

Preface

The 3rd International Conference on Advanced Micro-Device Engineering (AMDE 2011) was held by the Advanced Technology Research Center (ATEC), Gunma University on 8 December 2011 in Kiryu, Japan. The symposium was attended by 200 researchers, and the number of presentations was 84, including 11 oral presentations (3 invited and 8 regular) and 73 poster presentations.

Gunma University was established more than fifty years ago from an amalgamation of several educational institutions, including Maebashi Medical College, Kiryu Technical College, Gunma Normal School, and Gunma Youth Normal School. From these institutions, the Faculty of Medicine, the Faculty of Engineering, and the Faculty of Education were formed. Since its inception, the university has striven to foster distinguished physicians, engineers and teachers. Focusing on science and technology, the university has contributed significantly to the development of postwar Japan. The postwar industrial and economic growth of Japan has been steadily declining while neighboring countries appear ready to overtake Japan's lead position. The effects of these changes can be seen in various social phenomena. The university must take its position at the head of our society in order to lead the way toward the construction of a new era. It is imperative that the university accomplishes its mission to stimulate new energy for a new era. In order to achieve this goal, we need the participation of students who will bear the burdens of a new age.

The Advanced Technology Research Center (ATEC) was established in 1996 as the Satellite Venture Business Laboratory (SVBL). After the Japanese National Universities were incorporated in 2006, SVBL was renamed ATEC. ATEC seeks to create fundamental technologies to foster future advanced industries and to develop human resources having professional skills and venturesome minds. The main research projects at ATEC are "Applied Materials," "Nanotechnologies," "Applied Optics," "Analog Circuit Technologies", and newly launched "Medical Engineering". Such projects have been advanced through close collaboration with the Silicon Center. AMDE was first organized in 2009 to promote the activity of ATEC.

This special issue collects the contributions, submitted and accepted by at least two independent referees for this issue of *Key Engineering Materials*.

We are greatly thankful to all participants of AMDE 2011. We also acknowledge the authors and referees for their contribution to the present proceedings.

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Gunma University, Japan

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