

# A Novel Antiferroelectric Liquid Crystal with two Asymmetric Centres

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An antiferroelectric liquid crystal material, (S)-4-(2-chloro-3-phenyl-1-(2-methylbutyloxy)carbamato-4'-*n*-dodecyloxy biphenylcarboxylate (CPCDBD), has been synthesized by using (S)-2-amino-3-(4-hydroxy)phenyl propionic acid (L-tyrosine) as one the optically active ingredients. Preliminary investigations on this material reveal high spontaneous polarization ( $\sim 145 \text{ nC/cm}^2$ ) in the antiferroelectric Sm-C<sub>A</sub><sup>\*</sup> phase. Possible structural contributions towards the appearance of antiferroelectric ordering are discussed.

*Key words:* AFLC; CPCDBD; Spontaneous Polarization.