E-MRS Spring Meeting 2001

June 5 - 8, 2001

SYMPOSIUM B

Defect Engineering of Advanced Semiconductor Devices

Symposium Organizers:

Vittorio Privitera, CNR – IMETEM, Catania, Italy

Bengt Svensson, KTH Electrum, Kista, Sweden

Stephen Watts, Brunel University, Uxbridge, U.K.

Symposium support :

ABB Corporate Research, Sweden
ST Microelectronics, Italy

Papers will be published in Nuclear Instruments & Methods B

E-MRS 2001 SPRING MEETING

SYMPOSIUM B

Tuesday, June 5, 2001 **Morning**
Mardi 5 juin 2001 Matin

09.00 **Welcome to the attendees**

Session I: Defects in silicon based materials
Session Chair: V. Privitera

B-I.1 09:10 -Invited- OPTICAL STUDIES OF DAMAGE CENTRES IN SILICON, **G. Davies**, King's College, London, UK

B-I.2 09:50 -Invited- FUTURE TECHNOLOGY FOR ADVANCED MOS DEVICES, **C. Wyon**, LETI/Technologies Avancées, CEA Grenoble, 17 rue des Martyrs, 38054 Grenoble Cedex 9, France

10:30 **BREAK**

Session Chair: A. Claverie

B-I.3 11:00 DLTS AND PL STUDIES OF PROTON RADIATION DEFECTS IN TIN-DOPED FZ SILICON, E. Simoen, C. Claeys, IMEC, Kapeldreef 75, 3001 Leuven, Belgium, V. Privitera, S. Coffa, IMETEM - CNR, Catania, Italy, M. Kokkoris, E. Kossionides, G. Fanourakis, NCSR 'Demokritos', Athens, Greece, A. Nylandsted Larsen, University of Aarhus, Aarhus, Denmark and P. Clauws, University of Ghent, Gent, Belgium

B-I.4 11:20 TIN-VACANCY COMPLEXES IN SILICON, M. Kaukonen, R. Jones, School of Physics, The University of Exeter, Exeter EX4 4QL, UK, S. Öberg, Department of Mathematics, Lulea University of Technology, Lulea 97187, Sweden, P.R. Briddon, Department of Physics, The University of Newcastle upon Tyne, Newcastle upon Tyne NE1 7RU, UK

B-I.5 11:40 THE DIVACANCY IN PARTICLE-IRRADIATED, STRAIN-RELAXED EPITAXIAL SiGe, A. Bro Hansen, H. av Skardi, A. Nylandsted Larsen, Institute of Physics and Astronomy, University of Aarhus, 8000 Aarhus C and A. Mesli, Laboratoire LPSE, 4 rue des Frères Lumière, 68093 Mulhouse Cedex, France

B-I.6 12:00 TIME DOMAIN MEASUREMENTS OF SPIN DEPENDENT RECOMBINATION - A NOVEL SPECTROSCOPY FOR ELECTRONICALLY ACTIVE DEFECTS OF SEMICONDUCTORS, C. Boehme, P. Kanschat, K. Lips, Hahn-Meitner-Institut Berlin Abt. SE1, Kekulestr. 5, 12489 Berlin, Germany

12:20 **LUNCH**

Tuesday, June 5, 2001 — Afternoon
Mardi 5 juin 2001 — Après-Midi

Session II: Radiation effects in silicon
Session Chair: G. Tonelli

B-II.1 14:00 -Invited- RADIATION HARDNESS OF SILICON PARTICLE DETECTORS -RADIATION HARDENING BY OXYGEN ENRICHEMENT, **M. Moll**, CERN, 1211 Geneva 23, Switzerland, ROSE (CERN R&D 48) – Collaboration

B-II.2 14:40 NEW RESULTS FOR A NOVEL OXYGENATED SILICON MATERIAL, C. DaVia, S.J. Watts, Brunel University, UK

B-II.3 15:00 THERMAL DONOR FORMATION IN OXYGEN ENRICHED HIGH-RESISTIVE FLOAT-ZONE SILICON RADIATION DETECTOR SUBSTRATES, R. Job, A.G. Ulyashin, W.R. Fahrner, University of Hagen (LGBE), P.O. Box 940, 58084 Hagen, Germany, E. Simoen, C. Claeys, IMEC, Kapeldreef 75, 3001 Leuven, Belgium, G. Tonelli, INFN, Sezione di Pisa, Via Livornese 1291, 56010 Pisa, Italy

B-II.4 15:20 DEFECT ENGINEERING IN CZOCHRALSKI SILICON BY ELECTRON IRRADIATION AT DIFFERENT TEMPERATURES, J.L. Lindstrom, M. Kleverman and J. Hermansson, Solid State Physics, University of Lund, Box 118, 22100 Lund, Sweden, L.I. Murin and V.P. Markevich, Institute of Solid State and Semiconductor Physics, 220072 Minsk, Belarus, T. Hallberg, Defence Research Establishment, P.O. Box 1165, 58111 Linkoping, Sweden and B.G. Svensson, Solid State Electronics, Royal Institute of Technology, 16440 Kista, Sweden

15:40 **BREAK**

Session III: SiC, SiGe
Session Chair: G. Weyer

B-III.1 16:10 -Invited- ION IMPLANTATION OF SILICON CARBIDE, **A. Hallén**[(a)], M.S. Janson[(a)], A.Yu. Kuznetsov[(a)], D. Aberg[(a)], M.K. Linnarsson[(a)], B.G. Svensson[(a,b)], P.O. Persson[(c)], F.H.C. Carlsson[(c)], L. Storasta[(c)], J.P. Bergman[(c)], S.G. Sridhara[(c)] and Y. Zang[(d)], [(a)]Royal Institute of Technoogy, Department of Electronics, PO Box Electrum 229, 164 40 Kista, Sweden; [(b)]Oslo University, Physical Electronics, Department of Physics, PB 1048, Blindern, 0316 Oslo, Norway; [(c)]Linkoping University, Department of Physics and Measurement Technology, 581 83 Linkoping, Sweden; [(d)]Division of Ion Physics, Box 534, Angström Laboratory, 751 21 Uppsala, Sweden

B-III.2 16:50 ELECTRON PARAMAGNETIC RESONANCE STUDY OF PROTON IMPLANTATION INDUCED DEFECTS IN MONOCRYSTALLINE 4H- AND 6H-SiC, H.J. von Bardeleben, J.L.Cantin, GPS, University Paris 6&7, 2 place Jussieu, 75005 Paris, France

B-III.3 17:10 FORMATION AND ANNEA LING OF PERIODICALLY ARRANGED AMORPHOUS SiC_x NANOCLUSTERS IN SILICON, J.K.N. Lindner, M. Häberlen, M. Schmid*, W. Attenberger, and B. Stritzker, Universität Augsburg, Institut für Physik, 86135 Augsburg, Germany, *Forschungszentrum Jülich, ISG-IT, 52425 Jülich, Germany

B-III.4 17:30 DIFFUSION AND CLUSTERING OF SUPERSATURATED C IN SiGeC LAYERS UNDER OXIDATION, E. Napolitani, D. De Salvador, A. Coati, M. Berti, A.V. Drigo, INFM and Dept. of Physics, University of Padova, Padova, Italy; M.S. Carroll, J.C. Sturm, Dept. of Electrical Engineering, Princeton University, Princeton NJ, USA; J. Stangl, G. Bauer, Institute for Semiconductor Physics, Johannes Kepler University Linz, Linz, Austria, C. Spinella, C.N.R.-IMETEM, Catania, Italy.

B-III.5 17:50 CHARATERIZATION OF DEFECTS INDUCED BY HIGH ENERGY HELIUM IMPLANTATION IN 4H-SiC, M.F. Beaufort, E. Oliviero, M.L. David, A. Declémy, L. Pranevicius, C Blanchard, J.F. Barbot, Laboratoire de Métallurgie Physique, UMR 6630, SP2MI, 86960 Futuroscope-Chasseneuil, France

Wednesday, June 6, 2001 — Afternoon
Mercredi 6 juin 2001 — Après-Midi

Session IV: Ion Implantation and diffusion
Session Chair: B. Svensson

B-IV.1 14:00 -Invited- DEFECTS AND DIFFUSION IN SILICON: AN OVERVIEW, **U. Goesele**, N. Engler, P. Laveant, P. Werner Max Planck Institute of Microstructure Physics, Weinberg 2, 06120 Halle, Germany and T. Y. Tan, School of Engineering, Duke University, Durham NC 27704, USA

B-IV.2 14:40 DEFECT CHARACTERISATION OF MeV ION IMPLANTED SILICON IN THE SUB-AMORPHOUS DOSE REGIME, J. Wong-Leung, C. Jagadish and S. Fatima, Dept. of Electronic Materials Engineering, Research School of Physical Sciences and Engineering, Australian National University, Canberra ACT 0200, Australia, J. Fitz Gerald, Petrophysics group, Research School of Earth Sciences, Australian National University, Canberra, ACT 0200, Australia

B-IV.3 15:00 ROOM TEMPERATURE DEFECT DIFFUSION IN ION IMPLANTED c-Si, S. Libertino, S. Coffa and A. La Magna, CNR-IMETEM, Stradale Primosole 50, 95121 Catania, Italy

B-IV.4 15:20 HIGH DEPTH RESOLUTION CHARACTERIZATION OF DAMAGE PROFILES OF ULTRA SHALLOW B IMPLANTS INTO Si BY MEDIUM ENERGY ION SCATTERING (MEIS), S. Zhang, J.A. van den Berg, S. Whelan and D.G. Armour, Joule Physics Laboratory, School of Sciences, University of Salford, Salford M5 4WT, UK, R.D. Goldberg and E.J.H. Collart, Ion Implant Division, Applied Materials, Foundry Lane, Horsham RH13 5PX, UK and P. Bailey and T.C.Q. Noakes, CLRC Daresbury Laboratories, Daresbury, Cheshire WA4 4AD, UK

B-IV.5 15:40 ROLE OF OXYGEN IN THE GETTERING PROCESS OF NICKEL VIA HELIUM IMPLANTATION IN SILICON, R. El Bouayadi, G. Regula, M. Lancin, B. Pichaud, TECSEN, Marseille, France; E. Ntsoenzok, CERI-CNRS, Orléans, France; C. Dubois, LMP, Villeurbanne, France

16:00 **BREAK**

Session Chair: P. Pichler

B-IV.6 16:30 -Invited- ISSUES ON B ELECTRICAL ACTIVATION IN Si: EXPERIMENTS ON B-CLUSTERS AND SHALLOW JUNCTION FORMATION, **G. Mannino**, CNR-IMETEM, Catania, Italy

B-IV.7 17:10 IRRADIATION ENHANCED DIFFUSION OF ANTIMONY IN DELTA-DOPED SILICON, P. Lévêque, A.Yu. Kuznetsov, J.S. Christensen, Royal Institute of Technology, Solid State Electronics, Electrum 229, 16440 Kista-Stockholm, Sweden, B.G. Svensson, Oslo University, Department of Physics, Physical Electronics, P.B. 1048 Blindern, 0316 Oslo, Norway, A. Nylandsted Larsen, Institute of Physics and Astronomy, University of Aarhus, 800 Aarhus, Denmark

B-IV.8 17:30 AN INVESTIGATION ON THE ELECTRICAL ACTIVATION OF ULTRA-LOW ENERGY As IMPLANTS IN Si, S. Whelan, V. Privitera, G. Mannino, M. Italia and C. Bongiorno, CNR-IMETEM, Stradale Primosole 50, 95121 Catania, Italy, E. Napolitani INFM and Dipartimento di Fisica, Universita di Padova, Via Marzolo 8, 35131 Padova, Italy, E.J.H. Collart, Applied Materials, Implant Division, Foundry Lane, Horsham, West Sussex RH13 5PX, UK

B-IV.9 17:50 EFFECT OF THE Ge^+ PREAMORPHISATION DOSE ON THE THERMAL EVOLUTION OF EOR DEFECTS AND TED, B. Colombeau, G. Ben Assayag, A. Claverie, CEMES/CNRS, BP4347, 31055 Toulouse Cedex, France; C. Armand, INSA Complexe scientifique de Rangueil, 31400 Toulouse cedex, France; F. Olivie and F. Cristiano, LAAS/CNRS, 7 Av du Colonel Roche, 31077 Toulouse Cedex, France

18:10–19:30 **Poster Session 1**

Poster Session 1 Damage and defects in semiconductors

B/P1.1 FORMATION OF ELECTRICALLY ACTIVE DEFECTS IN NEUTRON IRRADIATED SILICON, P. Kaminski, R. Kozlowski and E. Nossarzewska-Orlowska, Institute of Electronic Materials Technology, ul. Wolczynska 133, 01-919 Warszawa, Poland

B/P1.2 GENERATION OF DEFECTS INDUCED BY MeV PROTON IMPLANTATION IN SILICON - INFLUENCE OF NUCLEAR LOSSES, M. L. David, E. Oliviero, M. F. Beaufort, C. Blanchard, J. F. Barbot, Laboratoire de Métallurgie Physique, UMR 6630, Bd Marie et Pierre Curie, BP 30179, 86962 Chasseneuil-Futuroscope cedex, France

B/P1.3 CARRIER LIFETIME AND TURN-OFF CURRENT CONTROL BY ELECTRON IRRADIATION OF MCT, V.P. Popov, E.V. Chernyavsky, Yu.I. Krasnikov, Institute of Semiconductor Physycs, Novosibirsk, Russia

B/P1.4 EFFECT OF NITROGEN SEGREGATION ON TED AND LOSS OF PHOSPHORUS IN CZ-Si, N. Fujiwara, K. Saito, Y. Nakabayashi, H.I. Osuman, K. Toyonaga, S. Matsumoto, Y. Sato, Keio University, Yokohama, Japan

B/P1.5 AN X-RAY AND IR-REFLECTIVITY STUDY OF HIGH ENERGY He-ION IMPLANTATION-INDUCED DAMAGE IN 4H-SiC, A. Declémy[(a)], E. Oliviero[(a)], J.F. Barbot[(a)], E. Ntsoenzok[(b)], M.F. Beaufort[(a)], [(a)]Laboratoire de Métallurgie Physique, UMR6630-CNRS, Université de Poitiers, Boulevard Pierre et Marie Curie, BP30179, 86962 Futuroscope Chasseneuil Cedex France, [(b)]CERI-CNRS, 3A rue de la Ferollerie, 45071 Orléans Cedex France

B/P1.6 DEPTH PROFILES OF RECOIL IMPLANTED ALUMINIUM IN SILICON, R. Delamare, E. Ntsoenzok, CNRS/CERI, 3A rue de la Férollerie, 45071 Orléans Cedex 2, France, M.F. Beaufort, J.F. Barbot, LMP UMR6630, Université de Poitiers, SP2MI, Bd M. et P. Curie, BP30179, 86960 Futuroscope-Chasseneuil Cedex, France, A. van Veen, A.V. Fedorov, F. Labohm, Interfaculty Reactor Institute, Delft University of Technology, Mekelweg 15, 2629JB Delft, The Netherlands, C. Dubois, LPM, INSA, 69621 Villeurbanne, France

B/P1.7 ANORMAL GROWTH OF CAVITIES IN MeV He IMPLANTED Si COVERED WITH A THIN Al FOIL, R. Delamare, E. Ntsoenzok, CERI/CNRS, 3A rue de la Férollerie, 45071 Orléans Cedex 2, France, J. Grisolia, A. Claverie, CEMES/CNRS, 29 rue Jeanne Marvig, 31055 Toulouse Cedex 4, France, A. van Veen, F. Labohm, Interfaculty Reactor Institute, Delft University of Technology, Mekelweg 15, 2629JB Delft, The Netherlands, M.F. Beaufort, J.F. Barbot, LMP UMR6630, Université de Poitiers, SP2MI, Bd M. et P. Curie, BP30179, 86960 Futuroscope-Chasseneuil Cedex, France

B/P1.8 RAMAN AND PHOTOLUMINESCENCE STUDY OF THE H^+ ION BOMBARDED SILICON-ON-INSULATOR STRUCTURES FORMED BY HYDROGEN ION CUT, I.E. Tyschenko, A.B. Talochkin, B.A. Kolesov, K.S. Zhuravlev, V.P. Popov, Institute of Semiconductor Physics, Novosibirsk, 630090, Russia, A. Misiuk, Institute of Electron Technology, Al.Lotnikow 46, Warsaw, Poland

B/P1.9 SEPARATION OF VACANCY AND INTERSTITIAL DEPTH PROFILES IN ION-IMPLANTED SILICON: EXPERIMENTAL OBSERVATION, P. Pellegrino, P. Lévêque, Royal Institute of Technology, Solid State Electronics, P.O. Box E229, 164 40 Kista-Stockholm, Sweden, J. Wong-Leung, C. Jagadish, Department of Electronics Materials Engineering, Research School of Physical Sciences and Engineering, Canberra ACT 0200, Australia, B.G. Svensson, University of Oslo, Physics Department/Physical Electronics, P.B. 1048 Blindern, 0316 Oslo, Norway

B/P1.10 COBALT SILICIDE FORMATION INSIDE SURFACE DEFECTS OF A SILICON SUBSTRATE, I. Belousov[(a)], A. Grib[(b)], S. Linzen[(c)] and P. Seidel[(c)], [(a)]Institute of Metal Physics, Ukrainian National Academy of Sciences, Vernadskii Ave. 36, 252180 Kiev, Ukraine, [(b)]Physics Department, Kharkov State University, 61077 Kharkov, Ukraine, [(c)]Institut fur Festkorperphysik, Friedrich-Schiller-Universitat Jena, Helmholtzweg 5, 07743 Jena, Germany

B/P1.11 A KINETIC LATTICE MONTE-CARLO APPROACH TO THE EVOLUTION OF BORON IN SILICON, M. Strobel, CNR-IMETEM, Catania, Italy, and MIRIAM, University of Milan, Milan, Italy, A. La Magna, S. Coffa, CNR-IMETEM, Catania, Italy,

B/P1.12 DEFECT DISTRIBUTIONS IN SILICON IMPLANTED WITH LOW DOSES OF MeV IONS, N. Keskitalo and A. Hallén, Royal Institute of Technology, Department of Electronics Solid State Electronics, P.O. Box E229, 164 40 Kista-Stockholm, Sweden

B/P1.13 CHARACTERIZATION OF HYDROPHOBIC BONDED SILICON WAFERS, N. Keskitalo, Ericsson Radio Access, RF Test Technology, P.O. Box 6206, 800 06 Gävle, Sweden, S. Tiensuu, Omic Production, Dag Hammarskjöldsväg 52 b 2tr, 751 83 Uppsala, Sweden, _____, Royal Institute of Technology, Department of Electronics, P.O. Box E229, 164 40 Kista-Stockholm, Sweden

B/P1.14 SOME ASPECTS OF BLISTERING AND EXFOLIATION OF HELIUM/HYDROGEN COIMPLANTED (100) SILICON, F. Corni and R. Tonini, I.N.F.M. and Dipartimento di Fisica, Univ. Of Modena and Reggio Emilia, Italy

B/P1.15 TIME DOMAIN AND FREQUENCY ANALYSIS OF RTS NOISE IN DEEP SUBMICRON SiGe HBTS, J. Raoult, L. Militaru, J. Verdier and A. Souifi, Laboratoire de Physique de la Matiere, INSA de Lyon, UMR CNRS 5511, 20 Av. A. Einstein, 69621 Villeurbanne cedex, France

B/P1.16 ON-LINE DLTS INVESTIGATIONS OF THE MONO- AND DI-VACANCY IN P-TYPE SILICON AFTER LOW-TEMPERATURE ELECTRON IRRADIATION, J.-J. Goubet, N. Zangenberg and A. Nylandsted Larsen, Institute for Physics and Astronomy, Ny Munkegade, 8000 Aarhus C, Denmark

B/P1.17 REVERSIBLE AND IRREVERSIBLE REACTION FRONTS IN TWO COMPETING REACTIONS SYSTEM, M. Sinder, Department of Materials Engineering, Ben - Gurion University of the Negev, Beer Sheva 84105, Israel, H. Taitelbaum, Department of Physics, Bar - Ilan University, Ramat - Gan 52900, Israel, J. Pelleg, Department of Materials Engineering, Ben - Gurion University of the Negev, Beer Sheva 84105, Israel

B/P1.18 EFFECT OF GAMMA-IRRADIATION ON THE ELECTRICAL PROPERTIES OF UNIPOLAR DIRECTLY BONDED p-SI/p-Si JUNCTIONS, V.A. Stuchinsky, G.N. Kamaev, K.Yu. Khoroshilov, Institute of Semiconductor Physics, 13 Lavrent'ev Ave., 633090 Novosibirsk, Russia and V.V. Bolotov, Yu.A. Sten'kin, Institute of Sensor Microelectronics, 55a Prosp. Mira, 644077 Omsk, Russia

B/P1.19 PROFILING OF ABRUPT SPATIAL DISTRIBUTION OF DEEP TRAPS BY DEEP-LEVEL TRANSIENT SPECTROSCOPY, V.A. Stuchinsky, Institute of Semiconductor Physics, 13 Lavrent'ev Ave., 633090 Novosibirsk, Russia

B/P1.20 INTERACTION BETWEEN POINT DEFECTS IN THE Si-SiO_2 SYSTEM DURING THE PROCESS OF ITS FORMATION, D. Kropman, Estonian Maritime Academy, Mustakivi 25, Tallinn, Estonia, T. Kärner, Institute of Physics, Tartu University, Tartu, Estonia, A. Samoson and I. Heinmaa, Institute of Chemical Physics and Biophysics, Tallinn, Estonia, Ü.Ugaste, Pedagogical University of Tallinn, Estonia, E. Mellikov, Tallinn Technical University, Estonia

B/P1.21 Si^+ ION IMPLANTATION AS A METHOD FOR CONTROLLING A-SI:H PHOTOCONDUCTIVITY, O.A. Golikova, E.V. Bogdanova, A.N. Kuznetsov, AF-Ioffe Institute, Polytechnicheskaya 26, 194021 St-Petersburg, Russia

B/P1.22 DEFECTS IN CARBON AND OXYGEN IMPLANTED p-TYPE SILICON, B. Pivac[(a)], I. Kovacevic[(a)], and V. Borjanovic[(b)], [(a)]Rudjer Boskovic Institute, P.O.B. 1016, 10000 Zagreb, Croatia and [(2)]Faculty for Electrical Engineering and Computing, Unska 3, 10000 Zagreb, Croatia

B/P1.23 INFLUENCE OF FLUORINE ON THE SIMULATION OF THE TRANSIENT ENHANCED DIFFUSION, OF 15 keV BF_2^+ ION IMPLANTATION INTO SILICON, A. Dusch, K. Masmoudi, J. Marcon, K. Ketata, M. Benzohra, M. Ketata, LEMI-IUT-Université de Rouen 76821 Mont Saint Aignan, France, F. Olivié, Laboratoire d'Analyse et d'Architecture des Systèmes LAAS/CNRS 31077 Toulouse, France

B/P1.24 MODEL OF STRUCTURE DISTURBANCE AND DEFECT ACTIVITY IN MULTIINTERFACE SOLAR CELL, Z. Swiatek[(a)], E. Beltowska[(a)], I.M. Fodchuk[(b)], Z.T. Kuznicki[(c)], F. Krok[(d)], [(a)]Institute of Metallurgy and Materials Science of the Polish Academy of Sciences, 30-059 Krakow, 25 Reymonta Str., Poland, [(b)]Chernivtsi State Univeristy, 274012 Chernivtsi, 2 Kotsyubynsky Str., Ukraine, [(c)]CNRS, Laboratoire PHASE (UPR 292), BP 20, 23 rue du Loess, 67037 Strasbourg Cedex 2, France, [(d)]Regional Laboratory for Physicochemical Analyses and Structural Research, Jagiellonian University, 30-060 Krakow, 3 Ingardena Str., Poland

B/P1.25 ACTIVE NANOSTRUCTURE FOR PHOTOVOLTAIC APPLICATION CREATED BY ION IMPLANTATION, Z.T. Kuznicki[(a)], M. Ley[(a)], J. Thibault[(b)], D. Bouchet[(c)], [(a)]Laboratoire PHASE, CNRS UPR 292, 23 rue du Loess, 67037 Strasbourg cedex 2, France, [(b)]CEA/Dép. Recherche Fondamentale sur la Matière Condensée, 17 rue des Martyrs, Grenoble cedex 9, France, [(c)]Laboratoire Physique du Solide, Université Paris-Sud, Bât. 510, 91405 Orsay, France

B/P1.26 NON-EQUILIBRIUM IMPURITY REDISTRIBUTION IN Si, A.N. Buzynin, A.E. Luk'yanov, V.V. Osiko, General Physics Institute, Russian Academy of Sciences, Vavilov Str 38D, 117942 Moscow, Russia and V.V. Voronkov, MEMS Electronics Materials, via Nazionale 59, 39012 Merano, Italy

B/P1.27 NATURE OF POINT DEFECTS INDUCED IN DOPED WITH Ga LEAD TELLURIDE THIN FILMS BY TWO DIFFERENT TECHNIQUES, A.M. Samoylov, S.A. Buchnev, A.M. Khoviv, M.K. Sharov, Voronezh State University, Universitetskaya Sq. 1, 394693 Voronezh, Russian Federation

Thursday, June 7, 2001 — Morning
Jeudi 7 juin 2001 — Matin

Session V: Defects in silicon
Session Chair: S. Watts

B-V.1 09:00 -Invited- SELF-INTERSTITIAL CLUSTERS IN SILICON, **R. Jones,** T. Eberlein, N. Pinho, B.J. Coomer, School of Physics, The University of Exeter, Exeter EX4 4QL, UK, S. Öberg, Department of Mathematics, Lulea University of Technology, Lulea 97187, Sweden, P.R. Briddon, Department of Physics, The University of Newcastle upon Tyne, Newcastle upon Tyne NE1 7RU, UK

B-V.2 09:40 DLTS AND EPR STUDY OF DEFECTS IN H IMPLANTED SILICON, V. Miksic[(a)], B. Pivac[(b)], B. Rakvin[(b)], H. Zorc[(b)], F. Corni[(c)], R. Tonini[(c)], and G. Ottaviani[(c)], [(a)]Faculty for Electrical Engineering and Computing, Unska 3, Zagreb, Croatia, [(b)]R. Boskovic Institute, P.O.Box 1016, 10000 Zagreb, Croatia, [(c)]University of Modena, Physics Department, Via Campi 213a, 41100 Modena, Italy

B-V.3 10:00 HIGH RESOLUTION LAPLACE DLTS STUDIES OF DEFECTS IN ION IMPLANTED SILICON, J.H. Evans-Freeman, P.Y.Y. Kan, N. Abdelgader, A.R. Peaker, Centre for Electronic Materials, Dept. EE&E, UMIST, Manchester M69 1QD, UK

B-V.4 10:20 EFFECT OF RAPID THERMAL ANNEALING ON OXIDE PRECIPITATION BEHAVIOR IN SILICON CRYSTAL, M. Akatsuka, M. Okui and K. Sueoka, Sumitomo Metal Industries Limited, 1-8 Fuso-cho, Amagasaki 660-0891, Japan

B-V.5 10:40 ^{57}Fe MOSSBAUER STUDY OF RADIATION DAMAGE IN ION-IMPLANTED Si, SiGe, and SiSn, H.P. Gunnlaugsson[(a)], M. Fanciulli[(b)], M. Dietrich[(c)], K. Bharuth-Ram[(d)], R. Sielemann[(e)], G. Weyer[(a)] and the ISOLDE Collaboration[(c)], [(a)]Institute of Physics and Astronomy, University of Aarhus, 8000 Aarhus C, Denmark, [(b)]Laboratorio MDM-INFM, Via C. Olivetti 2, 20041 Agrate Brianza (MI), Italy, [(c)]EP Division, CERN, 1211 Geneva 23, Switzerland, [(d)]University of Durban, Westville, South Africa, [(e)]Hahn-Meitner Institute, Glienickerstr. 100, 14109 Berlin, Germany

11:00 **BREAK**

Session VI: Radiation effects and silicon detectors
Session Chair: E. Simoen

B-VI.1 11:30 COMPUTER IMAGE ANALYSIS OF SHRINKAGE OF ISOLATED AMORPHOUS ZONES IN SEMICONDUCTORS INDUCED BY ELECTRON BEAM, I. Jencic, J. Skvarc, Institute "J. Stefan", Jamova 39, 1000 Ljubljana, Slovenia, E.P. Hollar, I.M. Robertson, Department of Materials Science and Engineering, University of Illinois at Urbana-Champaign, 1304 W. Green St., Urbana IL 61801, USA

B-VI.2 11:50 FORMATION OF LUMINESCENT STRUCTURES ON CZ-SILICON BY HYDROGEN PLASMA TRATMENTS AND OXYDATION, R. Job, A.G. Ulyashin and W.R. Fahrner, University of Hagen (LGBE), P.O. Box 940, 58084 Hagen, Germany

B-VI.3 12:10 CRYOGENIC INVESTIGATIONS AND MODELLING OF INTER-DEFECT CHARGE EXCHANGE IN SILICON PARTICLE DETECTORS, B.C. MacEvoy & G.Hall, Blackett Laboratory, Imperial College, Prince Consort Road, London SW7 2BZ and A. Santocchia, INFN Perugia, Via A. Pascoli 1, 06123 Perugia, Italy

B-VI.4 12:30 DEFECT GENERATION IN CRYSTALLINE SILICON IRRADIATED WITH HIGH ENERGY PARTICLES, M. Kuhnke, E. Fretwurst and G. Lindstroem II. Institut fuer Experimentalphysik, University of Hamburg, Germany

12:50 **LUNCH**

Thursday, June 7, 2001 — Afternoon
Jeudi 7 juin 2001 — Après-midi

Session VII: Defects and diffusion modelling
Session Chair: U. Goesele

B-VII.1 14:30 -Invited- CURRENT STATUS OF MODELS FOR TRANSIENT PHENOMENA IN DOPANT DIFFUSION AND ACTIVATION, **P. Pichler**, Fraunhofer Institute of Integrated Circuits, Device Technology Department, Schottkystrasse 10, 91058 Erlangen, Germany

B-VII.2 15:10 TCAD CALIBRATION OF USJ PROFILES FOR ADVANCED DEEP SUB-µm CMOS PROCESSES, C. Zechner, D. Matveev, A. Erlebach, ISE AG, Balgriststr. 102, 8008 Zurich, Switzerland, S. Simeonov, V. Menialenko, R. Mickevicius, ISE AG, San Jose, USA, M. Foad, A. Al-Bayati, Applied Materials USA, A. Lebedev, M. Posselt, FZ Rossendorf, Germany

B-VII.3 15:30 - Cancelled -

B-VII.4 15:50 TAILORING OF DOPANT PROFILES IN ADVANCED nMOS TRANSISTORS, A. Lebedev, M. Posselt, Forschungszentrum Rossendorf, Institute of Ion Beam Physics and Materials Research, P.O.Box 510119, 01314 Dresden, Germany, T. Feudel, AMD Saxony Manufacturing GmbH, Wilschdorfer Landstrasse 101, M/S E22-TY, 01109 Dresden, Germany, and N. Variam, Varian Semiconductor Equipment Associates, 35 Dory Road, Gloucester, MA 01930, USA

16:10 **BREAK**

Session VIII: III-V Materials
Session Chair: R. Jones

B-VIII.1 16:40 OBSERVATION OF MISFIT DISLOCATION GENERATION IN HIGHLY STRAINED QUANTUM WELL LASERS DURING DEVICE OPERATION: FIRST REAL TIME STUDY, A. Mazuelas[(a)], M.L. Dotor[(b)], D. Golmayo[(b)], [(a)]European Synchrotron Radiation Facility, BP220, 38043 Grenoble, France, [(b)]Inst. Nacional de Microelectronica, Isaac Newton 8, 28760 Tres Cantos, Spain

B-VIII.2 17:00 DEFECT ENGINEERING IN III-V TERNARY ALLOYS: EFFECTS OF STRAIN AND LOCAL CHARGE ON THE FORMATION OF SUBSTITUTIONAL AND INTERSTITIAL DEEP DEFECTS, A. Amore Bonapasta, Istituto di Chimica dei Materiali (ICMAT) del Consiglio Nazionale delle Ricerche, CP 10, 00016 Monterotondo Stazione, Italy, and P. Giannozzi, INFM - Scuola Normale Superiore, Piazza dei Cavalieri 7, 56126 Pisa, Italy

B-VIII.3 17:20 PHOTODISSOCIATION OF HYDROGEN PASSIVATED DOPANTS IN GALLIUM-ARSENIDE, L. Tong, J.A. Larsson, M. Nolan, M. Murtagh, J.C. Greer, NMRC, University College Cork, Ireland, M. Barbe, J. Chevallier, Laboratoire de Physique des Solides et de Cristallogenese, CNRS, Meudon, France, E. Constant, IEMN, Villeneueve d'Ascq M. Constant LASIR, Villeneueve d'Ascq, France

17:40 – 19:00 **Poster Session 2**

Poster Session 2 Defect engineering

B/P2.1 CO-IMPLANTATION OF HYDROGEN AND HELIUM FOR THERMAL STABILISATION OF LIFETIME IN POWER DEVICES, E. Ntsoenzok, CNRS-CERI, 3A rue de la Férollerie, 45071 Orléans, France, G. Blondiaux, CNRS-CERI, 3A rue de la Férollerie, 45071 Orléans, France

B/P2.2 INTERACTIONS OF PRIMARY DEFECTS WITH IMPURITIES IN SILICON, B.N. Mukashev, Kh.A. Abdullin, Yu.V. Gorelkinskii, Institute of Physics and Technology, 480082 Almaty, Kazakstan

B/P2.3 HYDROGEN-INDUCED TRAPPING OF SELF-INTERSTITIAL ATOMS IN CRYSTALLINE SILICON, B.N. Mukashev, Kh.A. Abdullin, M.F. Tamendarov, Institute of Physics and Technology, 480082 Almaty, Kazakstan

B/P2.4 IMPACT OF FAST-NEUTRON IRRADIATION ON THE SILICON P-N JUNCTION LEAKAGE AND ROLE OF THE DIFFUSION REVERSE CURRENT, A. Czerwinski, J. Katcki, J. Ratajczak, Institute of Electron Technology, Al. Lotnikow 32/46, 02-668 Warsaw, Poland, E. Simoen, IMEC, Kapeldreef 75, 3001 Leuven, Belgium and A. Poyai, C. Claeys, IMEC, Kapeldreef 75, 3001 Leuven, Belgium and also the E.E. Dept, KU Leuven, 3001 Leuven, Belgium, H. Ohyama, Kumamoto National College of Technology, 2659-2 Nishigoshi Kumamoto, 861-1102 Japan

B/P2.5 DISTRIBUTION OF DEFECTS AND IMPURITIES IN GALLIUM ARSENIDE WAFERS AFTER SURFACE GETTERING, A.T. Gorelenok, A.V. Kamanin, N.M. Shmidt, B.Ya. Ber, S.I. Kohanovskii, Ioffe Physico-Technical Institute, St.Petersburg 194021, Russia, V.F. Andrievskii, Institute for Electronics, Minsk 220090, Belarus

B/P2.6 DOSE-RATE INFLUENCE ON THE DEFECT PRODUCTION IN MeV PROTON-IMPLANTED FLOAT-ZONE AND EPITAXIAL N-TYPE SILICON, P. Lévêque, A. Hallén, P. Pellegrino, Royal Institute of Technology, Solid State Electronics Electrum 229, 16440 Kista-Stockholm, Sweden, B.G. Svensson, Oslo University, Department of Physics Physical Electronics, P.B. 1048 Blindern, 0316 Oslo, Norway, V. Privitera, CNR-IMETEM, Stradale Primosole 50, 95121 Catania, Italy

B/P2.7 MULTI-CONFIGURATE DX CENTER STATISTICS : APPLICATION TO HALL DATA ANALYSIS IN $Al_xGa_{1-x}As$:Si, A. Triki[(a)], F. Rziga Ouaja[(a)], H. Mejri[(b)] and A. Selmi[(a)], [(a)]Laboratoire de Physique des Semiconducteurs, Faculté des Sciences, Avenue de l'environnement, 5000 Monastir, Tunisie, [(b)]Unité de Physique des Solides, Faculté des Sciences, Avenue de l'environnement 5000 Monastir, Tunisie

B/P2.8 AN ENHANCED APPROACH TO NUMERICAL MODELING OF HEAVILY IRRADIATED SILICON DEVICES, F. Moscatelli, D. Passeri, P. Placidi, DIEI e INFN di Perugia, Universita di Perugia, Via Duranti 93, 06131 Perugia, Italy, G.M. Bilei, INFN Perugia, Via A.Pascoli 1, 06123 Perugia, Italy, A. Santocchia, B.C. MacEvoy, G. Hall, Imperial College of Science Technology and Medicine, London SW7 2BW, UK

B/P2.9 HELIUM IMPLANTATION DEFECTS IN SiC STUDIED BY THERMAL HELIUM DESORPTION SPECTROMETRY, E. Oliviero[(a)], A. Van Veen[(b)], A.V. Federov[(b)], J.F. Barbot[(a)], M.F. Beaufort[(a)], F. Labohm[(b)], R. Delamare[(c)], E. Ntsoenzok[(c)], [(a)]Laboratoire de Métallurgie Physique UMR6630, Université de Poitiers, SP2MI, Bd M. et P. Curie, BP30179, 86960 Futuroscope-Chasseneuil Cedex, France, [(b)]Interfaculty Reactor Institute, Delft University of Technology, Mekelweg 15, 2629 JB Delft, The Netherlands, [(c)]CNRS/CERI, 4A rue de la Férollerie, 45071 Orléans Cedex 2, France

B/P2.10 PASSIVATION - BASED POROUS SILICON AND THERMAL TREATEMENT OF POLYCRYSTALLINE SILICON SOLAR CELLS, W. Dimassi, M. Bouaï cha, M. Saedoun, B. Bessaïs, H. Ezzaouia and R. Bennaceur, Laboratoire des Applications Solaires, Institut National de Recherche Scientifique et Technique, B.P. 95, 2050 Hammam-Lif, Tunisia.

B/P2.11 STUDY OF ELECTRON AND HOLES EFFECTIVE MASSES IN AS GROWN AND ALPHA PARTICLE IRRADIATED GaAs QUANTUM WELLS, H.W. Kunert, Department of Physics, University of Pretoria, 0002 Pretoria,South Africa and E.Lavitska, Polytechnic University.Kotlarewski, Street 1, 79013 Ukraine

B/P2.12 METASTABLE IRRADIATION INDUCED DEFECTS IN Be DOPED $Al_{0.5}Ga_{0.5}$ As MBE LAYERS, J. Szatkowski, E. Placzek-Popko, A. Johansen, C. Soerensen, Institute of Physics, Wroclaw University of Technology, Wybrzeze Wyspianskiego 27, 50-370 Wroclaw, Poland. A. Johansen, C. Soerensen, Oersted Laboratory, University of Copenhagen, Universitetparken 5, 2100 Copenhagen, Denmark

B/P2.13 RADIATION EFFECTS ON n-MOSFETs FABRICATED IN A BiCMOS PROCESS, H. Ohyama, K. Hayama, A. Ueda, Kumamoto National College of Technology, 2659-2 Nishigoshi Kumamoto, 861-1102 Japan, E. Simoen, C. Claeys, IMEC, Leuven, Belgium, M. Nakabayashi, Mitsubishi Electric Co., Nishigoshi Kumamoto, Japan and K. Kobayashi, NEC IC Microcomputer Systems Ltd., Mashiki Kumamoto, Japan

B/P2.14 DEFECT ASSESSMENT OF IRRADIATED STI DIODES, H. Ohyama, K. Hayama, T. Miura, Kumamoto National College of Technology, 2659-2 Nishigoshi Kumamoto, 861-1102 Japan, E. Simoen, C. Claeys, A. Poyai, IMEC, Leuven, Belgium, M. Nakabayashi, Mitsubishi Electric Co., Nishigoshi Kumamoto, Japan, and K. Kobayashi, NEC IC Microcomputer Systems Ltd., Mashiki Kumamoto, Japan

B/P2.15 RADIATION DAMAGE OF POLYCRYSTALLINE SILICON FILMS, H. Ohyama, K. Tanaka, Kumamoto National College of Technology, 2659-2 Nishigoshi Kumamoto, 861-1102 Japan, E. Simoen, C. Claeys, IMEC, Leuven, Belgium, M. Nakabayashi, Mitsubishi Electric Co., Nishigoshi Kumamoto, Japan, and K. Kobayashi, NEC IC Microcomputer Systems Ltd., Mashiki Kumamoto, Japan

B/P2.16 EFFECT OF UV IRRADIATION ON CURRENT TRANSPORT IN MIS-STRUCTURES BASED ON CdTe SINGLE CRYSTALS, G. Khlyap, State Pedagogical university, 24 Franko str., Drogobych, 82100, Ukraine

B/P2.17 UNDER–THRESHOLD MECHANISM OF CREATION OF DEFECTS IN SEMICONDUCTORS BY THERMOGRADIENT EFFECT, A. Medvid', Riga Technical University, 14 Azenes St., 1048, Latvia

B/P2.18 BULK GENERATION LIFE-TIME STUDIES IN SEMICONDUCTOR STRUCTURES WITH NONUNIFORM DISTRIBUTION OF ELECTRICALLY ACTIVE DEFECTS IN SILICON, V.M Popov, A.P. Pokanevich, A.I. Panin, Research Institute for Microdevices, Physical & Technol. Res. Certif. Center, 3 Severo-Syretskaya, 04136, Kiev, Ukraine

B/P2.19 μ-IRRADIATION HARDNESS OF SHORT CHANNEL NMOSFETs FABRICATED IN A 0.5 μm SOI TECHNOLOGY, C. Claeys[(a,b)], E. Simoen[(a)], A. Efremov[(c)], V.G. Litovchenko[(c)], A. Evtukh[(c)], A. Kizjak[(c)] and Ju. Rassamakin[(c)], [(a)]IMEC, Kapeldreef 75, 3001 Leuven, Belgium, [(b)]also at KU Leuven, ESAT-INSYS, Leuven, [(c)]Institute of Semiconductor Physics, Kiev 03028, Ukraine

B/P2.20 CdS AND CdTe DEFECT STRUCTURE REBUILDING INDUCED BY LOW-DOSE IONISING IRRADIATION, B. Pavlyk, B. Tsybulyak, O. Klochan, Ivan Franko Lviv National University, Physics Dept., 50 Dragomanov str., 79005 Lviv, Ukraine

B/P2.21 MONOLAYER-TUNED CONTROL OF SILICON OXIDATION, C.M. Camalleri, S. Lorenti and D. Cali', STMicroelectronics, Stradale Pimosole 50, 95121 Catania, Italy

B/P2.22 LIFETIME OF MINORITY CARRIERS IN DOPED P-TYPE SILICON, M.S. Yunusov, M. Karimov, K.A. Begmatov, Institute of Nuclear Physics, Academy of Sciences, 702132 Tashkent, Ulugbeg, Uzbekistan

B/P2.23 SEMI-INSULATING ZnTe: ELECTRICAL, OPTICAL PROPERTIES AND DEFECT STUDIES, D.N. Bose, S. Bhunia and P. Banerji, Advanced Technology Centre, Indian Institute of Technology, Kharagpur 721 302, India

B/P2.24 HYDROGEN IN SILICON CARBIDE, M. Kaukonen, C.J. Fall, R. Jones, School of Physics, The University of Exeter, Exeter EX4 4QL, UK, P.R. Briddon, Department of Physics, The University of Newcastle upon Tyne, Newcastle upon Tyne NE1 7RU, UK

B/P2.25 POSITRON BEAM AND RAMAN ANALYSIS OF HYDROGEN PLASMA TREATED AND ANNEALED Cz-Si, H. Schut, A. van Veen, S.W.H. Eijt, Interfaculty Reactor Institue, Delft University of Technology, Mekelweg 15, 2629 JB Delft, The Netherlands, R. Job, A.G. Ulyashin and Fahrner, University of Hagen (LGBE), P.O. Box 940, 58084 Hagen, Germany

B/P2.26 INVESTIGATIONS OF THE PROCESS OF A PRECIPITATION OF LITHIUM IONS FROM THE Si<Li> HIGH - COMPENSATED SYSTEM INTO ELECTRICALLY NON-ACTIVE STATES, E. Petrosyan, Institute for Nuclear Research of Acad. Sci. Ukraine, 252058 Kiev, Ukraine, D. Cahen, Weizmann Institute of Science, 76100 Rehovot, Israel, F. Decker, University of Roma "La Sapienza", 00185 Roma, Italy, and V.M. Aroutiounian, Yerevan State University, 375049 Yerevan, Armenia

B/P2.27 THE ROLE OF CRYTALLIZATION FRONT FORM IN SAPPHIRE PERFECT CRYSTALS FORMATION, N.I. Bletskan[(a)], Lee Jiaji[(b)], D.I. Bletskan[(c)], [(a)]Research 1 Production Complex SAPFIR, 103482 Zelenograd, Moscow, Russia, [(b)]Nankin Dunmin Synthetic Crystal Co., Ltd., Tixi Road 18, Nankin, China, [(c)]Tecknocrystall Ltd., Granitnaya Street 5a, Uzhgorod, Ukraine

B/P2.28 EPR STUDIES OF NEUTRON-IRRADIATED N-TYPE FZ SILICON DOPED WITH TIN, G. Kordas and G. Mitrikas, Institute of Material Science, National Center for Scientific Research (NCSR) “Demokritos”, 153 10 Aghia Paraskevi, Attikis, Greece, G. Fanourakis, Institute of Nuclear Physics, National Center for Scientific Research (NCSR) “Demokritos”, 153 10 Aghia Paraskevi, Attikis, Greece, and E. Simoen, IMEC, Kapeldreef 75, 3001 Leuven, Belgium

Friday, June 8, 2001 — Morning
Vendredi 8 juin 2001 — Matin

Session IX: Ion implantation and diffusion
Session Chair: A. Nylandsted Larsen

B-IX.1 08:30 -Invited- NEW STRATEGIES FOR ULTRA-SHALLOW JUNCTIONS, **M. Foad**, Applied Materials, Santa Clara, USA

B-IX.2 09:10 TED OF BORON IN ULTRA LOW ENERGY IMPLANTS: EXPERIMENTS AND SIMULATIONS, F. Cristiano, F. Olivie, LAAS/CNRS, 7 Av du Colonel Roche, 31077 Toulouse Cedex, France; C. Armand, INSA, Complexe scientifique de Rangueil, 31400 Toulouse cedex, France; B. Colombeau, G. Ben Assayag, A. Claverie, CEMES/CNRS, BP4347, 31055 Toulouse Cedex, France

B-IX.3 09:30 FLASH LAMP ANNEALING WITH MILLISECOND PULSES VS. RTP FOR ULTRA-SHALLOW BORON PROFILES IN SILICON, T. Gebel[(a,b)], M. Voelskow[(a)], W. Skorupa[(a,b)], G. Mannino[(c)], V. Privitera[(c)], F. Priolo[(d)], E. Napolitani[(e)], A. Carnera[(e)], [(a)]Forschungszentrum Rossendorf, POB 510119, 01314 Dresden, Germany, [(b)]Nanoparc GmbH, Dresden-Rossendorf, Germany, [(c)]CNR-IMETEM, Catania, Italy, [(d)]INFM and University of Catania, Catania, Italy, [(e)]INFM and University of Padova, Padova, Italy

B-IX.4 09:50 ENGINEERING THE DIFFUSION BEHAVIOR OF DOPANTS (B, Sb) IN SILICON BY INCORPORATION OF CARBON, P. Lavéant, P. Werner, N. Engler and U. Gösele, Max-Planck-Institut für Mikrostrukturphysik, Weinberg 2, 06120 Halle, Germany

B-IX.5 10:10 PREVENTION OF IMPURITY GETTERING IN THE Rp/2 REGION OF ION IMPLANTED SILICON BY DEFECT ENGINEERING, R. Kögler, A. Peeva, W. Skorupa and H. Hutter*, Forschungszentrum Rossendorf, PF 510119, 01314 Dresden, Germany, *Technische Universität Wien,Getreidemarkt 9/151, 1060 Wien, Austria

10:30 **BREAK**

Session X: Silicon devices
Session Chair: G. Fanourakis

B-X.1 10:50 -Invited- RADIATION DAMAGE IN FLASH MEMORY CELLS, H. Ohyama, Kumamoto National College of Technology, 2659-2 Nishigoshi Kumamoto, 861-1102 Japan, E. Simoen, **C. Claeys**, IMEC, Kapeldreef 75, 3001 Leuven, Belgium, M. Nakabayashi, Mitsubishi Electric Co., Nishigoshi Kumamoto, Japan, and K. Kobayashi, NEC IC Microcomputer Systems Ltd., Mashiki Kumamoto, Japan.

B-X.2 11:30 ULTRA-SHALLOW JUNCTION FORMATION BY EXCIMER LASER ANNEALING AND LOW ENERGY (<1KeV) B IMPLANTATION: A TWO-DIMENSIONAL ANALYSIS, G. Fortunato[(a)], L. Mariucci[(a)], M. Stanizzi[(a)], V. Privitera[(b)], S. Whelan[(b)], C. Spinella[(b)], G. Mannino[(b)], M. Italia[(b)], C. Bongiorno[(b)] and A. Mittiga[(c)], [(a)]IESS-CNR, Via Cineto Romano 42, 00156 Roma, Italy, [(b)]IMETEM-CNR, Stradale Primosole 50, 95121 Catania, Italy, [(c)]ENEA C.R. Casaccia, Anguillara, Italy

B-X.3 11:50 RADIATION EFFECTS ON THE CURRENT-VOLTAGE AND CAPACITANCE-VOLTAGE CHARACTERISTICS OF ADVANCED p-n JUNCTION DIODES SURROUNDED BY SHALLOW TRENCH ISOLATION, A. Poyai[(a)], E. Simoen[(a)], C. Claeys[(a,b)], K. Hayama[(c)], K. Kobayashi[(c)] and H. Ohyama[(c)], [(a)]IMEC, Kapeldreef 75, 3001 Leuven, Belgium, [(b)]also at KU Leuven, ESAT-INSYS, Leuven, Belgium, [(c)]KNCT, 2659-2 Nishigoshi, Kumamoto 861-1102, Japan

B-X.4 12:10 OPTIMUM LIFETIME STRUCTURING IN SILICON POWER DIODES BY MEANS OF VARIOUS IRRADIATION TECHNIQUES, P. Hazdra
Czech Technical University in Prague, Technick· 2, 16627 Prague 6, Czech Republic and K. Brand, Dynamitron-Tandem-Laboratorium, Ruhr-Universität Bochum, 44780 Bochum, Germany

B-X.4 12:30 AN INJECTION OF DEFECTS FROM IMPLANTED DRAIN/SOURCE REGIONS DURING SOI CMOSFET CREATION STUDIED BY CHANNEL LENGTH SHORTENING UP TO 0.1 µm, V.P. Popov, A.A. Frazusov, G.N. Feofanov, O.V. Naumova, N.V. Sapoghnikova, I.V. Antonova, Institute of Semiconductor Physics, Novosibirsk 630090, Lavrentieva 13, Russia

12:50 **Closing remark**