

## Poling process in pseudoceramics of TGS

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### Abstract

We present the new results on pseudoceramics based on triglycine sulphate (TGS) during the poling process. These are required to obtain a piezoelectric material from random oriented microcrystals of a ferroelectric material.

The material under study consist of TGS microcrystals with controlled grain sizes between  $2\mu\text{m}$  and  $300\mu\text{m}$  getting by milling and agglutinate by means of an acrylate, whose volume proportions are near to 4%.

The poling process is well known for the ceramics but it presents a set of very interesting new aspects for the pseudoceramics because these kinds of materials cannot get the improvement in their mechanical behaviour acquired by the ceramics during the sinterization. Then we have to take into account the mechanical stresses appearing during the poling process in order to control the possibility of the sample breakdown.

However, we obtain a good piezoelectric behaviour for the pseudoceramics after poling.