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New sorbents based on liquid crystal and chiral macrocyclic compounds for gas chromatography

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Abstract

This article is concerned with the way of universal sorbents development for izomer seperetion based on the achiral nematic liquid crystals and chiral macrocyclic compounds (modified cyclodextrins) for gas chromatography. It has been demonstrated that the nature of the substituent in the molecule of cyclodextrin affects the type of formed mixed mesophase and enantioselectivity of the sorbent. We have analyzed the reasons of helically twisted cholesteric mesophase development and its role in providing enantioselective sorption.