E-MRS | E-MRS – IUMRS – ICEM 2000

SYMPOSIUM M

Advanced Characterisation of Semiconductor Materials

May 30 – June 2, 2000

Symposium Organizers:

Vito Raineri, CNR – IMETEM, Catania, Italy

Lih J. Chen, National Tsing Hua University, Hsinchu, Taiwan

Peer Zalm, Philips Center, Eindhoven, The Netherlands

Srinivasan Anand, Royal Institute of Technology, Kista, Sweden

Wilfried Vandervorst, IMEC, Belgium

Papers will be published in Materials Sci Semiconductor Proc

E-MRS 2000 SPRING MEETING

SYMPOSIUM M

Tuesday May 30, 2000 — **Morning**
Mardi 30 mai 2000 — Matin

	9:20		**WELCOME**

Session I

M-I.1	9:30	**Invited**	CHARACTERIZATION OF SEMICONDUCTOR MATERIALS AND DEVICES USING SCANNING PROBE MICROSCOPY, **P. De Wolf**, E. Brazel, A. Erickson, Digital Instruments - Veeco Metrology, 112 Robin Hill Road, Santa Barbara CA 93117, USA
M-I.2	10:10		SCANNING PROBE METHODS FOR MEASURING MINORITY CARRIER DIFFUSION LENGTH, Y. Rosenwaks, T. Meoded and R.Shikler, Tel-Aviv University, Israel
M-I.3	10:30		AUTO-CORRELATION FUNCTION ANALYSIS OF AMORPHOUS INTERLAYERS IN Ti/Si SYSTEMS, L.J. Chen, Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan
	10:50		**BREAK**

Session II

M-II.1	11:20	**Invited**	APPLICATION OF SCM FOR ULSI-CONTROL, H. Edwards, D. Woodall, H. Machala and V. Ukraintsev, Silicon Technology Development, Texas Instruments, Inc., Dallas TX 75265, USA
M-II.2	12:00		HIGH RESOLUTION SCANNING CAPACITANCE MICROSCOPY MEASUREMENTS BY ANGLE BEVELLING, F. Giannazzo and F. Priolo, INFM and Dipartimento di Fisica, Corso Italia 57, 95129 Catania, Italy, V. Raineri and V. Privitera, CNR-IMETEM, Stradale Primosole 50, 95121 Catania, Italy
M-II.3	12:20		EVALUATION OF DIFFERENT OXIDATION METHODS FOR SILICON FOR SCANNING CAPACITANCE MICROSCOPY, O. Bowallius and S. Anand, Department of Electronics, Royal Institute of Technology, Electrum 229, 16440 Kista, Sweden
M-II.4	12:40		SIMULATION OF SCANNING CAPACITANCE MICROSCOPY MEASUREMENTS ON BEVELED n^+-p SAMPLES, L. Ciampolini(1), F. Giannozzo(2), M. Ciappa(1), W. Fichtner(1), V. Raineri(2), Swiss Federal Institute of Technology (ETH), Integrated System, Laboratory, Zurich, Switzerland, (2)IMETEM, CNR, Catania, Italy
	13:00		**LUNCH**

Tuesday May 30, 2000 **Afternoon**
Mardi 30 mai 2000 Après-midi

Session III

M-III.1 14:30 **Invited** OPTICAL, NON-DESTRUCTIVE CHARACTERIZATION OF ULTRA-SHALLOW JUNCTIONS, **P. Borden**, G. Lane, R. Nijmeijer and K. Lingel, Boxer Cross Inc, 978 Hamilton Court, Menlo Park CA 94025, USA

M-III.2 15:10 MULTIPLE INTERNAL REFLECTION SPECTROSCOPY: A SENSITIVE NON-DESTRUCTIVE PROBE FOR INTERFACES AND NANOMETRIC LAYERS, M. Olivier, N. Rochat, A. Chabli, G. Lefeuvre, F. Conne, LETI/CEA.G – DMEL, 17 rue des Martyrs, 38054 Grenoble Cedex 9, France

M-III.3 15:30 FEMTOSECOND NONLINEAR-OPTICAL CHARACTERISATION OF SILICON WAFERS: THE ROLE OF SYMMETRY, J. Reif, Th. Schneider, D. Wolfframm, T. Arguirov, S. Kouteva-Arguirova, LS Experimentalphysik 2, Brandenburgische Technische Universitaet Cottbus, Germany, R. Schmid, LS Physikalische Chemie und Analytik, Brandenburgische Technische Universitaet Cottbus, Germany

15:50 **BREAK**

Session IV

M-IV.1 16:30 **Invited** NEAR-FIELD SURFACE PHOTOVOLTAGE, R.Shikler and **Y. Rosenwaks**, Tel-Aviv University, Israel

M-IV.2 17:10 LIFETIME STUDY IN ADVANCED ISOLATION TECHNIQUES, A. Poyai*, E. Simoen, C. Claeys, R. Rooyackers and G. Badenes, IMEC, Kapeldreef 75, 3001 Leuven, Belgium, *also at KU Leuven, ESAT-INSYS, Leuven, Belgium.

M-IV.3 17:30 SURFACE PHOTOVOLTAGE MEASUREMENTS FOR Cu, Ti AND W DETERMINATION IN Si WAFERS, M. Camalleri and D. Cali, STMicroelectronics, Stradale Primosole 50, 95121 Catania, Italy, V. Raineri, CNR - IMETEM, Stradale Primosole 50, 95121 Catania, Italy

M-IV.4 17:50 NON DESTRUCTIVE DIAGNOSTIC TECHNIQUES FOR OXYGEN PRECIPITATES IN CZOCHRALSKI SILICON, A. Bazzali[1], G. Borionetti[1], R. Falster[1], D. Gambaro[1], L. Mule'Stagno[2], M. Olmo[1], R. Orizio[1], M. Porrini[3], [1]MEMC Electronic Materials, viale Gherzi 31, 28100 Novara, Italy, [2]P.O.Box 8, St Peters, MO 63376 USA, [3]via Nazionale 59, 39012 Merano Italy

M-IV.5 18:10 MINORITY CARRIER LIFETIME AND METALLIC IMPURITY MAPPING IN SILICON WAFERS, O. Palais and S. Martinuzzi, TECSEN/LPDSO, University of Marseille, 13397 Marseille Cedex 20, France

Wednesday May 31, 2000 **Afternoon**
Mercredi 31 mai 2000 Après-midi

Session V

M-V.1 14:30 **Invited** TOWARDS SUB-10 NM CARRIER PROFILING WITH SPREADING RESISTANCE TECHNIQUES, **T. Clarysse**, P. Eyben and W. Vandervorst, IMEC, Kapeldreef 75, 3001 Leuven, Belgium

M-V.2 15:10 HIGH TEMPERATURE SPREADING-RESISTANCE PROFILING FOR THE CHARACTERIZATION OF IMPURIT DISTRIBUTIONS IN N-TYPE SILICON, S. Voß, N.A. Stolwijk and H. Bracht, Institute für Metallforschung, Universität Münster, 48149 Münster, Germany

M-V.3 15:30 RAPID DETERMINATION OF "SLOW" STATES AND "FAST" STATES DENSITIES USING THERMALLY STIMULATED CONDUCTANCE SPECTROSCOPY ON METAL-OXIDE-SEMICONDUCTOR CAPACITORS, E. Duval, L. Soliman, E. Lheurette, K. Ketata, M. Benzohra and M. Ketata, LEMI-UPRES.EA2654-IUT, Universite de Rouen, 76131 Mont-Saint-Aignan Cedex, France

15:50 **BREAK**

Session VI

M-VI.1 16:30 **Invited** CHARACTERIZATION AND PRODUCTION METROLOGY OF THIN TRANSISTOR GATE DIELECTRIC FILMS, **A.C. Diebold**, SeMaTech, 2706 Montopolis Drive, Austin TX 78741, USA

M-VI.2 17:10 STRUCTURAL PROPERTIES AND STRESS ANALYSIS OF THE Si/SiO_2 INTERFACE, G. Joyce, C. Moore, T.S. Perova, R.A. Moore, Dept. of Electronic & Electrical Eng., University of Dublin, Trinity College, Dublin 2, Ireland, K. Berwick and H. Byrne, Dublin Institute of Technology, Kevin St., Dublin 8, Ireland

M-VI.3 17:30 GATE OXIDE INTEGRITY DEPENDENCE ON SiO_2 THICKNESS AND SUBSTRATE CHARACTERISTICS, F. Bonoli, P. Godio, G. Borionetti, R. Falster, MEMC Electronic Materials, Viale Gherzi 31, 28100 Novara, Italy

M-VI.4 17:50 HYDROGEN RELEASE RELATED TO HOLE INJECTION INTO SiO_2 LAYERS ON Si, V.V. Afanas'ev and A. Stesmans, Laboratory of Semiconductor Physics, University of Leuven, 3001 Leuven, Belgium

M-VI.5 18:10 INFLUENCE OF THE POLYSILICON DOPING ON THE ELECTRICAL QUALITY OF THIN OXIDES: A COMPARISON BETWEEN VERTICAL AND HORIZONTAL FURNACES, G. Franco, M. Priulla, G. Renna and G. Scerra, STMicroelectronics, Stradale Primosole 50, 95121 Catania, Italy

Thursday June 1, 2000 — Morning

Jeudi 1er juin 2000 — Matin

Session VII

M-VII.1 8:30 COMPETITIVE DELINEATION OF n- AND p-DOPED Si BY SELECTIVE ELECTROCHEMICAL ETCH AND TRANSMISSION ELECTRON MICROSCOPY ANALYSES, C. Spinella and G. D'Arrigo, CNR Istituto Nazionale di Metodologie e Tecnologie per la Microelettronica, Stradale Primosole 50, 95121 Catania, Italy

M-VII.2 8:50 STATISTICAL ANALYSIS OF SHALLOW P-N JUNCTION LEAKAGE INCREASE USING XTEM RESULTS PROBABILITIES, A. Czerwinski[1], J. Katcki[1], A. Poyai[2], E. Simoen[2], C. Claeys[2,3], J. Ratajczak[1], E. Gaubas[4], [1]Institute of Electron Technology, Al. Lotnikow 32/46, 02-668 Warsaw, Poland, [2]IMEC, Kapeldreef 75, 3001 Leuven, Belgium, [3]KU Leuven, Kard. Mercierlaan 94, 3001 Leuven, Belgium, [4]Vilnius University, Inst. of Mat. Research & Appl. Sciences, Sauletekio 10, 2040 Vilnius, Lithuania

M-VII.3 9:10 CHEMICAL AND STRUCTURAL ANALYSIS OF ETCHING RESIDUE LAYERS IN SEMICONDUCTOR DEVICES WITH ENERGY FILTERING TRANSMISSION ELECTRON MICROSCOPY, S. Hens, J. Van Landuyt, EMAT, Groenenborgerlaan 171, 2020 Antwerpen, Belgium and H. Bender, W. Boullaert, S. Vanhaelemeersch, IMEC, Kapeldreef 75, 3001 Leuven, Belgium

M-VII.4 9:30 STRAIN CHARACTERISATION OF SHALLOW TRENCH ISOLATION STRUCTURES ON A NM SCALE BY CONVERGENT BEAM ELECTRON DIFFRACTION, A.Armigliato[1], R. Balboni[1], S. Frabboni[2], A.Benedetti[3], A.G. Cullis[3], G.P.Carnevale[4], P.Colpani[4], G.Pavia[4], [1]CNR-Istituto LAMEL, Via P. Gobetti 101, 40129 Bologna, Italy, [2]Istituto Nazionale Fisica della Materia (INFM) and Dipartimento di Fisica - Universita di Modena e Reggio Emilia, Via G.Campi 213/A 41100 Modena, Italy, [3]Department of Electronic and Electrical Engineering, University of Sheffield, Mappin Street, Sheffield, S1 3JD, UK, [4]ST Microelectronics s.r.l., Via C.Olivetti 2 20041 Agrate Brianza, Italy

9:50 **BREAK**

Session VIII

M-VIII.1 10:20 **Invited** FULL WAFER CHARACTERISATION NEEDS FOR 300 MM: DEFECTS AND METROLOGY, **C. Brundle**

M-VIII.2 11:00 LOCALIZATION OF GOI-DEFECTS IN SILICON MOS STRUCTURES WITH IR LOCK-IN THERMOGRAPHY, S. Huth, O. Breitenstein, Max Planck Institut fuer Mikrostrukturphysik, Weinberg 2, 06120 Halle, Germany, A. Huber, U. Lambert, Wacker Siltronic AG, Postfach 1140, 84479 Burghausen, Germany

M-VIII.3 11:20 DEFECT ANALYSIS OF n-TYPE SILICON STRAINED LAYERS, E. Simoen, R. Loo, P. Roussel, M. Caymax, H. Bender and C. Claeys, IMEC, Kapeldreef 75, 3001 Leuven, Belgium, H.-J. Herzog, DaimlerChrysler AG, Wilhelm-Runge-Str. 11, 89081 Ulm, Germany and A. Blondeel and P. Clauws, Solid State Sciences Dept., University of Ghent, Krijgslaan 281-S1, 9000 Gent, Belgium

M-VIII.4 11:40 MICROROUGHNESS ANALYSIS OF SILICON WAFERS USING ULTRAVIOLET RAMAN MICROSCOPY, Jing Wang, Hailing Tu, Qigang Zhou, Wuxin Zhu, Ansheng Liu, General Research Institute for Nonferrous Metals, Beijing 100088, China, D. Pitt, Renishaw plc, Wotton-under-Edge GL 12 7DW, UK and M. Kuball, H.H. Wills Physics Lab., University of Bristol, UK

M-VIII.5 12:00 Si MELT DENSITY -PROBLEMS OF ARCHIMEDEAN TECHNIQUE, K.Terashima and K.Kanno, Sonan Insitute of Technology, Fujisawa, Kanagawa 251-8511, Japan

12:20 **LUNCH**

Thursday June 1, 2000 — Afternoon

Jeudi 1er juin 2000 — Après-midi

Session IX

M-IX.1 14:00 **Invited** ULTRASHALLOW PROFILING OF SEMICONDUCTOR MATERIALS BY SIMS: METHODS AND APPLICATIONS, **E. Napolitani**[(1)], A. Carnera[(1)], V. Privitera[(2)] and F. Priolo[(3)], [(1)]INFM and Dipartimento di Fisica, Universita di Padova, via Marzolo 8, 35131 Padova, Italy, [(2)]IMETEM (CNR), Stradale Primosole 50, 95121 Catania, Italy, [(3)]INFM and Dipartimento di Fisica, Universita di Catania, Corso Italia 57, 95129 Catania, Italy

M-IX.2 14:40 THE BEHAVIORS OF DOPANT JUNCTION PROFILE AND CU ELECTROMIGRATION IN THE P^+-Si IMPLANTED CHANNEL UNDER HIGH CURRENT DENSITY, H.H. Lin, S.L. Cheng and L.J. Chen, Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan, ROC

15:00 **BREAK**

M-IX.3 15:30 STRUCTURAL CHARACTERIZATION OF ULTRA-THIN (001) SILICON FILMS BONDED ONTO (001) SILICON WAFERS : A TRANSMISSION ELECTRON MICROSCOPY STUDY, K. Rousseau[(1)], J.L. Rouvière[(1)], F. Fournel[(1,2)], H. Moriceau[(2)], CEA Grenoble, [(1)]Département de Recherche Fondamentale sur la Matière Condensée, [(2)]LETI / Département de Microtechnologie, 17 rue des Martyrs, 38054 Grenoble Cedex 09, France

M-IX.4 15:50 X-RAY REFLECTIVITY OF SILICON ON INSULATOR WAFERS: STRUCTURE AND BONDING MECHANISMS, J. Eymery[(1)], F. Rieutord[(1)], F. Fournel[(1,2)], D. Buttard[(1)], H. Moriceau[(2)], CEA Grenoble, [(1)]Département de Recherche Fondamentale sur la Matière Condensée, [(2)]LETI/Département de Microtechnologies, 17 rue des Martyrs, 38054 Grenoble Cedex 9, France

M-IX.5 16:10 DEFECT TRANSFORMATION STUDY IN SILICON-ON-INSULATOR STRUCTURES BY HIGH RESOLUTION X-RAY DIFFRACTION, V.P. Popov, I.V. Antonova, Institute of Semiconductor Physics, Russian Academy of Science, Novosibirsk, Russia, J. Bak-Misiuk, J. Domagala, Institute of Physics, Polish Academy of Sciences, Warsaw, Poland

16:30 - 18:30 **POSTER SESSION**

M/P1 IMPROVEMENT OF OXIDE THICKNESS DETERMINATION ON MOS STRUCTURES USING CAPACITANCE-VOLTAGE MEASUREMENTS AT HIGH FREQUENCIES, L. Soliman, E. Duval, M. Benzohra, E. Lheurette, K. Ketata, M. Ketata, LEMI-UPRES.EA2654-IUT, Université de Rouen, 76131 Mont-Saint-Aignan Cedex, France

M/P2 STRUCTURAL PROPERTIES OF SiO_2 AND SiOF THIN FILMS, F. Iacona, G. Ceriola and F. La Via, CNR-IMETEM, Stradale Primosole 50, 95121 Catania, Italy

M/P3 CARRIER CONCENTRATION PROFILES IN 6H-SIC BY SCANNING CAPACITANCE MICROSCOPY, F. Giannazzo and L. Calcagno, INFM and Dipartimento di Fisica, Corso Italia 57, 95129 Catania, Italy, A. Makhtari and V. Raineri, CNR-IMETEM, Stradale Primosole 50, 95121 Catania, Italy

M/P4 GENERATION OF DISLOCATIONS IN Si BY REPETITIVE STRESS, N. Kato, IBM, Japan, H. Saka, Nagoya University, Japan, A. Nishikawa, IBM, Japan

M/P5 LUMINESCENT STUDIES OF CRYSTAL STRUCTURE DEFECTS OF $Li_2B_4O_7$ AND Al_2O_3 SINGLE CRYSTALS, B.M. Hunda, A.M. Solomon, T.V. Hunda, P.P. Puga, Institute of Electron Physics, Ukrainian National Academy of Sciences, Department of the Quantum Electronics Optical Materials, 21 Universitetska st., Uzhgorod 88016, Ukraine

M/P6 LOCAL CHARACTERISATION OF LARGE AREA MULTICRYSTALLINE SOLAR CELLS BY NON DESTRUCTIVE MAPPING, J.P.Boyeaux, A. Kaminski, A. Fave and A. Laugier, Laboratoire de Physique de la Matière, UMR 5511, INSA de Lyon, 20 Avenue Albert Einstein, 69621 Villeurbanne Cedex, France

M/P7 FORMATION OF Si NANOCRYSTALS IN Si-RICH SiO_2 LAYERS AS CHARACTERIZED BY ELLIPSOMETRY, T. Hasanov, G. Kachurin, A. Mardezhov, S. Yanovskaya. Institute of Semiconductor Physics SO RAN, 630090 Novosibirsk, Russia

M/P8 PIEZOELECTRIC PHOTOACOUSTIC SPECTRA OF Zn-DOPED InGaAlP BASED LIGHT EMITTING DIODES, A. Fukuyama(1), H. Nagatomo(2), K. Yoshino(2) and T. Ikari(2), (1)Department of Applied Physics and (2)Department of Electrical and Electronic Engineering, Miyazaki University, 1-1 Gakuen Kibanadai-nishi, Miyazaki 889-2192, Japan

M/P9 FORMATION OF YTTERBIUM SILICIDE ON SILICON SUBSTRATE BY SOLID STATE REACTION, K.S. Chi and L.J. Chen, Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan, R.O.C.

M/P10 SCTS : SCANNING CAPACITANCE TRANSIENT SPECTROSCOPY - NEW DEEP LEVEL LOCALIZATION TECHNIQUE WITH SCM RESOLUTION, A.L.Toth, L. Dozsa and J. Gyulai, MTA-MFA, Budapest, Hungary, F. Giannazzo and V. Raineri, CNR-IMETEM, Catania, Italy

M/P11 THE USE OF HYDROGEN PASSIVATION TO FABRICATE SCHOTTKY DIODES FOR DLTS MEASUREMENTS OF HEAVILY DOPED P^+ Si, Y. Tokuda(1), T. Namizaki(1), T. Okumura(2), (1)Aichi Institute of Technology, 470-0392 Toyota, Japan, (2)Tokyo Metropolitan University, 192-0397 Hachiohji, Japan

M/P12 SCANNING PROBE MICROSCOPY MEASUREMENTS ON FERROELECTRIC LAYERS, S. Ravesi, STMicroelectronics, Stradale Primosole 50, 95121 Catania, Italy, V. Raineri, CNR-IMETEM, Stradale Primosole 50, 95121 Catania, Italy

M/P13 LOCAL OPTICAL SPECTROSCOPY OF HPHT SYNTHETIC DIAMONDS, AS GROWN AT 1500°C, A. Yelisseyev, Y. Babich, V. Nadolinny, B. Feigelson, Institute of Mineralogy & Petrography SB RAS, 3 Koptyug Avenue, 630090 Novosibirsk, Russia and D. Fisher, S. Lawson, DTC Research Centre, Belmont Road, Maidenhead SL6 6JW, UK

M/P14 Be AND Mg-ION-IMPLANTATION-INDUCED DEFECTS IN InSb, A. Declémy, Laboratoire de Métallurgie Physique - UMR6630-CNRS, Université de Poitiers, UFR Sciences, SP2MI, Téléport 2, Boulevard Pierrre et Marie Curie, BP30179, 86962 Futuroscope Chasseneuil Cedex, France, T. Sauvage, Centre d'Etudes et de Recherches par Irradiation-CNRS, 3A rue de la Férollerie, 45071 Orléans Cédex 2, France, E. Kotai, KFKI Research Institute for Particles and Nuclear Physics, H-1525 Budapest POB 49, Hungary, P. Lévêque, Department of Solid State Electronics, KTH-Royal Institute of Technology, Electrum 229, 164 40 Kista-Stockholm, Sweden, M.I. Abd El-Ati, Physics Department, Faculty of Science, Tanta University, Tanta, Egypt

M/P15 CHARACTERIZATION OF DEEP IMPURITIES IN SEMICONDUCTORS BY TERAHERTZ TUNNELING IONIZATION, S.D. Ganichev[1,2], E. Ziemann[1], I.N. Yassievich[2], V.I. Perel[2] and W. Prettl[1], [1]Institut fuer Experimentelle und Angewandte Physik, Universitaet Regensburg, 93040 Regensburg, Germany, [2]A.F. Ioffe Physicotechnical Institute, Russian Academy of Sciences, 194021 St. Petersburg, Russia

M/P16 THERMO-PHOTO-VOLTAIC PHENOMENA IN AN INHOMOGENEOUS SEMICONDUCTOR, S. Sikorski, T. Piotrowski, W. Jung, Institute of Electron Technology, Al. Lotnikow 32/46, 02-668 Warsaw, Poland

M/P17 NON-IDEAL SCHOTTKY BARRIER MODEL FOR IMPEDANCE MEASUREMENTS OF MATERIAL PROPERTIES, S. Sikorski, W. Jung, Institute of Electron Technology, Al. Lotnikow 32/46, 02-668 Warsaw, Poland

M/P18 STUDY OF Zn-RELATED STRUCTURAL TRANSFORMATIONS AT Zn/Ni/p-GaAs INTERFACES RELATIVE TO THE FORMATION OF AN OHMIC CONTACT, E. Kaminska, A. Piotrowska, A. Barcz, K. Reginski, Institute of Electron Technology, Warsaw, Poland, P. Dluzewski, E. Dynowska, Institute of Physics PAS, Warsaw, Poland

M/P19 ELLIPSOMETRIC INVESTIGATIONS OF (100) GaSb SURFACES UNDER CHEMICAL ETCHING AND SULFIDE TREATMENT, E. Papis, A. Kudla, T.T. Piotrowski, K. Golaszewska, E. Kaminska, A. Piotrowska, Institute of Electron Technology, Warsaw, Poland

M/P20 LOW TEMPERATURE PHOTOLUMINESCENCE CHARACTERIZATION OF HYDROGEN AND HELIUM IMPLANTED CZOCHRALSKI SILICON, A.G. Ulyashin, Belarussian State Polytechnical Academy, 220027 Minsk, Belarus, A.V. Mudryi, A.I. Patuk, I.A. Shakin, Institute of Solid State Physics and Semiconductors, 220027 Minsk, Belarus, R. Job, W.R. Fahrner, University of Hagen, Department of Electrical Engineering, 58084 Hagen, Germany

M/P21 XPS STUDY OF SYNCHROTRON RADIATED As_2S_3, V.Krustev, Institute of General and Inorganic Chemstry-Bulgarian Academy of Sciencess, G.Danev, E.Spassova, Central Lab.of Photoprocesses-Bulgarian Academy of Sciencess, P.Guttmann, FE Roentgenphysik-Uni Goettingen, Germany

M/P22 Si MELT DENSITY -PROBLEMS OF ARCHIMEDEAN TECHNIQUE- K.Terashima and K.Kanno, Shonan Institute of Technology, Fujisawa, Kanagawa 251-8511, Japan

M/P23 CHARACTERIZATION METHODOLOGY FOR PSEUDOMORPHIC HIGH ELECTRON MOBILITY TRANSISTORS USING SURFACE PHOTOVOLTAGE SPECTROSCOPY, M. Leibovitch[1], N. Ashkenasy[2], S. Solodky[1], I. Hallakoun[1], Y. Rosenwaks[1] and Y. Shapira[2], [1]ELTA Electronics Industries Ltd., P.O.B. 330, Ashdod 77102, Israel, [2]Department of Physical Electronics, Faculty of Engineering, Tel-Aviv University, Ramat-Aviv 69978, Israel

M/P24 AN ELECTRONIC HYPOTHESIS OF THE PHOTOSTIMULATED REBUILDING IN AMORPHOUS SEMICONDUCTORS, B.L. Oksengendler, Y.V. Pakharukov, N.N. Turaeva, Institute of Polymer Chemistry and Physics, 700128, Kadiry str.7B, Tashkent, Uzkbekistan

M/P25 CHARACTERISATION OF SCREEN PRINTED SILVER ON TiO_2/SiO_2/mc-Si STRUCTURE BY HRTEM AND EDS MAPPING OF INTERFACES, B. Thuillier, J.P. Boyeaux, A. Laugier, Laboratoire de Physique de la Matière, UMR 5511, INSA de Lyon 20, Avenue A. Einstein, 69621 Villeurbanne Cedex France

M/P26 THE STUDY ON THE RADIAL DISTRIBUTION OF THE DELTA [Oi] IN HEAVILY DOPED SILICON WAFER USING X-RAY DIFFRACTION, Dong-Kun Lee, Don-Ha Hwang, Soon-Hyun Lee, Young-Hee Mun, Bo-Young Lee, Hak-Do Yoo

M/P27 THERMAL STABILITY IMPROVEMENT OF NICKEL SILICIDE THIN FILMS ON (001)Si WITH A THIN INTERPOSING PT LAYER, L.W. Cheng, S.L. Cheng and L.J. Chen, Department of Materials Science and Engineering, National Tsing Hua University, Hsinchu, Taiwan, R.O.C.

M/P28 INFRARED AND TRANSMISSION ELECTRON MICROSCOPY OF POLYCRYSTALLINE SILICON CARBIDE, M. Dkaki(1), L. Calcagno(2), A.M. Makthari(1) and G. Foti(2), (1)Départemente de Physique, Université Moulay Ismail, BP 4010 Beni M'Hamed, Meknes, Morocco , (2)Dipartimento di Fisica and Istituto Nazionele di Fisica per la Materia, Corso Italia 57, Catania, Italy,

M/P29 PROBE OF THE VICINAL SI(111) SURFACE WITH SECOND HARMONIC PHASE SPECTROSCOPY, T.V. Dolgova, A.A. Fedyanin and O.A. Aktsipetrov, Department of Physics, Moscow State University, 119899 Moscow, Russia, D. Schuhmacher and G. Marowsky, Laser-Laboratorium Goettingen, Hans-Adolf-Krebs-Weg 1, 37077 Goettingen, Germany

M/P30 AN INVESTIGATION OF THE EFFECTS OF Ge SEGREGATION AND INCIDENT GERMANE FLUX ON THE Ge PROFILE ACROSS NM-SCALE CVD-GROWN MULTI-QUANTUM WELLS USING ANALYTICAL FEG-TEM, A. Benedetti(1), D.J. Norris(1), A.G. Cullis(1), D.J. Wallis(2) and D.J. Robbins(2), (1)Department of Electronic and Electrical Engineering, University of Sheffield, Mappin Street, Sheffield, S1 3JD, UK. (2)Defence and Evaluation Research Agency, St. Andrews Road, Malvern, Worcs WR14 3PS, UK

M/P31 CHARACTERIZATION OF SINGLE WALLED NANOTUBES AND ROPES WITH SCANNING FORCE MICROSCOPY, P.J. de Pablo, J. Gomez-Herrero, J. Colchero, A.M. Baro, Laboratorio de Nuevas Microscopias, Departimento de Fisica de la Materia Condensada, Universidad Autonoma de Madrid, 28049 Madrid, Spain, M.T. Martinez, W. Maser, A.M. Benito, E. Munoz, Instituto de Carboquimica, CSIC, Maria de Luna 12, 5015 Zaragoza, Spain

M/P32 HOLOGRAPHIC TIME OF FLIGHT INVESTIGATION OF HOLE MOBILITY IN $KNBO_3$, M. Wintermantel, M. Guenther, I. Biaggio, P. Guenter, Nonlinear Optics Laboratory, Institute of Quantum Electronics, ETH Hoenggerberg, 8093 Zuerich, Switzerland

M/P33 LIFETIME MEASUREMENTS ON Ge WAFERS FOR Ge/GaAs SOLAR CELLS – CHEMICAL SURFACE PASSIVATION A. Blondeel and P. Clauws, Department of Solid State Sciences, Ghent University, Krijgslaan 281/S1, 9000 Gent, Belgium and B. Depuydt, Union-Minière, Electro-Optic Materials, Watertorenstraat 33, 2250 Olen, Belgium

M/P34 SECONDARY ELECTRON EMISSION STIMULATED BY POSITRONS IMPINGING ON SiO_2 Si STRUCTURES, M. Dapor, A. Miotello and D. Zari, INFM-Dipartimento di Fisica dell'Universita di Trento and Istituto Trentino di Cultura, 38050 Povo, Trento, Italy

M/P35 THE USE OF CONVERGENT BEAM ELECTRON DIFFRACTION FOR STRESS MEASUREMENTS IN SHALLOW TRENCH ISOLATION STRUCTURES, C. Stuer, J. Van Landuyt, EMAT, University of Antwerp, Groenenborgerlaan 171, 2020 Antwerpen, Belgium, H. Bender, R. Rooyackers, G. Badenes, I. De Wolf, IMEC, Kapeldreef 75, 3001 Leuven, Belgium

M/P36 INFLUENCE OF A THERMAL CONDITION TO CHARACTER OF GROWTH PROCESS OF NON-DOPED GAAS SINGLE CRYSTALS FROM A MELT, A.A. Serov, Zelenograd Scientifical Research Center “Elsov”, korp. 452, kv. 76, 103498 Moscow, Russia and V.M. Maslovsky, Zelenograd State Research Institute of Physical Problems, 103460 Moscow, Russia

M/P37 CHARACTERIZATION OF $BaTiO_3$ THIN FILMS ON p-Si, E.K. Evangelou, E. Konofaos, X. Aslanoglou, Dept. of Physics, University of Ioannina, P.O.Box 1186, 45110 Ioannina, Greece, S. Kennou, Dept. of Chemical Engineering, University of Patras & ICEHT-FORTH, 26500 Patras, Greece and C.B. Thomas, Dept. of Electrical and Electronic Engineering, The Nottingham Trent University, NG1 4BU Nottingham, UK

M/P38 OPTICAL PROPERTIES OF THIN CONDUCTIVE FILMS FOR OPTOELECTRONICS APPLICATIONS, N.L. Dmitruk, O.Yu. Borkovskaya, O.V. Fursenko, I.B. Mamontova, S.V. Mamykin, Institute for Physics of Semiconductors, National Academy of Siences of Ukraine, 45 Prospect Nauki, 03028, Kyiv, Ukraine

M/P39 OXYGEN-RELATED RADIATION DEFECTS IN $Si_{1-x}Ge_x$, L. Khirunenko, Yu. Pomozov, M. Sosnin, Institute of Physics of Ukrainian NAS, Pr.Nauki 46, 03039 Kiev, Ukraine and N.Abrosimov, M.Höhne, W.Shröder, Institute of Crystal Growth, Rudower Chaussee 6, 12489 Berlin, Germany

M/P40 VERSATILE PREPARATION TECHNIQUE FOR TEM SPECIMEN USING MICROMANIPULATION, Katsuhiro Tsujimoto, Hiroshi Takatsuji, Satoshi Tsuji, Display Business Unit, IBM Japan, Ltd., Shimotsuruma, Yamato-shi, Kanagawa 242-8502, Japan

M/P41 ADVANCED TIME-OF-FLIGHT SECONDARY ION MASS SPECTROMETRY ANALYSES OF TFT-LCD MATERIALS, Hiroshi Takatsuji, Katsuhiro Tsujimoto, Satoshi Tsuji, Display Business Unit, IBM Japan, Ltd., Shimotsuruma, Yamato-shi, Kanagawa 242, Japan

M/P42 EFFECTS OF UV ANNEALING ON PROPERTIES OF TANTALUM OXIDE FILMS DEPOSITED BY PHOTO-CVD, Jun-Ying Zhang and Ian W Boyd, Electronic & Electrical Engineering, University College London, Torrington Place, London WC1E 7JE, UK, Vincent Dusastre, Department of Chemistry, University College London, 20 Gordon Street, London WC1H OAJ, UK

M/P43 FAST AND CHEAP METHOD TO QUALITATIVELY MEASURE THE THICKNESS AND UNIFORMITY OF THIN FILMS, H. Aguas, R. Martins, L. Mendes and Elvira Fortunato, Departmento de Ciencias dos Materiais and CEMOP /UNINOVA, Faculdade de Ciencias e Tecnologia, Universidade Nova de Lisboa, Portugal

M/P44 HIGH FREQUENCY METHOD OF SILICON CARBIDE CHARACTERISATION, A.V. Shturbin, I.E. Titkov, V.Yu. Panevin St. Petersburg State Technical University, 195251 St.Petersburg, Russia Department of Semiconductor Physics and Nanoelectronics and R.F. Witman, A.F.Ioffe Physico-Technical Institute RAS, 194021 St. Petersburg, Russia

M/P45 A NEW HIGH SENSITIV METHOD FOR DETERMINING WEAK MICROINHOGENEITIES IN SEMICONDUCTORS, I. Chaikovsky(1), L. Alperovich(2), A. Melnikov(3), Yu. Gurvich(3), S.Birykov(3), (1)Dept. of Mathematics, Ben-Gurion University, Beer-Sheva, 84105, Israel, (2)Dept. of Geophysics and Planetary Sciences, Tel Aviv University, Ramat Aviv, 69978, Israel, (3)Moskow State Pedagogical University, 119882, Moskow, Russia

M/P46 XPS STUDY OF SYNCHROTON RADIATED As_2S_3, V. Krastev(1), G. Danev(2), E.Spassova(1) and P.Guttmann(3), (1)Institute of General and Inorganic Chemistry, Bulgarian Academy of Sciences, acad. G. Bonchev str. Bl. 11, 1113 Sofia, Bulgaria, (2)Central laboratory on photoprocesses, Bulgarian Academy of Sciences, acad. G. Bonchev str. Bl. 109, 1113 Sofia, Bulgaria, (3)Georg August Uni. Goettingen, FE Roentgenphysik, Lentzeallee 100, 14195 Berlin, Germany

M/P47 THE INFLUENCE ANY FACTORS ON THE CORRELATION OF THE CHANGES OF THE DEFECT STRUCTURE AND ACOUSTIC EMISSION OF InP CRYSTALS, R.P. Zhitaru, V. A. Rahvalov, Institute of Applied Physics, Academy of Sciences, Academy str. 5, 2028 Kishinev, Moldova

M/P48 EFFECT OF GRAIN SIZE OF $Pb(La,Ti)O_3$ THIN FILMS GROWN BY PULSED LASER DEPOSITION FOR MEMORY DEVICE APPLICATIONS, Kyung-Suk Shim, Cheol Su Kim, Sang Hyuck Bae and Sang Yeol Lee, Department of Electrical and Computer Engineering, Yonsei University, 134 Shinchondong, Seodaemunku, Seoul 120-749, Republic of Korea

M/P49 APPLICATION OF FOCUSED ION BEAM TO ELECTRON MICROSCOPY ON GaAs BASED HIGH POWER DEVICES. P. Etienne, S. Cassette, S. Delage and P. Galtier, Laboratoire Central de Recherches, Thomson-CSF, Domaine de Corbeville, 91404 Orsay cedex, France

M/P50 CHARACTERISATION OF THICKNESSES AND INTERFACE ROUGHNESSES OF GaAs-BASED AND InAs/AlSb-BASED MULTILAYERS BY X-RAY REFLECTOMETRY, O. Durand, X. Marcadet, I. Prévot, V. Berger, R. Bisaro LCR Thomson-CSF, 91404 Orsay, France

M/P51 THE POLARIZATION PHOTOSENSITIVITY OF p-n-ZnSe STRUCTURES, G.A. Ilchuk, N.A. Ukrainets, State University "Lvivska Politekhnika", 79013 Lviv, Ukraine, Yu. V. Rud', V.I. Ivanov-Omslou, A.F. Ioffe Physics and Technical Institute, Russian Academy of Sciences, 194021 St. Petersburg, Russia, V.Yu. Rud', R.N. Bekimbetov State Technical University, 135251 St. Petersburg, Russia

M/P52 PACKAGING INDUCED STRESS IN HIGH POWER AlGaAs LASER DIODES BY PHOTOLUMINESCENCE MAPPING, P. Martin(1), J.-P. Landesman(1), R. Bisaro(1), E. Martin(1,2), A. Fily(3), J.P. Hirtz(3), (1)Thomson-CSF, Laboratoire Central de Recherches, Domaine de Corbeville, 91404 Orsay Cedex, France, (2)Dpto. Fisica de la Materia Condensada, E.T.S. Ingenieros Industriales, Paseo del Cauce s/n, 47011 Valladolid, Spain, , Thomson-CSF Laser Diodes, Domaine de Corbeville, 91404 Orsay Cedex, France

M/P53 NUMERICAL METHOD AS NONDESTRUCTIVE TECHNIQUE FOR HETEROINTERFACE CARRIER PROFILING, G. Khlyap, State Pedagogical University, 24 Franko str., Drogobych 82100, Ukraine

M/P54 HIGH-SENSITIVE METHOD FOR CHARACTERIZATION OF LOCAL ELECTROPHYSICAL PARAMETERS OF SEMICONDUCTOR SURFACE AND INSULATOR-SEMICONDUCTOR INTERFACE, V.M. Popov, A.S. Klimenko, A.P. Pokanevich, E.I. Bogdanov, Research Inst. for Microdevices, Phys. & Technol. Res. Certif. Center, 3 severo-Syretskaya, 04136 Kiev, Ukraine

M/P55 ROOM TEMPERATURE OXIDATION OF Cu_3Ge AND $Cu_3(Si_{1-x}Ge_x)$ ON $Si_{1-x}Ge_x$, Hsuan-Han Liang, Jian-Shing Luo and Wen-Tai Lin, Department of Materials Science and Engineering, National Cheng Kung University, Tainan, Taiwan 701, ROC

M/P56 ELECTRICAL DEFECT STUDY IN THIN-FILM SiGe/Si SOLAR CELLS, A. Daami, A. Zerrai, J.J. Marchand, G. Bremond, Laboratoire de Physique de la Matière (UMR CNRS 5511), INSA, 20 av. A. Einstein, 69621 Villeurbanne Cedex, France, J. Poortmans, IMEC, Kapeldreef 75, 3001 Leuven, Belgium

M/P57 ELECTRICAL CHARACTERIZATION OF UNIPOLAR DIRECTLY BONDED STRUCTURES: EFFECT OF LATERAL NON-UNIFORMITY OF THE STRUCTURES ON CHARACTERIZATION RESULTS, V.A. Stuchinsky, Institute of Semiconductor Physics, 13 Lavrent'ev Ave, 630090 Novosibirsk, Russia

M/P58 NEW METHODS FOR ELECTRICAL CHARACTERIZATION OF UNIPOLAR DIRECTLY BONDED Si/Si STRUCTURES PERMITTING QUANTITATIVE EVALUATION OF THEIR LATERAL NON-UNIFORMITY, V.A. Stuchinsky and G.N. Kamaev, Institute of Semiconductor Physics, 13 Lavrent'ev Ave, 630090 Novosibirsk, Russia

M/P59 FREQUENCY-DEPENDENT SMALL-SIGNAL COMPLEX CONDUCTIVITY OF THE UNIPOLAR Si/Si JUNCTION AND EVALUATION OF INTERFACE STATES PARAMETERS IN DIRECTLY BONDED Si/Si STRUCTURES, V.A. Stuchinsky, Institute of Semiconductor Physics, 13 Lavrent'ev Ave, 630090 Novosibirsk, Russia

M/P60 MAPPING OF TRANSVERSE CONDUCTIVITY IN UNIPOLAR DIRECTLY BONDED Si/Si STRUCTURES, V.A. Stuchinsky, Institute of Semiconductor Physics, 13 Lavrent'ev Ave, 630090 Novosibirsk, Russia

M/P61 PHONONS ASSISTED PHOTOLUMINESCENCE PROCESS IN POROUS SILION, H. Elhouichet and M. Oueslati, Laboratoire de Spectroscopie Raman, Département de Physique, Faculté des Sciences de Tunis, 1060 Le Belvédère, Tunis, Tunisie

M/P62 THE USE OF ELECTRON BACKSCATTERED DIFFRACTION TO STUDY THE REGROWTH OF AMORPHISED SILICON-BASED HETEROSTRUCTURES, K.D. Vernon-Parry, K. Abd-El-Rahman, J.H. Evans-Freeman and A.R. Peaker, Centre for Electronic Materials and Dept EE&E, UMIST, Manchester, UK, I. Brough, Manchester Materials Science Center, UMIST, Manchester, UK and J. Zhang, Dept of Physics, Imperial College, London, UK

M/P63 OPTICAL INVESTIGATION AND RAMAN SCATTERING CHARACTERISATION OF CARBON BONDING IN BOND -C:H FILMS, M. Lejeune, O. Durand-Drouhin, M. Benlahsen, J. Henocque, A. Zeinert and K. Zellama, Laboratoire de Physique de la Matière Condensée, Faculté des Sciences d'Amiens, 33 rue Saint Leu, 80039 Amiens Cedex 2, France

M/P64 CORRELATION BETWEEN THE MICROSTRUCTURE AND OPTICAL PROPERTIES OF CARBON NITRIDE FILMS DEPOSITED BY RF MAGNETRON SPUTTERING, O. Durand-Drouhin, M. Lejeune, M. Clin and J. Henocque, Laboratoire de Physique de la Matière Condensée, Faculté des Sciences d'Amiens, 33 rue Saint Leu, 80039 Amiens, France

M/P65 THE SUBIMPLANTATION MODEL FOR HYDROGENATED AMORPHOUS CARBON FILMS DEPOSITED IN ELECTRON CYCLOTRON RESONANCE PLASMA, O. Durand-Drouhin, M. Lejeune, R. Bouzerard and M. Benlahsen, Laboratoire de Physique de la Matière Condensée, Faculté des Sciences d'Amiens, 33 rue Saint Leu, 80039 Amiens Cedex 2, France

Friday June 2, 2000 — Morning
Vendredi 2 juin 2000 — Matin

Session X

M-X.1 8:30 **Invited** DOPANT REDISTRIBUTION AND FORMATION OF ELECTRICALLY ACTIVE COMPLEXES IN SiGe, A.Yu. Kuznetsov(1), J.S. Christensen(1), E.V. Monakhov(1), A-C. Lindgren(1), H.H. Radamson(1), M.K. Linnarsson(1), A. Nylansted-Larsen(2) and **B.G. Svensson**(1), (1)Royal Institute of Technology, Department of Electronics, Kista-Stockholm, 164 40, Sweden, (2)Institute of Physics and Astronomy, Aarhus University, 8000 Aarhus, Denmark

M-X.2 9:10 HYDROGEN COMPLEXES IN SILICON AND SILICON-GERMANIUM, L. Rubaldo, CNRS/MPI High Magnetic Field Laboratory, Grenoble, France, J.H. Evans-Freeman, I.D. Hawkins, A.R. Peaker, Centre for Electronic Materials, UMIST, Manchester, UK, L. Dobaczewski Institute of Physics, Warsaw, Poland

M-X.3 9:30 PROCESS CONTROL OF SiGe HBT STRUCTURES BY X-RAY DIFFRACTION, T. Ryan, Philips Analytical, 12 Michigan Drive, Natick MA 01760, USA and C. Moore, Philips Analytical Waterloo, ON, Canada and P. Fewster, Philips Research Laboratories, Redhill, UK

9:50 **BREAK**

Session XI

M-XI.1 10:20 **Invited** EXCESS CARRIER CROSS-SECTIONAL PROFILING TECHNIQUE FOR DETERMINATION OF THE SURFACE RECOMBINATION VELOCITY, E. Gaubas(1), E. Simoen(2), C. Claeys(2) and J. Vanhellemont(3), (1)Vilnius University, Institute of Material Research and Applied Sciences, Sauletekio av. 10, 2040 Vilnius, Lithuania, (2)IMEC, Kapeldreef 75, 3001 Leuven, Belgium, (3)Ministry of the Flemish Community, Science and Innovation Administration, Boudewijnlaan 30, 1000 Brussels, Belgium

M-XI.2 11:00 SILICON p-n JUNCTIONS BIASED ABOVE BREAKDOWN USED AS MONITORS OF CARRIER LIFETIME, E. Sciacca and S. Lombardo, CNR-IMETEM, Catania, Italy, M. Ghioni and F. Zappa, Dipartimento di Elettronica, Politecnico di Milano, Milano, Italy, E. Rimini, Dipartimento di Fisica, Università di Catania, Italy

M-XI.3 11:20 MATERIAL AND DEVICE CHARACTERISATION WITH A CORRELATION SPECTRUM ANALYZER, G. Ferrari and M.Sampietro, Politecnico di Milano, Dipartimento di Elettronica e Informazione, P.za L. da Vinci 32, 20133 Milano, Italy

M-XI.4 11:40 INVESTIGATION OF DEEP LEVELS IN GaAs BY MEANS OF A THERMALLY ACTIVATED PIEZOELECTRIC PHOTOACOUSTIC SIGNALS, T. Ikari(1), M. Iwamoto(1), H. Nagatomo(1), K. Yoshino(1) and A. Fukuyama(2), (1)Department of Electrical and Electronic Engineering and (2)Department of Applied Physics, Miyazaki University, 1-1 Gakuen Kibanadai-nishi, Miyazaki 889-2192, Japan

M-XI.5 12:00 THE EVOLUTION OF HYDROGEN MOLECULE FORMATION IN HYDROGEN PLASMA TREATED CZOCHRALSKI SILICON, R. Job, W.R. Fahrner, University of Hagen, Department of Electrical Engineering, 58084 Hagen, Germany, A.G. Ulyashin, Belarussian State Polytechnical Academy, Minsk, Belarus

M-XI.6 12:20 INVESTIGATION OF CARRIER CONCENTRATION CHANGES CREATED BY PIEZORESISTANCE EFFECT IN CZ-SI WAFERS BY IMPEDANCE METHOD, W. Jung, T. Piotrowski, Institute of Electron Technology, Al. Lotnikow 32/46, 02-668 Warsaw, Poland

12:40 **LUNCH**

Friday June 2, 2000 — Afternoon

Vendredi 2 juin 2000 — Après-midi

Session XII

M-XII.1 14:00 **Invited** MATERIAL CHARACTERISATION NEED FOR SIC BASED DEVICES, **E. Janzen**

M-XII.2 14:40 HETEROEPITAXIAL GROWTH AND CHARACTERIZATION OF SiC ON Si(111), A. Fissel[(1)], U. Kaiser[(1)], B. Schröter[(1)], J. Kräußlich[(1)], H. Hobert[(2)] and W. Richter[(1)], Friedrich-Schiller-Universität Jena, [(1)]Institut für Festkörperphysik, *Institut für Optik und Quantenelektronik, Max-Wien-Platz 1, [(2)]Institut für Physikalische Chemie, Lessigstrasse 10, 07743 Jena, Germany

M-XII.3 15:00 COMPOSITION ANALYSIS OF OXIDIZED BURIED SiC LAYERS IN SILICON FROM EFTEM IMAGES, W. Attenberger, J.K.N. Lindner and B. Stritzker, University of Augsburg, Institute of Physics, 86135 Augsburg, Germany

M-XII.4 15:20 CARRIER LIFETIME INVESTIGATIONS IN 4H-SiC GROWN BY CVD AND SUBLIMATION EPITAXY, P. Grivickas, A. Galeckas and J. Linnros Department of Electronics, Royal Institute of Technology, Electrum 229, 164 40 Kista-Stockholm, Sweden, M. Syvajarvi and R. Yakimova, Department of Physics and Measurement, Linkoping University, 581 83 Linkoping, Sweden, I. Mikulskas and V. Grivickas, Institute of Material Research and Applied Sciences, Vilnius University, Sauletekio 10, 2054 Vilnius, Lithuania

15:40 **BREAK**

Session XIII

M-XIII.1 16:10 SCANNING CAPACITANCE MICROSCOPY INVESTIGATIONS OF SiC STRUCTURES, O. Bowallius, S. Anand, N. Nordell and G. Landgren, Department of Electronics, Royal Institute of Technology, Electrum 229, 16440 Kista, Sweden and S. Karlsson, Acreo, Electrum 236, 16640 Kista, Sweden

M-XIII.2 16:30 CONTACT CLIP MATERIAL AND ANODE CONDITIONS IN COPPER ELECTROPLATING OF WAFERS, Kuen-Chaung Lin, Shih-Chieh Chang, Shao-Yu Chiu, Chia-Fu Chen and Ming-Shiann Feng, Institute of Materials Science and Enginnering, National Chiao Tung University, Hsinchu 30050, Taiwan, ROC, Jia-Min Shieh, Bau-Tong Dai, National Nano Device Laboratories, Hsinchu 30050, Taiwan, ROC

16:50 **CONCLUSION AND REMARKS**

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