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Title:Ionic Polarization Occurrence in BaSrTiO₃ Thin Film by THz-Time Domain Spectroscopy

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Abstract:BaSrTiO₃ thin films in a paraelectric phase were characterized on the one hand from 1 GHz to 200 GHz by microwave measurements on interdigitated capacitance and coplanar waveguides and on the other hand up to 3 THz by Time Domain Spectroscopy. An overlap of the polar nanoregion relaxation mechanism with a characteristic frequency around 800 GHz and of the ionic polarization with a relaxation frequency around 3 THz is directly evidenced experimentally.

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