

Program

Wednesday, november 17th 13H40-14H : Introduction (Guillaume Saint-Girons – INL)

Wednesday, november 17th PM : Growth and structure I

Chair : Nathalie Lemée (LPMC – Amiens)

14H–14H45 **Invited 1 : Hubert Renevier (LMGP – Grenoble)**

In situ X-ray studies of the early stage of ZnO Atomic Layer Deposition on InGaAs and lamellar dichalcogenides

E.V. Skopin (1), P. Abi Younes (1), (2), L. Rapenne (1), H. Roussel (1), J.-L. Deschanvres (1), E. Blanquet (3), N. Aubert (4), G. Ciatto (4), L. Pithan (5), D. D. Fong (6), M.-I. Richard (7), C. Camp (8), M. Zhukush (8), (9), E. A. Quadrelli (9), N. Gauthiern (2), D. Rouchon (2) and H. Renevier (1)

(1) LMGP – Grenoble, (2) CEA/LETI – Grenoble, (3) SIMAP – Grenoble, (4) Synchrotron SOLEIL – Gif-sur-Yvette, (5) ESRF – Grenoble, (6) Material Science Division, Argonne National Laboratory – Argonne (USA), (7) CEA/IRIG/MEM/NRS & ESRF – Grenoble, (8) LCOMS – Villeurbanne, (9) IRCELYON – Villeurbanne

14H45 – 15H **Flash 1**

Growth-mode and interface structure of epitaxial ultrathin MgO/Ag(001) films

M. De Santis (1), V. Langlais (2), K. Schneider (2) and X. Torrelles (3)

(1) Institut Néel – Grenoble, (2) CEMES – Toulouse, (3) ICMA B – Barcelone

15H – 15H15 **Flash 2**

Unravelling the complex optical properties of heterogeneous transparent and conducting vanadates thin films grown on a 2D nanosheet layer by the means of Spectroscopic Ellipsometry

A. Boileau (1), S. Hurand (2), F. Baudouin (3), U. Lüders (1), M. Dallochio (1), B. Bérimi (4), A. Cheikh (1), A. David (1), F. Paumier (3), T. Girardeau (2), P. Marie (5), C. Labbé (5), J. Cardin (5), D. Aureau (6), M. Frégnaux (6), M. Guilloux-Viry (3), W. Prellier (1), Y. Dumont (4), V. Demange (3), A. Fouchet (1)

(1) CRISMAT – Caen, (2) Institut Pprime – Poitiers, (3) ISCR – Rennes, (4) GEMaC – Versailles, (5) CIMAP – Caen, (6) Institut Lavoisier – Versailles,

15H15 – 15h45 Break

15H45 – 16H30 **Invited 2 : Christophe Lefevre (IPCMS – Strasbourg)**

Structural characterization of oxide thin films by resonant x-ray diffractions

Christophe Lefevre

IPCMS – Strasbourg

16H30 – 16H45 **Flash 3**

The growth and properties of p-type transparent conducting thin films of the perovskite type

Oualyd El Khaloufi (1), Aimane Cheikh (1), Moussa Mezhoud (1), Adrian David (1), Christophe Labbé (2), Ulrike Lüders (1)

(1) CRISMAT – Caen, (2) CIMAP - Caen

16H45 – 17H00 **Flash 4**

Tuning transport properties by epitaxial strain in p-type Sr-doped LaCrO₃ transparent thin films grown by MBE

Dong Han (1), Rahma Moalla (1), Ignasi Fina (2) Valentina M. Giordano (3), Marc d'Esperonnat (1), Claude Botella (1), Geneviève Grenet (1), Régis Debord (3), Stéphane Pailhès (3), Guillaume Saint-Girons (1) and Romain Bachelet (1)

(1) INL – Lyon, (2) ICMA B – Barcelona, (3) ILM – Lyon

Thursday, november 18th AM : Growth and structure II

Chair : Olena Popova (IPR – Rennes)

9H—9H45 **Invited 1 : Houssny Bouyanfif (LPMC – Amiens)**

Antiferroelectric like state in BiFeO₃/LaFeO₃ superlattices

Houssny Bouyanfif

LPMC - Amiens

9H45 – 10H **Flash 1**

Effect of the buffer layer on bias-field effects in Bi₂FeCrO₆ ferroelectric thin films

L. Wendling, X. Henning, F. Roulland, M. Lenertz, G. Versini, L. Schlur, A. Dinia, S. Colis, M.V. Rastei

IPCMS – Strasbourg

10H – 10H15 **Flash 2**

Epitaxial growth of Pb(Mg_{1/3}Nb_{2/3})O₃-33PbTiO₃/SrRuO₃ heterostructures on ReScO₃ (RE=Dy, Gd, Sm, Nd) atomically flat single terminated substrates using pulsed laser deposition

Jamal Belhadi (1), (2), Urska Gabor (2), Hana Uršič (3), Nina Daneu (2), Gertjan Koster (4) and Matjaz Spreitzer (2)

(1) *LPMC – Amiens*, (2) *Advanced Material Department, Josef Stefan Institute – Ljubjana (Slovenia)*, (3) *Electronic Ceramics Department, Josef Stefan Institute – Ljubjana (Slovenia)*, (4) *MESA+ – Twente (The Netherlands)*

10H15 – 10H30 **Flash 3**

Electric field and temperature induced phase transitions in antiferroelectric thin films of PbZrO₃

P. Dufour (1), A. Chanthbouala (1), T. Maroutian (2), C. Jacquemont (1), F. Godel (1), L. Yedra (3), M. Otonicar (4), N. Guiblin (3), M. Bibes (1), B. Dkhil (3), S. Fusil (1) and V. Garcia (1)

(1) *UMR CNRS/Thales – Palaiseau*, (2) *C2N – Palaiseau*, (3) *LSPMS – Saclay*, (4) *Electronic Ceramics Department, Jožef Stefan Institute, Ljubljana*

10H30 – 10h45 Break

10H45 – 11H30 **Invited 2 : Franck Vidal (INSP – Paris)**

Vertically self-assembled nanostructures : growth, structure and properties

Marcel Hennes, Thomas Tran, Dominique Demaille, Yunlin Zheng, Franck Vidal

INSP - Paris

11H30 – 11H45 **Flash 4**

Stabilization of the perovskite phase in Sr-doped NdNiO₃ thin films grown by pulsed laser deposition

Guillaume Krieger, Nathalie Viart and Daniele Preziosi

IPCMS - Strasbourg

11H45 – 12H00 **Flash 5**

Pulvérisation cathodique radiofréquence de couches minces de titanates de nickel (NiTiO₃) sur substrats de saphir : Croissance épitaxiale et axiotaxiale

Chettab Meriem (1), Simon Quentin (1), Demange Valérie (2), Laffez Patrick (1)

(1) *GREMAN – Tours*, (2) *ISCR - Rennes*

Chair : Romain Bachelet (INL-Lyon)

14H–14H45 **Invited 1 : V. Demange (ISCR - Rennes)**

Nanofeuillets d'oxydes métalliques : templates pour la croissance orientée d'oxydes complexes

F. Baudouin (1), A. Boileau (2), J.J. Manguelle (2), M. Dallochio (2), S. Ollivier (1), P. Turban (3), J.C. Le Breton (3), B. Lépine (3), C. Cibert (2), S. Hurand (4), A. David (2), U. Lüders (2), G. Poullain (2), B. Bérini (5), Y. Dumont (5), V. Bouquet (1), S. Députier (1), W. Prellier (2), M. Guilloux-Viry (1), A. Fouchet (2), V. Demange (1)

(1) ISCR, ScanMat – Rennes, (2) CRISMAT – Caen, (3) IPR – Rennes, (4) Institut PPrime – Poitiers, (5) GEMAC – Versailles

14H45 – 15H **Flash 1**

Transfert des couches minces d'oxyde de manganite (La_{0.7}Sr_{0.3}MnO₃) et étude de leurs propriétés magnétiques

Moussa Mezhoud (1), Alexandre De Fonvillars (1), Saidur Rahman Bakaul (2), Wilfrid Prellier (1), Ulrike Lüders (1)

(1) CRISMAT – Caen, (2) Material Science Division, Argonne National Laboratory – Lemont (USA)

15H – 15H15 **Flash 2**

Growth analysis of thermal CVD alumina films deposited on bonding layers

Maoxiang Zhu (1), (2), (3), Sofiane achache (1), (2), Jean-François Pierson (3), Frédéric Sanchette (1), (2)

(1) LASMIS – Nogent, (2) NICCI – Nogent, (2) Institut Jean Lamour - Nancy

15H15 – 15h45 Break

15H45 – 16H30 **Invited 2 : Florencio Sanchez (ICMAB – Barcelona)**

Epitaxial ferroelectric doped HfO₂ thin films on Si(001)

T. Song (1), J. Lyu (1), S. Estandía (1), J. Gàzquez (1), G. Saint-Girons (2), R. Bachelet (2), I. Fina (1), **F. Sánchez** (1)

(1) ICMAB – Barcelona (Spain), (2) – INL-Lyon

16H30 – 16H45 **Flash 3**

Integration of oxide ferromagnets with high spin polarization onto ZnO-based 2D, 1D nanostructures: growth, structure, properties of Fe₃O₄ onto ZnO(0001) substrates

Madaci Ismail (1) (2), Popova Elena (3), Philippe Vennéguès (2), Nemoz Maud (2), Berini Bruno (1), Stenger Ingrid (1), Morhain Christian (2), Dumont Yves (1)

(1) GEMAC – Versailles, (2) CRHEA – Valbonne, (3) IPR - Rennes

16H45 – 17H00 **Flash 4**

Effect of chromium substitution on structural and chemical properties of Fe_{3-x}Cr_xO₄(111) epitaxial thin films

Pâmella V. B. Pinho (1), (2), Alain Chartier (1), Frédéric Miserque (1), Cécile Marcelot (3), Bénédicte Warot-Fonrose (3), Antoine Barbier (2), Philippe Ohresser (4), Denis Menut (4), Jean-Baptiste Moussy (2)

(1) Den/SCCME/CEA/Université Paris-Saclay - Gif-sur-Yvette, (2) CEA/DRF/IRAMIS/SPEC – Saclay, (3) CEMES – Toulouse, (4) Synchrotron SOLEIL – Gif-sur-Yvette

Friday november 19th AM : Oxide epitaxy techniques

Chair : Thomas Maroutian (C2N – Palaiseau)

9H—9H45 **Invited 1 : Karine Dumesnil (IJL – Nancy)**

Ozone assisted MBE for the epitaxial growth of complex oxides

G. Masset, O. Copie, J. Ghanbaja, S. Andrieu, L. Pasquier, D. Pierre, K. Dumesnil

(1) IJL - Nancy

9H45 – 10H **Flash 1**

Sensitive RHEED signature of Ti-excess enabling enhanced cationic composition control during the molecular beam epitaxy of SrTiO₃ based solid solutions

Masoumeh Razaghi, Marc d'Esperonnat, Claude Botella, Sébastien Cueff, Romain Bachelet and Guillaume Saint-Girons

INL - Lyon

10H – 10H15 **Flash 2**

Rare-earth oxide thin films deposited by direct liquid injection chemical vapour deposition (DLICVD) for quantum technologies applications

Nao Harada, Alexandre Tallaire, Alban Ferrier, Diana Serrano, Philippe Goldner

IRCP – Paris

10H15 – 10h45 Break

10H45 – 11H30 **Invited 2 : Jérôme Wolfman (GREMAN – Tours)**

Exploration de diagrammes de phases et de propriétés interfaciales par synthèse combinatoire de films oxydes

J. Wolfman (1), A. Ruyter (1), B. Negulescu (1), N. Jaber (1), C. Daumont (1), C. Autret-Lambert (1), P. Andreazza (2), X. Wallart (3)

(1) GREMAN – Tours

(2) ICMN, UMR 7374 CNRS, Université d'Orléans

(3) IEMN, UMR CNRS 8520, Villeneuve d'Ascq

11H30 – 11H45 **Flash 3**

High quality, large area deposition of vanadium dioxide (VO₂) using magnetron sputtering

Sirjita Eduard-Nicolae (1) (2), Boule Alexandre (2), Mayet Richard (2), Orlanges Jean-Cristophe (1), Crunteanu Aurelian (1)

(1) XLIM – Limoges, (2) IRCer – Limoges

11H45 – 12H00 **Flash 4**

Chemical Beam Epitaxy and Sybilla Equipment

G. Benvenuti (1), E. Wagner (2), W. Maudez (2), R. Rani (2), S. Bagdzevicius (2)

(1) ABCD Technology – Nyon (Switzerland), (2). 3D-Oxides – St Genis Pouilly

12H – 12H15 : Closure (Guillaume Saint-Girons – INL)