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# Ferroelectrics and Related Substances

Subvolume C: Organic crystals, liquid crystals and  
polymers

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## Preamble

This is the final subvolume in a long Landolt-Börnstein series on "Ferroelectrics and Related Substances". The electronic version of this volume comprises the revised edition of all the volumes published between 1969 and today on this subject and is ready for continuous supplementation.

The Japanese editors and authors would like to express their sincere thanks to the German participants for a very long, pleasant and successful cooperation.

Through the work, we have reconfirmed the existence of common emotion in the German and Japanese cultures. For instance, we accept with deep sympathy such Goethe words as

"Der Geist des Wirklichen ist das wahre Ideelle".

In the name of the Japanese editors and authors

Toshio Mitsui  
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Toyonaka, Japan

September 2006

## Preface

A complete new edition on ferroelectrics, Landolt-Börnstein volume III/36, is required by the growing number of publications and increasing amount of valuable data after the publication of volume III/16 (1981) and its supplement III/28 (1990). Subvolume III/36C on organic crystals, liquid crystals and polymers is presented herewith.

Volume III/36 contains revised, updated and extended information on ferroelectrics, antiferroelectrics and closely related substances. All reliable data on both pure compounds and solid solutions published between 1920 and 1995 (with some more recent data) are critically evaluated and included. Besides of the dielectric and ferroelectric behavior, a number of other properties relevant to the characterization of the substances are presented in tables and figures. The ferroelectric crystals exhibit diverse types of phase transitions, which convey information about cooperative interactions among ions, atoms or molecules in condensed matters. They are used as dielectric, piezoelectric, pyroelectric and optic elements (e.g. in nonlinear optical devices).

As the range of the compiled data is very extensive, volume III/36 is divided into three subvolumes titled

III/36A Oxides

III/36B Inorganic substances other than oxides

III/36C Organic crystals, liquid crystals and polymers.

The two subvolumes A and B are published each in two parts, C is published in one part. The titles of the two parts of subvolume III/36A are

III/36A1 Perovskite-type oxides and  $\text{LiNbO}_3$  family,

III/36A2 Oxides other than Perovskite-type and  $\text{LiNbO}_3$  family.

Titles for the two parts of subvolume III/36B are

III/36B1 SbSI family ... TAAP,

III/36B2  $(\text{NH}_4)_2\text{SO}_4$  family ...  $\text{K}_3\text{BiCl}_6 \cdot 2\text{KCl} \cdot \text{KH}_2\text{F}_4$ .

Unlike previous Landolt-Börnstein volumes on ferroelectrics, volume III/36 will be published in three different forms: printed, online and on CD-ROM. The internet address of Landolt-Börnstein online is

[www.landolt-boernstein.com](http://www.landolt-boernstein.com)

The CD-ROM will be offered together with the printed volume. The complete information of volume III/36 will be published online as well as on the CD-ROM. When printed the complete information of part III/36C alone would cover already nearly 1500 pages. Therefore, to keep things handy, the printed volumes will contain only a selection of the complete data, covering roughly one third of the complete data; the basic data, all figure and table captions and all references, however, will be included. Only the number of figures and the number of tables will be reduced in the printed volume.

The editors wish to thank all the authors for their competent and persistent work, the members of the Landolt-Börnstein office, especially Mrs. A. Endemann, Mrs. H. Hämmer, Dr. R. Poerschke, Dr. W. Polzin, Mrs. D. Rathgeber-Manns, and Dr. T. Schneider for their nice cooperation and thoughtful help in the final preparation.

The Editors

September 2006

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