

## Preface

The processing of semiconductor structures stands at the cutting edge of technological innovation, propelling advancements in the production of solid-state electronics. These technologies require a range of sophisticated and precise operations and are crucial in modifying materials to achieve the desired electrical characteristics of finished structures. Key to the discussion are the various structures that emerge from these processes. The principles behind forming p-n junctions and the intricate behaviour of metal-oxide-semiconductor (MOS) structures are explored. Special attention is given to advanced architectures like trench gate structures and multi-gate devices, pushing current technology's boundaries.

The characteristics of solid-state structures are fundamental to performance and functionality in completed electronic devices. Methods and results of investigations of some of them are presented.

This special edition will be an invaluable resource for engineers and researchers involved in the development in the area of semiconductor technologies.