**Complex permitivity method to determine the devitrification process in a glassy matrix.The correlation between the a.c. electrical behaviour and the non isothermal nucleation.**

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Even today, after many years of study, it is still not clear how to design a glass from its components to fully predict its electrical, thermal, and optical behavior. We could have an initial idea but by empirical comparison rather than by a formal model to support it. Fewest is what we know about the vitreous stability and how atoms spatial order changes the original glass *structure* and be altered by the perturbations to which it may be subjected such as light, temperature variations, pressure changes, chemical agents, environmental conditions, over time. The so-called structural relaxation arises from glass atoms rearrangements close to the glass transition as well as from the devitrification process and it is fundamental to understand these phenomena.

Glass-ceramic materials require a strict control of the crystallization phenomenon either by controlling the cooling rate of a glass-forming liquid or by heating a previously prepared glass [1-3] and their properties depend on the processes that take place during their transformation from a glass-forming liquid or a glass parent. Non-isothermal analysis involves a quick determination and the theoretical basis for the phase-transformation kinetics are also related to the JMAK (Johnson–Mehl–Avrami–Kolomogoroff) model, which describes the isothermal crystallization processes. As no foreign particles are included in a homogeneous nucleation mechanism the homogeneous nucleation and crystallizations show a straightforward effect on its complex permittivity in a more sensitive way that a calorimetric scanning. In the present talk, it is explained relationship between the electrical behavior of a phosphate glassy matrix to the thermal devitrification phenomena. The relationship between the structural changes caused by the thermal aging and the resulting electrical response is interpreted through the *dc* conductivity -macroscopic electrical response, and *ac* permittivity ~~-~~microscopic response. This knowledge is fundamental when glasses and glass-ceramics are considered to use for capacitors.