

## Preface

Piezoelectric materials are used in an ever-increasing number of industrial and research applications in many key technologies, including microelectronics, signal processing, sensors and actuators. As users require increasingly higher performances, researchers, designers and manufacturers are faced with growing challenges. In particular, the development of new devices is closely linked to the progress made in improving existing materials, and in developing new bulk and thin film materials.

This volume is a collection of selected papers presented at the 4<sup>th</sup> European Workshop on Piezoelectric Materials (EWPM) held in Montpellier (France), July 21<sup>st</sup>–23<sup>rd</sup> 2004. Several invited lectures and many contributed papers were presented during this 3-day meeting, attended by approximately 80 scientists from both University and Industry. It was the fourth in the series of workshops dedicated to subjects related to (1) fundamental aspects of crystal growth, (2) improvements in the crystal growth of bulk materials, (3) characterization of crystals, (4) processing and characterization of thin films, (5) preparation and characterization of piezoelectric ceramics, (6) basic physical properties of materials, (7) theories, modeling, (8) stability of piezoelectric materials, (9) material aspects of device manufacturing, (10) industrial developments and future prospects.

Scientists and engineers were invited from throughout Europe, North America and Asia to present work covering topics that were considered of particular importance to the workshop and to its general theme. As one of the aims of this meeting was to improve exchange between scientists and engineers in order to develop new industrial applications, a significant number of attendees were directly concerned by scientific and technological problems and corresponding solutions in piezoelectric devices.

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*The Organizing Committee of the 4<sup>th</sup> EWPM*