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Y.H. Mori, K. Ohnishi (Eds.)

Energy and Environment

Technological Challenges for the Future

With 178 Figures, Including 38 in Color

Springer

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Preface

This book is a compilation of papers presented at the International Symposium “Energy and Environment: Technological Challenges for the Future,” held in Yokohama and Hakone November 25–27, 1999. The Symposium was the concluding event of the 5-year TEPCO Chairship Program which was established in the Faculty of Science and Technology, Keio University, Yokohama, Japan, in 1994 with a grant from the Tokyo Electric Power Company (TEPCO). Thirteen internationally recognized experts who are actively involved in various aspects of energy and environmental research were invited to the Symposium as guest speakers. Most of them were researchers who had been invited to Keio University either as TEPCO Chair Visiting Professors to conduct courses in the Graduate School of Science and Technology of Keio University or as lecturers for ad hoc TEPCO–Keio Seminars in the Faculty of Science and Technology, Keio University.

Each of the papers contributed by these guest speakers presents an overview, a state-of-the-art review, and/or a perspective on a subject of each speaker’s research interest related to a significant aspect of energy and environmental issues. Thus, the book is definitely more than just a guidebook to superficial trends in technology: It is a compilation of the world’s top-rank investigations of a wide spectrum of current and future technologies expected to contribute to solving the energy and environmental problems of the next century.

In addition to the technological papers in Parts I–V, the book contains a unique sixth section. Part VI is unique, we believe, because it deals with a subject beyond the confines of *technology*, namely, education—at home, in school, and through the media—about energy and environmental concerns. Part VI is a record of the Panel Discussion held November 27, 1999, in Hakone as part of the Symposium. The Panel Discussion was chaired by Dr. Azusa Tomiura, a member of Science Council of Japan, and was attended by 18 invited guests, the members of the Organizing Committee of the Symposium, and three students from the Graduate School of Science and Technology, Keio University. Compiled in Part VI are the chair’s keynote message to the participants in the Panel Discussion, talks by the five panelists, and comments and discussion by the participants.

As the editors of this book and also as the chairs of the Symposium, we greatly thank those who presented their papers in the Symposium and then contributed them to the book. We are also most grateful to Dr. Azusa Tomiura for chairing the Panel Discussion and organizing the resulting documents for publication here. We owe the successful management of the Symposium and that of the subsequent publication of this book to the

staff of the Office of Research Administration at Yagami, Keio University, particularly to Mr. Hiroshi Watanabe and Ms. Yukari Mitsuhashi. Finally, we express our heart-felt gratitude to the Tokyo Electric Power Company for their endowment of the chairship to Keio University. We are pleased and proud that the conclusion of the chairship program is marked by the publication of this book.

Yasuhiko H. Mori
Kouhei Ohnishi

Panel Discussion Participants, Hakone Prince Hotel, November 27, 1999

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