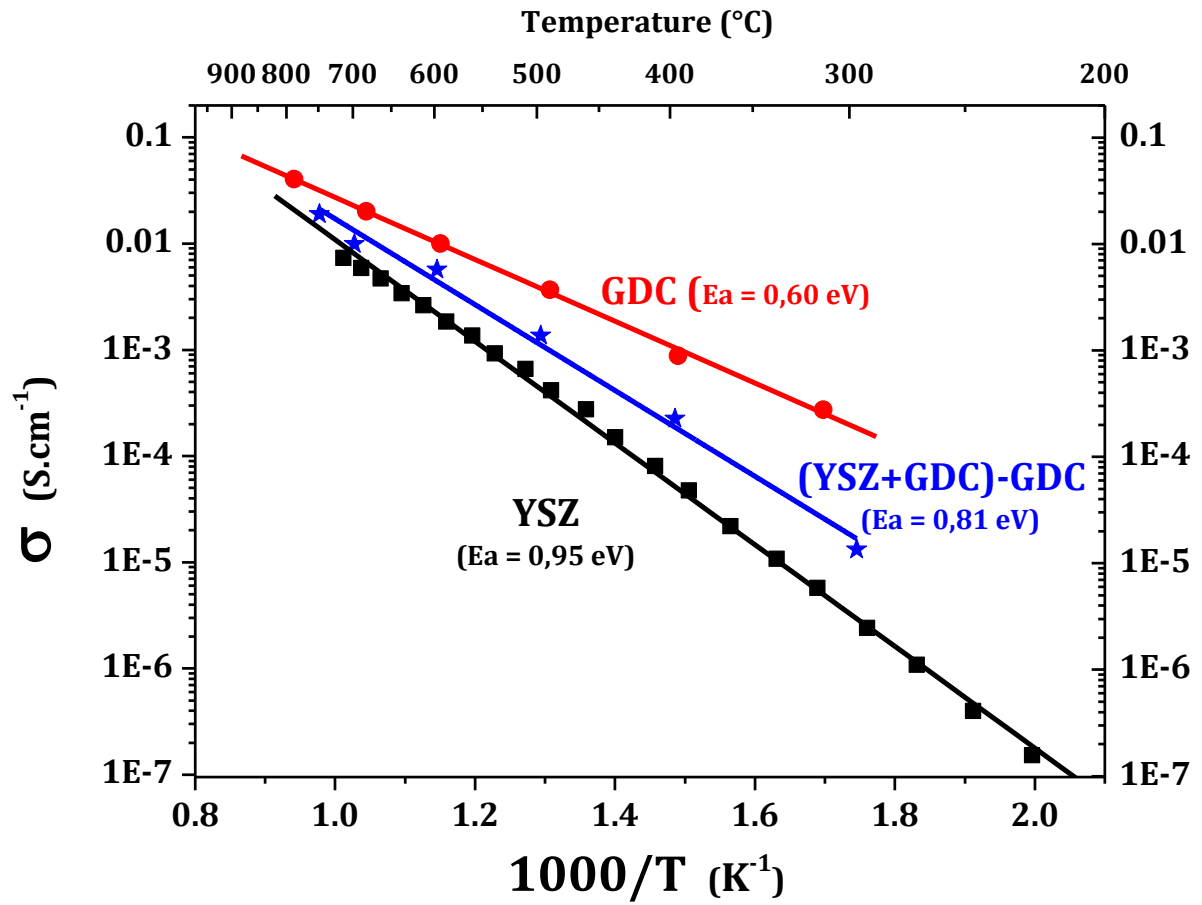
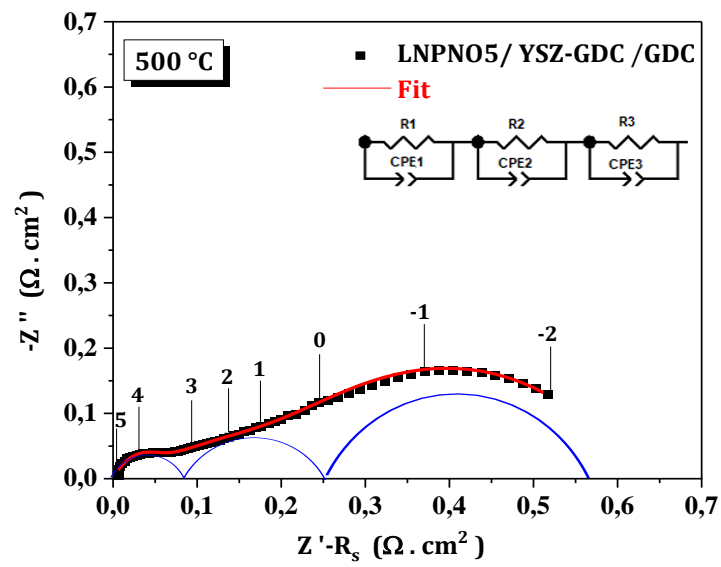
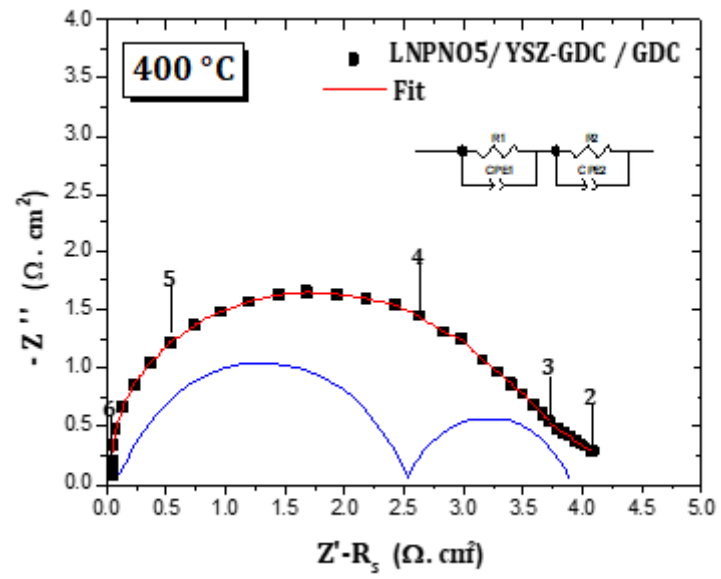


Fig. 10.



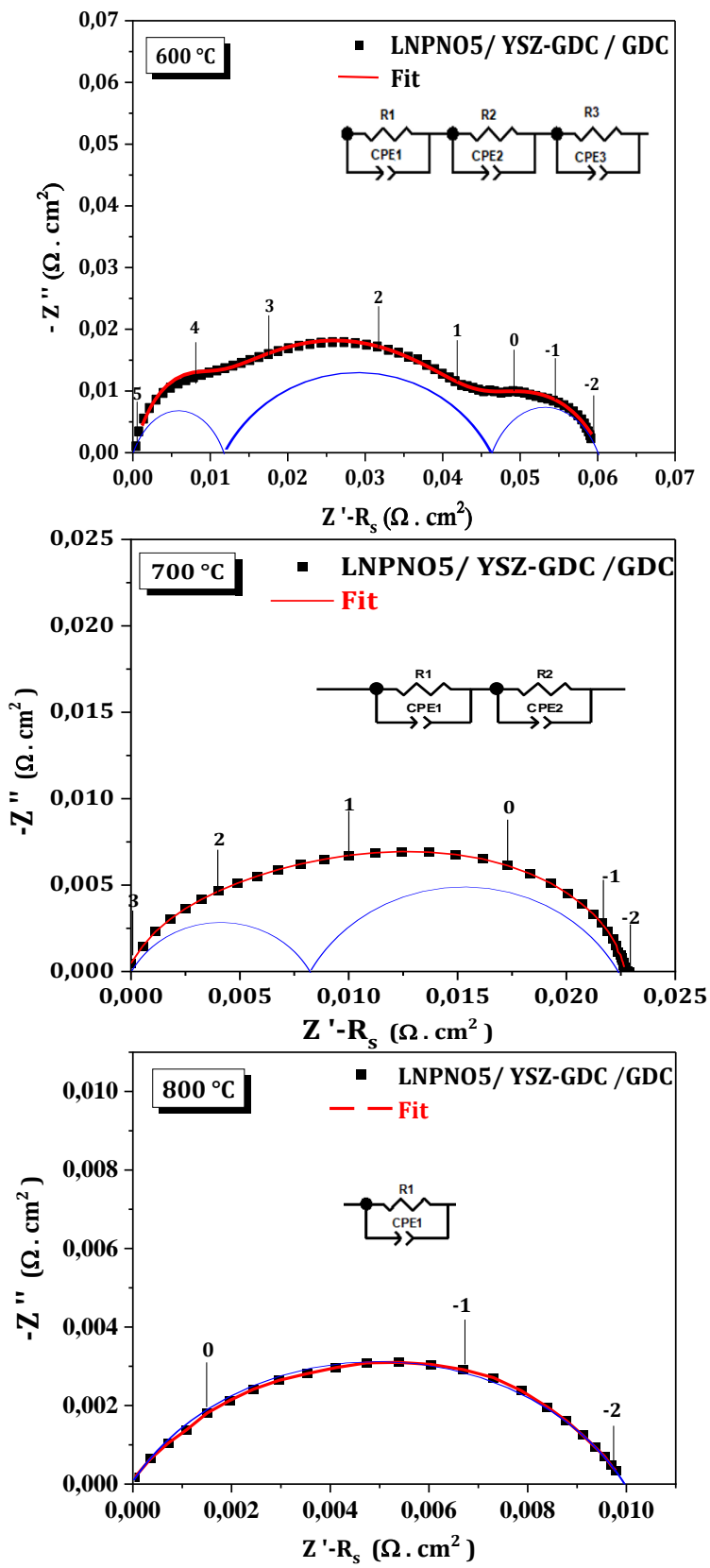


Fig. 11.

