

PREFACE

The field of nanotubes and nanowires is evolving at a rapid pace, with many potential applications in electronics, optics, and sensors, to name a few. In this special issue, several groups summarize some of these potential applications, although the list is by no means extensive. Rather, it is meant to serve as a flavor of and snapshot of the current state of the art in the field of nanowires and nanotubes. There is an ample mix of experimental, theoretical, and visionary material in this book to give the reader an indication of where the field is now, and where it is going.

Two chapters on the electrostatics and quantum properties of 1d FETs provide a snapshot of the understanding of device physics. One of the chapters focuses on a particular materials system (ZnO) for nanowire technology. Three chapters point to some of the potential applications, including sensors, memory, and high frequency electronics and systems.

While research continues at a rapid pace in academia and industry, the reader will get a good idea of the potential and current state of the art of the field, and will be in a better position to judge for themselves if and when the technology will find commercial applications.

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