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A Study of Dielectric Relaxation Using Microwave Technology JAMES ROBERTS, University of North Texas, JAI DAHIYA, Soueast Missouri State University, SANTEEL GHOSH, Southeast Missouri State University — An insulating material placed in an electric field is polarized. A material such as this when placed between two parallel plates of a capacitor changes the capacitance of the capacitor in accordance with the polarization behavior of the material. Because of this material behavior, the insulating material is known as a dielectric and this process of interaction is referred to as dielectric relaxation. The dielectric relaxation of a number of materials has been investigated using microwave technology at a fixed frequency and varying the temperature. The data show some interesting results for select materials which are presented in this paper.

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