

# 第13回 関西コロキウム電子デバイスワークショップ

**参加費  
無料**  
(事前登録不要)

**2012年度IEEE主要ジャーナル・国際会議から  
関西発の注目論文を選びすぐり、著者自らに  
解説していただきます**



会場



日時: 2013年10月25日(金) 10:00~17:00  
会場: 大阪工業大学 うめきたナレッジセンター  
グランフロント大阪 ナレッジキャピタルタワー C9階  
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## 講演プログラム 2013年10月25日(金) 10:00-17:00

### I. Nanoelectronics: Process, Device, and Circuit [10:05-11:45]

1. Analysis of Channel Stress Induced by NiPt-silicide and Its Generation Mechanism [SSDM]  
*M. Mizuo (Renesas Semiconductor Engineering Corp.)*

2. Isotope Effect on Phonon Thermal Transport in Silicon Nanowires [SSDM]  
*J. Hattori (Ritsumeikan Univ.)*

3. Impact of Random Telegraph Noise on CMOS Logic Delay Uncertainty under Low Voltage Operation [IEDM]  
*T. Matsumoto (Kyoto Univ.)*

4. Metal Oxide Nanowires: Synthesis and Memristive Properties [SSDM]  
*T. Yanagida (Osaka Univ.)*

### II. Power and Compound Semiconductor Devices [13:00-14:40]

1. GaN Gate Injection Transistor with Integrated Si Schottky Barrier Diode for Highly Efficient DC-DC Converters [IEDM]  
*S. Ujita (Panasonic Corp.)*

2. Breakdown Characteristics of 12-20 kV-class 4H-SiC PiN Diodes with Improved Junction Termination Structures [ISPSD]  
*H. Niwa (Kyoto Univ.)*

3. Significant Effect of JFET Doping on Low On-resistance 4H-SiC DMOSFETs of 3300 V Rating [SSDM]  
*K. Hamada (Mitsubishi Electric Corp.)*

4. Theoretical and Experimental Study of Inverse Piezoelectric Effect in AlGaN/GaN Field-plated Heterostructure Field-effect Transistors [IEEE Trans. Electron Devices]  
*Y. Ando (Renesas Electronics Corp.)*

### III. Sensor, Solar Cell, and Emerging Devices [14:55-16:35]

1. Novel High-sensitivity Broadband Image Sensor with CIGS Thin Films [SSDM]  
*Y. Ota (Rohm Co. Ltd.)*

2. Low-resistance TCO n-p Tunnel Recombination Junction for Multi-cell Interface Layers in Thin-film Solar Cells [SSDM]  
*K. Kanamoto (Mitsubishi Electric Corp.)*

3. Ferroelectric Synapse Device with Brain-like Learning Function: Analog Conductance Control in a Ferroelectric-gate Field-effect Transistor Based on the Timing Difference between Two Pulses [SSDM]  
*Y. Nishitani (Panasonic Corp.)*

4. Development of MWCNT Embedded Micromechanical Resonator Working as Rarefied Gas Sensor [MEMS Conference]  
*Y. Isono (Kobe Univ.)*