



## Molecular Crystals and Liquid Crystals

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/gmcl16>

### Electrical Signal Induced by a Chemical Reaction in pts

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Version of record first published: 20 Apr 2011.

To cite this article: M. Bertault, M. Schott & J. Sworakowski (1984): Electrical Signal Induced by a Chemical Reaction in pts, *Molecular Crystals and Liquid Crystals*, 106:3-4, 406-406

To link to this article: <http://dx.doi.org/10.1080/00268948408071459>

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ELECTRICAL SIGNAL INDUCED BY A CHEMICAL  
REACTION IN pTS

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Abstract. Single crystals of monomeric pTS (bis-p-toluene-sulphonate of 2,4-hexadiyne 1,6-diol), when isothermally annealed at 350 K, were found to generate an electrical signal peaking at a time corresponding to that of a maximum conversion rate. The measurements reported here were carried out in the current mode, i.e. the samples were shortcircuited through the electrometer insistance (usually  $10^{10}$  ohms). The measured signals were of the order of  $10^{-12}$  -  $10^{-11}$  A, and -- although differing in details -- were found to be satisfactorily reproducible in general features.

It is shown that a steady-state polarization of the order of  $10^{-4}$  C/m<sup>2</sup> is built into the pTS samples during the polymerization. The effect is probably associated with non-compensated dipolar defects created on polymerizing pTS crystals, and possibly also accounting for the pyroelectricity of poly-pTS, reported earlier in the literature.