
FOREWORD

Special Section on Heterostructure Microelectronics with TWHM 2009

Welcome to this Special Section on “Heterostructure Microelectronics with TWHM2009.” Most of the papers in this section are extended version of the abstracts presented at the Topical Workshop on Heterostructure Microelectronics (TWHM2009), which was held at Mielparque-Nagano, Nagano, Japan on August 25–28, 2009, and include a substantial amount of information beyond the presentations. The purpose of this Special Section is to share an overview of recent progress of research and development in electron devices using semiconductor heterostructures with many readers of this transaction. The topics cover ultrahigh-frequency and/or high-power devices using compound semiconductor heterostructures, their circuit applications, and material issues related to the heterostructures.

This Special Section consists of 16 papers from Europe and Japan, covering a broad range of theoretical and experimental aspects of compound semiconductor devices: Nitride-based devices, InP-based devices, and emerging devices.

We would like to thank all the authors of papers for their efforts in preparing the manuscripts, the reviewers who worked diligently to make sure that the papers are worth publication, and the staffs in IEICE Transactions on Electronics.

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Masaaki Kuzuhara, Guest Editor

Masaaki Kuzuhara (*Senior Member*) received the B.E., M.E. and Ph.D. degrees in electrical engineering from Kyoto University, Kyoto, Japan, in 1979, 1981 and 1991, respectively. In 1981, he joined Central Research Laboratories, NEC Corporation, Kawasaki, Japan. From 1981 to 1997, he engaged in developing III-V heterojunction FETs and their microwave ICs. From 1998–2003, he worked for developing GaN-based heterojunction FETs for power applications as a senior manager. In 2004, he joined Graduate School of Engineering, University of Fukui, Fukui, Japan, as a professor. His current research interests include III-nitride heterojunction devices for high-voltage and high-frequency applications. He served as Chair of the Technical Committee on Electron Devices in IEICE Electronics Society from 2007–2008. He was awarded 2002 Ichimura Prize from the New Technology Development Foundation for his contribution of developing 3V power PHEMT for cellular handset. He is a Fellow of IEEE.

