



E-MRS Spring Meeting 2001
June 5 - 8, 2001

SYMPOSIUM I

Self-Organization in Semiconductors Fundamentals and
Applications

Symposium Organizers:

Gottfried Döhler, University of Erlangen, Germany

Alain Claverie, CEMES/CNRS, Toulouse, France

Jo De Boeck, IMEC, Leuven, Belgium

Arthur C. Gossard, UCSB, Santa Barbara, USA

Venkatesh Narayanamurti, Harvard University, Cambridge, UK

Papers will be published in Materials Science B

E-MRS 2001 SPRING MEETING

SYMPOSIUM I

Tuesday, June 5, 2001
Mardi 5 juin 2001

Morning
Matin

Session I: Self-Organization- Introduction and Theory

- 09:00 **WELCOME**
G.H. Döhler
- I-I.1** 09:10 Invited SELF-ASSEMBLING QUANTUM DOT LATTICES AND QUANTUM DOT RESONANT COUPLING, H. Lee, J.A. Johnson, B.D. Gerardot, G. Subramanian*, I. Schritchman, C. Metzner, W.V. Schoenfeld, J.S. Speck, and **P.M. Petroff**, Materials Department and *Chemical Engineering Department, University of California, Santa Barbara, California 93106, USA
- I-I.2** 09:40 Invited SELF-ORGANIZATION OF NANOSTRUCTURES WITH ION BEAMS, **K.-H. Heinig**, B. Schmidt, J.v. Borany, T. Müller, and H. Bernas*, Forschungszentrum Rossendorf, Postfach 510119, 01314 Dresden, Germany; *CSNSM, CNRS-IN2P3, Orsay, France
- I-I.3** 10:10 ATOMISTIC SIMULATIONS OF THE RIPENING OF 3D, 2D AND 1D OBJECTS, C. Bonafos, B. Colombeau, M. Carrada, A. Altibelli and A. Claverie, CEMES/CNRS BP4347, 31055 Toulouse Cedex, France
- 10:30 **BREAK**

Session II: Superlattice and Polytype Ordering

- I-II.1** 11:00 Invited LATERAL COMPOSITION MODULATIONS IN SHORT PERIOD STRAINED LAYER, **A. Mascarenhas**, Center for Basic Sciences, NREL, USA
- I-II.2** 11:30 INTERBAND TRANSITIONS IN (GaP)₁/(InP)_m MONOLAYER SUPERLATTICE STRUCTURES GROWN ON (001) InP, J. Sik, M. Schubert, T. Hofmann, H. Schmidt, G. Böhm and V. Gottschalch*, Fakultät für Physik und Geowissenschaften, Inst. für Exp. Physik II, Universität Leipzig, Linnéstrasse 5, 04103 Leipzig, Germany, *Fakultät für Chemie and Mineralogie, Halbleiterchemie, Universität Leipzig, Linnéstrasse 3, 04103 Leipzig, Germany
- I-II.3** 11:50 ELECTRIC-FIELD-INDUCED REDISTRIBUTION OF FREE CARRIERS AT ISOTYPE (In,Ga)P/GaAs INTERFACES, P. Krispin, Paul-Drude-Institut für Festkörperelektronik, Hausvogteiplatz 5-7, 10117 Berlin, Germany, A. Knauer and S. Gramlich, Ferdinand-Braun-Institut für Höchstfrequenztechnik, Albert-Einstein-Str 11, 12489 Berlin, Germany
- I-II.4** 12:10 FOUNDAMENTALS OF POLYTYPE CONTROL, J. Pezoldt, TU Ilmenau, Institut für Festkörperelektronik, Postfach 100565, 98684 Ilmenau, Germany, A.A. Kalnin, St.-Petersburg Electrotechnical University, Department of Microelectronics, Prof. Popov 5, 197376 St.-Petersburg, Russia
- 12:30 **LUNCH**

Tuesday, June 5, 2001
Mardi 5 juin 2001

Afternoon
Après-midi

Session III: Controlling Size, Shape and Position in Self-Organizing Systems

- I-III.1** 14:00 Invited VERTICAL AND LATERAL ORDERING IN SELF-ORGANIZED QUANTUM DOT SUPERLATTICES, **G. Springholz**, Universität Linz, Austria
- I-III.2** 14:30 Invited SELF-ORGANIZED QUANTUM DISKS FOR A TWO-STATE SYSTEM, **J. Temmyo**, H. Kamada, E. Kuramochi, H. Ando, and T. Tamamura, NTT Basic Research Laboratories, 3-1 Morinosato-Wakamiya, Atsugi, Kanagawa 243-0198, Japan
- I-III.3** 15:00 SCANNING TUNNELING MICROSCOPY STUDY OF InAs ISLANDS GROWN ON GaAs(001) SUBSTRATES, O. Suekane, T. Okui, M. Tanaka, S. Hasegawa and H. Nakashima, The Institute of Scientific and Industrial Research, Osaka University, Ibaraki, Japan
- I-III.4** 15:20 PHOTOLUMINESCENCE CHARACTERIZATION OF InAs/GaAs QUANTUM DOT BILAYERS, **E.C. Le Ru**, U. Marchioni, P.B. Joyce, T.S. Jones and R. Murray, Centre for Electronic Materials and Devices, Imperial College, London SW7 2BZ, UK
- 15:40 **BREAK**

Session IV: Studies of Topology and Correlation of Dots

- I-IV.1** 16:10 Invited OPTICAL PROPERTIES AND ATOMIC SCALE STRUCTURE OF QUANTUM DOTS IN GALLIUM INDIUM PHOSPHIDE, **R.G. Ulbrich**, M. Wenderoth, IV.Physikalisches Institut, Georg-August-Universität Göttingen, Germany
- I-IV.2** 16:40 STM TOPOGRAPHY AND BARRIER IMAGING OF INAS/GAAS DOTS, **S. Selci**, M. Righini, G. Latini, Istituto di Struttura della Materia-CNR, Via del Fosso del Cavaliere 1000, 00133 Rome, Italy
- I-IV.3** 17:00 A NEW TOOL FOR MEASURING ISLAND DIMENSIONS AND SPATIAL CORRELATIONS IN QUANTUM DOT MULTILAYERS: RAMAN SCATTERING INTERFERENCES, **M. Cazayous**, J. Groenen, J.R. Huntzinger, A. Mlayah Laboratoire de Physique des Solides, UMR 5477, Toulouse, France; O.G. Schmidt, K. Eberl, Max-Planck-Institut für Festkörperforschung, Stuttgart, Germany
- I-IV.4** 17:20 LONG-RANGE INTERACTION OF SELF-ASSEMBLED QUANTUM DOTS VIA INTERFACE LIGHT, **A.L. Ivanov**, Department of Physics and Astronomy, Cardiff University, PO Box 913, Cardiff CF24 3YB, Wales, UK
- I-IV.5** 17:40 FABRICATION OF A STRAIN-DISTRIBUTION-CONTROLLED Si(001) SURFACE WITH MAXIMUM STRESS LOCALIZATION; ANALYSIS OF THE SURFACE BEFORE AND AFTER Ge EPITAXY, **D.J. Bottomley**, H. Omi, and T. Ogino, NTT Basic Research Laboratories, Atsugi, Japan

Wednesday, June 6, 2001
Mercredi 6 juin 2001

Afternoon
Après-midi

Session V: Islands in epitaxial layers incorporated in II-V Semiconductors

- I-V.1** 14:00 Invited GROWTH AND PROPERTIES OF BURIED ErAs IN GaAs, **C.J. Palmström**, B.D. Schultz, Chemical Engineering and Materials Science, University of Minnesota, Minneapolis, MN 55455, USA, D.R. Schmidt, D.E. Brehmer, S. J. Allen, Jr., iQuest, University of California, Santa Barbara, CA 93106, USA, C. Kadow, J. Ibbetson and A.C. Gossard, Materials, University of California, Santa Barbara, CA 93106, USA
- I-V.2** 14:30 3D ISLAND FORMATION IN GaSb/(001)GaAs, NUCLEATION, DEFECTS AND ROLE OF THE SUBSTRATE: ATOMISTIC SIMULATIONS AND EXPERIMENTS, **J. Dalla Torre**(a,b), H. Kassem(a), M. Djafari Rouhani(a,b), G. Landa(a), A. Rocher(c), D. Esteve(b), (a)Laboratoire de Physique des Solides - UMR5477, Univ. Paul Sabatier, Toulouse, France, (b)LAAS-CNRS, Toulouse, France, (c)CEMES-CNRS, Toulouse, France
- I-V.3** 14:50 CONTROL OF MORPHOLOGICAL TRANSITIONS DURING HETEROEPITAXIAL ISLAND GROWTH BY REFLECTION HIGH ENERGY ELECTRON DIFFRACTION, **V. Cimalla**, K. Zekentes, F.O.R.T.H. - MRG, P.O. Box 1527, Heraklion Crete 71110, Greece, N. Vouroutzis, A.U. Thessaloniki Phys. Dept., 54006 Thessaloniki, Greece
- I-V.4** 15:10 OPTICAL AND ELECTRICAL SPECTROSCOPY OF DEFECTS IN LOW TEMPERATURE GROWN GaAs, P. Kiesel, C. Steen, S. Tautz, S. Krämer, S. Malzer and G.H. Döhler, Institut für Technische Physik 1, Universität Erlangen-Nürnberg, Germany
- 15:30 **BREAK**

Session VI: Formation and Properties of Precipitates in Non-Stoichiometric III-V Semiconductors

- I-VI.1** 16:00 Invited TWO-DIMENSIONAL ORGANIZATION OF As CLUSTERS IN GaAs, V. Chaldyshev, Ioffe Institute, St.Petersburg, Russia
- I-VI.2** 16:30 AS PRECIPITATES IN AS-RICH GaAs: MICROSTRUCTURE AND STABILITY BY CALCULATIONS, **T.E.M. Staab**, R.M. Nieminen, Laboratory of Physics, Helsinki University of Technology, P.O. Box 1100, 02015 HUT, Finland, J. Gebauer, Fachbereich Physik, Martin-Luther-Universität Halle-Wittenberg, 06099 Halle, Germany, M. Luysberg, Institut für Festkörperforschung, Forschungszentrum Jülich, 52425 Jülich, Germany, M. Haugk, Th. Frauenheim, University GH Paderborn, Department of Physics, Theoretical Physics, 33098 Paderborn, Germany
- I-VI.3** 16:50 LOW SUBSTRATE TEMPERATURE GROWTH OF GaAs ON VICINAL SUBSTRATES, G. Apostolopoulos, N. Boukos, A. Travlos Institute of Materials Science, National Centre for Scientific Research "Demokritos", 153 10 Ag. Paraskevi Attikis, Greece, **J. Herfort**, L. Daeweritz, K.H. Ploog, Paul-Drude-Institut für Festkörperelektronik, Hausvogteiplatz 5-7, 10117 Berlin, Germany
- I-VI.4** 17:10 SELF-ORGANIZATION PROCESSES AND ERBIUM IONS OPTICAL ACTIVATION IN HYDROGENATED AMORPHOUS SILICON FILMS DOPED BY ERBIUM, **M.M. Mezdrogina**, G.N. Mosina, E.I. Terukov, and I.N. Trapeznikova, A.F.Ioffe Physicotechnical Institute RAS, 194021 26, Polytechnical str., St.-Petersburg, Russia

Thursday, June 7, 2001
Jeudi 7 juin 2001

Morning
Matin

Session VII: Magnetic Precipitates and Spin-Systems

- I-VII.1** 09:00 Invited MAGNETIC NANOPARTICLES IN A SEMICONDUCTOR, **G. Borghs**, A. Van Esch and J. De Boeck, Department of advanced components and sensor systems, Imec Leuven, Belgium
- I-VII.2** 09:30 Invited GROWTH AND MAGNETIC PROPERTIES OF (Ga,Mn)As DIGITAL FERROMAGNETIC HETEROSTRUCTURES, **R.K. Kawakami**, D.D. Awschalom and A.C. Gossard, Center for Spintronics and Quantum Computation, University of California, Santa Barbara CA 93106, USA
- I-VII.3** 10:00 ELECTRONIC COUPLING OF VERTICALLY COUPLED QUANTUM DOTS: EFFECT OF TIME-DEPENDENT MAGNETIC FIELD, **S. Jaziri***, E. Ben Salem, W. Ben Chouikha, A. Hichri, Laboratoire de Physique de la Matière Condensée, Faculté des Sciences de Tunis, Tunisia, *Departement de Physique, Faculté des Sciences de Bizerte, Jarzouna 7021 Bizerte, Tunisia
- 10:20 Oral Poster Introduction
- 10:40 **BREAK**
- 11:00 **POSTER SESSION (Session VIII)**
- I-VIII/P01** ANISOTROPIC FACETED STRUCTURE IN ORDERED STRAINED InGaP, **S. Hasenohrl**, R. Kudela, J. Novak, Institute of Electrical Engineering, Dubravska cesta 9, 842 39 Bratislava, Slovak Republic, T.O. Tuomi and L. Knuutila, Helsinki University of Technology, Optoelectronics Laboratory, PO Box 3000, 02015 TKK, Finland
- I-VIII/P02** EFFECT OF STRAIN AND ORDERING ON THE BAND GAP ENERGY OF In_xGa_{1-x}P, **J. Novak**, S. Hasenohrl and M. Kucera, Institute of Electrical Engineering, Slovak Academy of Sciences, 842 39 Bratislava, Slovakia, M.I. Alonso and M. Garriga, Institut de Ciencia de Materials CSIC, 08193 Bellaterra, Spain
- I-VIII/P03** NATURAL SUPERLATTICE ORDERING IN InAlAs EPILAYERS GROWN BY MOCVD, K. Borgi, F. Hassen and **H. Maaref**, Laboratoire de Physique des Semiconducteurs et des Composants Electroniques, Faculté des Sciences, 5000 Monastir, Tunisia, V.Soulière and Y.Monteil, Laboratoire Multimatériaux et Interfaces, UCB Lyon 1, 43 Boulevard du 11 Novembre 1918, 69622 Villeurbanne Cedex, France
- I-VIII/P04** RAMAN SCATTERING STUDY OF GaAs:Mn SYSTEM, **W. Gebicki**(a), L. Adamowicz(a), S. Goettig(a), H. Shimizu(b), M. Tanaka(b) A. Twardowski(c), (a)Faculty of Physics, Warsaw University of Technology, Koszykowa 75 00-662 Warsaw, Poland, (b)Department of Electronic Engineering, The University of Tokyo 7-3-1Hongo, Bunkyo-ku, Tokyo 113-8656, Japan, (c)Institute of Experimental Physics, Warsaw university, Hoza 69, 00-681 Warsaw, Poland
- I-VIII/P05** PHONON-PLASMON INTERACTION IN TUNNELING THIN GaAs/AlAs NANOCOMPOSITE SUPERLATTICES, **M.D. Efremov**, V.A. Volodin, V.V. Preobrazhenskii, B.R. Semyagin, Institute of Semiconductor Physics, SB RAS, pr.Lavrentjeva 13, Novosibirsk 630090, Russia, V.A. Sachkov, Institute of Sensor Microelectronics, SB RAS, pr.Mira 55a, Omsk 644077, Russia, E.A. Galaktionov, D.A. Orehov, Novosibirsk State University, Pirogova 2, 630090 Novosibirsk, Russia
- I-VIII/P06** SELF ORGANIZATION OF GaAs QUANTUM ISLANDS IN GaAs/AlAs NANOCOMPOSITE SUPERLATTICES, **M.D. Efremov**, V.A. Volodin, V.V. Preobrazhenskii, B.R. Semyagin, Institute of Semiconductor Physics, SB RAS, pr.Lavrentjeva 13, Novosibirsk 630090, Russia, V.A. Sachkov, V.V. Bolotov, Institute of Sensor Microelectronics, SB RAS, pr.Mira 55a, Omsk 644077, Russia, E.A. Galaktionov, A.V. Kretinin, Novosibirsk State University, Pirogova 2, 630090 Novosibirsk, Russia

- I-VIII/P07** SELF-ORGANIZED TECHNOLOGY OF ANISOTROPIC ETCHING OF SEMICONDUCTORS FOR OPTOELECTRONICS APPLICATIONS, N.L. Dmitruk, O.Yu. Borkovskaya, O.I. Mayeva, S.V. Mamykin, I.B. Mamontova, Institute for Physics of Semiconductors of NAS of Ukraine, 45 Prospect Nauki, 03028 Kyiv, Ukraine
- I-VIII/P08** LASERS WITH d-InAs LAYER IN GaAs, J. Oswald, E. Hulicius, J. Pangrac, K. Melichar, T. Aimeèek, O. Petèek, K. Kuldova, Institute of Physics, Academy of Sciences, Cukrovarnick 10, 162 53 Prague, Czech Republic and P. Hazdra, J. Voves, Department of Microelectronics, Czech Technical University in Prague, Technick 2, 16627 Prague, Czech Republic
- I-VIII/P09** STACKED LAYERS OF INAS SELF ASSEMBLED QUANTUM DOTS, V. Khorenko, S. Malzer, G.H. Döhler, Institut für Technische Physik I, Universität Erlangen, Erlangen, Germany, C. Bock, K.H. Schmidt, Rhur Universität, Bochum, Germany
- I-VIII/P10** PL STUDY OF THE OPTICAL ANISOTROPY IN InAs/InAlAs QUANTUM WIRE ARRAYS, M. Hjiri, F. Hassen and H. Maaref, Laboratoire de Physique des Semiconducteurs et des Composants Electroniques, Faculté des Sciences de Monastir, Tunisia, J.Brault, M. Gendry and G. Hollinger, Laboratoire d'Electronique-LEAME, Ecole Centrale de Lyon, France, J. Olivares, B. Salem and G. Bremond, Laboratoire de Physique de la Matière, INSA de Lyon, France
- I-VIII/P11** MAGNETO-PHOTOLUMINESCENCE STUDY OF ELECTRONIC TRANSITIONS OF SELF-ORGANISED InAs/GaAs QUANTUM DOTS: MONO- AND MULTILAYER STRUCTURES, K. Kuldova, J. Oswald, E. Hulicius, J. Pangrac, Institute of Physics AV CR Cukrovarnick· 10, 16253 Prague, Czech republic and J. Zeman, Grenoble High Magnetic Field Laboratory, 25 Avenue des Martyrs, BP 166, 38042 Grenoble Cedex 9, France
- I-VIII/P12** RESONANT QUENCHING OF PHOTOLUMINESCENCE IN InGaAs/AlGaAs/GaAs SELF ASSEMBLED QUANTUM DOTS, P. Altieri, S. Lozzia, S. Sanguinetti, M. Gurioli, E. Grilli, M. Guzzi, I.N.F.M. and Dip. Scienza dei Materiali, Universita di Milano Bicocca, Via Cozzi 53, 20125 Milano, Italy and P. Frigeri, S. Franchi, CNR-MASPEC, Parco delle Scienze 37A, 43010 Fontanini, Parma, Italy
- I-VIII/P13** TEMPERATURE AND EXCITATION DEPENDENCE OF THE LUMINESCENCE SPECTRA OF InAs QUANTUM DOTS, M. Hjiri, F. Hassen and H. Maaref, Laboratoire de Physique des Semiconducteurs et des Composants Electroniques (LA-MA-06), Département de Physique, Faculté des Sciences de Monastir, 5000 Monastir, Tunisia
- I-VIII/P14** SELF-ASSEMBLED GERMANIUM NANOCRYSTALS ON SiC(0001), B. Schroeter, K. Komlev, W. Richter, Friedrich-Schiller-Universitaet Jena, Institut fuer Festkoerperphysik, Max-Wien-Platz 1, 07743 Jena, Germany
- I-VIII/P15** SELF ORGANIZATION OF (110) ORIENTED Si NANOCRYSTALS IN a-Si:H FILMS UNDER PULSE EXCIMER LASER IMPACTS, V.A. Volodin, M.D. Efremov, S.A. Kochubei, A.K. Gutakovskii, L.I. Fedina, Institute of Semiconductor Physics SB RAS, pr.Lavrentjeva 13, Novosibirsk 630090, Russia, V.V. Bolotov, Institute of Sensor Microelectronics SB RAS, pr.Mira 55a, Omsk 644077, Russia, A.V. Kretinin, Novosibirsk State University, Pirogova 2, 630090 Novosibirsk, Russia
- I-VIII/P16** SELF-ORGANIZATION IN DEFECT SUBSYSTEM OF IV-VI THIN FILMS, E.I. Rogacheva, O.N. Nashchekina, National Technical University “Kharkov Polytechnic Institute”, 21 Frunze st., 61002 Kharkov, Ukraine
- I-VIII/P17** Cancelled
- I-VIII/P18** A NEW TYPE SELF-ORGANIZATION EQUILIBRIUM SELF- ORGANIZATION, A.Ya. Gubenko, Moscow Institute of Electronics and Mathematics, ul. Kuusinena 25,62, Moscow 125252, Russia
- I-VIII/P19** A NEW MECHANISM OF IMPURITY EFFECTS ON THE PROPERTIES OF SEMICONDUCTORS, A.Ya. Gubenko, Moscow Institute of Electronics and Mathematics, ul. Kuusinena 25,62, Moscow 125252, Russia
- I-VIII/P20** THE PHOTOCONVERSION DEVICE BASED ON HETEROJUNCTION OF BIOCHOLESTEROL-SILICON, K.B. Tynyshtybaev, S.S. Ibrayev, A.L. Dautov, N.K. Kenshinbaev, M.A. Dosmailov, Kazakh National Technical University, Almaty, Kazakhstan

- I-VIII/P21** PHOTOELECTRONS ENSEMBLE SELF-ORGANIZATION IN LEAD MOLYBDATE CRYSTALS, R.K. Hovsepyan, N.R. Aghamalyan, Institute for Physical Research of National Academy of Sciences of Armenia, 378410 Ashtarak-2, Armenia
- I-VIII/P22** SELF-ORGANIZATION PROCESSES IN SEMICONDUCTORS UNDER PHOTO-INDUCED GUNN EFFECT, P.M. Gorley(a), P.P. Horley(a), J. Gonzalez-Hernandez(b) and Yu.V. Vorobiev(b), (a)Chernivtsi National University, 2 Kotsyubynsky st., 58012 Chernivtsi, Ukraine, (b)CINVESTAV-IPN Unidad Queretaro, CP 76230, Queretaro, Qro., Mexico
- I-VIII/P23** EVOLUTION OF THE INTERMIXING PROCESS IN Ge/Si(111) SELF-ASSEMBLED ISLANDS, N. Motta, F. Rosei, A. Sgarlata, Dipartimento di Fisica e Unita' INFM, Universita' di Roma Tor Vergata, Roma, Italy, G. Capellini, S. Mobilio, Dipartimento di Fisica e Unita' INFM, Universita' di Roma Tre, Roma, Italy, F. Boscherini, Dipartimento di Fisica e Unita' INFM, Universita' di Bologna, Bologna, Italy

12:30

LUNCH

Thursday, June 7, 2001
Jeudi 7 juin 2001

Afternoon
Après-midi

Session IX: Unconventional Prestructuring Methods

- I-IX.1** 14:00 Invited APPLICATION OF WAFER BONDING TO THE LATERAL SELF-ORGANIZATION OF Si DOTS BY A PERIODIC SUBSURFACE DISLOCATION ARRAY, J. Eymery, **N. Magnea**, K. Rousseau, J.L. Rouvière, D. Buttard, F. Rieutord, F. Leroy, P. Gentile, CEA Grenoble/DRFMC, France, H. Moriceau, F. Fournel, B. Aspard, P. Mur, M. N. Semeria, CEA Grenoble/LETI; Th. Baron, INSA/Lyon, France
- I-IX.2** 14:30 ON THE SELF-ORGANIZATION OF 3D ISLANDS IN STRAINED HETEROEPITAXY ON A SUBSTRATE WITH A THIN TWISTED BONDED LAYER, C. Priester, IEMN/Dept ISEN, BP 69, 59652 Villeneuve d'Ascq cedex, France
- I-IX.3** 14:50 SELF-ORGANISED GROWTH OF SILICON STRUCTURES ON Si(100) DURING OXIDE DESORPTION, V. Palermo and D. Jones, ICoCEA-CNR, Area della Ricerca, Bologna, Italy
- I-IX.4** 15:10 SELF ORGANIZATION AND NON LINEAR OPTICAL EFFECTS IN LASER PROCESSING OF SEMICONDUCTORS, A.Yu. Bonchik, Z.Yu. Gotra, S.G. Kiyak, I.A. Mohyliak, W. Proszak, I.P. Trostynskyy, Institute for Applied Problems of Mechanics and Mathematics of NASU, 3-b Naukova Street, 79601 Lviv, Ukraine
- 15:30 **BREAK**

Session X: Studies of Growth and Properties of Self assembled Dots

- I-X.1** 16:00 Invited WHAT HAPPENS DURING THE OVERGROWTH OF InGaAs NANO-ISLANDS ? ; **A. Lorke**, Universität Duisburg, Germany
- I-X.2** 16:30 GROWTH OF InAs-QUANTEN DOTS ON FOCUSED ION BEAM DOPED GaAs(100), D. Reuter, P.Schafmeister, J. Koch and A. D. Wieck, Applied Solid State Physics, K. Schmidt, Materials for Electrical Engineering, Ruhr University Bochum, Germany
- I-X.3** 16:50 OPTICAL PROPERTIES OF InAs/AlGaAs/GaAs QUANTUM DOT STRUCTURES, P. Altieri, S. Sanguinetti, M. Gurioli, E. Grilli, M. Guzzi, I.N.F.M. and Dip. Scienza dei Materiali, Università di Milano Bicocca, Via Cozzi 53, 20125 Milano, Italy and P. Frigeri, S. Franchi, G. Trevisi, CNR-MASPEC, Parco delle Scienze 37A, 43010 Fontanini, Parma, Italy
- I-X.4** 17:10 ELECTRONIC STRUCTURE OF InAs QUANTUM DOTS, K.H. Schmidt, C. Bock, U. Kunze, Werkstoffe der Elektrotechnik, Ruhr-Universität Bochum, 44780 Bochum, Germany, V. Korenko, S. Malzer, G.H. Döhler, Institut für Technische Physik I, Universität Erlangen, Erwin-Rommel-Str. 1, 91058 Erlangen, Germany, D. Reuter, A.D. Wieck, Angewandte Festkörperphysik, Ruhr-Universität Bochum, 44780 Bochum, Germany

Friday, June 8, 2001
Vendredi 8 juin 2001

Morning
Matin

Session XI: Self-Organization in Various Systems

- I-XI.1** 09:00 OPTICAL PROPERTIES OF MOLECULAR-WIRE/SEMICONDUCTOR NANOCRYSTALS HYBRID STRUCTURES, E. Minkin, M. Sirota and E. Lifshitz, Technion-Israel Institute of Technology, Dept of Chemistry and Solid State Institute, Haifa, Israel, V. Hensel, M. Lahav, Weizmann Institute of Science, Dept of Materials and Interfaces, Rehovot, Israel
- I-XI.2** 09:20 SPACE AND TIME SELF-ORGANIZATION PROCESSES ON SEMICONDUCTOR-ELECTROLYTE INTERFACE, P.P. Konorov, V.B. Bogevolnov, A.M. Yafyasov, Physical Institute of Saint-Petersburg, State University, St.Petersburg 198504, Petrodvoretz, Russia
- I-XI.3** 09:40 NEW TYPE OF CHAOS-ORDER TRANSITIONS AT CORRODING SILICON SURFACE, V.P. Parkhutik, Department of Materials Science, Technical University of Valencia, Cami de Verwa, s/n 46071 Valencia, Spain
- I-XI.4** 10:00 POROUS SILICON STUDIES USING X-RAY GRAZING INCIDENCE, G. Dolino, Laboratoire de Spectrométrie Physique, Grenoble, France, V. Chamard, ESRF Grenoble, France, P. Bastie, Laboratoire de Spectrométrie Physique, Grenoble, France, D. Le Bolloc'h, ESRF Grenoble, France, F. Rieutord, CEA Grenoble, France, D. Thiaudiere, Lure Orsay, France
- 10:20 **BREAK**

Session XII: Controlled Growth of Self-Organized Structures and Device Applications

- I-XII.1** 10:40 Invited SITE-CONTROLLED SELF-ORGANIZATION OF InAs QUANTUM DOTS, S. Kohmoto, H. Nakamura, S. Nishikawa, and K. Asakawa, Femtosecond Technology Research Association (FESTA), 5-5 Tokodai, Tsukuba 300-2635, Japan
- I-XII.2** 11:10 CONTROLLING SIZE DISTRIBUTION IN SILICON BRUSH-LIKE SUPERSTRUCTURES GROWN BY SELF-ORGANIZATION, A.I. Klimovskaya, I.P. Ostrovsky, A.A. Efremov, A.V. Sarikov, Institute of Semiconductor Physics, National Academy of Sciences, 45 Nauki avenue, Kiev 03028, Ukraine
- I-XII.3** 11:30 REDISTRIBUTION OF LOCALIZED EXCITONS IN CdSe/ZnSe QUANTUM DOT STRUCTURES, M. Strassburg(a,b), M. Dworzak(b), R. Heit(b), J. Christen (a), A. Hoffmann(b), D. Schikora(c), (a)Otto-von-Guericke-Universität Magdeburg, Abt. Festkörperphysik, Universitätsplatz 2, 39106 Magdeburg, Germany, (b)Technische Universität Berlin, Institut für Festkörperphysik, Hardenbergstraße 36, 10623 Berlin, Germany, (c)Universität Paderborn, Fachbereich 6 Physik, Warburger Str. 100, 33098 Paderborn, Germany
- I-XII.4** 11:50 POLARIZATION-SENSITIVE OPTO-ELECTRONIC DEVICES BASED ON SPONTANEOUS SELF ORDERING IN SEMICONDUCTOR ALLOYS, P. Kiesel, J. Spieler, T. Kippenberg, M. Müller, and G.H. Döhler, Institut für Technische Physik 1, Universität Erlangen-Nürnberg, Germany