
FOREWORD

Special Section on Fundamentals and Applications of Advanced Semiconductor Devices

Semiconductor devices are definitely the key components to support future ubiquitous network society and the demand for high-performance and new-functional devices 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 covers the entire field of semiconductor devices and materials from fundamental physics to recent improvements in device performance and processing technology. This special section contains 24 papers in total; 14 of them are on silicon, memory and related devices and technology, and 10 on compound semiconductor and emerging devices.

The guest editor would like to express his appreciation on all authors for their contributions and to all the reviewers for their helpful comments. He is also grateful to editorial committee members for their supports.

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Shigeyoshi Watanabe, Guest Editor

Shigeyoshi Watanabe (*Member*) was born in Mie, Japan in 1955. He received the B.E. degree in instrumental engineering from Keio University, Japan, in 1977 and the M.S. degree in applied physics from Tokyo Institute of Technology, Japan, in 1979. He received the Ph.D. degree in instrumental engineering from Keio University, in 1998. In 1979 he joined Toshiba Corporation, Japan. Since then he has been working on research and development of MOS memories, SOI/BiCMOS/CMOS device technologies, low-power and high-speed technology and architecture of system LSI. In 2005, he joined department of information science, Shonan Institute of Technology as a professor. His current research interests are MOS memories such as FeRAM and MRAM, 3D device technology such as FinFET and SGT, and low-power/high-speed circuit technology. He served chairman of the technical committee of Silicon Device and Materials (SDM) of IEICE from 2009 to 2010.

