

# **2006 14<sup>th</sup> International Conference on Advanced Thermal Processing of Semiconductors**

**Kyoto, Japan  
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# IEEE RTP 2006

October 10, 2006

9:00AM-5:00PM Workshop:

**Pattern Effect and its Impact on Advanced Thermal Processing of Semiconductors**

October 11, 2006

8:15AM Conference Opening

8:30AM Keynote Presentation

**Process-Integration Challenges with up-to-date Modulation of Scaling Laws** 1  
**S. Nakai, Fujitsu, Japan**

9:15AM Keynote Presentation

**Growing Importance of Fundamental Understanding on the Source of Process Variations** 5  
**S. Sato, NEC Yamagata, Japan**

10:00AM Invited Presentation

**Laser Annealing Technology and Device Integration Challenges** 11  
**A. Shima, Hitachi, Tokyo, Japan**

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1:00PM Invited Presentation

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**K. Tsutsui, K. Majima, Y. Fugakawa, K. Kakushima, Tokyo Institute of Technology, Yokohama, Japan**  
**Y. Sasaki, C-G. Jim, H. Ito, B. Mizuno, Ultimate Junction Technologies, Osaka, Japan**  
**H. Iwai, H. Sauddin, P. Ahmet, Frontier Collaborative Research Center, Tokyo Institute of Technology, Yokohama, Japan**

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Renesas Technology, Hyogo, Japan

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AMD Saxony, Dresden, Germany  
P. Fisher, J. Kluth, AMD Corporation/IBM, Hopewell Junction, USA

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M. Liu, A. Budrevich, Intel, Hillsboro, USA

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P. Morin, STMicroelectronics, Crolles, France

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P. Pichler, Fraunhofer IISB, Erlangen, Germany  
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P. Timans, Mattson Technology, Fremont, USA

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J. Venturini, SOPRA, Gennevilliers, France  
O. Marcelot, CEMES, Toulouse, France

4:45PM  
Raman Study on the Process of Si Advanced Integrated Circuits  
S. Nishibe, T. Sasaki, H. Harima, Kyoto Institute of Technology, Kyoto, Japan  
K. Kisoda, Wakayama University, Wakayama, Japan,  
T. Yamazaki, W. S. Yoo, WaferMasters, San Jose, USA

**October 13, 2006**

8:30AM  
Raman Study of Low-Temperature Formation of Nickel-Silicide Layers  
T. Sasaki, S. Nishibe, H. Harima, T. Isshiki, M. Yoshimoto, Kyoto Institute  
of Technology, Kyoto, Japan  
K. Kisoda, Wakayama University, Japan  
W. S. Yoo, T. Fukada, WaferMasters, San Jose, CA

9:00AM  
Laser Annealed Ni(Ti) Silicides Formation  
Y. Setiawan, P.S. Lee, K. L. Pey, X.C. Wang, G. C. Lim, NTU, Singapore  
F. L. Chow, Chartered Semiconductor Manufacturing, Woodland Industrial Park, Singapore

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D. Erbetta, T. Marangon, STMicroelectronics, Agrate Brianza, Italy  
T. Ueda, T. Fukada, M. Ouaknine, I. J. Malik, W. S. Yoo, WaferMasters, San Jose, USA

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Impact of Ni Layer Thickness and Anneal Time on Nickel Silicide Formation  
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T. Huelsmann, J. Niess, W. Lerch, Mattson Thermal Products, Dornstadt, Germany  
O. Fursenko, D. Bolze, IHP, Im Technologiepark, Frankfurt (Oder), Germany

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W. S. Yoo, T. Fukada, I. J. Malik, WaferMasters, San Jose, U.S.A.

11:00AM

Optimization of Annealing for ClusterBoron<sup>®</sup> and ClusterCarbon<sup>™</sup> PMOS SDE  
K. Sekar, W. Krull, SemEquip, Inc., North Billerica, USA  
K. Verheyden, K. Funk, ASM Europe, Almere, The Netherlands

11:30AM

Process Characterization of Single Wafer Rapid Thermal Furnace System  
with a Vacuum Loadlock  
D. Garroux, Altis Semiconductor, Corbeil Essonnes, France  
T. Fukada, T. Ueda, M. Odera, M. Ouaknine, W. S. Yoo, WaferMasters, San Jose,

12:00M -1:00PM Lunch Break

1:00PM

Improvement of Within Wafer Uniformity of Device Parameters by Gradient  
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K. W. Lee, S. Kim, P. Frisella, B. Jacobs, G. Cai, R. Reece, Axcelis Beverley, USA  
N. Y. Kwak, C. Y. Ham, K. C. Joo, D. H. Lee, S. W. Park, S. K. Park, Hynix Semiconductor,  
Kyungki-do, Korea

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Device Scaling Effect on the Spectral Absorptance of Wafer Front Side  
K. Fu, Yu-Bin Chen, Pei-feng Hsu, Florida Institute of Technology, Melbourne, USA,  
Z.M. Zhang, Woodruff School of Mechanical Engineering,  
Georgia Institute of Technology, Atlanta, USA

2:00PM

Insertion Error in LPRT Temperature Measurements  
Y. Qu, E. Puttitwong, J. R. Howell, O. A. Ezekoye, The University of Texas, Austin, USA

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Hot Plate Emissivity Effect in Low Temperature Annealing  
T. Fukada, W. S. Yoo, WaferMasters, San Jose, USA

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Calibration of Low Temperature Cable-Less Lightpipe Pyrometer  
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B. K. Tsai, K. G. Kreider, W. A. Kimes, NIST, Gaithersburg, USA

3:30OM

Adjourn