Su1500 — Registration opens at the Sea Lodge.

Su1630 — Welcome reception/dinner provided by the conference at the Sea Lodge (until 1830).

Su1900 — Session at Scripps: Emerging areas of interface physics. *Chair: L. Brillson.*

Su1900 — Epitaxy of organic semiconductors. S. R. Forrest. *Princeton U. (Invited).*

Su1940 — Epitaxial Metals. G. A. Prinz. *Naval Research Laboratory. (Invited).*

Su2020 — Room-temperature conductance quantization in metallic nanostructures. M. A. Reed. *Yale U. (Invited).*

Mo0700 — Breakfasts are not provided by the conference.

Mo0830 — Session at Scripps: Interfaces and device physics. *Chair: T. McGill.*

Mo0830 — Process and device modeling for 0.35 and 0.25 μm processes. M. Pinto *AT&T Bell Laboratories. (Invited).*

Mo0910 — Interface roughness and polar phonon scattering in RTDs: theory, modeling, and experiment. R. Lake, G. Klimeck, C. Fernando, R. C. Bowen, T. Moise, Y. C. Kao, and D. Francovicchio. *Texas Instruments. (Invited).*

Mo0950 — On the universality of the room-temperature electron mobility in silicon MOSFET's with high substrate dopings. D. Vasileska and D. K. Ferry. *Arizona State U.*

Mo0955 — Si single hole quantum-dot transistor. L. Guo, E. Leobandung, and S. Y. Chou. *U. Minnesota.*

Mo1000 — Coffee break.

Mo1030 — Session at Scripps: Si/SiO$_2$ Interfaces. *Chair: D. Ferry.*

Mo1030 — Progress and issues in the gate dielectric structure of Si-based CMOS. L. C. Feldman. *AT&T Bell Laboratories. (Invited).*

Mo1110 — Defect generation at Si/SiO$_2$ interfaces: the role of nitrogen atoms in improving device reliability. G. Lucovsky, Z. Jing, and D. R. Lee. *North Carolina State U.*

Mo1115 — Kinetics of field induced oxidation of hydrogen terminated Si(111). L. Ley, T. Teuschler, K. Mahr, S. Miyazaki, and M. Hundhausen. *U. Erlangen, Germany.*

Mo1120 — Oxidation of silicon (100): a unified chemical model. P. Thanikasalam, T. K. Whidden, and D. K. Ferry. *Arizona State U.*

Mo1125 — Photochemical modification of Si surfaces with molecular oxides. E. J. Lee, T. W. Bitner, J. S. Ha, and M. J. Sailor. *UC-San Diego.*

Mo1130 — The effect of N on the oxide/Si(100) interface structure. Z. H. Lu, R. J. Hussey, M. J. Graham, S. P. Tay, R. Cao and P. Pianetta. *National Research Council - Ottawa; Northern Telecom; Stanford.*

Mo1135 — High field transport and stressing studies on device-grade SiO$_2$ by ballistic electron emission spectroscopy. R. Ludeke and E. Cartier. *IBM.*

Mo1140 — Ultra-thin gate dielectric films on silicon: Growth mechanism, microstructure and surface roughening. E. P. Gusev, H. C. Lu, E. Garfunkel, and T. Gustafsson. *Rutgers U.*

Mo1145 — Nanometer-scale creation and characterization of trapped charge in SiO_2 films using ballistic electron emission microscopy (BEEM). B. Kaczer and J. P. Pelz. *Ohio State U.*

Mo1150 — A new approach to preparing smooth Si(100) surfaces: characterization by spectro-ellipsometry & validation of Si/SiO_2 interface properties in MOS devices. D. Schmidt, H. Niimi, K. Bell, D. E. Aspnes and G. Lucovsky. *North Carolina State U.*

Mo1155 — Core level shifts of single-domain β-SiC(100) surface reconstructions and direct SiO_2/β-SiC(100) interface formation studied by photoemission spectroscopy using synchrotron radiation. P. Soukiassian, F. Semond, L. Douillard, D. Dunham, F. Amy, and S. Rivillon. *Northern Illinois, Saclay and Orsay.*

Mo1230 — Lunch (provided by conference) at Sea Lodge.

Mo1430 — Session at Scripps: Si surfaces. *Chair: W. Goddard.*

Mo1430 — Thermodynamics and the evolution of nanostructure on silicon surfaces. E. D. Williams, E. Fu, M. D. Johnson, and R. J. Phaneuf. *U. Maryland. (Invited).*

Mo1510 — Diffusion and Schwoebel barriers on Si(111) steps. S. Kodiyalam, K. E. Khor, and S. Das Sarma. *U. Maryland.*

Mo1515 — STM measurements and a model for the Si(110) surface. W. E. Packard and J. D. Dow. *Arizona State U.*

Mo1520 — A. A. Baski, S. C. Erwin, and L. J. Whitman The stability of high-index silicon surfaces. *Naval Research Laboratory.*

Mo1525 — Optical response of clean, hydrogenated and oxidized vicinal Si surfaces investigated by RDS. U. Rossow, L. Mantese, and D. E. Aspnes. *North Carolina State U.*

Mo1530 — Electronic characterization of air exposed and hydrogen terminated

free silicon (111) surfaces by contactless capacitance-voltage technique. H. Hasegawa, S. Koyanagi, and T. Hashizme. *Hokkaido U., Japan.*

Mo1535 — Surface Fermi level position on hydrogen terminated Si(111). L. Ley, J. Ristein, S. Miyazaki, J. Schafer. *U. Erlangen, Germany.*

Mo1540 — Electronic surface structure of the ultrathin Ba/Si(111) 7x7 interface. G. V. Benemanskaya, D. V. Daineka, G. E. Frank-Kamenetskaya. *St. Petersburg, Russia.*

Mo1545 — Session at Scripps: III-V Surfaces. *Chair: C. Tu.*

Mo1545 — Electronic structure of steps on InP(110) surfaces. M. Heinrich, C. Domke, Ph. Ebert, and K. Urban. *Jülich, Germany.*

Mo1550 — Surface structure and ordering in GaInP. G. B. Stringfellow, L. C. Su, and H. Murata. *U. Utah.*

Mo1555 — Structural and electronic properties of Sb islands on GaAs(110). R. Magri, F. Manghi, and C. Calandra. *U. Modena, Italy.*

Mo1600 — Photoemission observation of Cs-induced states in the band gap of GaP(110): alkali metal bonding and Fermi level pinning. G. Neuhold, Th. Chasse, J. J. Paggel, and K. Horn. *Berlin and Leipzig, Germany.*

Mo1605 — Reactions of halogens with III-V semiconductor surfaces. W. C. Simpson and J. A. Yarmoff. *UC-Riverside; UC-Berkeley.*

Mo1610 — Reflectance anisotropy.

Mo1610 — ***Ab initio*** **calculations of the reflection anisotropy spectra of the GaAs(001)-c(4×4) and Si/GaAs surfaces.** J. M. Bass and C. C. Matthai. *Cardiff, Wales.*

Mo1615 — Anisotropic optical reflection by stepped surfaces. C. M. J. Wijers, P. L. de Boeij, and E. Zoethout. *U. Twente, Netherlands.*

Mo1620 — In-situ characterization of ZnSe/GaAs(100) interfaces by reflectance difference spectroscopy. T. Yasuda, K. Kimura, S. Miwa, L. H. Kuo, C. Jin, K. Tanaka, and T. Yao. *Tsukuba, Japan.*

Mo1625 — A reflectance anisotropy spectroscopy study of GaAs overlayer growth on sub-monolayer coverages of Si on the GaAs(001)-c(4x4) surface. Z. Sobiesierski, D. A. Woolf and D. I. Westwood. *Cardiff, Wales.*

Mo1630 — Optical monitoring of the development of InAs quantum dots on GaAs(001) by reflectance anisotropy spectroscopy. E. Steinmetz, T. Zettler, W. Richter, D. I. Westwood, D. A. Woolf, and Z. Sobiesierski. *TU-Berlin and Cardiff, Wales.*

Mo1635 — III-V Passivation.

Mo1635 — Fabrication and photoluminescence characterization of $In_{0.53}$–$Ga_{0.47}As$ ridge quantum wires having a silicon interlayer-based passivation layer. H. Fujikura, S. Kodama, and H. Hasegawa. *Hokkaido, Japan.*

Mo1640 — Interface structure of the SiN_x/GaAs(110) modified with ultrathin Si/Ge and sulphur passivation. L. J. Huang, K. Rajesh, W. M. Lau, X. Z. Wu, D. Landheer, J.-M. Baribeau, and S. Ingrey. *Western Ontario; Argonne; NRC-Ottawa; and Bell Northern.*

Mo1645 — Surface passivation of the As based III-V semiconductors by hydrogen ion irradiation. Y.-L. Chang, R. Cao, W. E. Spicer, P. Pianetta, S. Shi, E. Hu, and J. Merz. *Santa Barbara, Stanford and Notre Dame.*

Mo1700 — Dinner (not provided by conference).

Mo2000 — Poster viewing at the Sea Lodge (until 2300). *Authors whose presentations are scheduled for Monday should stand near their posters.*

Tu0830 — Session at Scripps: Heteroepitaxy. *Chair: L. Cooper.*

Tu0830 — Nonlinear optical spectroscopy of Si-heterostructure interfaces. C. Meyer, G. Lüpke, Z. G. Lü, A. Gölz, H. Kurz, N. Dietz, and G. Lucovsky. *Aachen, Germany; Guangzhou, China; North Carolina State U. (Invited).*

Tu0910 — Optical investigations of surface processes in GaP homoepitaxy and heteroepitaxy on silicon under pulsed chemical beam epitaxy conditions, U. Rossow, N. Dietz, D. E. Aspnes, and K. J. Bachmann. *North Carolina State U.*

Tu0915 — III-V Interfaces.

Tu0915 — A study on interface abruptness on $In_xGa_{1-x}As/In_yGa_{1-y}As_zP_{1-z}$ heterostructures grown by gas-source molecular beam epitaxy. W. G. Bi and C. W. Tu. *UC-San Diego.*

Tu0920 — Effects of strain relaxation and interface defect formation on the thermal quenching of luminescence in $In_xGa_{1-x}As/GaAs$ quantum wells. D. H. Rich, K. Rammohan, H. T. Lin, and A. Larsson. *U. Southern California, Chalmers - Göteborg, Sweden.*

Tu0925 — Implications of excess strain measured in As-compound/P-compound III-V multilayer superlattices grown by MOVPE. A. R. Clawson and C. M. Hanson. *UC-San Diego.*

Tu0930 — Strain dependence of structural and chemical contributions to band offsets at lattice-mismatched junctions: the GaAs/GaP (001) case. M. Di Ventra, M. Peressi, and A. Baldereschi. *Lausanne, Switzerland; Trieste, Italy.*

Tu0935 Quantitative compositional mapping of $In_xGa_{1-x}As/GaAs$ quantum wells by annular dark field imaging STEM. S. Hillyard, Y. P. Chen, W. J. Schaff, L. F. Eastman, and J. Silcox. *Cornell.*

Tu0940 — Atomic-scale structure of $InAs/InAs_xSb_{1-x}$ superlattices grown by modulated molecular beam epitaxy. A. Y. Lew, E. T. Yu, Y. H. Zhang, and R. H.

Miles. *UC-Santa Barbara and Hughes.*

Tu0945 — Evidence for the occupation of DX centers in $In_{0.29}A\ell_{0.71}As$. A. P. Young and H. H. Wieder. *UC-San Diego.*

Tu1000 — Coffee break.

Tu1030 — Session at Scripps: SiGe and transport. *Chair: M. Hybertsen.*

Tu1030 — Scattering mechanisms at Si/SiGe interfaces. K. Ismail *IBM. (Invited).*

Tu1110 — Interface roughness effects on transport in tunnel structures. D. Z.-Y. Ting and T. C. McGill. *Caltech.*

Tu1115 — Novel surface morphology of SiGe(001) layers under tensile strain as observed by ultra high vacuum (UHV) scanning tunneling microscopy (STM) and low energy electron microscopy (LEEM). D. E. Jones, J. P. Pelz, Y. Hong, I. S. T. Tsong, Y. H. Xie, and P. J. Silverman. *Ohio State U.; Arizona State U.; AT&T.*

Tu1120 — Characterization of $Si/Si_{1-y}C_y$ superlattices grown by surfactant assisted molecular beam epitaxy. P. O. Pettersson, C. C. Ahn, T. C. McGill, E. T. Croke, and A. T. Hunter. *Caltech, Hughes.*

Tu1125 — The transport properties at InAs/GaAs interfaces. M-l. Ke, D. I. Westwood, C. C. Matthai, and B. E. Richardson. *Cardiff, Wales.*

Tu1130 — Correlation of buffer strain relaxation modes with transport properties of two-dimensional electron gases. R. S. Goldman, H. H. Wieder, K. L. Kavanagh, V. M. Robbins, S. N. Ehrlich, and R. M. Feenstra. *UC-San Diego; HP; Purdue; and Carnegie-Mellon.*

Tu1135 — Late news: Study of the defect structure of the SiO_2/Si interface using positron annihilation. J. P. Peng, K. G. Lynn, P. Asoka-Kumar, D. P. Becker, D. R. Harshman, and A. T. Fiory. *Brookhaven National Laboratory and AT&T Bell Laboratories.*

Tu1140 — Free until 1900. Neither lunch nor dinner is provided by the conference.

Tu1900 — Rump Session at Scripps until 2100: Atomic Structure at Buried Interfaces. *Moderator: D. Aspnes. Bring one transparency and contribute.*

Tu2100 — Poster Viewing at Sea Lodge (until 2300). *Authors whose presentations are scheduled for Tuesday should stand near their posters.*

We0830 — Session at Scripps: Characterization. *Chair: R. Feenstra.*

We0830 — Electronic characterization of semiconductor surfaces by scanning probe microscopy. C. Williams *U. Utah. (Invited).*

We0910 — Wide-band-gap semiconductors.

We0910 — Evolution of deep levels and internal photoemission with temperature at ZnSe/GaAs interfaces. X. Yang, A. D. Raisanen, L. J. Brillson, A. Franciosi, L. Vanzetti, and L. Sorba. *Xerox, U. Minnesota, TU-Berlin, Germany.*

We0915 — Interfacial chemical bonds, reactions, and band alignment in ZnSe/GaAs(001) heterojunctions. G. Bratina, J. J. Paggel, S. Rubini, T. Ozzello, L. Vanzetti, A. Bonanni, and A. Franciosi. *U. Minnesota; Trieste, Italy.*

We0920 — Interface states of ZnSe/GaAs and related interfaces. Z. Yang, I. K. Sou, Y. H. Yeung, Y. Wang, C.-x. Jin, and X.-y. Hou. *Hong Kong; Fudan, China.*

We0925 — Zn adsorption on GaAs(100)2x4 and its influence on the properties of ZnSe/GaAs heterostructures. J. J. Paggel, S. Rubini, S. Heum, and A. Franciosi. *Trieste, Italy; U. Minnesota.*

We0930 — Study of strain relaxation in GaN_xP_{1-x}(x<8%) on GaP grown by chemical beam epitaxy. N. Y. Li, W. S. Wong, D. H. Tomich, K. L. Kavanagh, and C.

W. Tu. *UC-San Diego.*

We0935 — Microscopic processes during electron cyclotron resonance microwave nitrogen plasma-assisted molecular beam epitaxial growth of GaN/GaAs heterostructures: experiments and kinetic modeling. Z. Z. Bandic, T. C. McGill, R. J. Hauenstein, and M. L. O'Steen. *Caltech; Oklahoma State U.*

We0940 — Role of interface charge in determining substrate quality for GaN. S. Y. Ren and J. D. Dow. *Beijing, China, and Arizona State U.*

We0945 — The properties of Ni doped B_5C thin film fabricated by plasma enhanced chemical vapor deposition (PECVD). S.-D. Hwang, N. B. Remmes, D. N. McIlroy, and P. A. Dowben. *Nebraska.*

We0950 — Orientation of organic molecules on compound semiconductor interfaces: Experimental and theoretical results for oriented alkylhalide/GaAs(001). K. A. Khan, P. J. Lasky, P. H. Lu, D. A. Slater, R. M. Osgood, Jr., S. M. Black, and R. A. Friesner. *Columbia.*

We0955 — Coffee break.

We1030 — Session at Scripps: Metal/semiconductor interfaces. *Chair: C. Palmstrom.*

We1030 — Electronic properties of ideal and interface-modified metal/semiconductor contacts. W. Mönch. *Duisburg (Invited).*

We1110 — Tunable Schottky barriers and the nature of Si interface layers in Aℓ/GaAs(001) diodes. L. Sorba, J. J. Paggel, A. Franciosi, J. E. Angelo, and C. Gerardi. *Trieste, Italy; U. Minnesota; Purdue U.; Brindisi, Italy.*

We1115 — Control of Schottky barrier height by interlayers: the role of screened microscopic interface dipoles. C. Berthod, N. Binggeli, and A. Baldereschi. *Lausanne, Switzerland.*

We1120 — WITHDRAWN

We1125 — Interface formation and epitaxial growth of Fe on the GaAs(001)-(2x4) surface. B. T. Jonker, E. Kneedler, P. M. Thibado, L. J. Whitman, B. R. Bennett, O. J. Glembocki, B. V. Shanabrook, and R. J. Wagner. *Naval Research Laboratory.*

We1130 — Electron transport at Au/InP interface with nanoscopic exclusions. S. Anand, S-B. Carlsson, K. Deppert, L. Montelius, and L. Samuelson. *Lund U., Sweden.*

We1135 — Interface formation at the epitaxial Au/GaAs(100) interface: photoemission, RBS, and STM studies. J. E. Rowe, L. C. Feldman, N. Moriya, G. K. Wertheim, M. Hong, E. E. Chaban, and J. P. Mannaerts. *AT&T.*

We1140 — Local transport properties of thin Bi films on InP(110) surfaces. B. G. Briner, R. M. Feenstra, T. P. Chin, and J. M. Woodall. *IBM and Purdue.*

We1145 — Reflection difference anisotropy, surface photovoltage spectroscopy and contactless electroreflectance investigation of the InP/InGaAs heterojunction system. M. Leibovitch, P. Ram, L. Malikova, F. H. Pollak, L. Kronik, Y. Shapira, A. W. Clawson, and C. M. Hanson. *Brooklyn College; Tel-Aviv U., Israel; UC-San Diego; NCCOCS, San Diego.*

We1230 — Lunch (provided by conference) at Sea Lodge.

We1400 — Poster viewing at Sea Lodge (until 1600). *Authors whose presentations are scheduled for Wednesday or Thursday should stand near their posters.*

We1630 — Session at Scripps: Si/SiO_2 Interfaces. *Chair: G. Lucovsky.*

We1630 — Structural implications of photoemission studies of the Si/SiO_2 interface. F. R. McFeely. *IBM (Invited).*

We1710 — Atomic and electronic structure of the Si(100)/SiO_2 interface. Alfredo Pasquarello. *IRRMA, Lausanne, and AT&T Bell Laboratories. (Invited)*

We1900 — Banquet at Sea Lodge (provided by conference).

Th0900 — Session at Scripps: Heteroepitaxy. *Chair: K. Kavanagh.*

Th0900 — Nearly lattice-matched heteroepitaxy of compounds on Si. K. J. Bachmann, N. Dietz, and U. Rossow. *North Carolina State U. (Invited).*

Th0940 — Late news: Structure and growth of GaN and HgCdTe films. X. J. Chen, B. Tsai, J. Hu, and W. A. Goddard III. *CalTech.*

Th0945 — Late news paper.

Th0950 — Late news paper.

Th1000 — Coffee break.

Th1030 — Session at Scripps: New techniques for interface studies. *Chair: J. Rowe.*

Th1030 — Strain measurement in $In_{0.23}Ga_{0.77}As/GaAs$ quantum wires using convergent beam electron diffraction. S. Hillyard, Y. P. Chen, J. D. Reed, W. J. Schaff, L. F. Eastman, and J. Silcox. *Cornell. (Invited).*

Th1110 — Physics and chemistry of silicon wafer bonding: an infrared absorption study. M. Weldon, Y. J. Chabal, S. B. Christman, E. E. Chaban, L. C. Feldman, D. R. Hamann, C. A. Goodwin, C. -M. Hsieh, R. H. Shanaman and S. W. Wallace. *AT&T Bell Laboratories. (Invited).*

Th1215 — Lunch (provided by conference) at Sea Lodge and departure.
