



SYMPOSIUM P

Crystal Chemistry of Functional Materials

May 30 – June 2, 2000

Symposium Organizers:

Peter Majewski, Max-Planck-Institut, Stuttgart, Germany

Amparo Fuertes, Institut de Ciència de Materials de Barcelona, Spain

Rudi Cloots, University of Liege, Belgium

Symposium Support:

Robert Bosch GmbH, Germany

Papers will be published in International Journal of Inorganic Materials

E-MRS 2000 SPRING MEETING

SYMPOSIUM P

Tuesday May 30, 2000

Mardi 30 mai 2000

Morning

Matin

Session I

- P-I.1** 8:30 **Invited** PHASE EQUILIBRIA, CRYSTAL CHEMISTRY and STRUCTURE-PROPERTY STUDIES OF TALKING CEARAMICS, **T.A. Vanderah**, National Institute of Standards and Technology, Ceramics Division, Gaithersburg MD 20899, USA
- P-I.2** 9:00 **Invited** STRUCTURE - PROPERTY RELATIONSHIPS IN METAL OXIDES, **P.D. Battle**, E.J. Cussen and C.A. Moore, Inorganic Chemistry Laboratory, Oxford University, South Parks Road, Oxford OX1 3QR, UK
- P-I.3** 9:30 **Invited** STRUCTURE-PROPERTY RELATIONS IN DOPED PEROVSKITE OXIDES, **J.P. Attfield**, Department of Chemistry and IRC in Superconductivity, University of Cambridge, Cambridge CB2 1EW, UK
- 10:00 **BREAK**

Session II

- P-II.1** 10:30 **Invited** CHARACTERISTICS OF NITROGEN IN NITRIDES AND OXYNITRIDES, **R. Marchand**, F. Tessier, A. Le Sauze and N. Diot, UMR CNRS 6512 "Verres et Céramiques", Université de Rennes 1, 35042 Rennes Cedex, France
- P-II.2** 11:00 **Invited** RANDOM NETWORKS OF Si/B/N/C, A NEW FAMILY OF EXTREMELY STABLE CERAMICS, **M. Jansen**, Max-Planck-Institut für Festkörperforschung, Heisenbergst. 1, 70569 Stuttgart, Germany
- P-II.3** 11:30 **Invited** NITRIDOSILICATES, OXONITRIDOSILICATES (SIONS) AND OXONITRIDOALUMINO-SILICATES (SIALONS) - NEW MATERIALS WITH PROMISING PROPERTIES, **W. Schnick**, Department Chemie, Ludwig-Maximilians-Universität München, Germany
- P-II.4** 12:00 RELATIONSHIP BETWEEN GROWTH CONDITIONS, THERMODYNAMIC PROPERTIES AND CRYSTAL STRUCTURE OF SiC, **A. Fissel**, Friedrich-Schiller-Universität Jena, Institut für Festkörperphysik, Max-Wien-Platz 1, 07743 Jena, Germany
- P-II.5** 12:15 ELABORATION AND CHARACTERISATION OF THIN HARD COATING CHROMIUM CARBIDES, C. Harkati, L. Chekour and **R. Halimi**, Département et Unité de Recherche de Physique, Université Mentouri, 25000 Contantine, Algérie
- 12:30 **LUNCH**

Tuesday May 30, 2000

Mardi 30 mai 2000

Afternoon

Après-midi

Session III

- P-III.1** 14:00 **Invited** SOLID STATE CHEMISTRY OF COPPER-RICH OXIDES WITH MOLYBDENUM, VANADIUM AND RUTHENIUM, **K.R. Poepelmeier**, Northwestern University, Department of Chemistry, Evanston Il 60208, USA
- P-III.2** 14:30 **Invited** CRYSTAL CHEMISTRY AND PHASE EQUILIBRIA OF THE $\text{SrO-R}_2\text{O}_3\text{-CuO}$ SYSTEMS, R=LANTHANIDES, **W. Wong-Ng**, J. Kaduk, Q. Huang, T. Haugan, I. Levin, J. Dillingham, L.P. Cook and J. Suh, MSEL, National Institute of Standards and Technology, Gaithersburg MD 20899, USA
- P-III.3** 15:00 **Invited** THERMODYNAMICS OF RARE EARTH BARIUM CUPRATES (REBCO's) AND APPLICATION TO LPE PROCESSING OF CONDUCTORS, Xiaoding Qi, J. Nelstrop and **J. MacManus-Driscoll**, Dept. of Materials, Imperial College, Prince Consort Rd. London, SW7 2BP, UK
- P-III.4** 15:30 LONG - RANGE STRUCTURAL CHANGES VS LOCAL ORDERING IN DEFECT PEROVSKITES $\text{Nd}_{1+x}\text{Ba}_{2-x}\text{Cu}_3\text{O}_z$, E.A. Goodilin, I.A. Presnyakov, M. Tarasov, S.N. Mudretsova, A.F. Mayorova, **Yu.D. Tretyakov**, Chemistry Faculty of Moscow State University, Lenin Hills, Moscow 119899, Russia; V.V. Petrykin, Materials and Structures Lab., Tokyo Institute of Technology, 4259 Nagatsuta, Yokohama 226-8503, Japan; J. Hester, Australian Nuclear Science and Technology Organisation, New Illawarra Road, Lucas Heights 2234, Australia
- P-III.5** 15:45 INTERCALATION CHEMISTRY OF SUPERCONDUCTING ZIRCONIUM AND HAFNIUM NITRIDE HALIDES, **M.R. Palacín**, J. Oró-Solé, M. Vlassov, B. Martínez, A. Fuertes, Institut de Ciència de Materials de Barcelona (C.S.I.C.), Campus U.A.B., 08193 Bellaterra, Spain, D. Beltrán-Porter, Institut de Ciència de Materials de la Universitat de València, P.O.Box 2085, 46071 Burjassot, Spain and M.T. Caldes, Institut des Matériaux Jean Rouxel UMR 6502, 2 rue de la Houssinière, 44072 Nantes Cedex 03, France
- 16:00 **BREAK**

Session IV

- P-IV.1** 16:30 **Invited** CORRELATION BETWEEN COLOR AND BONDING IN CERIUM CONTAINING SULPHIDES, **S. Jobic**, G. Gauthier and R. Brec, Institut des Matériaux Jean Rouxel, 44322 Nantes Cedex 03, France
- P-IV.2** 17:00 **Invited** STUDY OF THE ELECTROCHEMICAL SYNTHESIS OF SELECTIVE BLACK COATINGS ABSORBING SOLAR ENERGY, **V. Moise**, R. Cloots and A. Rulmont, University of Liège, Laboratoire de Chimie Inorganique Structurale, Chemistry Institute B6, Sart-Tilman, 4000 Liège, Belgium
- P-IV.3** 17:15 PHASE DIAGRAM STUDIES IN THE SYSTEM $\text{La}_2\text{O}_3\text{-SrO-MgO-Ga}_2\text{O}_3$, **P. Majewski**, M. Rozumek, F. Aldinger, Max-Planck-Institut für Metallforschung, Heisenbergstr. 5, 70569 Stuttgart, Germany
- P-IV.4** 17:30 REAL STRUCTURE AND PROPERTIES OF NONLINEAR LiInS_2 AND LiInSe_2 CRYSTALS, **L. Isaenko**, S. Lobanov, I. Vasilyeva, A. Merkulov, A. Yelissev, Design & Technological Institute of Monocrystals SB RAS, 43 Russkaya str., Novosibirsk 630058, Russia and J.-J. Zondy, LPTF, Observatoire de Paris, 61 Avenue de l'Observatoire, 75014 Paris, France

- P-IV.5** 17:45 P-T-X PHASE EQUILIBRIUM AND CRYSTAL GROWTH OF ZNTE FROM THE VAPOR PHASE, J.H. Greenberg⁽¹⁾, V.N. Guskov⁽²⁾, T. Feltgen⁽³⁾, M. Fiederle⁽³⁾, K.W. Benz⁽³⁾, ⁽¹⁾Department of Inorganic and Analytical Chemistry, Hebrew University of Jerusalem, 91904 Jerusalem, Israel; ⁽²⁾Kurnakov Institute of General and Inorganic Chemistry Academy of Sciences, 117907 Moscow, Leninski prosp.31, Russia; ⁽³⁾Kristallographisches Institut, University of Freiburg, Hebelstrasse 25, 79104 Freiburg, Germany
- P-IV.5** 18:00 IMPORTANCE OF SUBSTRATE WAFERS CRYSTAL STRUCTURE FOR DIFFUSION TECHNOLOGIES OF OPTICAL WAVEGUIDES FABRICATION, Jarmila Spirkova, Pavla Nekvindova, Department of Inorganic Chemistry, Institute of Chemical Technology, Prague, Jiri Vacik, Jarmila Cervena, Vratislav Perina, Nuclear Physics Institute, Czech Academy of Science, Rez, Josef Schrofel, Department of Microelectronics, Faculty of Electrical Engineering, Czech, Technical University, Prague, Czech Republic
- P-IV.6** 18:15 Ga- AND In-DOPING OF ZnS, K. Lott, M. Raukas, Tallinn Technical University, Ehitajate tee 5, 19086 Tallinn, Estonia, A. Vishnjakov, A. Grebennik, D.I. Mendelejev University of Chemical Technology of Russia, Miuskaya sq.9, 125190 Moscow, Russia

Wednesday May 31, 2000

Mercredi 31 mai 2000

Afternoon

Après-midi

Session V

- P-V.1** 14:00 **Invited** MISFIT ACCOMMODATION OF EPITAXIAL $\text{La}_{1-x}\text{A}_x\text{MnO}_3$ (A=Ca,Sr) THIN FILMS, **O. Lebedev**, G. Van Tendeloo, S.Amelinckx, EMAT, RUCA, Groenenborgerlaan 171, 2020 Antwerp, Belgium
- P-V.2** 14:30 INFLUENCE OF SYNTHESIS METHODS ON THE MICROSTRUCTURE OF $\text{Sr}_{3-x}\text{La}_x\text{Mn}_2\text{O}_7$: A COMBINED HREM EELS AND X-RAY STUDY, **M.T. Caldes**, G. Goglio, C. Marhic, M. Lancin, L. Brohan, Institut des Matériaux Jean Rouxel, UMR 6502, 2 rue de la Houssinière, BP 32229, 44322 Nantes Cedex 03 France
- P-V.3** 14:45 INFLUENCE OF CHROMIUM DOPING IN MAGNETIC AND ELECTRICAL PROPERTIES OF $\text{La}_{0.7}\text{Sr}_{0.3}\text{Mn}_{1-x}\text{Cr}_x\text{O}_3$ PEROVSKITE TYPE COMPOUNDS, **N. Kallel**, J. Dhahri, M. Oumezzine, S. Zemni and M. Ghedira, Laboratoire de Physico-Chimie Structurale, Faculté des Sciences de Monastir, 5000 Monastir, Tunisie
- P-V.4** 15:00 EPITAXIAL PEROVSKIT RARE EARTH NICKELATES AND THEIR HETEROSTRUCTURES WITH CMR MANGANITES, **M.A. Novozhilov**, **O.Yu. Gorbenko**, A.R. Kaul, Inorganic Chemistry Division, Moscow State University, 119899 Moscow, Russia and L.M. Belova, N.A. Babushkina, RC Kurchatov Institute, 123182 Moscow, Russia
- P-V.5** 15:15 INFLUENCE OF THE DEPOSITION CONFIGURATION ON THE COMPOSITION, STRUCTURE AND MORPHOLOGY OF $\text{La}_{0.6}\text{Y}_{0.07}\text{Ca}_{0.33}\text{MnO}_3$ THIN FILMS OBTAINED BY PULSED LASER DEPOSITION, **C. Ghica**, M. Valeanu, L.C. Nistor, V. Teodorescu, C. Sandu, NIMP, PO Box MG-7, 76900 Bucharest, Romania, C. Ristoscu, I.N. Mihailescu, NILPRP, PO Box MG-54, 76900 Bucharest, Romania, J. Werckmann, G. Schmerber, J.-P. Deville, IPCMS, 23 Rue du Loess, 67037 Strasbourg Cedex, France
- P-V.6** 15:30 PHASE DIAGRAM STUDIES IN THE PSEUDO TERNARY SYSTEM LaMnO_3 - SrMnO_3 , **P. Majewski**, F. Aldinger, Max-Planck-Institut für Metallforschung, Heisenbergstr. 5, 70569 Stuttgart, Germany
- P-V.7** 15:45 NEW PHASES FORMATION BY VACUUM CONDENSATION OF METAL AND FULLERENE, **E.M. Shpilevsky** and M.E. Shpilevsky, Belarusian State University, 4 Skorina av., 220050 Minsk, Belarus, L.A. Matveeva, Institute of Semiconductor Physics, 45 Nauki av., 252028 Kiev, Ukraine
- 16:00 **BREAK**
- 16:30 - 18:30 **POSTER SESSION**
- P/P1** NiMn_2O_4 NTC THERMISTORS, **R. Schmidt** and A.W. Brinkman, University of Durham, Dept. of Physics, South Road, Durham DH1 3LE, UK
- P/P2** NTC CHARACTERISTICS OF BISMUTH BASED CERAMIC AT HIGH TEMPERATURE, **Arnab Basu**, A W Brinkman and Tooraj Hashemi, University of Durham, Department of Physics, South Road, Durham DH1 3LE, UK
- P/P3** PREPARATION AND PROPERTIES OF AN INTEGRATED SYSTEM "PHOTOSENSITIVE HETEROSTRUCTURE – SEMICONDUCTOR SCINTILLATOR" ON THE BASIS OF COMPOUNDS $\text{A}_{II}\text{B}_{VI}$, P.A. Gashin, A.A. Focsha, **V.D. Ryzhikov**, N.G. Starzhinskiy, STC RI of Concern "Institute for Single Crystals", 60 Lenin Ave., 61001 Kharkiv, Ukraine
- P/P4** ON THE ROLE OF OXYGEN ADMIXTURES IN FORMATION OF RADIATIVE RECOMBINATION CENTERS IN CRYSTALS $\text{ZnSe}_x\text{Te}_{1-x}$, **V.D. Ryzhikov**, N.G. Starzhinskiy, L.P. Gal'chinetskii, V.I. Silin, STC RI of Concern "Institute for Single Crystals", 60 Lenin Ave., 61001 Kharkiv, Ukraine

- P/P5** THE MECHANISM OF LOW-TEMPERATURE RECRYSTALLISATION IN ALKALI HALIDE CRYSTALS, E.B. Borisenko, B.A. Gnesin, Institute of Solid State Physics of the Russian Academy of Sciences
- P/P6** STACKING FAULT ENERGY CALCULATION IN BROAD INTERVALS OF X, P AND T, V. Danylenko, Nina Danylenko, FIPMS, Kyiv, Ukraine
- P/P7** NEW APPROACH TO GRAINT BOUNDARY SEGREGATION RESEARCH, Volodymyr Danylenko, V. Yagodkin, FIPMS, Kyiv, Ukraine
- P/P8** INTERACTION OF VACANCIES WITH GRAIN BOUNDARIES, M.D. Starostenkov, B.F. Demyanov, E.L. Grakhov and A.V. Weckman, General Physics Dept, Altai State Technical University, Lenin st. 46, Barnaul, 656099, Russia
- P/P9** SYSTEM TO CONTROL LARGE-SIZE SINGLE CRYSTALS GROWTH PROCESS, V. Suzdal, Institute for Single Crystals of National Academy of Sciences of Ukraine, Kharkov, Ukraine
- P/P10** PRINCIPLE OF CONTROL IN THE PROCESSES OF CRYSTALS GROWING FROM MELT ON SEED, B.V. Grinyov, N.N. Smirnov, V.I. Goriletsky, S.K. Bondarenko, Institute for Single Crystals, Kharkov, Ukraine
- P/P11** SCALING OF THE DEFORMATION AND FRACTURE PROPERTIES OF SOLIDS, V. P. Kisel, Inst. of Solid State Physics, RAS, 142432 Chernogolovka, Moscow distr., Russia
- P/P12** MORPHOLOGY OF GROWING KDP AND LAP CRYSTALS SURFACES IN SITU, V.I. Bredikhin, G.L Galushkina, V.P. Ershov, V.V. Khlunev and S.P Kuznetsov, Institute of Applied Physics RAS, Nizhny Novgorod, Russia
- P/P13** INFLUENCE OF DEVIATION FROM STOICHIOMETRY ON THE LUMINESCENT PROPERTIES OF $\text{Li}_2\text{B}_4\text{O}_7$ (LTB) POLYCRYSTALS, B.M. Hunda, A.M. Solomon, T.V. Hunda, V.M. Holovey, 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
- P/P14** THERMOLUMINESCENCE PROPERTIES OF POLYCRYSTALLINE $\text{Li}_2\text{B}_4\text{O}_7:\text{Tm}$, E.F. Dolzhenkova, M.F. Dubovik, A.V. Tolmachev, B.V. Grinyov, V.A. Tarasov, L.V. Grini, Institute for Single Crystals NAS of Ukraine, 60 Lenin ave., 61001 Kharkov, Ukraine
- P/P15** A UNIQUE DISTORTION IN $\text{K}_1/3\text{Ba}_2/3\text{AgTe}_2$. X-RAY DIFFRACTION DETERMINATION AND ELECTRONIC BAND STRUCTURE ANALYSIS OF ITS INCOMMENSURATELY MODULATED STRUCTURE, O. Gourdon, J. Hanko, F. Boucher, V. Petricek, M.-H. Whangbo, M. G. Kanatzidis and M Evain, Nantes, France
- P/P16** BLUE LUMINESCENCE OF Ce_{III} IN $\text{Ce}_3(\text{SiS}_4)_2\text{X}$ (X= Cl, Br, I) AND $\text{La}_{3-x}\text{Ce}_x(\text{SiS}_4)_2\text{I}$ (FROM $x = 0$ TO 1), D. Gout, R. Riccardi, G. Gauthier, F. Guillen, S. Jobic, A. Garcia, D. Huguenin, P. Macaudière, C. Fouassier and R. Brec, Nantes, France
- P/P17** CRYSTAL STRUCTURE OF TUNGSTEN BRONZE-TYPE $(\text{Ba}_{6-x}\text{La}_{3+2x}/3)\text{aTi}_{18-y}\text{Al}_y\text{O}_{54}$ ($a=1+y/36$) SOLID SOLUTION, D. Mercurio, M. Abou-Salama and J.P. Mercurio, Science des Procédés Céramiques et de Traitements de Surface, UMR 6638, Faculté des Sciences, Université de Limoges, 123, Avenue Albert-Thomas, 87060 Limoges Cedex, France
- P/P18** OBSERVATION OF THE COMPENSATION LAW DURING OXYGEN DIFFUSION IN PEROVSKITE MATERIALS, A.V Berenov, J.L. MacManus-Driscoll and J.A. Kilner, Department of Materials, Imperial College of Science Technology and Medicine, London SW7 2BP, UK
- P/P19** PARTIAL CARBONIZATION OF AROMATIC POLYIMIDE FILMS, M. Doyama, A. Ichida, Y. Inoue, Y. Kogure, T. Nozaki and S. Yamada, Teikyo University of Science & Technology, Japan
- P/P20** THE ELECTRONIC STRUCTURE OF STRONTIUM AND CALCIUM APATITES, A.P. Shpak, V. L. Karbovskij, L.P. Kluyenko, 36 Vernadsky str., Institute of Metal Physics, Ukrainian NAS, Kiev, 252142, Ukraine

- P/P21** STUDY OF V_2O_5 AS INSERTION MATERIAL FOR LITHIUM POLYMER BATTERIES, P. Andre, Ph. Deniard, R. Brec, Institut des Matériaux Jean Rouxel, Laboratoire de Chimie des Solides, 2 Rue de la Houssinière, BP 32229, 44322 Nantes Cedex 03, France
- P/P22** SYNTHESIS, CHARACTERIZATION AND LUMINESCENCE INVESTIGATION OF RE-DOPED CALCIUM VANADATE APATITES, S.G. Nedilko, O.V. Chukova, V.P. Scherbatskyi, Taras Shevchenko Kyiv National University, Kyiv, Ukraine, L.I. Ardanova, E.I. Getman, V.I. Marchenko, Donetsk State University, Donetsk, Ukraine
- P/P23** LUMINESCENCE OF THE OWN AND IMPURITY DEFECTS IN THE DIELECTRIC OXIDE CRYSTALS, S.G. Nedilko, O.V. Chukova, Taras Shevchenko Kyiv National University, Kyiv, Ukraine
- P/P24** TEXTURE ANALYSIS AS A NON-DESTRUCTIVE TOOL FOR CONTROLLING OF THE ELECTRODEPOSITED FUNCTIONAL LAYERS, J. Bonarski, E. Beltowska-Lehman, Z. Swiatek, Institute of Metallurgy and Materials Science, Polish Academy of Sciences, ul. Reymonta 25, 30-059 Krakow, Poland
- P/P25** RELATIONS BETWEEN CRYSTAL CHEMISTRY AND CRYSTALLIZATION OF FUNCTIONAL BORATE MATERIALS, N.I. Leonyuk, Lomonosov Moscow State University, Moscow 119899, Russia
- P/P26** STUDIES OF Mn^{2+} EMISSION SPECTRA IN PHOSPHORS BASED ON CRYSTAL CHEMISTRY APPROACH, L. Axelrud, V. Bondar, V. Davydov, O. Bondar, Lviv National University, Department of Physics, Department of Chemistry, 50 Dragomanov Str., 79005 Lviv, Ukraine
- P/P27** THE ELIMINATION OF SILICON HILLOCKS USING ALKALINE COMPLEXANT ETCHING SYSTEMS, C. Moldovan, R. Iosub, National Institute for Research and Development in Microtechnologies, Bucharest, Romania
- P/P28** CORRELATION OF STRUCTURE AND CHEMICAL COMPOSITION IN BINARY COMPOUNDS, K.D. Tovstyuk⁽¹⁾, N.K. Tovstyuk⁽²⁾, ⁽¹⁾State University "Lvivska Politechnika", Department of Electrophysics, Bandera str.12, 79000 Lviv, Ukraine, ⁽²⁾Lviv I.Franko National University, Department of Physics, 50 Dragomanov str., 79005 Lviv, Ukraine
- P/P29** CRYSTALLOCHEMICAL ESTIMATION OF ALTERNATIVE SUBSTRATES FOR EPITAXIAL THIN FILM GROWTH OF GALLIUM NITRIDE, E.A. Volkova, N.I. Leonyuk, Lomonosov Moscow State University, Moscow 119899, Russia
- P/P30** EXPERIMENTAL AND ELASTICITY-BASED THEORETICAL STUDY ON MBE GROWN PbSe/CaF₂/Si EPILAYERS, G. Breton⁽¹⁾, T. Maurice⁽²⁾, P. Masri⁽²⁾, S. Charar⁽²⁾ and M. Averous⁽²⁾; ⁽¹⁾Dept. of Physic, Centre for Electronics Materials and Devices, The Blakett Laboratory, Imperial College of Science Technology and Medicine, Prince Consort Road, SW7 2BW, UK; ⁽²⁾Groupe d'Etude des Semi-conducteurs, CNRS UMR 5650, Université Montpellier II, Place E. Bataillon, 34095 Montpellier cedex 05, France
- P/P31** CRYSTAL CHEMICAL PERAMETERS CONTROLLING Tc HTSC CUPRATES, L.M. Volkova, S.A. Polyschuk, F.E. Herbeck, Vladivostok, Russia
- P/P32** COLLOIDAL PROCESSING OF CORDIERITE-BASED GLASS-CERAMICS, Sen Mei, Juan Yang, JMF Ferreira, Department of Ceramics and Glass Engineering, UIMC, University of Aveiro, 3810-193, Portugal
- P/P33** CRYSTALLIZATION OF BORATE AND SILICATE SYSTEMS, N.I. Leonyuk, Lomonosov Moscow State University, Moscow 119899, Russia
- P/P34** THE NATURE OF THE NONSTOICHIOMETRY OF CHEMICAL COMPOUNDS, A.Ya. Gubenko, Moscow Institute of Electronics and Mathematics, ul. Kuusinena 25-62, Moscow 125252, Russia
- P/P35** MAGNETIC FIELD EFFECT ON PHOTOCONDUCTIVITY OF C60 CRYSTALS, Yu.I. Golovin, R.B. Morgunov and D.V. Lopatin, 33 Internatsionalnaya Street, Tambov State University, 392622 Tambov, Russia

- P/P36** *Propriétés optiques de l'alliage $Al_{80}Mn_{20}$ dans les deux phases: amorphe et quasi-cristalline*, A. Meddour, Centre Universitaire de Guelma, B.P 401, 24000,- Guelma, Algérie et J.M.Frigerio, Laboratoire d'optique des solides, 4 place Jussieu, tour 13-14, Paris Cedex 05, France
- P/P37** Ag SOLUBILITY ISOTHERMS IN ZnS AND IN CdSe, K. Lott, T. Nirk, M. Raukas, A. Õpik Tallinn Technical University, Ehitajate tee 5, 19086 Tallinn, Estonia, A. Vishnjakov, D.I. Mendelejev University of Chemical Technology of Russia, Miusskaya sq. 9, 125190 Moscow, Russia
- P/P38** THE STRUCTURAL NON-STABILITY IN LAYER CRYSTALS, O.A. Buryy, C.C. Tovstjuk, Semiconductors department, State University "Lvivska Polytechnica", Bandera street, 12, 290646, Lviv, Ukraine
- P/P39** PHASE AND ELEMENTAL COMPOSITION OF HP-HT C-BN STUDIED BY XRD, CEMS AND AES, J.A. Fedotova, Belarusian State University, F. Skorina av. 4, 220050 Minsk, Belarus, N.A. Shishonok, Institute of Solid State Physics and Semiconductors, P. Brovka str. 17, 220724 Minsk, Belarus, J. Stanek, Jagiellonian University, Raymonta str. 4, 30-059 Cracow, Poland, A.A. Leusenko, Institute of Solid State Physics and Semiconductors, P. Brovka str. 17, 220724 Minsk, Belarus
- P/P40** POLYMORPHOUS AND POLYMERIZATION TRANSFORMATIONS OF THE CRYSTAL PHOSPHATES IN THE FORMATION OF THE PHOSPHATE GLASS STRUCTURE, D.V. Romanova, Corporation "Energoresurs-invest", Physical-Mechanical Institute, Naukova 5-A, Lviv 290051, Ukraine
- P/P41** CRYSTAL CHEMISTRY OF SOLID SOLUTIONS WITH VARIABLE VALENCE COMPONENT, E. I. Rogacheva, O.N. Nashchekina, G.V. Gorne, Kharkov State Polytechnic University, 21 Frunze Street, 310002 Kharkov, Ukraine
- P/P42** ORDERING OF NON-STOICHIOMETRIC DEFECTS AND PHYSICAL PROPERTIES OF SEMICONDUCTOR PHASES, O.N. Nashchekina and E.I. Rogacheva, Kharkov State Polytechnic University, 21 Frunze Street, 310002 Kharkov, Ukraine
- P/P43** CREATION OF HIGHLY REFLECTIVE SILVER COATING ON THE BASIS OF POLYIMIDE FILMS, S. Kudaikulova⁽¹⁾, A. Syzdykova⁽¹⁾, G. Boiko⁽¹⁾, B. Zhubanov⁽¹⁾, N. Kamolova⁽²⁾, L. Shevtsova⁽²⁾, I. Razumovskaya⁽²⁾, M. Abadie⁽³⁾, V. Sidorov⁽⁴⁾, O. Figovsky⁽⁴⁾, ⁽¹⁾Institute of Chemical Sciences, 106 Valihanov, Alma-Ata, Kazakhstan; ⁽²⁾Physical Department of Moscow Pedagogical State University, Russia; ⁽³⁾University Montpellier II, France; ⁽⁴⁾Technion, Israel
- P/P44** INTERMOLECULAR INTERACTIONS AND DEPOSITION MECHANISM OF THE GaAsP/GaAs MULTILAYERS HETEROSTRUCTURES BY I-VPE METHOD, V. A. Voronin, S. K. Guba, State University Lviv Polytechnica, Bandera Str. 12, Lviv 290646, Ukraine; A. J. Kulikov, A.F. Ioffe Physico-Technical Institute National Academy of Science Russia, Polytechnicheskay Str. 26, Sanct. Peterburg 194021, Russia; M. A. Litvin Institute of Physics and Mechanics National Academy of Science Ukraine, Naukova Str. 5, Lviv 290601, Ukraine
- P/P45** INFLUENCE OF MAGNETIC FIELD ON SPIN-DEPENDENT PHYSICO-CHEMICAL PROCESSES BETWEEN STRUCTURAL DEFECTS IN $A_{II}B_{VI}$ SEMICONDUCTORS, Yu. I. Golovin, R.B. Morgunov, M. V. Badilevich, A.A. Baskakov, Tambov State University, 33 Internatsionalnaya st., 392622 Tambov, Russia
- P/P46** DEFECTS INDUCED BY TRANSITION METALS (Cu, Ag) IN ZINC SELENIDE, V. Kasiyan, D. Nedeoglo, N. Nedeoglo, Department of Semiconductor Physics, State University of Moldova, 60 A.Mateevich str., 2009 Kishinau, Moldova
- P/P47** ELLIPSOMETRIC CHARACTERIZATION OF SURFACE DUCTILE-BRITTLE TRANSITION IN METALLIC FUNCTIONAL MATERIALS, L. Poperenko, I. Yurgelevych, Taras Shevchenko University, 64 Volodymyrska st., 01033 Kyiv, Ukraine
- P/P48** ANALYSIS OF INTERMOLECULAR INTERACTION IN $Ge_{1-x}Pb_xTe$ MELTS ON THE BASIS OF TEMPERATURE CONCENTRATION DEPENDENCIES OF VISCOSITY, V.G. Pavlov, V.M. Glazov. Moscow Institute of Electronic Engineering (Technical University), 103527 Moscow, Russia

- P/P49** STRUCTURAL CHANGES ON A SURFACE ON PHOTSENSITIVE LAYERS FORMING, V.G. Pavloy, S.N. Novikov, Moscow Institute of Electronic Engineering, Technical University, 103527 Moscow, Russia
- P/P50** ANTIMONY DOPANT REDISTRIBUTION DURING COPPER SILICIDE FORMATION, M. Benkerri, R. Halimi and A. Bouabellou, Département et Unité de Recherche de Physique, Université Mentouri, 25000 Contantine, Algérie, A. Mosser, IPCMS-GSI, 23 rue du Loess, 67037 Strasbourg, France and J.P. Sens, CNRS, 23 rue du Loess, 67037 Strasbourg, France
- P/P51** SELF-TUNNING MOCVD APPROACH FOR THE GROWTH OF VERY SMOOTH $\text{La}_{1-x}\text{Pb}_x\text{MnO}_3$ THIN FILMS, A.A. Bosak, S.V. Samoilenkov, O.Yu. Gorbenko, A.N. Botev, A.R. Kaul, Chemistry Department, Moscow State University, 119899 Moscow, Russia
- P/P52** LATTICE STRAIN IN THE EITAXIAL THIN FILMS OF PEROVSKITES, O.Yu. Gorbenko, M.A. Novozhilov, I.E. Graboy, V.A. Amelichev, A.R. Kaul, Inorganic Chemistry Division, MSU, 119899 Moscow, Russia, B. Güttler, PTB, Bundesallee 100, 38116 Braunschweig, Germany, L.M. Belova, N.A. Babushkina, RC Kurchatov Institute, 123182 Moscow, Russia and H.W. Zandbergen, National Centre for HREM, Laboratory of Materials Science, Delft University of Technology, Rotterdamseweg 137, 2628 AL Delft, The Netherlands
- P/P53** STRESS – INDUCED TRANSFORMATION OF MICRODEFECTS IN NEUTRON IRRADIATED CZOCHRALSKI SILICON, J. Bak-Misiuk, J. Trela, Insitute of Physics PAS, Al. Lotnikow 46, 02-668 Warsaw, Poland, C.A. Londos, University of Athens, Athens 157 84, Greece, A. Misiuk, H.B. Surma, Institute of Electron Technology, 02-668 Warsaw, Poland
- P/P54** IMPROVEMENT OF OPTICAL AND LUMINESCENT CHARACTERISTICS AND RADIATION HARDNESS OF PBWO4 CRYSTALS BY DOPING WITH Y, Sb AND Mo IMPURITIES, S. Burachas, A. Apanassenko, B. Grinyov, V. Ryshikov, K. Katrunv, Institute for Single Crystals, 60 Lenin Ave., 61001 Kharkov, Ukraine and M. Ippolitov, V. Manko, Kurchatov National Center, sq.1, 123182 Moscow, Russia and G. Tamulaitis, Vilnius University, 24 Naugarduko, 2006 Vilnius, Lithuania
- P/P55** DIELECTRIC PROPERTIES OF NANOCRYSTALLINE AIN IN RESPECT TO ITS CRYSTAL CHEMISTRY, A.R. Olszyna, A. Sokolowska, Faculty of Materials Science & Engineering, Warsaw University of Technology, Wolowska 141, 02-507 Warsaw, Poland and J. Szmidt, A. Werbowy, M. Bakowski, Warsaw University of Technology, Poland
- P/P56** WATER CONFINED IN SILICA GEL POWDER, X-RAY DIFFRACTION STUDY, A. Fouzri, R. Dorbez-Sridi, M. Omezzine, Laboratoite de Physico-Chimie Structurale, Département de Physique, Faculté des Sciences de Monastir, avenue de l'Environnement, 5000 Monastir, Tunisie
- P/P57** THEORETICAL AND EXPERIMENTAL INVESTIGATION ON ELASTIC PROPERTIES OF SUBSTOICHIOMETRIC TITANIUM NITRIDES: THE INFLUENCE OF LATTICE VACANCIES, M. Guemmaz⁽¹⁾, J-C. Parlebas⁽²⁾, A. Mosser⁽³⁾ and A. Bocenna⁽¹⁾, ⁽¹⁾Département de Physique, Université de Sétif, 19000 Sétif, Algérie, ⁽²⁾IPCMS-GEMME, 23 rue du Loess, 67037 Strasbourg Cedex, France, ⁽³⁾IPCMS-GSI, 23 rue du Loess, 67037 Strasbourg Cedex, France
- P/P58** CHARACTERIZATION OF NEW ANIONIC CONDUCTORS $\text{Bi}_2\text{Ge}_{1-x}\text{V}_x\text{O}_{5+x/2}$ ($0 \leq x \leq 0.65$) AND $\text{Bi}_2\text{Si}_{1-x}\text{V}_x\text{O}_{5+x/2}$ ($0 \leq x \leq 0.3$), O. Joubert, M. Caldes, L. Brohan and M. Ganne, Institut des Matériaux Jean Rouxel, Laboratoire de Chimie des Solides, UMR CNRS N°6502, B.P. 32 229, 2 rue de la Houssinière, 44 322 Nantes Cedex 03, France

Thursday June 1, 2000

Jeudi 1er juin 2000

Morning

Matin

Session VI

- P-VI.1** 8:30 **Invited** STRUCTURAL AND ELECTROCHEMICAL FEATURES OF FAST OXIDE ION CONDUCTORS, **J.-C. Boivin**, Laboratoire de Cristallographie et Physicochimie du Solide - UPRESA CNRS 8012, Ecole Nationale Supérieure de Chimie de Lille, Université des Sciences et Technologies de Lille, BP 108, 59652 Villeneuve d'Ascq Cedex, France
- P-VI.2** 9:00 **Invited** STRUCTURE/ELECTROCHEMICAL PROPERTIES RELATIONSHIPS OF BATTERY MATERIALS, **A. Delahaye-Vidal**, J.-M. Tarascon, Amiens, France
- P-VI.3** 9:30 **Invited** THE CONTROL OF STRUCTURE AND PROPERTIES OF VANADIUM AND MANGANESE OXIDES THROUGH TAILORED SOFT SYNTHESIS, **M.S. Whittingham** and P.Y. Zavalij, Institute for Materials Research and Dept. of Chemistry, SUNY at Binghamton, Binghamton, NY 13902-6016, USA
- 10:00 **BREAK**

Session VII

- P-VII.1** 10:30 **Invited** STRUCTURE SYSTEMATICS OF MULTINARY SEMICONDUCTING COMPOUNDS, **K. Bente**, Institut für Mineralogie, Kristallographie und Materialwissenschaft der Universität Leipzig, Germany
- P-VII.2** 10:45 PHASE DIAGRAM STUDIES IN THE SYSTEM $\text{La}_2\text{O}_3\text{-SrO-MgO-Ga}_2\text{O}_3$, **P. Majewski**, M. Rozumek, F. Aldinger, Max-Planck-Institut für Metallforschung, Heisenbergstr. 5, 70569 Stuttgart, Germany
- P-VII.3** 11:00 ELECTROLYTIC DECOMPOSITION STRUCTURES IN THIN FILMS OF THE SOLID IONIC CONDUCTOR CuBr, **C. Lambert**⁽¹⁾, **J.-M. Debierre**⁽¹⁾, **M. Bendahan**⁽¹⁾, **P. Lauque**⁽¹⁾, **J.L. Seguin**⁽¹⁾ and **P. Knauth**⁽²⁾, ⁽¹⁾Laboratoire de Microélectronique et Matériaux de Provence (L2MP-CNRS), 13393 Marseille Cedex 20, ⁽²⁾Laboratoire des Matériaux Divisés, Revêtements, Electrocéramiques (MADIREL-CNRS), 13331 Marseille Cedex 3, France
- P-VII.4** 11:15 ELECTROCHEMICAL PROPERTIES OF CuBr-TiO₂ COMPOSITE MATERIALS, **P. Knauth**, Y. Massiani, Laboratoire des Matériaux Divisés, Revêtements, Electrocéramiques, (MADIREL), Université de Provence-CNRS, Centre St Charles, Case 26, 13331 Marseille Cedex 3, France
- P-VII.5** 11:30 PREPARATION AND CONDUCTIVE MECHANISMS OF $\text{Zr}_{1-x}\text{Y}_x\text{O}_{2-0.5x}$ THIN FILMS BY PECVD, **Q. Fang**⁽¹⁾, **J.-Y. Zhang**⁽²⁾, **D.-K. Peng**⁽²⁾ and **G.Y. Meng**⁽²⁾, ⁽¹⁾Department of Materials, Imperial College, Prince Consort Road, London SW7 2BP, UK; ⁽²⁾Department of Materials Science and Engineering, University of Science and Technology of China, Hefei 23600, P.R. China
- P-VII.6** 11:45 CORRELATION BETWEEN THE MICROSCOPIC AND MACROSCOPIC CHARACTERISTICS OF SnO_2 THIN FILMS, **A. Lopes**⁽¹⁾, **P. Nunes**⁽¹⁾, **P. Vilarinho**⁽²⁾, **R. Monteiro**⁽¹⁾, **E. Fortunato**⁽¹⁾, **R. Martins**⁽¹⁾, ⁽¹⁾CENIMAT, Department of Materials Science, Faculty of Science and Technology, New University of Lisbon and CEMOP-UNINOVA, 2825-114 Caparica, Portugal, ⁽²⁾Department of Ceramics and Glass Engineering / UIMC, University of Aveiro, 3810-193 Aveiro, Portugal
- P-VII.7** 12:00 OPTICAL AND ELECTRICAL PROPERTIES OF METAL-FULLERENE THIN FILMS, **L.A. Matveeva**, Institute of Semiconductor Physics, 45 Nauki av., 252028 Kiev, Ukraine, **E.M. Shpilevsky** and **M.E. Shpilevsky**, Belarusian State University, 4 Skorina av., 220050 Minsk, Belarus

P-VII.8 12:15

EFFECT OF DIFFERENT DOPANTS ON THE PROPERTIES OF ZnO THIN FILMS,
P. Nunes⁽¹⁾, E. Fortunato⁽¹⁾, P.Vilarinho⁽²⁾, R. Martins⁽¹⁾, ⁽¹⁾CENIMAT, Department of
Materials Science, Faculty of Sciences and Technology, New University of Lisbon and
CEMOP-UNINOVA, 2825-114 Caparica, Portugal, ⁽²⁾Department of Ceramics and Glass
Engineering/UIMC, University of Aveiro, 3810-193 Aveiro, Portugal

12:30

LUNCH

Thursday June 1, 2000

Jeudi 1er juin 2000

Afternoon

Après-midi

Session VII

- P-VIII.1** 14:00 **Invited** TOWARD THE DESIGN OF TAILOR MADE MICROPOROUS COMPOUNDS, **G. Ferey**, Institut Lavoisier, UMR 8637 CNRS, Université de Versailles, St Quentin, 45 avenue des Etats Unis, 78035 Versailles Cedex, France
- P-VIII.2** 14:30 **Invited** ORDERED POROUS MATERIALS : COMPOSITION AND TOPOLOGY CONTROL THROUGH THE CHEMISTRY, **D. Beltran-Porter**, Institut de Ciència dels Materials, Universitat de València, (ICMUV), P Box 2085, 46071 València, Spain
- P-VIII.3** 15:00 THE TAILORING OF ZEOLITE SYNTHESIS BY THE HIGH PRESSURE HYDROTHERMAL METHOD. INSTANCE: SYNTHESIS OF NATURAL 6-RING ZEOLITES WITH DIFFERENT VOID SYSTEMS, **H. Ghobarkar⁽¹⁾**, **O. Schäf⁽²⁾**, ⁽¹⁾Institute for Mineralogy, Free University of Berlin, Takustr. 6, 14195 Berlin, Germany, ⁽²⁾Institute for Chemistry and Biochemistry, University of Greifswald, Soldmannstr. 23, 17489 Greifswald, Germany
- P-VIII.4** 15:15 HYDROXYAPATITE COATINGS BY THE THERMAL ACTIVATION OF A POLYMERIC SOL, **M. Manso⁽¹⁾**, **M. Langlet⁽³⁾**, **C. Jiménez⁽¹⁾**, **P. Herrero⁽²⁾**, **J.M. Martínez-Duart⁽¹⁾**, ⁽¹⁾Departamento de Física Aplicada, Universidad Autónoma de Madrid, 28049 Madrid, Spain; ⁽²⁾Instituto de Ciencia de Materiales de Madrid ICMM- CSIC, 28049 Madrid, Spain, ⁽³⁾Laboratoire des Matériaux et du Génie Physique, Rue de la Houille Blanche, BP 46, 38402 Saint Martin d'Hères, France
- P-VIII.5** 15:30 OPTIMIZATION OF (Ti,Al)N HARD COATINGS BY A COMBINATORIAL APPROACH, **R. Cremer** and **D. Neuschütz**, Lehrstuhl für Theoretische Hüttenkunde, RWTH Aachen, 52056 Aachen, Germany
- P-VIII.6** 15:45 IMPORTANCE OF SOFT SOLUTION PROCESSING FOR ADVANCED BaZrO₃ MATERIALS, **B. Robertz**, **F. Boschini**, **R. Cloots** and **A. Rulmont**, University of Liège, Laboratoire de Chimie Inorganique Structurale, Chemistry Institute B6, Sart-Tilman, 4000 Liège, Belgium.

16:00

BREAK

Session IX

- P-IX.1** 16:30 DENSIFICATION AND PROPERTIES OF NICUZN FERRITES SINTERED WITH GLASS ADDITIVES, **Wang Yuh-Ruey**, National Taipei University of Technology, Department of Materials & Mineral Resources Engineering, Taiwan
- P-IX.2** 16:45 NANO-POROUS TiN THIN FILMS DEPOSITED BY REACTIVELY SPUTTERING METHOD, **Q. Fang⁽¹⁾**, **J-Y Zhang⁽²⁾**, ⁽¹⁾Department of Materials, Imperial College, Prince Consort Road, London SW7 2BP, UK, ⁽²⁾Department of Electrical and Electronic Engineering, University College London, London WC1E 7JE, UK
- P-IX.3** 17:00 OXYGEN-RELATED MICRO-DEFECTS IN CZOCHRALSKI SILICON ANNEALED AT ENHANCED STRESS CONDITIONS, **A. Misiuk**, **H.B. Surma**, Institute of Electron Technology, Al. Lotnikow 46, 02-668 Warsaw, Poland, **J. Bak-Misiuk**, Institute of Physics PAS, 02-668 Warsaw, Poland; **M. Lopez** and **A. Romano-Rodriguez**, Barcelona Universitat, 08028 Barcelona, Spain
- P-IX.4** 17:15 INVESTIGATION OF NANOCRYSTALLINE Fe₃O₄ POWDER, **I. Nedkov**, **K. Krejov**, **T. Merodiiska**, **L. Milenova**, Institute of Electronics, BAS, 72 Tzarigradsko Shaussee, 1784 Sofia, Bulgaria

- P-IX.5** 17:30 SCINTILLATION AND MECHANICAL PROPERTIES OF CsI(Tl,Br) CRYSTALS, B.G. Zaslavsky, S.I. Vasetsky, A.M. Kudin, V.Yu. Gres', L.N. Shpilinskaya, T.A. Charkina, L.V. Kovaleva, A.Yu. Boyarintsev, Institute for Single Crystals, 60 Lenin ave., 310001, Kharkiv, Ukraine
- P-IX.6** 17:45 NONSTOICHIOMETRY AND CRYSTAL CHEMISTRY OF TERNARY SEMICONDUCTOR PHASES, E.I. Rogacheva, Kharkov State Polytechnic University, 21 Frunze Street, 310002 Kharkov, Ukraine
- P-IX.7** 18:00 CRYSTAL GROWTH AND TRANSPORT PROPERTIES OF 4-LEG SPIN-LADDER COMPOUND $\text{La}_2\text{Cu}_2\text{O}_5$: OCCURRENCE OF INSULATOR-METAL TRANSITION, C. Sekar, T. Watanabe and A. Matsuda, NTT Basic Research Laboratories, 3-1 Wakamiya Morinosato, Atsugi-shi, Kanagawa 243-0198, Japan and Y. Zenitani and J. Akimitsu, Dept. of Physics, Aoyama-Gakuin University, 6-16-1 Chitosedai, Setagaya-ku, Tokyo 157-8572, Japan
- P-IX.8** 18:15 THE EFFECTS OF PROCESSING ON THE PHYSICAL PROPERTIES OF ALUMINA/GLASS COMPOSITES, R.C.C. Monteiro and M.M.R.A. Lima, CENIMAT, Faculty of Sciences and Technology, New University of Lisbon, Quinta da Torre, 2825 114 Monte de Caparica, Portugal

Friday June 2, 2000

Vendredi 2 juin 2000

Morning

Matin

Session X

- P-X.1** 8:30 **Invited** STACKING FAULT ANALYSIS IN LAYERED MATERIALS, **H. Dittrich**, Center for Solar Energy and Hydrogen Research, Helmholtzstr. 8, 89081 Ulm, Germany
- P-X.2** 9:00 **Invited** DOPING MECHANISMS AND HIGH PERMITTIVITY CHARACTERISTICS OF RARE EARTH DOPED BARIUM TITANATE CERAMICS, F. D. Morrison, A.G. Mould, **D.C. Sinclair** and A.R. West, Department of Engineering Materials, Sir Robert Hadfield Building, University of Sheffield, Mappin Street, Sheffield, S1 3JD, UK
- P-X.3** 9:30 A DISCUSSION ON THE CRYSTAL STRUCTURES OF THE COMPLEX PEROVSKITES $\text{PbFe}_{0.5}\text{Nb}_{0.5}\text{O}_3$ AND $\text{PbFe}_{0.5}\text{Ta}_{0.5}\text{O}_{3z}$. **N. Lampis**, A. Geddo Lehmann, Dipartimento di Fisica e INFN, Cittadella Universitaria, Strada Provinciale Monserrato-Sestu Km 0.700, 09042 Monserrato (CA), Italy and Ph. Sciau CEMES-CNRS, 29 rue Jeanne Marvig, BP 4347, 31055 Toulouse cedex, France
- P-X.4** 9:45 SBN THIN FILMS DEPOSITED BY PLD ON VARIOUS SUBSTRATES. J.R. Duclère, **M. Guilloux-Viry**, A. Perrin, LCSIM UMR CNRS 6511, Université de Rennes 1, Campus de Beaulieu, 35042 Rennes Cedex, France and C. Clerc, F. Lalu, CSNSM, 91405 Orsay Campus, France and S. Zanetti, V. Bouquet, E. Longo, LIEC, UFSC, P.O. Box 676, 13 565-905 Sao Carlos - SP, Brazil

10:00

BREAK

Session XI

- P-XI.1** 10:30 INFLUENCE OF THE POST TREATMENT ON THE PROPERTIES OF ZnO THIN FILMS, **P. Nunes**⁽¹⁾, E. Fortunato⁽¹⁾, P. Vilarinho⁽²⁾, R. Martins⁽¹⁾, ⁽¹⁾CENIMAT, Department of Materials Science, Faculty of Sciences and Technology, New University of Lisbon and CEMOP-UNINOVA, 2825-114 Caparica, Portugal, ⁽²⁾Department of Ceramics and Glass Engineering/ UIMC, University of Aveiro, 3810-193 Aveiro Portugal
- P-XI.2** 10:45 INFLUENCE OF THE DEPOSITIONS CONDITIONS ON THE GAS SENSITIVITY OF ZINC OXIDE THIN FILMS DEPOSITED BY SPRAY PYROLYSIS, **P. Nunes**⁽¹⁾, **E. Fortunato**⁽¹⁾, P. Vilarinho⁽²⁾, R. Martins⁽¹⁾, ⁽¹⁾CENIMAT, Department of Materials Science, Faculty of Sciences and Technology, New University of Lisbon and CEMOP-UNINOVA, 2825 Caparica, Portugal, ⁽²⁾Department of Ceramics and Glass Engineering / UIMC, University of Aveiro, 3810-193 Aveiro, Portugal
- P-XI.3** 11:00 STRUCTURAL MODULATION IN $\text{Sr}_{1.4}\text{Ta}_{0.6}\text{O}_{2.9}$, **P. Deniard**, M.T. Caldes, R. Brec, Institut des Matériaux Jean Rouxel, UMR 6502, 2 rue de la Houssinière, BP 32229, 44322 Nantes cedex 03 France, X.D. Zou, Structural Chemistry, Stockholm University, S-10691 Stockholm, Sweden and R. Marchand, N. Diot, Laboratoire des verres et céramiques, UMR 6512, Université de Rennes I, 35042 Rennes cedex, France
- P-XI.4** 11:15 GROWTH AND STUDY OF THE $\text{Ba}_{1-x}\text{K}_x\text{BiO}_{3-y}$ SINGLE CRYSTALS: CRYSTAL STRUCTURE AND CATION COMPOSITION CORRELATION, A.G. Soldatov, S.V. Shiryaev, S.N. Barilo, Institute of Solid State and Semiconductor Physics, Nat. Acad. Sci. of Belarus, P. Brovka st. 17, 220072 Minsk, Belarus, **M. Braden**, Laboratoire Leon Brillouin, CE-Saclay, CEA, 91191 Gif sur Yvette, France
- P-XI.5** 11:30 CRYSTALLOGRAPHIC CONTROL OF THE BARRIER STRUCTURE IN ZINC OXIDE VARISTORS, **C. Leach**, Manchester Materials Science Centre, University of Manchester and UMIST, Manchester M1 7HS, UK.
- P-XI.6** 11:45 STRUCTURE AND OPTICAL PROPERTIES OF $(\text{Ga}_{0.4}\text{In}_{0.6})\text{Se}_3$ SINGLE CRYSTAL **P. Lupshak**, V.P. Savchyn, Ya. M. Fijala, Physical Department, Lviv Ivan Franko State University, Dragomanov Street 50, 79005 Lviv, Ukraine, G. Melnyk, Anorg.-Chem. Institut, Westfälische Wilhelms-Universität Münster, Wilhelm-Klemm Strasse 8, 48149 Münster, Germany

- P-XI.7** 12:00 THE STRUCTURE OF BOUNDARY LAYERS IN CRYSTAL GROWTH IN-SITU MICROPROBE: KDP AND DKDP, X.L. Yu, J.L. You*, Y. Wang, Zh.X. Cheng, J.J. Wang*, H.T. Zhou*, B.K. Yu*, Sh.J. Zhang, D.L. Sun, G.Ch. Jiang, The State Key Laboratory of Crystal Materials, Shandong University, Jinan 250100, P. R. China; *Addresses are not presented here
- P-XI.8** 12:15 BBO CRYSTAL GROWTH IN AZIMUTHALLY DISTRIBUTED HEAT FIELDS, A.E. Kokh, N.G. Kononova, V.N. Popov, P.W. Mokruchnikov, Institute of Mineralogy and Petrography, Novosibirsk, Russia
- 12:30 **LUNCH**

Friday June 2, 2000

Vendredi 2 juin 2000

Afternoon

Après-midi

Session XII

- P-XII.1** 14:00 SOLUBILITY INVESTIGATION FOR TI ALLOYS, V. Danylenko, A. Storchak-Fedyuk, FIPMS, Kyiv, Ukraine
- P-XII.2** 14:15 GENERAL CONCEPT OF THERMODYNAMICAL SYSTEMS DESCRIPTION, V. Danylenko, FIPMS, Kyiv, Ukraine
- P-XII.3** 14:30 INFLUENCE OF THE DEFECT INTERACTION ON THEIR DIFFUSIVITIES IN INTERMETTALICS, M. Ganchenkova, A. Nazarov, Dept. Materials Science, Moscow Engineering Physics Institute, 31 Kashirskoe shosse, 115409 Moscow, Russia
- P-XII.4** 14:45 FORMATION OF METASTABLE PHASES IN Al/Ge BY THERMAL ANNEALING PROCESS, G. Raghavan, S. Chandra, S. Tripura Sundari and A.K. Tyagi, Materials Science Division, Indira Gandhi Centre for Atomic Research, Kalpakkam 603 102, Tamil Nadu, India
- P-XII.5** 15:00 GRAIN BOUNDARY PHASE TRANSITIONS AND PHASE DIAGRAMS, B.B. Straumal^(1,2), W. Gust⁽¹⁾, ⁽¹⁾Institut fuer Metallkunde, Seestr. 92, 70174 Stuttgart, Germany, ⁽²⁾Institute of Solid State Physics, Russian Academy of Sciences, Chernogolovka, Moscow District 142432, Russia
- P-XII.6** 15:15 SIMULATION OF COARSENING KINETICS OF MISFITTING PARTICLES IN BINARY SYSTEMS, A.V. Nazarov, M.G.Ganchenkova, Dpt. of Materials Science, Moscow Engineering Physics Institute, 31 Kashirskoe shosse, Moscow 115409 Russia and A.A. Mikheev, Dpt. of Metal Physics, I.P. Bardin Central Res. Institute of Ferrous Metallurgy, 9/23, 2-nd Baumanskaya, Moscow 107005, Russia
- P-XII.7** 15:30 EPITAXIAL PHASE STABILIZATION IN THIN FILMS OF COMPLEX OXIDES, A.R. Kaul, O.Yu. Gorbenko, I.E. Graboy, S.V. Samoilenkov, M.A. Novojilov, A.A. Bosak, Chemistry Department, Moscow State University, 119899 Moscow, Russia, H.W. Zandbergen, National Centre for HREM, Laboratory of Materials Science, Delft University of Technology, Rotterdamseweg 137, 2628 AL Delft, The Netherlands, G. Wahl, IOPW, TU Braunschweig, Bienroder Weg 53, 38108 Braunschweig, Germany
- P-XII.8** 15:45 MAGNETOSENSITIVE PHYSICOCHEMICAL PROCESSES INFLUENCING PLASTICITY OF POLYMERS AND FULLERITES, Yu.I. Golovin, R.B. Morgunov, S.Yu. Liksutin, Tambov State University, 33 Internatsionalnaya st., 392622 Tambov, Russia
- 16:00 **BREAK**

Session XIII

- P-XIII.1** 16:30 UNIVERSALITY OF DISLOCATION MECHANISMS IN SCALING OF ELECTRICAL, MAGNETIC AND MECHANICAL PROPERTIES OF SOLIDS, V. P. Kisel, Inst. of Solid State Physics, RAS, 142432 Chernogolovka, Moscow distr., Russia
- P-XIII.2** 16:45 INFLUENCE "LENGTH" INTERATOMIC INTERACTION ON LONG- AND SHORT-RANGE ORDERED AXES IN ORDERING THIN FILMS, M.D. Starostenkov, O.V. Andruhova, A.V. Borissov, General Physics Dept, Altai State Technical University, Barnaul 656099, Russia
- P-XIII.3** 17:00 THE THERMODYNAMICAL ANALYSES OF LAYERED STRUCTURES, C.C. Tovstjuk, Semiconductors Department, State University "Lvivska Polytechnica", Bandera street 12, 290646 Lviv, Ukraine

- P-XIII.4** 17:15 INTERRELATION BETWEEN THE PROPERTIES AND KINETIC PROCESSES IN MATERIALS, A. Ya. Gubenko, Moscow Institute of Electronics and Mathematics, ul. Kuusinenena 25-62, Moscow, Russia
- P-XIII.5** 17:30 MORPHOLOGY AND DOPING PERCULIARITIES OF WHISKERS USED AS SEMICONDUCTOR MICROSENSORS, R.I. Baitsar, S.S. Varshasva, I.P. Ostrovkii, State University "Lvivska polytechnika", Lviv, Ukraine
- P-XIII.6** 17:45 ATOMIC STRUCTURE AND REORGANISATION OF TILT GRAIN BOUNDARY IN Al, M.D. Starostenkov, B.F. Demyanov, E.A. Kuklina, General Physics Dept, Altai State Technical University, Barnaul 656099, Russia
- P-XIII.7** 18:00 INTERCALATION INFLUENCE ON THE LAYERED CRYSTAL ELECTRON PROPERTIES, B.A. Lukiyanets⁽¹⁾, N.K. Tovstyuk⁽²⁾, ⁽¹⁾State University "Lvivska Politechnika", Department of Electrophysics, Bandera str.12, Lviv 79000, Ukraine, ⁽²⁾Lviv I.Franko National University, Department of Physics, 50 Dragomanov str., Lviv 79005, Ukraine
- P-XIII.8** 18:15 ENERGY OF CRYSTAL LATTICES AND FASTNESS OF BONDS OF ATOMS IN SULPHIDES OF METALS, E.I. Perov, E.P. Irkhina, A.B. Shipunov, Department of Chemistry, Altai State University, Dimitrov Street, 66, 656099 Barnaul, Russia

END OF SYMPOSIUM P.