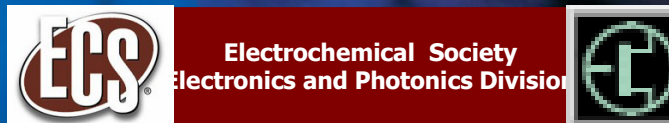
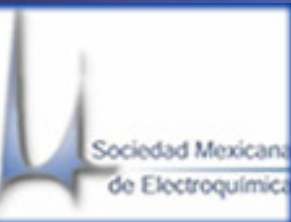




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SiGe, Ge, & Related Compounds: Materials, Processing, and Devices Symposium

part of the 2014 Joint International 226th Electrochemical Society Meeting in Moon Palace, Cancun, Mexico, October 5-11, 2014



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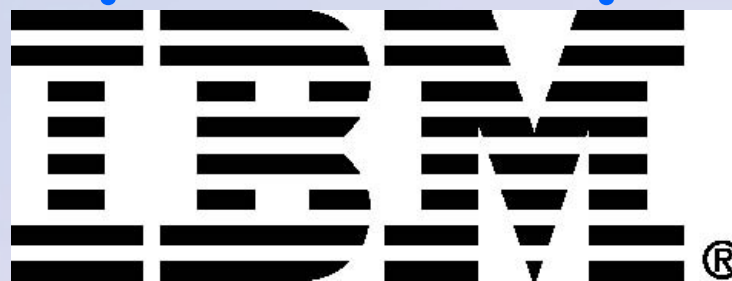


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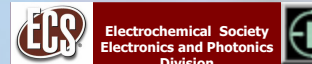


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Oct 6-Oct 10, 2014

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Evening Panel Session

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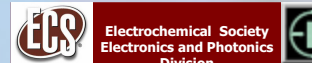
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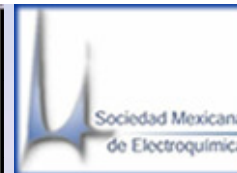
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SiGe, Ge & Related Compounds: Materials, Processing and Devices



Oct 6-Oct 10, 2014

**October
5-12
2014**

**Moon Palace,
Cancun, Mexico**

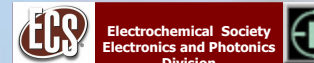


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Oct 6-Oct 10, 201

Conference at a Glance

4 day symposium with parallel sessions

1 (Monday) 10:15 AM	Plenary Session Expo Center, 1st Floor, Universal 12
2 (Monday) 1:40 PM	HBT 1: Advanced SiGe HBT Technology Expo Center, 1st Floor, Universal 8
3 (Monday) 1:40 PM	Sufaces & Interfaces 1: - Characterization and Process Control Expo Center, 1st Floor, Universal 7
4 (Monday) 3:55 PM	Processing 1 Expo Center, 1st Floor, Universal 8
5 (Tuesday) 8:00 AM	Processing 2 Expo Center, 1st Floor, Universal 8
6 (Tuesday) 10:15 AM	HBT 2: Optimization, Characterization and Modeling Expo Center, 1st Floor, Universal 8
7 (Tuesday) 10:15 AM	Surfaces & Interfaces 2: Channel and Gate Stack Technology 2014 Expo Center, 1st Floor, Universal 7
8 (Tuesday) 1:20 PM	Joint FET and Strain 1: Germanium FETs Expo Center, 1st Floor, Universal 8
9 (Tuesday) 3:45 PM	Optoelectronics Session 1: Emission Expo Center, 1st Floor, Universal 8
10 (Tuesday) 6:00 PM	Posters Expo Center, 1st Floor, Center and Right Foyers
11 (Wednesday) 8:00 AM	Related Compounds 1 Expo Center, 1st Floor, Universal 8
12 (Wednesday) 10:25 AM	Joint Epitaxy & Related Compounds 1: III-V Compounds Expo Center, 1st Floor, Universal 7
13 (Wednesday) 10:25 AM	Joint FET and Strain 2: Tunnel FETs and Strained Bulk and SOI "Finned" FETs Expo Center, 1st Floor, Universal 8



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Conference at a Glance

4 day symposium with parallel sessions

14 (Wednesday)	Emerging Devices and Applications 1: Quantum Effects / Spintronics
1:20 PM	Expo Center, 1st Floor, Universal 8
15 (Wednesday)	Epitaxy 1: Low Dimensional Epitaxial Systems
2:55 PM	Expo Center, 1st Floor, Universal 8
16 (Wednesday)	Workshop on next generation devices How far can we push Si CMOS and what are the alternatives for future ULSI?"
5:40 PM	Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)
17 (Thursday)	GeSn Session 1: GeSn Epitaxy 1
8:00 AM	Expo Center, 1st Floor, Universal 8
18 (Thursday)	Optoelectronics 2: Photodetection
8:20 AM	Expo Center, 1st Floor, Universal 11 (Moon Palace Resort)
19 (Thursday)	GeSn Session 2: GeSn Epitaxy 2
10:05 AM	Expo Center, 1st Floor, Universal 8
20 (Thursday)	Optoelectronicis 3: Systems
10:05 AM	Expo Center, 1st Floor, Universal 11 (Moon Palace Resort)
21 (Thursday)	Strain 2
12:50 PM	Expo Center, 1st Floor, Universal 7 (Moon Palace Resort)
22 (Thursday)	GeSn Session 3: GeSn Devices and Characterization
12:50 PM	Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)
23 (Thursday)	Emerging Devices and Applications 2: Quantum Effects
1:30 PM	Expo Center, 1st Floor, Universal 11 (Moon Palace Resort)
24 (Thursday)	Epitaxy 2: Si/SiGe Epitaxial Growth
2:55 PM	Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)



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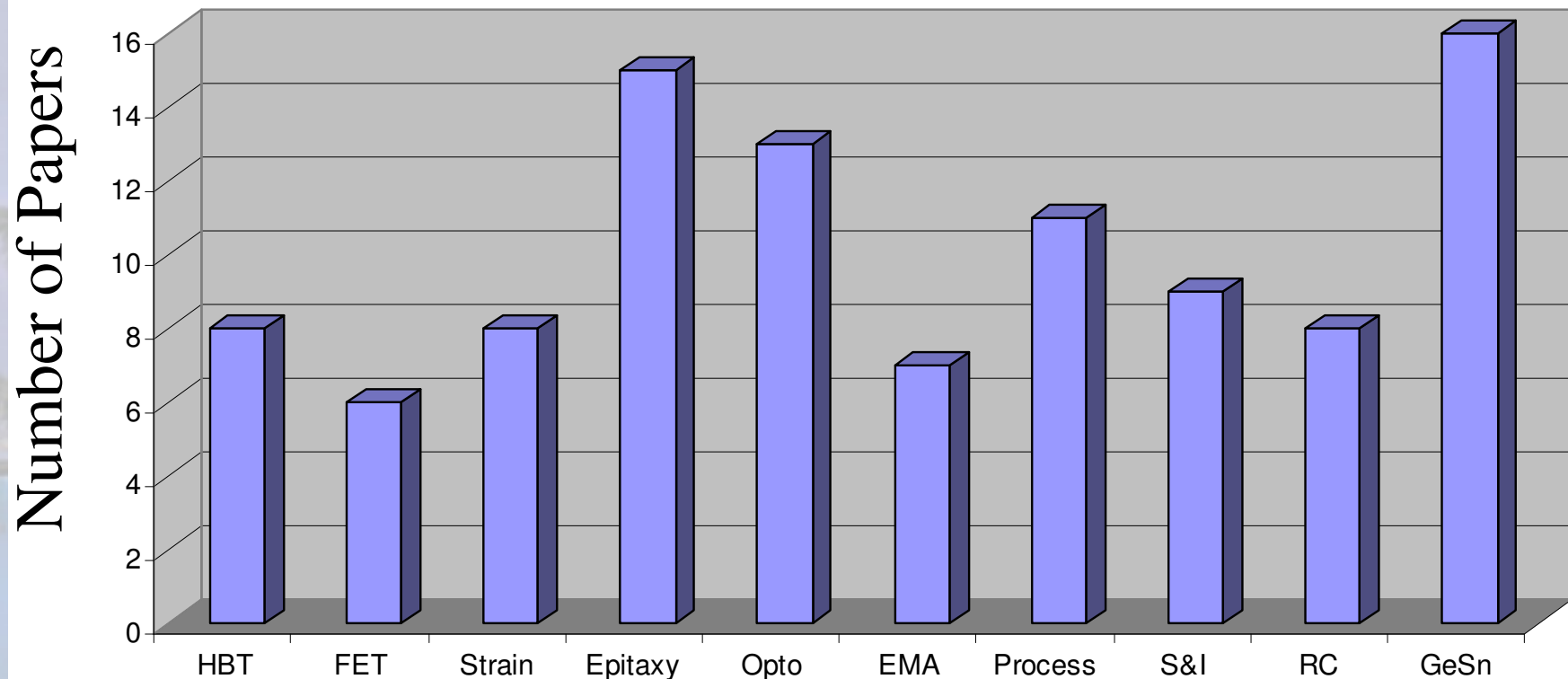




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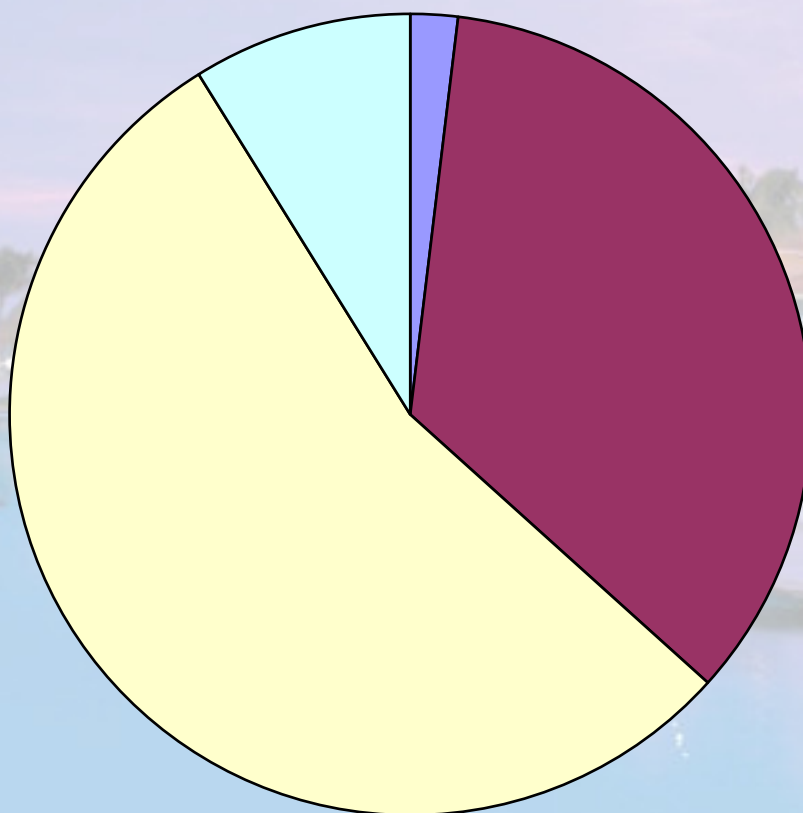




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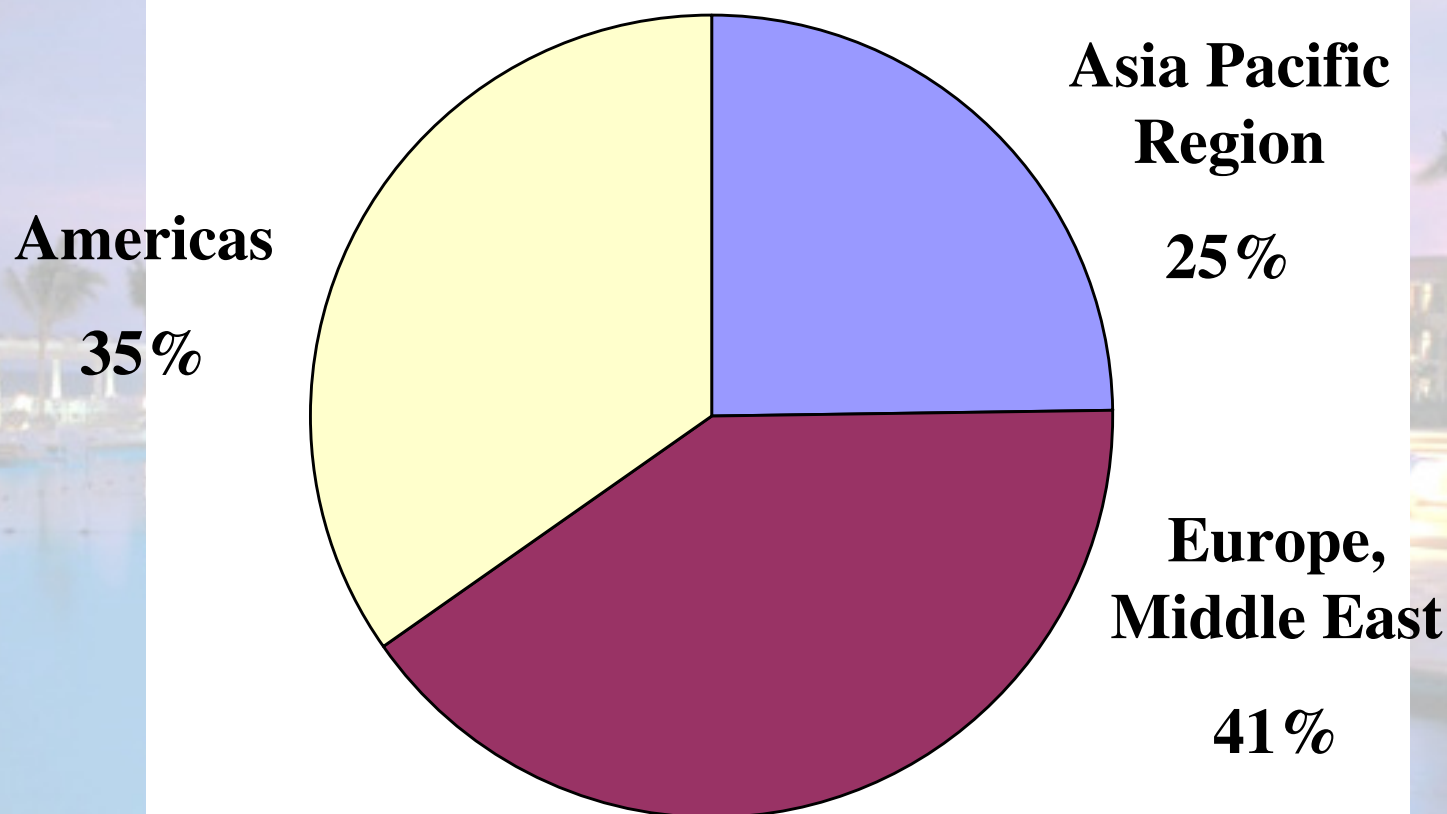




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ECS SiGe Symposium Posters

- Posters Displayed
 - Tuesday October 7
 - 6:00 - 9:00 PM,
 - Expo Center, 1st Floor, Center and Right Foyers
 - With other ECS Posters
 - Refreshments available



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Workshop on Next Generation Devices



Oct 6-Oct 10, 201

- **Session 16: Workshop on next generation devices**
How far can we push Si CMOS and what are the alternatives for future ULSI?"
 - Wednesday October 8,
 - Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)
 - 5:30 - 6:00 PM, Mixer
 - 6:00 - 8:00 PM Panel Discussion
 - Drinks and Ice Cream provided throughout the workshop
- **Moderator:**
 - Krishna Saraswat (Stanford University, USA)
- **Panel Participants**
 - Krishna Saraswat (Stanford University, USA)
 - Ken Uchida (Keio University, Japan)
 - Mikael Östling (KTH, Royal Institute of Technology)
 - Matty Caymax (IMEC)
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Center & Hilton Hawaiian Village

Hilton Hawaiian Village Honolulu Hawaii

Technical Program





1. Opening and Plenary Session

Monday, 6 October 2014: 10:15-12:25
Expo Center, 1st Floor, Universal 12 (Moon Palace Resort)
Session Chair: D. Haramé



Oct 6-Oct 10, 2014

- (1.1) 10:15 – 10:35 AM *Introductory Remarks D. Haramé (IBM Systems and Technology Group)*
- (1.2) 10:35 – 11:30 AM *(Invited) Extending the FETs: Challenges and Opportunities for New Materials and Structures* *K. Uchida and T. Takahashi (Keio University)* 1760
- (1.3) 11:30 – 12:25 PM *(Invited) High-Performance Photonic BiCMOS – Next Generation More-than-Moore Technology for the Large Bandwidth Era* *L. Zimmermann (IHP)* 1761
- Lunch Break 12:25 – 1:25 PM





2. HBT I: Advanced SiGe HBT Technology



Oct 6-Oct 10, 2014

Monday, 6 October 2014: 13:40-15:00

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Session Chair: G. Niu and M. Ostling

- (2.1) 13:40 – 14:10 PM (Invited) Towards 0.7 Terahertz Silicon Germanium Heterojunction Bipolar Technology – The DOTSEVEN Project R. Lachner (Infineon Technologies AG) 1762
- (2.2) 14:10 – 14:40 PM (Invited) Reliability of SiGe HBTs in Long-Term Operation G. G. Fischer (IHP) 1763
- (2.3) 14:40 – 15:00 PM A Novel Approach to Isolating the Edge of the Shallow Trench Isolation in SiGe HBTs for Improved Device Performance R. A. Camillo-Castillo, Q. Z. Liu, V. Jain, J. W. Adkisson (IBM Microelectronics Division), M. H. Khater (IBM T.J. Watson Research Center), P. Gray, J. J. Pekarik, R. Malladi, and D. L. Harnome (IBM Microelectronics Division) 1764
- Break 15:00 PM



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3. Surfaces & Interfaces 1: Characterization & Process Control



Oct 6-Oct 10, 2014

Monday, 6 October 2014: 13:40-15:40

Expo Center, 1st Floor, Universal 7 (Moon Palace Resort)

Session Chairs: Seiichi Miyazaki and Shigeaki Zaima

- (3.1) 13:40 – 14:10 PM (Invited) Anisotropic Strain Evaluation in the Finite Si Area by Surface Plasmon Enhanced Raman Spectroscopy A. Ogura and D. Kosemura (Meiji University) 1765
- (3.2) 14:10 – 14:30 PM Detection of Ge and Si Intermixing in Ge/Si Using Multiwavelength Micro-Raman Spectroscopy W. S. Yoo, K. Kang, T. Ueda, T. Ishigaki (WaferMasters, Inc.), H. Nishigaki, N. Hasuike, H. Harima, M. Yoshimoto (Kyoto Institute of Technology), and C. S. Tan (Nanyang Technological University) 1766
- (3.3) 14:30 – 15:00 PM (Invited) Si Ultrathin Films on Silver Surfaces: An Intriguing Epitaxial System T. Leoni (Aix Marseille Université), R. Bernard (Institut des Nanosciences de Paris), A. Ranguis (Aix Marseille Université), Y. Borensztein, G. Prévot (Institut des Nanosciences de Paris), and L. Masson (Aix Marseille Université) 1767
- (3.4) 15:00 – 15:20 PM Surface Reaction in Thin Film Formation of Si_{1-x}Ge_x Alloys on Si(100) by Electron-Cyclotron-Resonance Ar Plasma Chemical Vapor Deposition without Substrate Heating N. Ueno, M. Sakuraba, and S. Sato (Tohoku University) 1768
- (3.5) 15:20 – 15:40 PM Ni(SiGeSn) Metal Contact Formation on Low Bandgap Strained (Si)Ge(Sn) Semiconductors S. Wirths (Forschungszentrum Juelich), R. Troitsch (Peter Grünberg Institute 9 and JARA-FIT), G. Mussler (Forschungszentrum Juelich), P. Zaumseil (IHP), J. M. Hartmann (Université Grenoble Alpes), T. Schroeder (IHP), S. Mantl, and D. Buca (Forschungszentrum Juelich) 1769

- Break 15:40 PM



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4. Processing 1



Oct 6-Oct 10, 2014

Monday, 6 October 2014: 15:55-18:15

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chairs: Marco Lisker and Didier Dutartre

- (4.1) 15:55 – 16:25 PM (Invited) UV Excimer Laser Assisted Heteroepitaxy of (Si)GeSn on Si(100) S. Chiussi, S. Stefanov, A. Benedetti, C. Serra (Universidade de Vigo), D. Buca (Forschungszentrum Juelich), J. Schulze (Institut für Halbleitertechnik), and P. González (Universidade de Vigo) 1770
- (4.2) 16:25 – 16:45 PM Liquid Phase Epitaxy (LPE) Formation of Localized High Quality and Mobility Ge & SiGe by High Dose Ge-Implantation with Laser Melt Annealing for 10nm and 7nm Node CMOS Technology J. O. Borland (J.O.B. Technologies, AIP), M. Sugitani (SEN Corporation), P. Oesterlin (Innovavent), W. Johnson (KLA-Tencor), T. Buyuklimanli, R. Hengstebeck (EAG), E. Kennon, K. S. Jones (University of Florida), and A. Joshi (Active Layer Parametrics) 1771
- (4.3) 16:45 – 17:15 PM (Invited) Challenges and Developments in GeSn Process Technology for Si Nanoelectronics S. Zaima, O. Nakatsuka, N. Taoka, K. Kato, W. Takeuchi, and M. Sakashita (Nagoya University) 1772
- (4.4) 17:15 – 17:35 PM Silicon Diffusion Engineering in Rapid Melt Growth of Silicon-Germanium on Insulator C. G. Littlejohns, F. Y. Gardes, M. Nedeljkovic, G. Z. Mashanovich, and G. T. Reed (University of Southampton) 1773
- (4.5) 17:35 – 17:55 PM Electrical and Microstructural Characterization of Cu-Germanide Contacts Formed on p-Type Ge Substrate Y. R. Lim, Y. J. Lee, M. S. Kang, C. H. Leem, I. Jyothi, K. H. Shim, and C. J. Choi (Chonbuk National University) 1774
- (4.6) 17:55 – 18:15 PM Fabrications of Size- Controlled SiGe Nanowires Using I-Line Lithography and Focused Ion Beam Technique M. Noroozi, A. Ergül, A. Abedin, M. Toprak, and H. Radamson (KTH Royal Institute of Technology) 1775
- Dinner 18:15 PM



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5. Processing 2



Oct 6-Oct 10, 2014

Tuesday, 7 October 2014: 08:00-10:00

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chairs: Shigeaki Zaima and Stefano Chiussi

- (5.1) 08:00 – 08:30 AM (Invited) Combining SiGe BiCMOS and InP Processing in an on-top of Chip Integration Approach M. Lisker, A. Trusch, A. Krüger, M. Fraschke, P. Kulse, S. Marschmeyer, J. Schmidt, C. Meliani, B. Tillack (IHP), N. Weimann, T. Kraemer, I. Ostermay, O. Krüger, T. Jensen, T. Al-Sawaf, V. Krozer, and W. Heinrich (Ferdinand Braun Institut für Höchstfrequenztechnik) 1776
- (5.2) 08:30 – 08:50 AM Temperature Dependent Internal Friction Behavior of Single Crystal Germanium Studied by the Impulse Excitation Technique A. K. Swarnakar (National Institute of Technology, KU Leuven), O. Van der Biest, J. Van Humbeeck (KU Leuven), and J. Vanhellemont (Ghent University) 1777
- (5.3) 08:50 – 09:20 AM (Invited) “Small Size” Effects in Si-Based Epitaxies for Advanced CMOS Technologies D. Dutartre, B. Seiss, D. Barge, and N. Loubet (STMicroelectronics) 1778
- (5.4) 09:20 – 09:40 AM Etch Pit Formation on Germanium Alloys by in situ Gaseous Hydrogen Chloride Etching Y. C. Huang, C. Wang (Applied Materials, Inc.), and Y. Kim (Applied Materials) 1779
- (5.5) 09:40 – 10:00 AM Reduction of RIE Induced Ge Surface Roughness by SF₆-CF₄ Cyclic Etching Method X. Ma (Zhejiang University, Nanjing University), R. Zhang, and Y. Zhao (Zhejiang University) 1780
- Break 10:00 AM



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6. HBT 2: Optimization, Characterization, and Modeling



Oct 6-Oct 10, 2014

Tuesday, 7 October 2014: 10:15-11:55

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chairs: G. Niu and Rudolf Lachner

- (6.1) 10:15 – 10:45 AM *(Invited) Application-Specific SiGe HBT Optimization* P. H. C. Magnée, R. V. Dalen, H. Mertens, and T. Vanhoucke (NXP Semiconductors) 1781
- (6.2) 10:45 – 11:05 AM *SiGe HBTs in 90nm BiCMOS Technology Demonstrating f_T/f_{MAX} 285GHz/475GHz through Simultaneous Reduction of Base Resistance and Extrinsic Collector Capacitance* Q. Z. Liu, J. W. Adkisson, V. Jain, R. A. Camillo-Castillo (IBM Microelectronics Division), M. H. Khater (IBM T.J. Watson Research Center), P. B. Gray, J. J. Pekarik, B. Zetterlund, A. W. Divergilio, M. L. Kerbaugh, and D. L. Hareme (IBM Microelectronics Division) 1782
- (6.3) 11:05 – 11:35 AM *(Invited) Electro-Thermal Characterization of SiGe HBT PA-Cells* T. Zimmer (University of Bordeaux), M. Weiß (XMOD Technologies), M. De Matos, C. Maneux (University of Bordeaux), and S. Fregonese (CNRS) 1783
- (6.4) 11:35 – 11:55 AM *Second Order Intermodulation Linearity of a 200 GHz SiGe HBT Technology* Z. Li, G. Niu (Auburn University), and X. Wei (Huazhong University of Science and Technology) 1784
- Break 11:55 AM



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7. Surfaces & Interfaces 2: Channel and Gate Stack Technology



Oct 6-Oct 10, 2014

Tuesday, 7 October 2014: 10:15-11:45

Expo Center, 1st Floor, Universal 7 (Moon Palace Resort)

Chairs: Seiichi Miyazaki and Shigeaki Zaima

- (7.1) 10:15 – 10:35 AM Characterization of Chemical Bonding Features and Interfacial Reactions in Ge-MIS Structure with HfO₂/TaGexOy Dielectric Stack A. Ohta (Nagoya University), H. Murakami, K. Hashimoto (Hiroshima University), K. Makihara, and S. Miyazaki (Nagoya University) 1785
- (7.2) 10:35 – 11:05 AM (Invited) Interfacial Layer Engineering Using Thulium Silicate/Germanate for High-k/Metal Gate MOSFETs P. E. Hellström, E. D. Litta, and M. Östling (KTH Royal Institute of Technology) 1786
- (7.3) 11:05 – 11:25 AM Investigation of Al-PMA Effect on Al₂O₃/GeOX/Ge Gate Stack Y. Nagatomi, Y. Nagaoka, K. Yamamoto, D. Wang, and H. Nakashima (Kyushu University) 1787
- (7.4) 11:25 – 11:45 AM Ultra-Thin, High Quality HfO₂ on Strained-Ge MOS Capacitors with Low Leakage Current J. T. Teherani, W. Chern, D. A. Antoniadis, and J. L. Hoyt (Massachusetts Institute of Technology) 1788
- Break 11:45 AM



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8. Joint FET and Strain 1: Germanium FETs



Oct 6-Oct 10, 2014

Tuesday, 7 October 2014: 13:20-15:30

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chairs: Xiao Gong and Ken Uchida

- (8.1) 13:20 – 13:50 PM *(Invited) Gate-All-Around Ge FETs* C. W. Liu (National Taiwan University, National Nano Device Laboratories), Y. T. Chen (National Taiwan University), and S. H. Hsu (National Nano Device Laboratories) 1789
- (8.2) 13:50 – 14:10 PM *Plasma Post-Oxidation for High Mobility Strained-Ge pFETs with Aggressively Scaled High- κ Dielectrics* W. Chern (IBM T.J. Watson Research Center, Massachusetts Institute of Technology), P. Hashemi, M. Kobayashi, D. G. Park (IBM T.J. Watson Research Center), and J. L. Hoyt (Massachusetts Institute of Technology) 1790
- (8.3) 14:10 – 14:40 PM *(Invited) Silicon Germanium FinFET Device Physics, Process Integration and Modeling Considerations* D. Lu (IBM), P. Morin (STMicroelectronics), B. Sahu (GLOBALFOUNDRIES), T. B. Hook, P. Hashemi, A. Scholze (IBM), B. Kim (Samsung Electronics), P. Kerber, A. Khakifirooz, P. Oldiges, K. Rim, and B. Doris (IBM) 1791
- (8.4) 14:40 – 15:10 PM *(Invited) Mobility Enhancement of Uniaxially Strained Germanium Nanowire MOSFETs* K. Ikeda, Y. Kamimuta, Y. Moriyama, M. Ono, K. Usuda, M. Oda, T. Irisawa (National Institute of Advanced Industrial Science and Technology (AIST)), D. Kosemura, A. Ogura (Meiji University), and T. Tezuka (National Institute of Advanced Industrial Science and Technology) 1792
- *Design and Simulation of Ge Based Optically Controlled Field Effect Transistor (Cancelled)* 1793
- Break 15:30 PM



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9. Optoelectronics 1: Emission



Oct 6-Oct 10, 2014

Tuesday, 7 October 2014: 15:45-17:25

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chair: Gianlorenzo Masini

- (9.1) 15:45 – 16:15 PM *(Invited) Highly-Doped, Highly-Strained Germanium and Schottky Electroluminescent Diodes* M. El Kurdi (Université Paris Sud), M. Prost (Université Paris Sud, STMicroelectronics), A. Ghrib, X. Checoury, S. Sauvage, N. Zerounian, F. Aniel (Université Paris Sud), G. Beaudoin, I. Sagnes (CNRS), V. Le Thanh (Université Aix Marseille), T. P. K. Luong (University Hong Duc), M. Chaigneau, R. Ossikovski (CNRS-Ecole polytechnique), C. Baudot, F. Boeuf (STMicroelectronics), and P. Boucaud (Université Paris Sud) 1794
- (9.2) 16:15 – 16:35 PM *Photoluminescence Study of Si Quantum Dots with Ge Core* K. Makihara, K. Kondo (Nagoya University), M. Ikeda (Hiroshima University), A. Ohta, and S. Miyazaki (Nagoya University) 1795
- (9.3) 16:35 – 17:05 PM *(Invited) Light Emission from Highly-Strained Germanium for On-Chip Optical Interconnects* D. Nam, D. S. Sukhdeo (Stanford University), B. R. Dutt (APIC Corporation, PhotonIC Corporation), and K. C. Saraswat (Stanford University) 1796
- (9.4) 17:05 – 17:25 PM *Franz-Keldysh Effect in GeSn Detectors* S. Bechler, M. Oehme, O. Latzel, M. Schmid, K. Kosteki, R. Koerner, M. Gollhofer, E. Kasper, and J. Schulze (University of Stuttgart) 1797
- Break 17:25 PM



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10. Poster Session

Tuesday, 7 October 2014: 18:00-20:00 PM
Expo Center, 1st Floor, Center and Right Foyers
Part of the ECS General Poster session



Oct 6-Oct 10, 2014

- (10.1) *Structural and Optical Properties of Ge₁-XSn_x Alloys Grown on GaAs (001)* by R. F. Magnetron Sputtering H. Pérez Ladrón de Guevara (Universidad de Guadalajara), A. G. Rodríguez, H. Navarro-Contreras, and M. A. Vidal (Coordinación para la Innovación y la Aplicación de la Ciencia y la Tecnología (CIACYT), Universidad Autónoma de San Luis Potosí (UASLP) 1798
- (10.2) *A Study on the Sensitivity between Oxygen Radical and Negative Color PR in Exposure Process of CMOS Image Sensor* H. Sang Duk (Samsung Electronics) 1799
- (10.3) *Low-Temperature Deposition of Thin Si, Ge, and SiGe Films Using Reducing Activity of Ballistic Hot Electrons* N. Koshida (Tokyo Univ. of Agri. & Tech.), R. Suda, M. Yagi, A. Kojima, R. Mentek (Tokyo University of Agriculture and Technology), B. Gelloz (Nagoya University), N. Mori (Osaka University), and J. Shirakashi (Tokyo University of Agriculture and Technology) 1800
- (10.4) *Fermi-Level Depinning of Ge Schottky Junction Using Se Treatment* Y. J. Lee, Y. R. Lim, M. S. Kang, C. H. Leem, K. H. Shim, V. Janardhanam, and C. J. Choi (School of Semiconductor and Chemical Engineering, Chonbuk National University) 1801
- (10.5) *Fast and Accurate in-Line Monitor of Boron Implantation Energy and Dose by Spectroscopic Ellipsometry* C. Wen, T. W. Lu, Y. R. Wang (United Microelectronics Corp. (UMC)), S. J. Chang, S. M. Chiu, C. J. Huang, C. Y. Cheng, J. Cheng, G. Raphael, Z. Jiang, and Z. Tan (KLA-Tencor Corporation) 1802
- (10.6) *Pre-Amorphization and Low-Temperature Implantation for Efficient Activation of Implanted As in Ge(100)* H. Murakami, S. Hamada, T. Ono (Graduate School of Advanced Sciences of Matter, Hiroshima University), K. Hashimoto (Hiroshima University), A. Ohta (Nagoya university), H. Hanafusa, S. Higashi (Graduate School of Advanced Sciences of Matter, Hiroshima University), and S. Miyazaki (Nagoya University) 1803
- (10.7) *Detection of Effect of Strain on the Valence Band Structure of SiGe by HXPES with High Spatial Resolution* S. Yamahori, T. Sasago, K. Sawano (Tokyo City University), E. Ikenaga (Japan Synchrotron Radiation Research Institute), Y. Shiraki, and H. Nohira (Tokyo City University) 1804
- (10.8) *Novel In-Line Process and Defect Monitor for SiGe Ultra High Vacuum Chemical Vapor Deposition* R. Hazbun, J. Hart (University of Delaware), J. Nakos, D. Siegel, C. Funch, D. S. Hazel, M. Lifson (IBM Systems and Technology Group), and J. Kolodzey (University of Delaware) 1805
- (10.9) *Optical Constants Determination of Pseudomorphic Si_{1-x}Gex Layers on Si(001), with 0 < x < 0.54* E. Nolot, J. M. Hartmann (CEA, LETI, Grenoble, France), and J. Hilfiker (J.A. Woollam Co. Inc., USA) 1806



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11. Related Compounds 1



Oct 6-Oct 10, 2014

Wednesday, 8 October 2014: 08:00-09:40
Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)
Chairs: Pouya Hashemi and M Bauer

- (11.1) 08:00 – 08:20 AM Ge Condensation Using Rapid Thermal Oxidation for SGOI Substrate Preparation O. Gourhant, C. Pribat, D. Barge (STMicroelectronics), V. Mazzocchi, F. Andrieu (CEA, LETI), F. Abbate, M. Juhel, C. Gaumer, E. Baylac, A. Pofelski, M. Bidaud, and G. Serventon (STMicroelectronics) 1807
- (11.2) 08:20 – 08:40 AM Effect of Graphene Passivation on Ge Pin Photodiode (Cancelled) 1808
- (11.3) 08:40 – 09:10 AM (Invited) Wrinkling Graphene with Bacteria and Functionalization of MoS₂ for Electronic Applications D. Briggs, S. Deng, and V. Berry (University of Illinois at Chicago) 1809
- (11.4) 09:10 – 09:40 AM (Invited) Thin Epitaxial Film of Ge and III-V Directly Bonded onto Si Substrate T. Maeda (AIST), E. Mieda (National Institute of Advanced Industrial Science and Technology (AIST)), H. Ishii, T. Itatani, H. Hattori, T. Yasuda, A. Maeda (AIST), Y. Kurashima, H. Takagi (National Institute of Advanced Industrial Science and Technology (AIST)), T. Aoki, T. Yamamoto, O. Ichikawa, T. Osada (Sumitomo Chemical), T. Takada, M. Hata (Sumitomo Chemical Co., Ltd.), J. Yugami, A. Ogawa, T. Kikuchi, and Y. Kunii (Hitachi Kokusai Electric Inc.) 1810
- Break 10:10 AM



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12. Joint Epitaxy & Related Compounds 1: III-V Compounds



Oct 6-Oct 10, 2014

Wednesday, 8 October 2014: 10:25-12:05

Expo Center, 1st Floor, Universal 7 (Moon Palace Resort)

Chairs: A. Hikaviv and Masahiko Hata

- (12.1) 10:25 – 10:45 AM Influence of Trench Width on III-V Nucleation during InP Selective Area Growth on Patterned Si(001) Substrate S. Jiang (IMEC, K.U.Leuven), C. Merckling, A. Moussa, W. Guo, N. Waldron, M. Caymax (IMEC), W. Vandervorst (IMEC, KU Leuven), M. Seefeldt (K.U.Leuven), and M. Heyns (IMEC, KU Leuven) 1811
- (12.2) 10:45 – 11:15 AM (Invited) Selective-Area Metal Organic Vapor-Phase Epitaxy of III-V on Si: What About Defect Density? C. Merckling, N. Waldron (IMEC), S. Jiang (KU Leuven, IMEC), W. Guo, K. Barla (IMEC), M. Heyns (IMEC, KU Leuven), N. Collaert, A. Thean (IMEC), and W. Vandervorst (IMEC, KU Leuven) 1812
- (12.3) 11:15 – 11:45 AM (Invited) Monolithic Integration of InP Based Structures on Silicon for Optical Interconnects H. Kataria, W. Metaferia (KTH-Royal Institute of Technology), C. Junesand (Epiclarus AB), Y. T. Sun, and S. Lourdudoss (KTH-Royal Institute of Technology) 1813
- (12.4) 11:45 – 12:05 PM Fabrication of Relaxed Germanium on Insulator via Room Temperature Wafer Bonding A. Asadollahi, T. Zabel, G. Roupillard, H. H. Radamson, P. E. Hellström, and M. Ostling (KTH Royal Institute of Technology) 1814
- Break 12:05 PM



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13. Joint FET and Strain 2: Tunnel FETs and Strained Bulk and SOI "Finned" FETs



Oct 6-Oct 10, 2014

Wednesday, 8 October 2014: 10:25-12:05

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chairs: Atsushi Ogura and X. Gong

- (13.1) 10:25 – 10:55 AM (Invited) Strained SiGe on Insulator FinFETs: a P-FET Candidate for 10nm Node P. Hashemi, K. Balakrishnan, A. Majumdar, S. Engelmann, M. Hopstaken, W. Kim, J. A. Ott, E. Leobandung, and D. G. Park (IBM T.J. Watson Research Center) 1815
- (13.2) 10:55 – 11:15 AM Atomistic Modeling of Strained SiGe Nanofins S. T. Dunham, H. Lai, and R. Chen (University of Washington) 1816
- (13.3) 11:15 – 11:35 AM SOI and Bulk FinFET Alternatives from the Perspective of Strain Engineering I. V. Peidous, C. Lottes, and C. Jost (SunEdison Semiconductor, Ltd.) 1817 CANCELED
- (13.4) 11:35 – 12:05 PM (Invited) Challenges and Opportunities in the Design of Tunnel FETs: Materials, Device Architectures, and Defects D. Esseni (University of Udine), M. G. Pala (IMEP-LAHC, Grenoble-INP), A. Revelant, P. Palestri, L. Selmi (University of Udine), M. Li, G. Snider, D. Jena, and H. G. Xing (University of Notre Dame) 1818
- Break 12:05 PM



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14. Emerging Devices and Applications 1: Quantum Effects/Spintronics



Oct 6-Oct 10, 2014

Wednesday, 8 October 2014: 13:20-14:40

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chairs: Daniel R Ward and Antonio Samarelli

- (14.1) 13:20 – 13:50 PM (Invited) Spin Transport in Germanium *R. K. Kawakami (The Ohio State University, University of California, Riverside) 1819*
- (14.2) 13:50 – 14:10 PM Spin Transport in Ge Nanowires for Diluted Magnetic Semiconductor-Based Nonvolatile Transpinor *J. Tang, T. Nie, and K. L. Wang (University of California, Los Angeles) 1820*
- (14.3) 14:10 – 14:40 PM (Invited) Germanium at the Atomic Scale *J. E. Goldberger (The Ohio State University) 1821*
- Break 14:40 PM





15. Epitaxy 1: Low-dimensional Epitaxial Systems



Oct 6-Oct 10, 2014

Wednesday, 8 October 2014: 14:55-16:45

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chairs: Alois Lugstein and C Merckling

- (15.1) Structural and Electronic Properties of In-Situ Phosphorous-Doped Ge Layers Grown by Reduced Pressure – Chemical Vapour Deposition (Cancelled)
- (15.2) 14:55 – 15:25 PM (Invited) Three-Dimensional Epitaxial Si_{1-x}Ge_x, Ge and SiC Crystals on Deeply Patterned Si Substrates H. von Känel (ETH Zürich), F. Isa (ETH Zürich, Politecnico di Milano), C. V. Falub, E. J. Barthazy, E. Müller Gubler (ETH Zürich), D. Chrastina, G. Isella (Politecnico di Milano), T. Kreiliger, A. G. Taboada (ETH Zürich), M. Meduna (Masaryk University), R. Kaufmann, A. Neels, A. Dommann (EMPA), P. Niedermann (CSEM Neuchâtel), F. Mancarella (CNR-IMM Bologna), M. Mauceri, M. Puglisi (Epitaxial Technology Center Catania), D. Crippa (LPE Milano), F. La Via, R. Anzalone, N. Piluso (IMM-CNR Catania), R. Bergamaschini, A. Marzegalli, and L. Miglio (Università di Milano Bicocca) 1822
- (15.3) 15:25 – 15:45 PM Lateral Germanium Growth for Local GeOI Fabrication Y. Yamamoto, M. A. Schubert, C. Reich (IHP), and B. Tillack (IHP, Technische Universität Berlin) 1823
- (15.4) 15:55 – 16:05 PM Morphological Instability of High Ge Percent SiGe Films Grown by Ultra-High Vacuum Chemical Vapor Deposition J. Hart, R. Hazbun (University of Delaware), J. Nakos, D. Siegel, C. Funch (IBM Microelectronics Division), J. Kolodzey (University of Delaware), and D. L. Harame (IBM Microelectronics Division) 1824
- (15.5) 16:05 – 16:25 PM Use of a Purged FOUP to Improve H-Terminated Silicon Surface Stability Prior to Epitaxial Growth K. Wostyn (IMEC), D. Rondas, K. Kenis, R. Loo (imec vzw), A. Y. Hikavy (IMEC), B. Douhard, P. W. Mertens, F. Holsteyns (imec vzw), S. De Gendt (imec vzw, University of Leuven), L. D'Urzo, and L. Van Auytve (Entegris) 1825
- Dinner 16:25 PM



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16. Workshop on Next Generation Devices



Oct 6-Oct 10, 2014

Wednesday, 8 October 2014: 18:00-20:30
Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)
Chair: Krishna C. Saraswat

- (16.1) 18:00 – 20:30 PM (Invited) How far can we push Si CMOS and what are the alternatives for future ULSI?
 - Krishna Saraswat (Stanford University, USA)
 - Ken Uchida (Keio University, Japan)
 - Mikael Östling (KTH, Royal Institute of Technology)
 - Matty Caymax (IMEC)
 - Darsen Lu (IBM, USA)
- Appetizers 18:00 PM





17. GeSn Session 1: GeSn Epitaxy 1



Oct 6-Oct 10, 2014

Thursday, 9 October 2014: 08:00-09:50

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chair: Jean Michel Hartmann

- (17.1) 08:00 – 08:30 AM (Invited) Ge_{1-x}Sn_x Optical Devices: Growth and Applications Y. Shimura (IMEC, FWO Pegasus Marie Curie Fellow), W. Wang (IMEC), W. Vandervorst (KU Leuven, IMEC), F. Gencarelli (IMEC, KU Leuven), A. Gassenq, G. Roelkens (Ghent University), A. Vantomme (KU Leuven), M. Caymax, and R. Loo (IMEC) 1826
- (17.2) 08:30 – 08:50 AM Growth Studies of Doped SiGeSn/Strained Ge(Sn) Heterostructures S. Wirths (Forschungszentrum Juelich), Z. Ikonic (University of Leeds), N. von den Driesch, G. Mussler (Forschungszentrum Juelich), U. Breuer (Northern Illinois University, Forschungszentrum Juelich), A. Tiedemann, P. Bernardy, B. Holländer, T. Stoica (Forschungszentrum Juelich), J. M. Hartmann (CEA, LETI, MINATEC Campus, University of Grenoble - Alpes), D. Grützmacher, S. Mantl, and D. Buca (Forschungszentrum Juelich) 1827
- (17.3) 08:50 – 09:10 AM Ge_{1-x}Sn_x Epitaxial Growth on Ge Substrate by MOCVD K. Suda, S. Ishihara, N. Sawamoto (Meiji University), H. Machida, M. Ishikawa, H. Sudoh (Gas-phase Growth Ltd.), Y. Ohshita (Toyota Technological Institute), and A. Ogura (Meiji University) 1828
- (17.4) 09:10 – 09:30 AM CVD Growth of GeSnSiC Alloys Using Disilane, Digermane, Tin Tetrachloride and Methylsilane M. Noroozi, A. Abedin, M. Moeen, M. Ostling, and H. H. Radamson (KTH Royal Institute of Technology) 1829
- (17.5) 09:30 – 09:50 AM Growth and Characterization of Epitaxial Ge_{1-x}Sn_x Alloys and Heterostructures Using a Commercial CVD System J. Margetis (ASM America), S. A. Ghetmiri, W. Du, B. R. Conley, A. Mosleh (University of Arkansas), R. Soref, G. Sun (University of Massachusetts Boston), L. Domulevicz (Wilkes University), H. A. Naseem, S. Q. Yu (University of Arkansas), and J. Tolle (ASM America) 1830
- Break 09:50 AM





18. Optoelectronics 2: Photodetection



Oct 6-Oct 10, 2014

Thursday, 9 October 2014: 08:20-09:40

Expo Center, 1st Floor, Universal 11 (Moon Palace Resort)

Chair: Gianlorenzo Masini

- (18.1) 08:10 – 08:40 AM (Invited) Si Waveguide-Integrated High-Speed Ge Photodetector J. Fujikata, M. Miura, M. Noguchi (PECST, PETRA), and Y. Arakawa (PECST, The University of Tokyo) 1831
- (18.2) 08:40 – 09:10 AM (Invited) Waveguide Germanium PIN Photodiodes for Optical Communication Applications L. Vivien (University of Paris-Sud), L. Virost (University of Grenoble - Alpes, University of Paris-Sud), J. M. Hartmann (CEA, LETI, MINATEC Campus, University of Grenoble - Alpes), J. M. Fédéli (CEA, LETI, University of Grenoble - Alpes), D. Marris-Morini, E. Cassan (University of Paris-Sud), C. Baudot, and F. Boeuf (STMicroelectronics) 1832
- (18.3) 09:10 – 09:40 AM (Invited) Fabrication of Pure-GaB Ge-on-Si Photodiodes for Well-Controlled 100-pA-Level Dark Currents A. Sammak (TUDelft), M. Aminian (EPFL), L. Qi, W. B. de Boer (TUDelft), E. Charbon (EPFL, TUDelft), and L. K. Nanver (TUDelft) 1833
- Break 09:40 AM



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19. GeSn Session 2: GeSn Epitaxy 2



Oct 6-Oct 10, 2014

Thursday, 9 October 2014: 10:05-11:35

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chair: Yosuke Shimura

- (19.1) 10:05 – 10:35 AM (Invited) Epitaxial Growth of GeSn Layers on (001), (110), and (111) Si and Ge Substrates O. Nakatsuka, N. Taoka, T. Asano, T. Yamaha, M. Kurosawa, W. Takeuchi, and S. Zaima (Nagoya University) 1834
- (19.2) 10:35 – 10:55 AM Characterization of Ge_{1-x-y}Si_xSn_y Ternary Alloys – Comparison of UHV-CVD and Gas Source MBE Growth B. Claflin, A. Kiefer (Air Force Research Laboratory, Sensors Directorate), R. Beeler (Department of Chemistry and Biochemistry, and Department of Physics, Arizona State University), Z. Q. Fang (Wright State University), and G. Grzybowski (Solid State Scientific Corporation) 1835
- (19.3) 10:55 – 11:15 AM Virtual Substrate Technology for Ge_{1-x}Sn_x Heteroepitaxy on Si Substrates K. Kostecki, M. Oehme, R. Koerner (University of Stuttgart), D. Widmann (Institute for Semiconductor Engineering), M. Gollhofer, S. Bechler (University of Stuttgart), G. Mussler, D. Buca (Forschungszentrum Juelich), E. Kasper, and J. Schulze (University of Stuttgart) 1836
- (19.4) 11:15 – 11:35 AM Low Temperature Geometrically Confined Growth of Pseudo Single Crystalline GeSn on Amorphous Layers for Advanced Optoelectronics H. Li, J. Brouillet, A. Salas, I. Chaffin, X. Wang, and J. Liu (Dartmouth College) 1837
- Lunch 11:35 AM



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20. Optoelectronics 3: Systems



Oct 6-Oct 10, 2014

Thursday, 9 October 2014: 10:05-11:35

Expo Center, 1st Floor, Universal 11 (Moon Palace Resort)

Chair: Gianlorenzo Masini

- (20.1) 9:55 – 10:25 AM *(Invited) Silicon-Germanium-Silica Monolithic Photonic Integration Platform for High-Performance Optical Data Communication Systems* K. Yamada, T. Tsuchizawa, H. Nishi, R. Kou, T. Hiraki, K. Takeda, H. Fukuda, K. Okazaki (NTT Corporation), Y. Ishikawa, K. Wada (The University of Tokyo), and T. Yamamoto (NTT Corporation) 1838
- (20.2) 10:25 – 10:55 AM *(Invited) Photonic Interconnection Made by a Ge/SiGe MQW Modulator Connected to a Ge/SiGe MQW Photodetector through a SiGe Waveguide* J. Frigerio (Politecnico di Milano), P. Chaisakul (Institut d'Electronique Fondamentale), D. Marris-Morini (University of Paris-Sud), M. S. Rouifed (Institut d'Electronique Fondamentale), S. Cecchi, D. Chrastina, G. Isella (Politecnico di Milano), and L. Vivien (University of Paris-Sud) 1839
- (20.3) 10:55 – 11:15 AM *Post-Growth Laser Annealing for High-Performance Ge Photodiodes on Si* Y. Kawamata, S. Nagatomo, K. Fukuda (The University of Tokyo), Y. Izawa (Tokyo Electron Miyagi Limited), S. Hoshino (Tokyo Electron Limited), and Y. Ishikawa (The University of Tokyo) 1840
- (20.4) 11:15 – 11:35 AM *The Dual-Heterojunction Ge on Si Photodetector* S. Sahni, N. K. Hon, and G. Masini (Luxtera) 1841
- Lunch 11:35 AM



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21. Strain 2



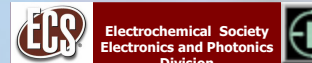
Oct 6-Oct 10, 2014

Thursday, 9 October 2014: 12:50-13:40
Expo Center, 1st Floor, Universal 7 (Moon Palace Resort)
Chairs: Atsushi Ogura and Seiichi Miyazaki

- (21.1) 12:50 – 13:20 PM *(Invited) High Ge Content SiGe Thin Films: Growth, Properties and Integration* A. Y. Hikavy, E. Rosseel, S. K. Dhayalan, L. Witters, H. Mertens, H. Bender, P. Favia, and R. Loo (IMEC) 1847
- (21.2) 13:20 – 13:40 PM *Evaluation of Anisotropic Biaxial Stress in Thin Strained-SiGe Layer Using Surface Enhanced Raman Spectroscopy* S. Yamamoto (School of Science and Technology, Meiji University), D. Kosemura (Meiji University), S. N. C.M. Yusoff, T. Kijima, R. Imai, K. Takeuchi, R. Yokogawa (School of Science and Technology, Meiji University), K. Usuda (National Institute of Advanced Industrial Science and Technology (AIST)), and A. Ogura (Meiji University) 1848
- Break 13:40 PM



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22. GeSn Session 3: GeSn Devices and Characterization



Oct 6-Oct 10, 2014

Thursday, 9 October 2014: 12:50-14:40

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chairs: Benjamin Vincent and Y. C. Yeo

- (22.1) 12:50 – 13:20 PM (Invited) Germanium-Tin P-Channel Field-Effect Transistor with Low-Temperature Si₂H₆ Passivation X. Gong, Y. Yang, P. Guo, W. Wang, R. Cheng, L. Wang, E. S. Tok, and Y. C. Yeo (National University of Singapore) 1842
- (22.2) 13:20 – 13:40 PM Optical and Electronic Properties of GeSn and GeSiSn Heterostructures and Nanowires A. Attiaoui and O. Moutanabbir (Department of Engineering Physics, École Polytechnique de Montréal) 1843
- (22.3) 13:40 – 14:00 PM Stability of Pseudomorphic and Compressively Strained Ge_{1-x}Sn_x Thin Films under Rapid Thermal Annealing B. R. Conley, A. Mosleh, S. A. Ghetmiri, W. Du (University of Arkansas), G. Sun, R. Soref (University of Massachusetts Boston), J. Margetis, J. Tolle (ASM America), H. A. Naseem, and S. Q. Yu (University of Arkansas) 1844
- (22.4) 14:00 – 14:20 PM Investigation on the Formation and Propagation of Defects in GeSn Thin Films A. Mosleh, M. Benamara, S. A. Ghetmiri, B. R. Conley (University of Arkansas), M. A. Alher (University of Karbala, Karbala, Iraq), W. Du (University of Arkansas), G. Sun, R. Soref (University of Massachusetts Boston), J. Margetis, J. Tolle (ASM America), S. Q. Yu, and H. A. Naseem (University of Arkansas) 1845
- (22.5) 14:20 – 14:40 PM In Situ Studies of Germanium-Tin and Silicon-Germanium-Tin Thermal Stability J. H. Fournier-Lupien, D. Chagnon (Department of Engineering Physics, École Polytechnique de Montréal), P. Lévesque (Department of Chemistry, Université de Montréal), A. A. AlMutairi (Department of Engineering Physics, École Polytechnique de Montréal), S. Wirths (Forschungszentrum Juelich), E. Pippel (Max Planck Institute of Microstructure Physics), G. Mussler (Forschungszentrum Juelich), J. M. Hartmann (University of Grenoble - Alpes), S. Mantl, D. Buca (Forschungszentrum Juelich), and O. Moutanabbir (Department of Engineering Physics, École Polytechnique de Montréal) 1846
- Break 14:40 PM



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23. Emerging Devices and Applications 2: Quantum Effects



Oct 6-Oct 10, 2014

Thursday, 9 October 2014: 13:30-14:50

Expo Center, 1st Floor, Universal 11 (Moon Palace Resort)

Chairs: Joshua E. Goldberger and Roland Kenji Kawakami

- (23.1) 13:30 – 14:00 PM (Invited) Integrating Classical Semiconductor Devices with Si/SiGe Quantum Dots D. R. Ward, R. H. Foote (University of Wisconsin-Madison), J. K. Gamble (Sandia National Laboratories), D. E. Savage, M. G. Lagally, S. N. Coppersmith, and M. A. Eriksson (University of Wisconsin-Madison) 1849
- (23.2) 14:00 – 14:20 PM Characterization of Electron Emission from High Density Self-Aligned Si-Based Quantum Dots by Conducting-Probe Atomic Force Microscopy D. Takeuchi, K. Makihara (Graduate School of Engineering, Nagoya University), A. Ohta (Nagoya University), M. Ikeda (Hiroshima University), and S. Miyazaki (Graduate School of Engineering, Nagoya University) 1850
- (23.3) 14:20 – 14:50 PM (Invited) The Thermoelectric Properties of Ge/SiGe Based Superlattices: from Materials to Energy Harvesting Modules A. Samarelli, L. Ferre Llin (University of Glasgow), S. Cecchi, J. Frigerio (Politecnico di Milano), T. Etzelstorfer (Johannes Kepler Universität), E. Müller Gubler (ETH Zürich), J. Stangl (Johannes Kepler Universität), D. Chrastina, G. Isella (Politecnico di Milano), and D. Paul (University of Glasgow) 1851
- Break 14:50 PM



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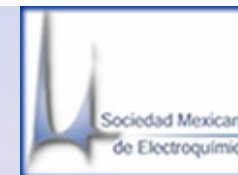


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24. Epitaxy 2: Si/SiGe Epitaxial Growth



Oct 6-Oct 10, 2014

Thursday, 9 October 2014: 14:55-17:25

Expo Center, 1st Floor, Universal 8 (Moon Palace Resort)

Chairs: Yuji Yamamoto and A. Hikaviv

- (24.1) 14:55 – 15:15 PM Very Low Temperature (Cyclic) Deposition / Etch of In-Situ Raised Sources and Drains J. M. Hartmann (CEA, LETI, MINATEC Campus), V. Benevent, A. André, C. Sirisopanaporn, M. Veillerot (CEA, LETI, Grenoble, France), M. P. Samson (STMicroelectronics, Crolles, France), and S. Barraud (CEA, LETI, Grenoble, France) 1852
- (24.2) 15:15 – 15:35 PM Selective Epitaxial Si:P Film for nMOSFET Application: High Phosphorous Concentration and High Tensile Strain X. Li, A. Dube, Z. Ye, S. Sharma, Y. Kim, and S. Chu (Applied Materials) 1853
- (24.3) 15:35 – 15:55 PM Investigation of Growth Mechanism and Role of H₂ in Very Low Temperature Si Epitaxy A. Mosleh, S. A. Ghetmiri, B. R. Conley (University of Arkansas), H. H. Abu-Safe (German-Jordanian University), M. Benamara, Z. Waqar, S. El-Ghazaly, S. Q. Yu, and H. A. Naseem (University of Arkansas) 1854
- (24.4) 15:55 – 16:15 PM Characterization of Epitaxial Si:C:P and Si:P Layers for Source/Drain Formation in Advanced Bulk FinFETs E. Rosseel (IMEC), H. B. Profijt (ASM Belgium), A. Y. Hikavyy (IMEC), J. Tolle (ASM America), S. Kubicek, G. Mannaert (imec), C. L'abbe, K. Wostyn (IMEC), N. Horiguchi, T. Clarysse, B. Parmentier (imec), S. Dhayalan, H. Bender (IMEC), J. W. Maes (ASM Belgium), S. Mehta (ASM America), and R. Loo (IMEC) 1855
- (24.5) 16:15 – 16:35 PM Evaluation of the Si_{0.8}Ge_{0.2}-on-Si Epitaxial Quality by Inline Surface Light Scattering: A Case Study on the Impact of Interfacial Oxygen K. Wostyn (IMEC), K. Kenis, D. Rondas (imec vzw), R. Loo, A. Y. Hikavyy (IMEC), S. Dhayalan (imec), B. Douhard, P. W. Mertens, F. Holsteyns, S. De Gendt (imec vzw), G. Simpson, G. Bast, and K. Swaminathan (KLA-Tencor) 1856
- *Shape and Orientation Controlled Vapor-Liquid-Solid growth of Si and Ge Nanowires for Monolithic Device Integration (Cancelled)* 1857
- (24.6) 17:05 – 17:25 PM Material Studies on Si:C Epitaxial Films Grown by CVD S. Dhayalan (K.U.Leuven, IMEC), R. Loo (imec vzw), E. Rosseel (Imec), A. Y. Hikavyy (IMEC), Y. Shimura (FWO Pegasus Marie Curie Fellow), T. Nuytten, O. Richard (imec), H. Bender (IMEC), B. Douhard (imec vzw), and W. Vandervorst (IMEC) 1858
- END 17:25 PM



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