Electronic Supplementary Material (ESI) for Physical Chemistry Chemical Physics.

Intrinsic electric conductivity study of perovskite powders $MAPbX_3$ (X = I, Br, Cl) to investigate its effect on the photovoltaic performance.

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Figures SI1, SI2, SI3, SI4, SI5 and SI6.

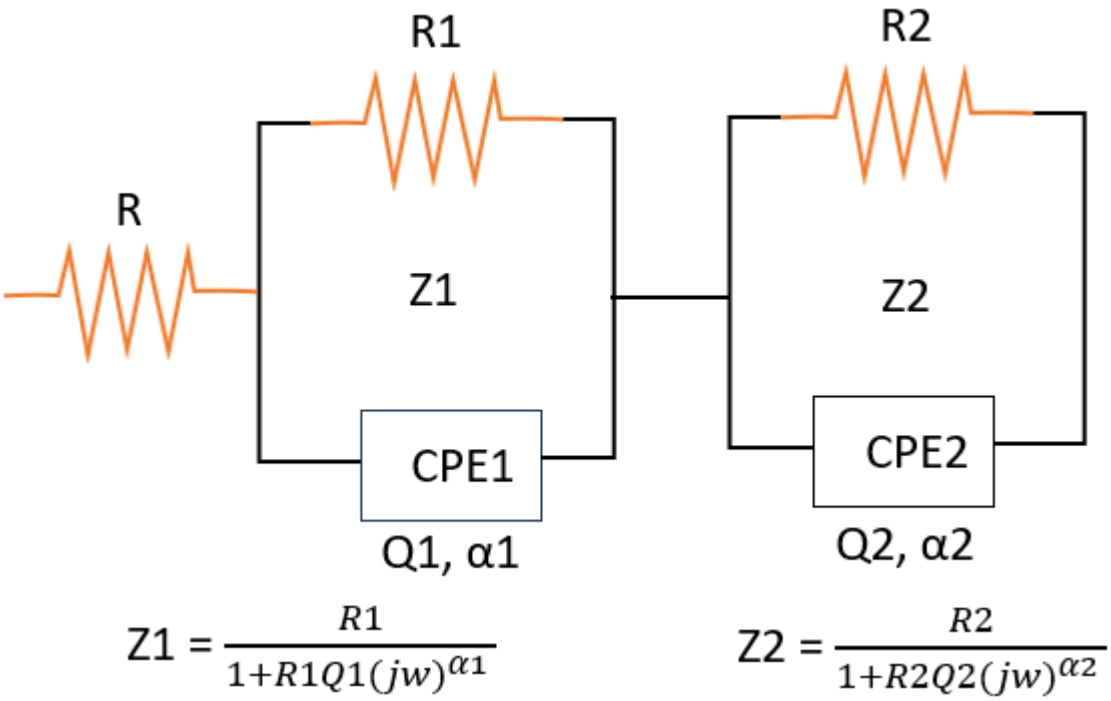

Figure SI1. The equivalent circuit formed by a parallel combination of two resistance and constant phase element impedance (R1–CPE1) and (R2–CPE2) circuits associated in series.

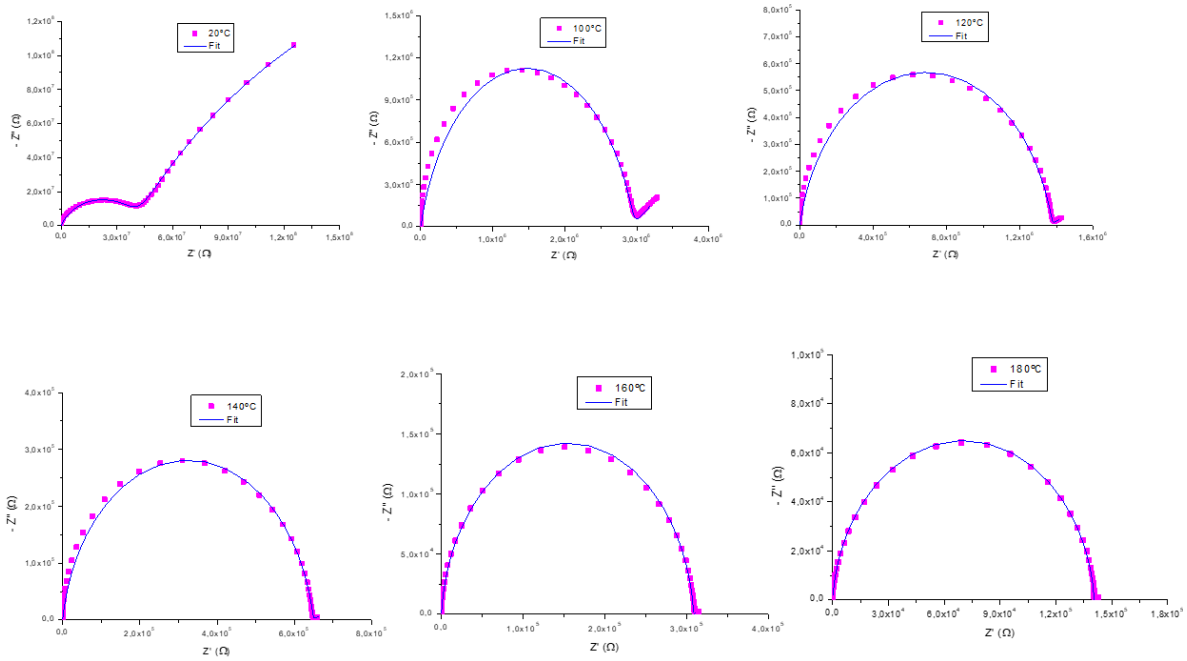

Figure SI2. Nyquist plots representing the complex impedance vs. real part of the impedance, at various temperatures (20ºC, 100ºC, 120ºC, 140ºC, 160ºC and 180ºC) for the $MAPbBr_3$.

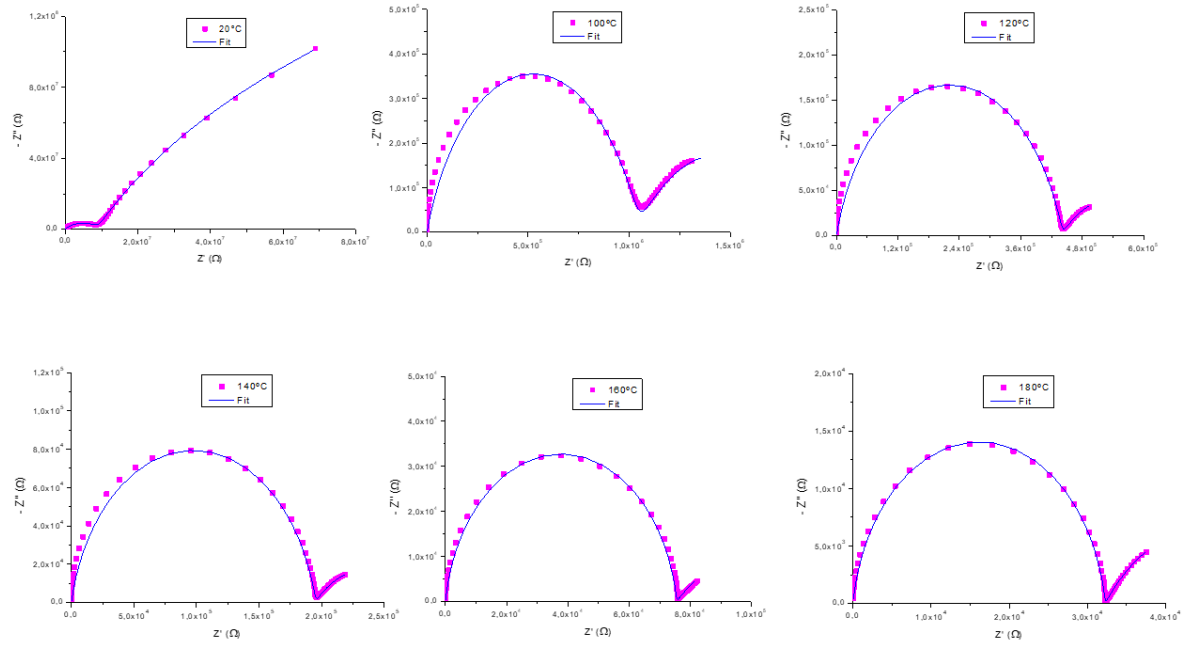

Figure SI3. Nyquist plots representing the complex impedance vs. real part of the impedance, at various temperatures (20ºC, 100ºC, 120ºC, 140ºC, 160ºC and 180ºC) for the $MAPbCl_3$.

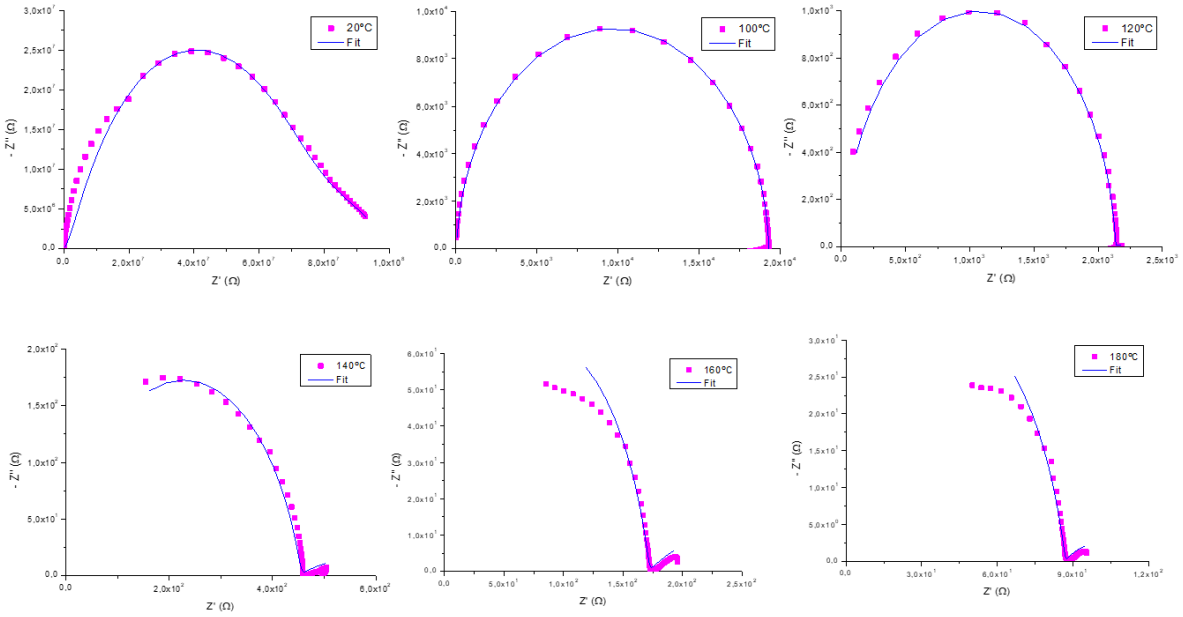

Figure SI4. Nyquist plots representing the complex impedance vs. real part of the impedance, at various temperatures (20ºC, 100ºC, 120ºC, 140ºC, 160ºC and 180ºC) for the $MAPbI_3$.

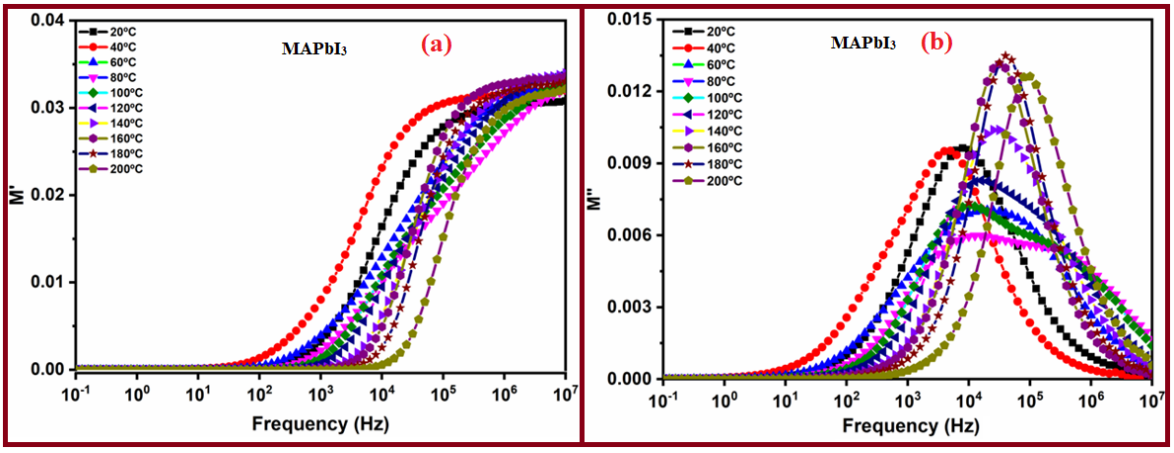

Figure SI5. Real part M' (a) and imaginary part M" of the complex dielectric modulus as a function of the frequency measured at different temperatures for the perovskite $MAPbI_3$.

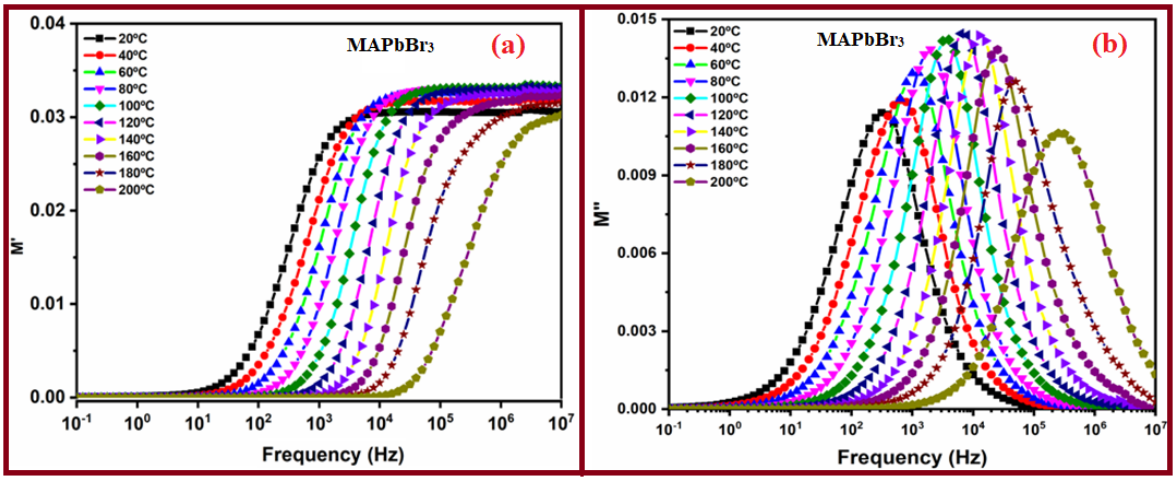

Figure SI6. Real part M' (a) and imaginary part M" of the complex dielectric modulus as a function of the frequency measured at different temperatures for the perovskite $MAPbBr_3$.