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# High Purity Organic Molecular Crystals

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The article reviews the preparation of highest purity organic crystals which are of rapidly growing importance for the understanding of basic processes and for the innovation of practical applications. High purity can be obtained by zone refining in combination with other methods. For the characterization of the crystals, grown from the melt or by sublimation, sensitive methods have been developed, being able to detect impurities down to well below 1 ppm. The author's extensive practical experience is condensed into reliable technical prescriptions and valuable advices and hints.

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# Rare-Earth Germanates

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# Growth, Properties and Applications of Narrow-Gap Semiconductors

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*This article reviews selected properties of the narrow-gap semiconductors $Pb_{1-x}Sn_xTe$, $Pb_{1-x}Sn_xSe$ and $Hg_{1-x}Cd_xTe$ which are accepted for infrared device applications, recently even in large-scale production.*
*The production aspect gave rise to a detailed description of the crystal growth as a first and decisive factor for device economy. Particular emphasis is placed on the important role of the thermodynamic parameters (phase diagrams) for growth, doping and physical properties of bulk crystals as well as epitaxial layers. The various growth methods are described and compared in detail.*
*The device aspect will be considered for photodetectors and tunable diode lasers as modern examples of applications in thermal imaging and gas spectroscopy around 10 μm.*

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