
FOREWORD

Special Section on Fundamentals and Applications of Advanced Semiconductor Devices

Semiconductor devices and its integration systems are definitely the key components to expand future ubiquitous network society and the demand for new-functional devices with high-performance and low power consumption is continuously growing. The objective of this special section is to discuss various aspects of fundamentals and applications of advanced semiconductor devices to meet the demand. This special section contains 22 papers, which cover the fields of MOSFET technology, Emerging technology, III-V semiconductor technology, Nanoscale device technology Memory technology and Circuit technology.

I would like to express my thanks to all authors for their contributions to the special section. I also thank all reviewers and editorial committee members for their devoted contributions to reviewing and editing the papers. Without their efforts, this special section couldn't be achieved.

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Tetsuo Endoh, Guest Editor

Tetsuo Endoh (*Member*) was born in Tokyo, Japan, in 1962. He received the B.S. degree in physics from the University of Tokyo, Japan, in 1987 and the Ph.D. degree in electronic engineering from Tohoku University, Japan, in 1995. He joined Toshiba Corporation, in 1987. Since then he has been working on research and development of NAND Memory and 3D structured Device technology. He became a lecturer at the Research Institute of Electrical Communication, Tohoku University, in 1995. Currently, he has been a Professor at the Graduate School of Engineering in Tohoku University, since 2012. He has also been the Deputy Director of the Center for Spintronics Integrated Systems, Tohoku University, since 2010, and the Director of the Center for Innovative Integrated Electronic Systems, Tohoku University, since 2012. His current research interests are novel device technology such as Vertical structure device, high density memory such as SRAM, DRAM, 3D-NAND and MRAM, and Beyond CMOS technology such as spintronics based nonvolatile Logic. He received the LSI IP Design Award, the JJAP Paper Award, and 2012 SSDM Paper Award in 2001, 2009, and 2012, respectively. He is an "International Collaboration Fellow" of Sendai city, a fellow of the Japan Society of Applied Physics (JSAP), and a member of the Institute of Electrical and Electronics Engineers (IEEE).

