

Séminaire Labex NanoSaclay

Le **vendredi 29 mars** à 11h en salle VI.133 du Bâtiment Eiffel de
CentraleSupélec

Nanoscale features in relaxor ferroelectrics



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Abstract:

Relaxor ferroelectric perovskites are materials that exhibit complex chemical and polar ordering. Their unique type of polar ordering, reflected in nanosized polar features, makes them highly susceptible to variables like external electric field, pressure, frequency and temperature. The structural complexity of relaxor ferroelectrics further contributes to their extraordinary electromechanical properties that we exploit in many electronic devices. Yet, their strong sensitivity to external stimuli may be disadvantageous as they are prone to phase transitions, fatigue and hysteresis. In this talk, domain-wall-effects that are associated to the nanoscale polar features in $\text{Pb}(\text{Mg}_{1/3}\text{Nb}_{2/3})\text{O}_3-x\text{PbTiO}_3$ solid solutions will be discussed, and linked to their electromechanical responses.

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