



crystals



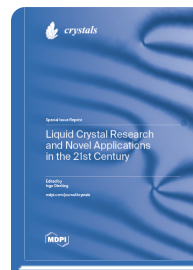
Special Issue Reprint

Liquid Crystal Research and Novel Applications in the 21st Century

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Liquid crystals are widely known and used in flat panel displays and TVs, but also from surfactants and detergents, such as washing powder. This publication collects a number of articles and reviews which go beyond the commonly mentioned applications and properties. These are, for example, liquid crystalline elastomers, applications in photonics and sensors, or the role of topology, knotting, and solitons in the description of recently observed director field disturbances of liquid crystals. The timely application of machine learning is discussed in the study along with the characterization of liquid crystals. Interactions with substrates and the use of patterned substrates for novel applications are discussed and studies about lyotropic liquid crystals are reported. All in all, this publication represents a collection of novel aspects of liquid crystals, leaving the more standard structure-property investigations and display studies of the last century, to advance into the 21st century.



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