

: P R E F A C E :

While writing this thesis consisting of five chapters, an attempt has been made to present the subject matter consistent with the development of the topics concerned. The first chapter deals with the ferroelectric materials and in order to understand them, the theoretical considerations have been utilised. This chapter ends with the orientation of the work. Chapter II is divided into two parts, one deals with the preparation of sample and other deals with the dielectric hysteresis. In chapters III and IV the subject matter of the dissertation is presented according to the nature of studies to which the ferroelectric materials  $\text{NaVO}_3$  and  $\text{KVO}_3$  were subjected, namely Solid-state battery formation and second harmonic generation. The Vth chapter gives the summary and conclusions of the work.

The theoretical background as well as the experimental results have been illustrated with appropriate figures and tables. A list of references is given at the end of each chapter. Whereever necessary, the abbreviations are used. In case of few references it was not possible to refer to the original work.

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