INVESTIGATION OF THE HF-CATALYZED CONDENSATION REACTION TO DIARYLHEXAFLUOROPROPANES

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HF-catalyzed condensation of 2-hydroxy-2-arylhexafluoropropanes, e.g. I, with suitably substituted arenes, e.g. II, leads to hexafluoroisopropylidene-bridged intermediates, e.g. III, for 6F-monomers.

$$- \underbrace{ \begin{array}{c} CF_3 \\ CF_3 \end{array}}_{CF_3} \text{ oh } + \underbrace{ \begin{array}{c} CF_3 \\ CF_3 \end{array}}_{III}$$

The condensation reaction was carried out with several substrates, side products were characterized and their formation under different reaction conditions was studied.

6F-Monomers are building blocks for a variety of polycondensates with high thermo-oxidative stability and low dielectric constant.