PREFACE

This volume contains eighty-three contributions to the 5th International Autumn Meeting "Gettering and Defect Engineering in Semiconductor Technology" - GADEST '93, held October 9 to 14 in Chossewitz near Frankfurt (Oder), Germany, and organized by the Institut für Halbleiterphysik Frankfurt (Oder) GmbH. The proceedings contain contributions from more than 60 research institutes of 19 countries and will give a representative survey of the present state of knowledge.

The topics of this conference were selected on the assumption that monocrystalline Si and Si-based semiconductors will dominate microelectronics until far into the 21th century. The reasons for this assumption lie in the vast body of experience and specialized knowledge in crystal growth, technological procedures, and optimized equipment which have been accumulated for these materials over the years.

With the continuing trend towards reduction of device dimensions into the nanometer regime, the number of atoms actively participating in switching operations becomes smaller, at the same time increasing the sensitivity to impurities introduced by fabrication processes or inherent to the material. Correspondingly, as the density of devices on a chip is increased, the importance of controlling defects, in the bulk material as well as within layers and at interfaces, becomes more significant.

An important aspect of future nanoelectronics is the compatibility to established silicon technologies. A typical example is the integration of SiGe layers into silicon technology since this material offers interesting improvements when compared to other semiconductor materials. In addition, the possibility of high-frequency and optoelectronic applications are indicated. Due to the current importance of fundamental research as well as practical applications, the topic of Si/SiGe heterostructures was given special attention in the program of this GADEST '93 meeting.

The large interest engendered by the conference in the past emphazises once again the fundamental importance of a meeting serving as a forum for scientists and engineers from the east and the west, both for providing deeper insight into defects in semiconductors and for discussing up-to-date effects and procedures of gettering and defect engineering.

We express our sincere thanks to all authors who contributed to the proceedings. The organizers are also deeply indebted to the sponsors for their support and to all those who are involved in the organization of the conference for their dedicated work. Finally, we like to mention that the 6th International Autumn Meeting will be held in 1995.

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