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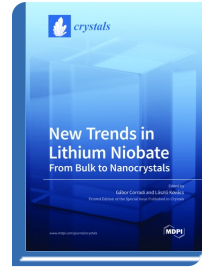
New Trends in Lithium Niobate

www.mdpi.com/books/reprint/5070

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ISBN 978-3-0365-3340-7 (Hardback)

ISBN 978-3-0365-3339-1 (PDF)

The present volume “New Trends in Lithium Niobate: From Bulk to Nanocrystals” contains the materials of a Special Issue of the MDPI journal *Crystals* dedicated to the memory of Prof. Dr. Ortwin F. Schirmer and provides a new synopsis of his research focusing on LiNbO_3 . It also includes recent developments, exemplifying the continued interest in this outstanding ferroelectric, non-linear optical and holographic crystal as a workhorse for testing and realizing new ideas and applications.

This book starts with reviews on intrinsic and extrinsic crystal defects in LiNbO_3 of single-crystal, thin-film or nano-powder forms, studied by various optical, magnetic resonance and nuclear methods, clarifying in particular the reasons for the suppression of anion vacancy formation upon thermal reduction, mechano-chemical processing or irradiations of various types. The reviews are followed by research papers on the experimental and theoretical investigation of small polarons, together with recent results on the properties of $\text{Li}(\text{Nb,Ta})\text{O}_3$ mixed crystals. Among the various contributions dealing with nonlinear optical applications, papers on device development, entangled photon pair generation and thin films on the Lithium Niobate On Insulator (LNOI) platform can also be found.



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