



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

SYMPOSIUM N

Ultrathin Epitaxial Oxides

Symposium Organizers:

Gaetano Granozzi, University of Padova, Italy

Hans-Joachim Freund, Fritz-Haber-Institut MPG, Berlin, Germany

Scott Chambers, Pacific Northwest National Laboratory, Richland, USA

Symposium support :

Consiglio Nazionale delle Ricerche, Italy
Istituto di Metodologie Inorganiche e dei Plasmi
Sezione Materiali Speciali

FHI-MPG, Germany

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Papers will be published in Thin Solid Films

E-MRS 2001 SPRING MEETING

SYMPOSIUM N

Tuesday, June 5, 2001
Mardi 5 juin 2001

Morning
Matin

9:00 Welcome and opening remarks, H.J. Freund

Session I: Growth and Characterization I
Session Chair: G. Pacchioni

N-I1 9:15 Invited GROWTH AND RELAXATION MECHANISMS OF OXIDE FILMS ON fcc(001) METALS, **J. Wollschläger**, Institut für Festkörperphysik, Universität Hannover, Appelstr.2, 30167 Hannover, Germany

N-I2 9:55 ELECTRONIC AND MORPHOLOGICAL PROPERTIES OF CRYSTALLINE SILICA EPILAYERS ON Mo(112), **T. Schroeder**, J. Giorgi, N. Magg, M. Bäumer and H.-J. Freund, Fritz-Haber-Institut der Max-Planck-Gesellschaft, Abt. Chemische Physik, Faradayweg 4 - 6, 14195 Berlin, Germany

N-I3 10:20 OXIDATION OF ALLOY SURFACES STUDIED BY SURFACE SENSITIVE X-RAY DIFFRACTION, **A. Stierle**, R. Streitl, F. Renner, H. Dosch, Max-Planck-Institut für Metallforschung, Heisenbergstr. 1, 70569 Stuttgart, Germany, R. Franchy, Institut für Grenzflächenforschung und Vakuumphysik am Forschungszentrum Jülich, 41223

10:45 **BREAK**

N-I4 11:15 Invited ULTRATHIN OXIDE FILMS ON METALS: NEW PHYSICS AND NEW CHEMISTRY ? **S. Altieri**, INFN and Physics Department, via G. Campi 213/a, 41100 Modena, Italy

N-I5 11:55 STRUCTURAL STUDY OF THIN MgO LAYERS ON Ag(001) PREPARED BY EITHER MBE OR SPUTTER DEPOSITION, **S. Valeri**, S. Altieri, A. di Bona and T. Moia, INFN and Dipartimento di Fisica, via Campi 213/a, 41100-Modena, Italy

N-I6 12:20 TEMPERATURE DEPENDENCE OF THE GROWTH OF GALLIUMOXIDE ON CoGa(100), F.M. Pan, **L.K. Verheij**, R. David and R. Franchy, Institut für Schichten und Grenzflächen, Forschungszentrum Jülich, Postbox 1913, 52425 Jülich, Germany

12:45 **LUNCH**

Tuesday, June 5, 2001
Mardi 5 juin 2001

Afternoon
Après-midi

Session II: Growth and Characterization II
Session Chair: H.J. Freund

- N-II.1** 14:30 Invited GROWTH AND STRUCTURAL CHARACTERISATION OF VANADIUM OXIDE ULTRATHIN FILMS ON TiO₂(110), **M. Sambì**, M. Della Negra, G. Granozzi, Dipartimento C.I.M.A., Università di Padova, via Loredan 4, 35131 Padova, Italy
- N-II.2** 15:10 LAYER DEPENDENT EVOLUTION OF OXIDE STRUCTURES: VANADIUM OXIDE THIN FILM GROWTH ON Pd(111), **S. Surney**, M.G. Ramsey, F.P. Netzer, Institut für Experimentalphysik, Karl-Franzens-Universität Graz, 8010 Graz, Austria, G. Kresse, Institut für Materialphysik, Universität Wien 1090 Wien, Austria
- N-II.3** 15:35 THIN FILM TiO₂(110) ON Ni(110), **T.V. Ashworth**, Z. Chang, G. Thornton, Surface Science Research Centre and Department of Chemistry, University of Manchester, Manchester M13 9PL, UK
- N-II.4** 16:00 COMPOSITION AND STRUCTURE OF ULTRATHIN VANADIUM OXIDE LAYERS DEPOSITED ON SnO₂(110) INVESTIGATED BY XPS, LEIS, XPD AND STM, **A. Atrej**, Dip. di Scienze e Tecnologie Chimiche e dei Biosistemi, Università di Siena, 53100 Siena, Italy, A. Sgobaro, B. Cortigiani, U.Bardi and G. Rovida, Dipartimento di Chimica, Università di Firenze, 50121 Firenze, Italy
- 16:25 **BREAK**
- N-II.5** 17:00 Invited MBE GROWTH AND PROPERTIES OF EPITAXIAL Co FERRITE, **S.A. Chambers**, Pacific Northwest National Laboratory, PO Box 999, MS K8-93, Richland WA 99352, USA, R.F.C. Farrow, S. Maat, M. Toney and L. Folks, IBM Almaden Research Center, San Jose CA, USA, T. Trainor and G.E. Brown, Jr., Stanford University, Stanford CA, USA
- N-II.6** 17:40 CERIUM OXIDE LAYERS ON Pt(111): A SCANNING TUNNELING MICROSCOPY STUDY, **U. Berner** and K.Schierbaum, Institute of Condensed Matter Physics, Dept. of Materials Science, University of Duesseldorf, Germany

Wednesday, June 6, 2001
Mercredi 6 juin 2001

Afternoon
Après-midi

Session III: Structure and Reactivity I
Session Chair: G. Granozzi

- N-III.1** 14:30 Invited INTERACTION OF ADSORBATES WITH OXIDE SURFACES, **H. Kuhlbeck** and H.-J. Freund, Fritz Haber Institute of the Max Planck Society, Chemical Physics Department, Faradayweg 4-6, 14195 Berlin, Germany
- N-III.2** 15:10 SURFACE DEFECTS OF MgO THIN FILMS AND CHEMICAL ACTIVITY OF SUPPORTED METALS, **G. Pacchioni**, L. Giordano, Dipartimento di Scienza dei Materiali, Università Milano-Bicocca and Istituto Nazionale per la Fisica della Materia, Via R. Cozzi 53, 20125 Milano, Italy, A.M. Ferrari, Dipartimento di Chimica IFM, Università di Torino, via P. Giuria 5, 10125 Torino, Italy, U. Heiz, Institut de physique de la Matière Condensée, Université de Lausanne, 1015 Lausanne, Switzerland
- N-III.3** 15:35 PREPARATION AND CHARACTERIZATION OF POTASSIUM PROMOTED IRON OXIDE MODEL CATALYST FILMS, W. Ranke, Y. Joseph, **G. Ketteler**, C. Kuhrs and W. Weiss, Fritz-Haber-Institut der MPG, Faradayweg 4-6, 14195 Berlin, Germany
- N-III.4** 16:00 FTIR SPECTROSCOPY OF H₂, CO/H₂, C₂H₄/H₂ AND CH₄, CO/CH₄, CH₄/H₂ MIXTURES ADSORBED ON ZnO, **D. Scarano**, S. Bertarione, G. Spoto, A. Zecchina, Dipartimento di Chimica IFM, Università degli Studi di Torino, via Pietro Giuria 7, 10125 Torino, Italy and C. Otero Arean, Departamento de Química, Universidad de las Islas Baleares, 07071 Palma de Mallorca, Spain
- 16:25 **BREAK**
- 17:00-18:45 **POSTER SESSION**
- N/P01** MAGNETORESISTANCE EFFECT ON THIN FILMS OF SOLID SOLUTIONS Eu_{1-x}Sm_xO ON SILICON, **Y.G. Fedorenko**, Stanislav V. Korenjuk, Saratov State University, Russia
- N/P02** FORMATION OF THE ULTRATHIN OXIDES ON SILICON WITH THE ENHANCED STABILITY **V.G. Litovchenko**, A.A. Evtukh, A.A. Efremov, I.P. Lisovski, A.Yu. Kizjak, Institute of Semiconductor Physics, 45 Prospekt Nauki, Kiev, 252650, Ukraine and H.Richter, IHP GmbH, Im Technologiepark 25, 15236 Frankfurt (Order), Germany
- N/P03** A NOVEL APPROACH TO ULTRA-THIN OXIDE GROWTH BY RAPID THERMAL NITRIDATION/OXIDATION, V.G. Litovchenko(a), **A.A. Efremov**(a), H. Richter(b), (a)Institute of Semiconductor Physics, 45 Nauki avenue, Kiev 03028, Ukraine, (b)Institute for Semiconductor Physics, Walter-Korsing-Strasse 2, 15230 Frankfurt (Oder), Germany
- N/P04** STRAIN RELEASE OF La_{0.67}Ca_{0.33}MnO₃ THIN FILMS GROWN ON YBa₂Cu₃O_x, **Z.Q. Yang**(a), R. Hendrikx(a), Y. Qin(b), H.W. Zandbergen(b) and J. Aarts(a), (a)Kamerlingh Onnes Laboratory, Leiden University, PO Box 9504, 2300 RA Leiden, The Netherlands, (b)National Center for High-resolution Electron Microscopy, Laboratory of Materials Science, Delft University of Technology, Rotterdamseweg 137, 2628 AL Delft, The Netherlands
- N/P05** GROWTH AND CHARACTERIZATION OF VO_x FILMS, **A.D. Rata**, I. Elfimov, S. Vongtragool, L.H. Tjeng, T. Hibma, University of Groningen, Department of Inorganic Thin Films and Materials Science Centre, Nijenborgh 4, 9747 AG Groningen, The Netherlands
- N/P06** STRUCTURAL CHARACTERIZATION OF ORIGINAL TiN_xO_y/TiO₂ MONOCRYSTALLINE AND NANOMETRIC MULTILAYERS GROWN BY LP-MOCVD ON (110) TiO₂, F. Fabreguette, **L. Imhoff**, L.P. Cardoso*, O. Heintz, B. Domenichini, M.C. Marco de Lucas, P. Sibillot, S. Bourgeois and M. Sacilotti, LPUB and LRRS, Université de Bourgogne, 9 avenue A. Savary, BP 47870, 21078 Dijon

- cedex, France, *Laboratorio de Difração de Raios-X, DFA, IFGW, UNICAMP, CP 6165, 13083-970 Campinas SP, Brazil
- N/P07** OXYGEN ELEMENT VARIATION AND RELATED TO TRANSPORT PROPERTIES IN PULSED-LASER-DEPOSITION La-Ca-Mn-O FILMS, W. Zhang(a,b), X. Wang(c) and I.W. Boyd(a), (a)Department of Electronic & Electrical Engineering, University College London, Torrington Place, London WC1E 7JE, UK, (b)Structure Research Laboratory, University of Science and Technology of China, Hefei, Anhui 230026, P.R. China, (c)School of Electrical Engineering and Information, South Bank University, 109 Borough Road, London SE1 6UH, UK
- N/P08** SYNTHESIS OF $\text{Ca}_{0.25}\text{Cu}_{0.75}\text{TiO}_3$ AND INFRARED CHARACTERIZATION OF ROLE PLAYED BY COPPER, A. Hassini, M. Gervais, F. Gervais, Laboratory of Electrodynamics of Advanced Materials, FRE2077 CNRS, CEA LRC M01, Faculty of Sciences & Techniques, François-Rabelais University, Parc de Grandmont 37200 Tours, France
- N/P09** EXTRACTION OF OXIDE THICKNESS FROM CAPACITANCE-VOLTAGE MEASUREMENTS IN MOS CAPACITORS: INFLUENCE OF STRUCTURE GEOMETRY AND POLYSILICON GATE, L. Ihaddadene, M. Masmoudi, M. Idrissi-Benzohra, M. Benzohra, P. Martin, K. Mourgues, M. Ketata, Université de Rouen, LEMEI, 76821 Mont Saint Aignan, France
- N/P10** SPECTRAL NARROWING OF SELF-TRAPPED EXCITON EMISSION IN ANATASE THIN FILMS, V. Kiisk(a), I. Sildos(a), A. Suisalu(a) and J. Aarik(b), (a)Institute of Physics of Tartu University, Riia Street 142, 51014 Tartu, Estonia, (b)Institute of Materials Science, University of Tartu, Tähe 4, 51010 Tartu, Estonia
- N/P11** GROWTH AND STUDY OF THIN ANODIC OXIDES ON GaAs AND InP, I. Gerard, N. Simon, A. Etcheberry, IREM -CNRS, Université de Versailles, 45 Ave des Etats-Unis, 75035 Versailles, France
- N/P12** EPITAXY OF ULTRATHIN TRANSITION METAL OXIDE FILMS ON METALLIC SINGLE CRYSTALS, P. Luches, S. Altieri, C. Giovanardi, T. Moia, S. Valeri, INFN and Dipartimento di Fisica, Università di Modena, Via G. Campi 213/a, 41100 Modena, Italy
- N/P13** $\text{V}_2\text{O}_3(0001)/\text{Au}(111)$: GROWTH, GEOMETRIC AND ELECTRONIC STRUCTURES, ADSORPTION PROPERTIES, A.-C. Dupuis, B. Richter, H. Kühlenbeck and H.-J. Freund, Fritz-Haber-Institut der Max-Planck-Gesellschaft, Faradayweg 4-6, 14195 Berlin, Germany
- N/P14** GROWTH OF EPITAXIAL YSZ FILMS ON LiNbO_3 SUBSTRATES, R. Rubi, L. Fabrega, F. Sandiumeng and J. Fontcuberta, Institut de Ciència de Materials de Barcelona, Campus UAB, Bellaterra 08193, Catalunya, Spain
- N/P15** EPITAXIAL PHASE STABILIZATION PHENOMENA IN RARE EARTH MANGANITES, A.A. Bosak(a), A.A. Kamenev(a), I.E. Graboy(a), O.Yu. Gorbenco(a), A.R. Kaul(a), C. Dubourdieu(b), J.P. Senateur(b), H.W. Zandbergen(c), B. Holländer(d), (a)Department of Chemistry, Moscow State University, 119899 Moscow, Russia, (b)Laboratoire des Matériaux et du Génie Physique, Institut National Polytechnique de Grenoble, BP 46, 38402 St. Martin d'Hères, France, (c)National Centre for HREM, Laboratory of Materials Science, Delft University of Technology, Rotterdamseweg 137, 2628 AL Delft, The Netherlands, (d)Forschungszentrum Jülich, 52425 Jülich, Germany
- N/P16** SPECTROSCOPIC AND STRUCTURAL CHARACTERIZATION OF A VO_x ($x > 1$) ULTRATHIN EPITAXIAL FILM ON Pt(111), M. Petukhov, G.A. Rizzi and G. Granozzi, Dipartimento di Chimica Inorganica, Metallorganica ed Analitica, Università di Padova, via Loredan 4, 35136 Padova, Italy

- N/P17** INDIUM AND GALLIUM OXIDES ON ANISOTROPIC III-VI SEMICONDUCTORS SURFACES, Z.D. Kovalyuk, V.M. Katerynchuk, T.G. Slobodsky, and O.I. Yanchuk, Chernivtsi Department of the Institute of Materials Science Problems of National Academy of Sciences of Ukraine, Iryna Vilde St. 5, Chernivtsi 58001, Ukraine
- N/P18** PREPARATION OF Pt-PtO_x THIN FILMS AS ELECTRODE FOR MEMORY CAPACITORS, K. Kuribayaishi and S. Kitamura, Department of Materials, Teikyo University of Science & Technology, Uenohara, Yamanashi 409-0193, Japan
- N/P19** XPS INVESTIGATIONS OF THE REACTIVITY OF TANTALUM DEPOSITS ON Al₂O₃/NiAl(110), B. Richter, J. Wilkes, H. Kühlenbeck, H.-J. Freund, Fritz-Haber-Institute of the Max-Planck-Society, Department of Chemical Physics, Faradayweg 4-6, 14195 Berlin, Germany
- N/P20** ABSORPTION EDGE STUDY OF THE LITHIUM NIOBATE THIN FILMS, N.R. Aghamalyan, R.K. Hovsepyan and E.S. Vartanyan, Institute for Physical Research of National Academy of Sciences of Armenia, 378410 Ashtarak-2, Armenia and S.-Y. Lee, R.S. Feigelson, Center of Material Research, Stanford University, Stanford CA 94305-4045, USA
- N/P21** THE STRUCTURE OF VANADIA ULTRATHIN FILMS GROWN ON TiO₂(110) IN AN OXYGEN AMBIENT, M. Sambj, M. Della Negra, G. Granozzi, Dipartimento C.I.M.A., Università di Padova, via Loredan 4, 35131 Padova, Italy
- N/P22** FAR-INFRARED PROPERTIES OF SOL-GEL DEPOSITED PbZr_{0.52}Ti_{0.48}O₃ FILMS ON, E.A. Kafadaryan, R.K. Hovsepyan, N. Aghamalyan, E.S. Vartanyan, Institute for Physical Research of National Academy of Sciences of Armenia, 378410 Ashtarak-2, Armenia
- N/P23** SPIN-DEPENDENT TUNNELING IN La_{0.7}Sr_{0.3}MnO₃/SrTiO₃ SUPERLATTICES, E. Favre-Nicolin, L. Ranno, Labo L. Néel, Grenoble, France C. Dubourdieu, M. Rosina, LMGP, INP Grenoble, France
- N/P24** SINGLE TERMINATION OF PEROVSKITE SUBSTRATES BY ANNEALING AND CHEMICAL ETCHING, V. Leca, G. Rijnders, H. Rogalla and D.H.A. Blank, Low Temperature Division, Applied Physics, MESA+ Research Institute, University of Twente, P.O. Box 217, 7500 AE Enschede, The Netherlands
- N/P25** ENHANCEMENT OF THE DIELECTRIC PROPERTIES OF Pb(La,Ti)O₃ THIN FILMS FABRICATED BY PULSED LASER DEPOSITION, Kyung Ah Jeon, Chang Hoi Hur and Sang Yeol Lee, Department of Electrical and Electronic Engineering, Yonsei University, 134 Shinchondong, Seodaemunku, Seoul, 120-749, Korea

Thursday, June 7, 2001
Jeudi 7 juin 2001

Morning
Matin

Session IV: Structure and Reactivity II
Session Chair: E. Garfunkel

- N-IV.1** 9:00 Invited ULTRA-THIN TUNGSTEN OXIDE BASED FILMS FOR CHEMICAL GAS SENSORS, **R.J. Lad**, Laboratory for Surface Science & Technology, 5764 Sawyer Research Center, University of Maine, Orono ME 04469, USA
- N-IV.2** 9:40 STRUCTURAL, ELECTRONIC AND CHEMICAL PROPERTIES OF AN EPITAXIAL MgO MONOLAYER ON Ag: AN AB-INITIO PERIODIC STUDY, M. Sgroi, M. Busso, R. Dovesi and **C. Pisani**, Unità INFN di Torino, Sezione F, and Dipartimento di Chimica IFM, Università di Torino, via Giuria 5, 10125 Torino, Italy
- N-IV.3** 10:05 EPITAXIAL GROWTH OF COPPER, MANGANESE AND VANADIUM ON A THIN AL₂O₃-FILM ON Ni₃Al(111), **A. Wiltner**(a), K. von Bergmann(a,b), A. Rosenhahn(a,d), J. Schneider(a,d), C. Becker(a), M. Kralj(c), P. Pervan(c), M. Milun(c) and K. Wandelt(a), (a)Institute of Physical and Theoretical Chemistry, University of Bonn, Wegelerstr.12, 53115 Bonn, Germany, (b)Institute of Applied Physics and Microstructure Research Center, University of Hamburg, Jungiusstr.11, 20355 Hamburg, Germany, (c)Institute of Physics, Bijenicka c.46, P.O.Box 304, 10000 Zagreb, Croatia, (d)Lawrence Laboratory of Berkeley, 1 Cyclotron Road MS-65, Berkeley CA-94720, USA
- 10:30 **BREAK**
- N-IV.4** 11:00 Invited NANOSCALE PHENOMENA IN SYNTHETIC FUNCTIONAL OXIDE HETEROSTRUCTURES, **R. Ramesh**, Department of Materials and Nuclear Engineering and Center for Superconductivity Research, Department of Physics, Materials Research Science and Engineering Center, University of Maryland, College Park MD 20742, USA
- N-IV.5** 11:40 CALCULATIONS OF THE ATOMIC AND ELECTRONIC STRUCTURE FOR ABO₃ PEROVSKITE THIN FILMS, **E.A. Kotomin**(a,b), R.I. Eglitis(c), J. Maier(a), and E. Heifets(d,e), (a)Max-Planck-Institut fuer Festkoerperforschung, Heisenbergstr.1, Stuttgart, Germany, (b)Institute of Solid State Physics, Kengaraga str. 8, Riga, Latvia, (c)Fachbereich Physik, Universitaet Osnabrueck, Germany, (d)Carnegie Institution of Washington, Washington D.C., USA, (e)Seismological Laboratory, Caltech, Pasadena, USA
- N-IV.6** 12:05 ABSENCE OF A PbTiO₃ PHASE TRANSITION IN PbTiO₃/BaTiO₃ SUPERLATTICES, F. Le Marrec, R. Farhi, **M.G. Karkut**, LPMC, Université de Picardie Jules Verne, 33 rue St Leu, 80039 Amiens, France and B. Dkhil, J. Chevreul, SPMS, Ecole Centrale de Paris, 92295 Châtenay-Malabry, France
- 12:45 **LUNCH**

Thursday, June 7, 2001
Jeudi 7 juin 2001

Afternoon
Après-midi

Session V: Magnetic Oxides
Session Chair: S. Chambers

- N-V.1** 14:15 Invited PHASE INSTABILITIES IN MBE-GROWN, ULTRATHIN Fe-OXIDE FILMS, **R.F.C. Farrow**, R.F. Marks, A.F. Panchula, S.S.P. Parkin, P.M. Rice, M.F. Toney, K.A. Hannibal, A.J. Kellock, IBM Research Division, Almaden Research Center, 650 Harry Road, San Jose CA 95120-6099, USA
- N-V.2** 14:55 APPLICATION OF PULSED LIQUID-INJECTION MOCVD TO THE GROWTH OF ULTRATHIN EPITAXIAL OXIDES FOR MAGNETIC HETEROSTRUCTURES, **C. Dubourdieu**, M. Rosina, H. Roussel, F. Weiss, J.P. Sénateur, LMGP, ENSPG, BP 46, 38402 St. Martin d'Hères, France and E. Dooryhee, J.L. Hodeau, Laboratoire de Cristallographie, BP 166, 38042 Grenoble cedex 9, France
- N-V.3** 15:20 INITIAL GROWTH STUDIES OF THE MAGNETIC OXIDE SrRuO₃ ON (001) SrTiO₃, G. Rijnders, **D.H.A. Blank**, H. Rogalla, Low Temperature Division, Applied Physics, MESA+ Research Institute, University of Twente, P.O. Box 217, 7500 AE Enschede, The Netherlands and J.-H. Choi and C.-B. Eom, Department of Materials Science and Engineering, University of Wisconsin-Madison, Madison, Wisconsin 53706, USA
- N-V.4** 15:45 INHOMOGENEOUS ELECTRONIC PROPERTIES OF NANOMETRIC NON-RELAXED La_{2/3}Ca_{1/3}MnO₃ EPITAXIAL THIN FILMS, M. Bibes, S. Valencia, B. Martinez, Ll. Balcells and **J. Fontcuberta**, Institut de Ciència de Materials de Barcelona, Campus UAB, Bellaterra 08193, Catalunya, Spain, M.-J. Casanove, CEMES-UPR. CNRS, BP 4347, 31055 Toulouse, France, S. Nadolski, M. Wojcik and E. Jedryka, Polish Acad. of Sciences, Inst of Physics, Al. Lotnikow 32/46, Warszawa 02-668, Poland
- 16:10 **BREAK**
- N-V.5** 16:40 SPIN-VALVE BEHAVIOUR OF ANTI-FERROMAGNETIC BOUNDARIES IN ULTRATHIN MAGNETITE FILMS, **W. Eerenstein**, T.T.M. Palstra, T Hibma, University of Groningen, Materials Science Centre/Chemical Physics, Nijenborgh 4, 9747 AG Groningen, The Netherlands
- N-V.6** 17:05 STRUCTURAL PROPERTIES OF PLD-DEPOSITED Sr₂FeMoO₆ HALF-METALLIC THIN FILMS, M. Besse, **E. Pailloux**, A. Barthélémy, K. Bouzehouane, A. Fert, J.-P. Contour, Unité Mixte de Physique CNRS/Thales, 91404 Orsay, France, O. Durand, J. Olivier, P. Galtier, LCR Thales, 91404 Orsay, France
- N-V.7** 17:30 THEORETICAL MODELLING OF SPIN-CONTRAST OVER Ni IONS IN NON-CONTACT SFM ON THE NiO (001) SURFACE, A.S. Foster and **A.L. Shluger**, Department of Physics and Astronomy, University College London, Gower Street, London WC1E 6BT, UK
- N-V.8** 17:55 EXCHANGE COUPLING IN LaFeO₃/Co THIN FILM SYSTEMS, J.W. Seo(a,b), **J. Fompeyrine**(b), H. Siegwart(b) and J.P. Locquet(b), (a)Institut de Physique, Université de Neuchâtel, 2000 Neuchâtel, Switzerland, (b)IBM Research Division, Zurich Research Laboratory, 8803 Ruschlikon, Switzerland

Friday, June 8, 2001
Vendredi 8 juin 2001

Morning
Matin

Session VI: Oxides on silicon
Session Chair: R. Ramesh

- N-VI.1** 9:00 Invited STRUCTURE OF THE SILICON-OXIDE INTERFACE, Yuhai Tu and **J. Tersoff**, IBM T.J. Watson Research Center, Yorktown Heights NY 10598, USA
- N-VI.2** 9:40 THE ROLE OF THE Si-SUBOXIDE STRUCTURE AT THE INTERFACE: AN ANGLE SCANNED PHOTOELECTRON DIFFRACTION STUDY, C. Westphal(a,b), S. Dreiner(b), M. Schürmann(b), and H. Zacharias(b), (a)Universität Dortmund, Experimentelle Physik I, Otto-Hahn-Str. 4, 44221 Dortmund, Germany, (b)Westfälische Wilhelms-Universität Münster, Physikalisches Institut, Wilhelm-Klemm-Str. 10, 48149
- N-VI.3** 10:05 YTTRIUM SESQUIOXIDE, Y_2O_3 , THIN FILMS DEPOSITED ON Si BY ION BEAM SPUTTERING: MICROSTRUCTURE AND DIELECTRIC PROPERTIES, R.J. Gaboriaud(a), F. Pailloux(b), P. Guerin(a) and F. Paumier(a), (a)Laboratoire de Métallurgie Physique, Université de Poitiers, UMR 6630 CNRS, SP2MI, BP30179, 86962 Chasseneuil-Futuroscope cedex, France, (b)UMR 137 CNRS, Thomson CSF, 91404 Orsay, France
- 10:30 **BREAK**
- N-VI.4** 11:00 Invited HIGH RESOLUTION ION SCATTERING STUDIES OF ULTRATHIN OXIDE FILMS AND INTERFACES FOR MICROELECTRONICS, **E. Garfunkel**, Rutgers University, Piscataway, USA
- N-VI.5** 11:40 IN SITU DETECTION OF F2 LASER-INDUCED ULTRATHIN OXIDE GROWTH ON HYDROGEN TERMINATED Si(111) AND Si(110) SURFACES BY FTIR TRANSMISSION SPECTROSCOPY, J. Lambers and P. Hess, Institute of Physical Chemistry, University of Heidelberg, Im Neuenheimer Feld 253, 69120 Heidelberg, Germany
- 12:05 **Concluding remarks**