

Supplementary materials for the article

Synthesis and Characterization of New Chiral Smectic Four-Ring Esters

MASS SPECTRA OF CHIRAL FOUR-RING ESTERS

The purity of the liquid crystalline esters was recorded using a Shimadzu prominence chromatograph. The strong molecular ion without hydrogen atom $[M - H]^-$ was observed; see Figures S1 and S2.

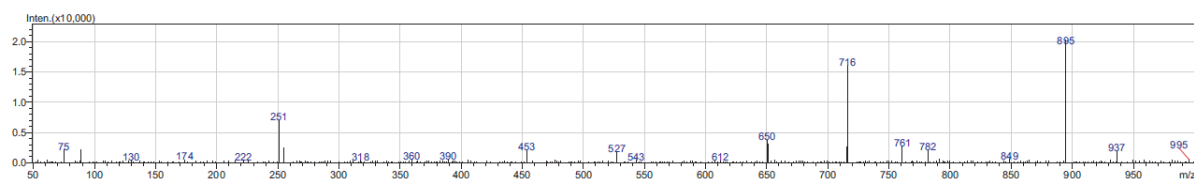


Figure S1. Mass spectrum of the compound 3PhPh.

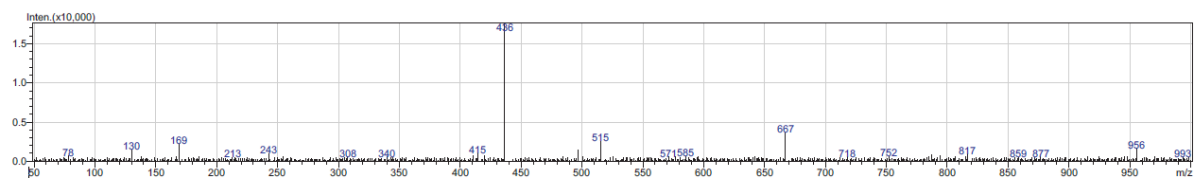


Figure S2. Mass spectrum of the compound 7PhPh.

STRUCTURE CONFIRMATION OF CHIRAL FOUR-RING ESTERS

A comparison of the NMR spectra confirmed the compliance of real structures with the planned structures; see Figures S3-S6.

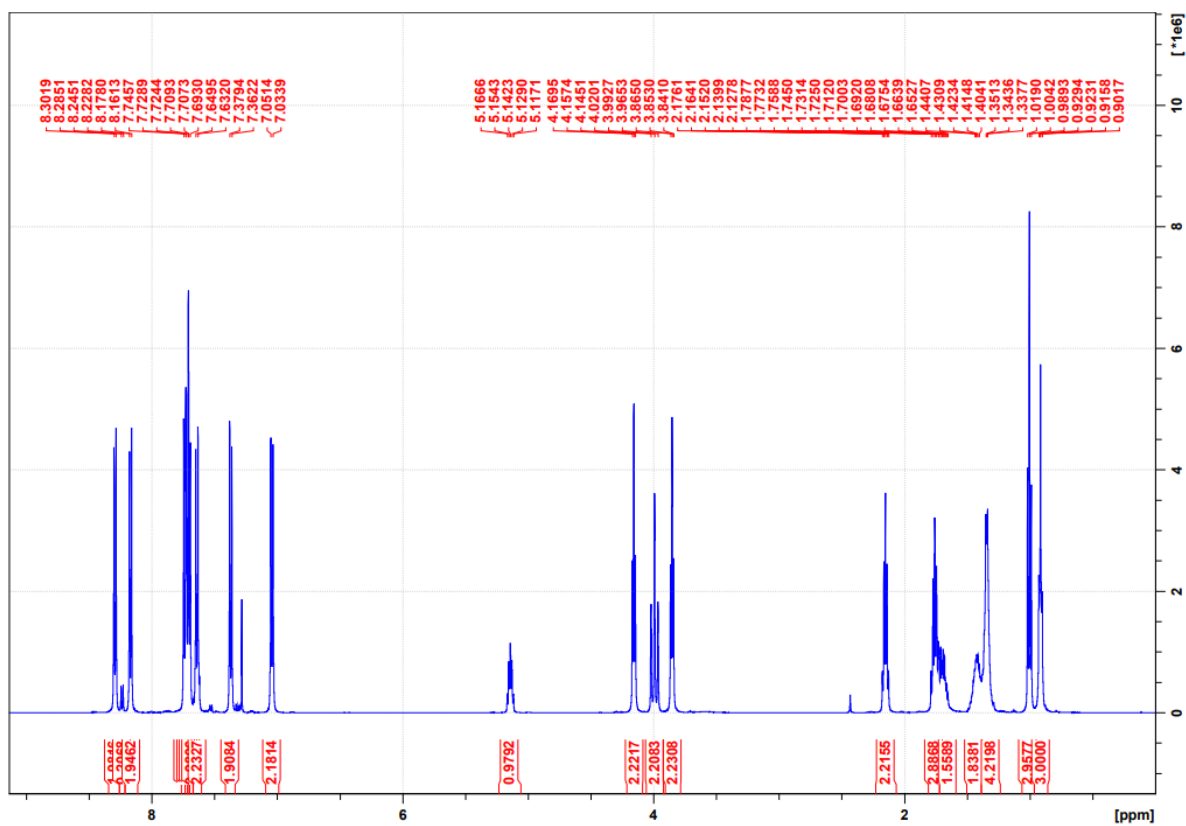


Figure S3. ^1H NMR spectrum of the compound **3PhPh** in CDCl_3 .

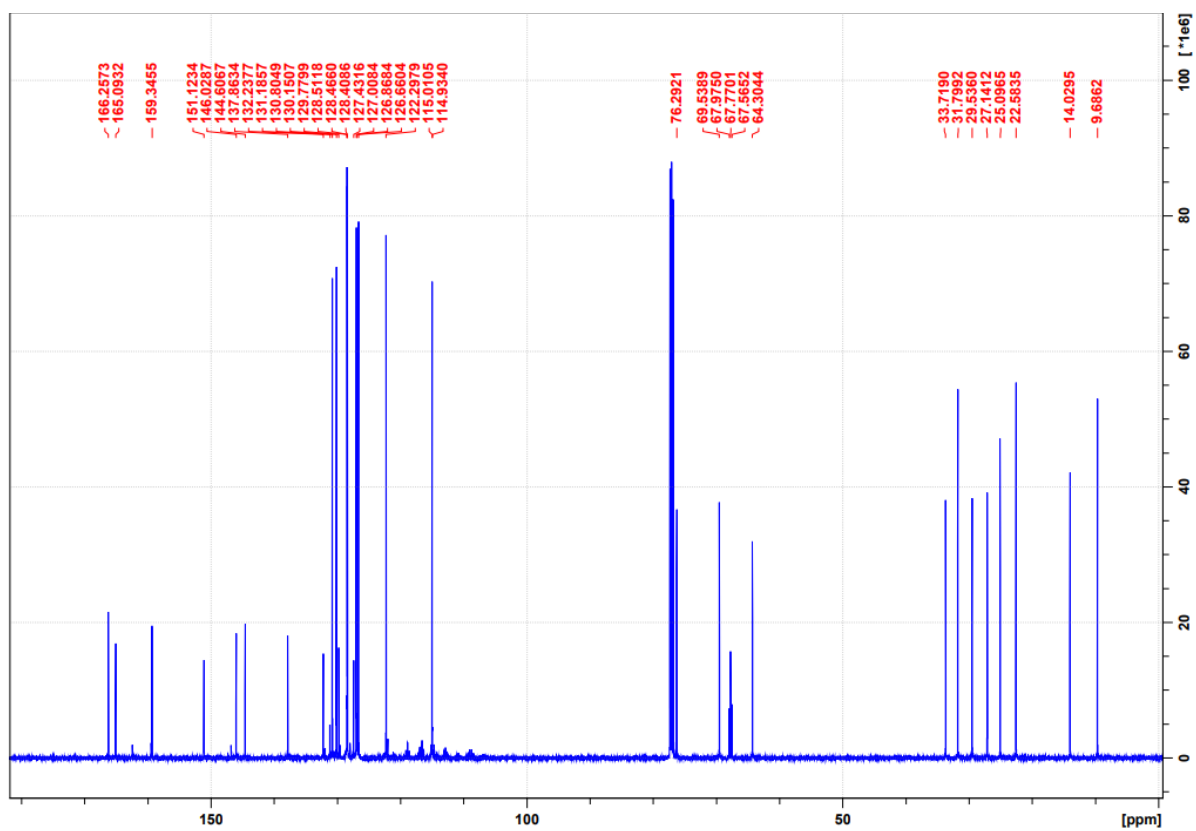


Figure S4. ^{13}C NMR spectrum of the compound **3PhPh** in CDCl_3 .

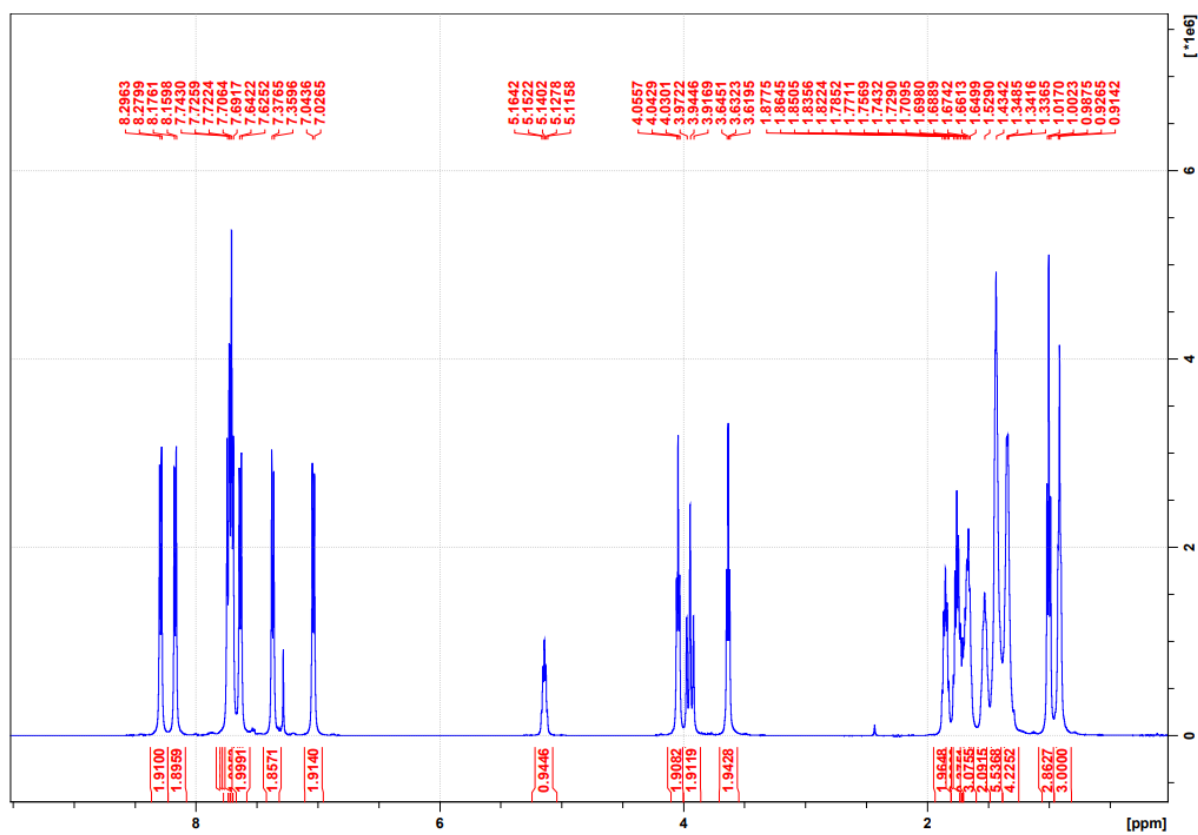


Figure S5. ¹H NMR spectrum of the compound 7PhPh in CDCl₃.

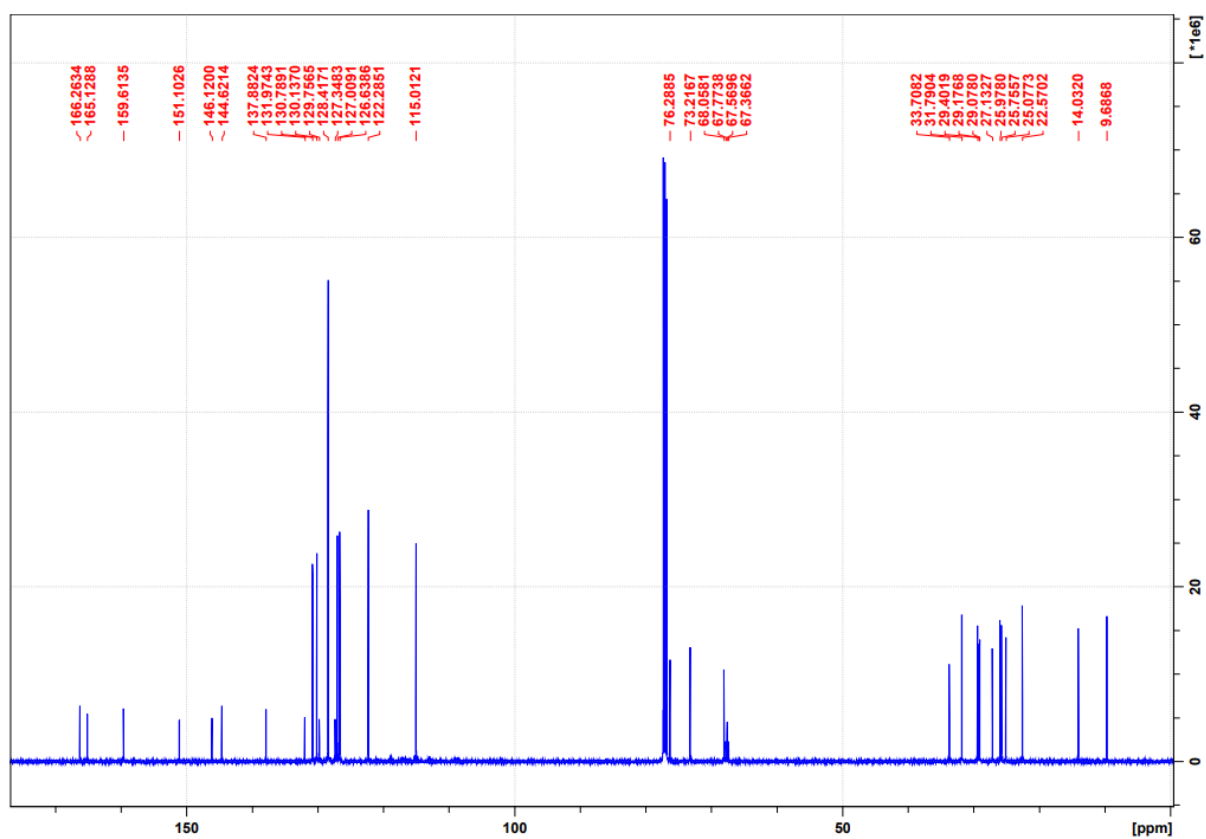


Figure S6. ¹³C NMR spectrum of the compound 7PhPh in CDCl₃.

DOUBLE HYSTERESIS CURVE OF DOPED MIXTURE

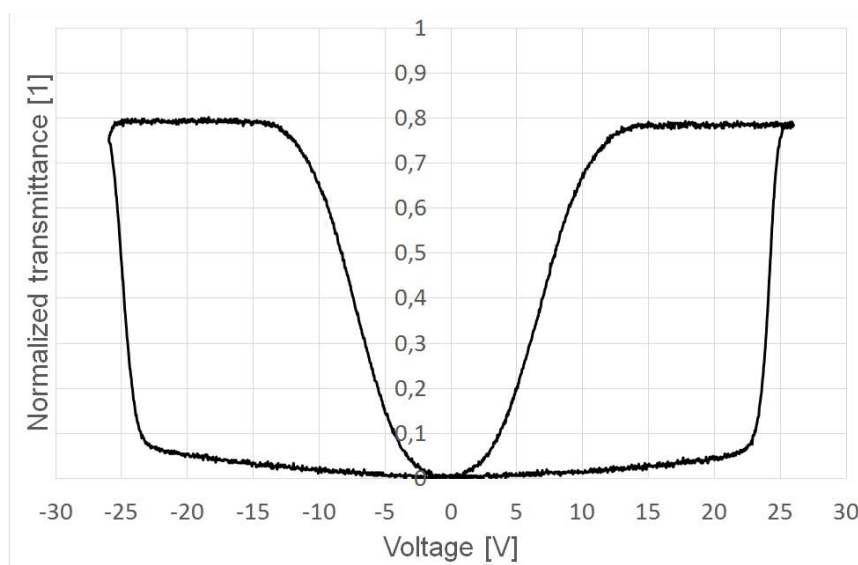


Figure S7. Quasistatic electro-optical response for the mixture W-450A, under application of a triangular waveform at 0.1 Hz.