

## **MS-8. Semiconductors and materials for information technologies**

8 September, 17:00 - 19:00 / 9 September, 16:30 - 18:30

### **MS-8-P-1439**

#### **Strain relaxation mechanisms at interfaces in III-As and III-Sb heterostructure nanowires by atomic resolution STEM**

Presenting author: **De La Mata M.**

*Authors: de la Mata M., Magen C., Shtrikman H., Caroff P., Arbiol J.,*

### **MS-8-P-1479**

#### **Structural and chemical study of colloidal II–VI semiconductor quantum dots by aberration-corrected STEM**

Presenting author: **Patriarche G.**

*Authors: Patriarche G., Pedetti S., Nasilowski M., Tessier M. D., Bouet C., Cassette E., Malher B., Dubertret B.*

### **MS-8-P-1498**

#### **Electron nanodiffraction and fluctuation electron microscopy of phase-change materials**

Presenting author: **Bornhoeft M.**

*Authors: Bornhoeft M., Saltzmann T., Benke J., Voyles P. M., Simon U., Wuttig M., Mayer J.,*

### **MS-8-P-1530**

#### **An attempt to visualize dopant distribution in Si by low-voltage SEM-EBIC**

Presenting author: **Tanaka S.**

*Authors: Tanaka S., Niwa T., Tanji T.*

### **MS-8-P-1572**

#### **GaN nanowires seeded by Al droplets on Si (111) : control of polarity and chronology of their elongation**

Presenting author: **Largeau L.**

*Authors: Largeau L., Galopin E., Gogneau N., Travers L., Glas F., Harmand J. C.*

### **MS-8-P-1584**

#### **Microscopic Characterization of Ferroelectric Field Effect Transistors with a Nanoimprinted Gate Dielectric**

Presenting author: **Cai R.**

*Authors: Cai R., Kassa H. G., Nysten B., Jonas A. M.*

### **MS-8-P-1632**

#### **Investigations Focused on the Local Composition Determination of Dilute Nitride Quaternary Material Systems Grown on Si-substrates**

Presenting author: **Wegele T.**

*Authors: Wegele T., Beyer A., Zimprich M., Volz K.*

### **MS-8-P-1634**

#### **Investigation of gallium phosphide antimonide grown on exactly oriented (001) silicon substrate**

Presenting author: **Ott A.**

*Authors: Ott A., Beyer A., Jandieri K., Ruiz Perez A., Kunert B., Stolz W., Volz K.*

#### **MS-8-P-1644**

##### **Characterization of the interface structure of (GaIn)As and Ga(NAs) grown on GaAs**

Presenting author: **Han H.**

*Authors: Han H., Beyer A., Gries K. I., Wolfgang S., Kerstin V.*

#### **MS-8-P-1648**

##### **Structural characterization of GaSb-based heterostructures grown on Si**

Presenting author: **Bahri M.**

*Authors: Bahri M., Largeau L., Mauguin O., Patriarche G., Madiomanana K., Rodriguez J. B., Cerutti L., Tournié E.*

#### **MS-8-P-1749**

##### **Electron Microscopy and optical properties Of PbGeSe Thin Films Chalcogenide Semiconductors**

Presenting author: **Elmandouh Z. S.**

*Authors: ElMandouh Z. S., ElMeleegi H. A.*

#### **MS-8-P-1983**

##### **Investigations of segregation phenomena in highly strained Mn-doped Ge wetting layers and Ge quantum dots embedded in silicon**

Presenting author: **Prestat E.**

*Authors: Prestat E., Porret C., Favre-Nicolin V., Tainoff D., Boukhari M., Bayle-Guillemaud P., Jamet M., Barski A.*

#### **MS-8-P-2116**

##### **Reaction of Ni with p-InGaAs at 350°C RTP**

Presenting author: **Lábár J. L.**

*Authors: Lábár J. L., Menyhárd M., Gurbán S., Hoummada K., Ghegin E., Nemouchi F.*

#### **MS-8-P-2155**

##### **Combined study of the evolution of composition, strain, and luminescence in InGaN thin films**

Presenting author: **Pantzas K.**

*Authors: Pantzas K., Patriarche G., Sundaram S., Kociak M., Cherkashin N., Troadec D., Ougazzaden A.,*

#### **MS-8-P-2196**

##### **Self-assembly of Al:ZnO doped nanopyramids studied by transmission electron microscopy**

Presenting author: **Javon E.**

*Authors: Javon E., Gaceur M., Margeat O., Ackermann J., Bals S., Van Tendeloo G.*

#### **MS-8-P-2279**

##### **The Study of the Structural and Vibrational Properties of Bismuth Oxides (Bi<sub>2</sub>O<sub>3</sub>) Synthesized from Tannic Acid**

Presenting author: **Ascencio-Aguirre F. M.**

*Authors: Ascencio-Aguirre F. M., Zorrilla-Cangas C., Herrera-Becerra R.*

#### **MS-8-P-2330**

##### **Texture and microstructure characterization by Precession Electron Diffraction (PED) technique for advanced semiconductor technologies**

Presenting author: **Valery A.**

*Authors: Valery A., Pofelski A., Clément L., Rauch E. F.*

#### **MS-8-P-2371**

##### **Characterization of an Fe-ZnO nanorod by STEM-EELS**

Presenting author: **Baik H. S.**

*Authors: Baik H. S., Yang M., Kim M. S., Park J. C., Min B. K.*

#### **MS-8-P-2427**

##### **Electrical Characteristics of Resistive Switching Devices Observed by TEM and Atom Probe Tomography**

Presenting author: **Lee J. H.**

*Authors: Lee J. H., Cha E. J., Chae B. K., Kim J. J., Lee S. Y., Hwang H. S., Park C. G.,*

#### **MS-8-P-2439**

##### **Ge nanostructure heteroepitaxy on a crystalline LaAlO<sub>3</sub>(001) substrate**

Presenting author: **Campos A. P.**

*Authors: Campos A. P., Ospina C. A., Mortada H., Rossi A. L., Dentel D., Bischoff J. L., Derivaz M., Werckmann J.*

#### **MS-8-P-2466**

##### **The core-shell structure of dysprosium-doped BaTiO<sub>3</sub> ceramics**

Presenting author: **Park D.**

*Authors: Park D., Markus K., Souza R., Martin M., Mayer J., Weirich T.*

#### **MS-8-P-2472**

##### **Mechanism of twin suppression in Bi<sub>2</sub>Se<sub>3</sub> thin films**

Presenting author: **Tarakina N. V.**

*Authors: Tarakina N. V., Schreyeck S., Luysberg M., Grauer S., Schumacher C., Karczewski G., Brunner K., Gould C., Buhmann H., Dunin-Borkowski R. E., Molenkamp L. W.*

#### **MS-8-P-2487**

##### **High-resolution studies of ZnO layers deposited by atomic layer deposition**

Presenting author: **Pécz B.**

*Authors: Pécz B., Baji Z., Horváth Z. E., Lábadi z., Kovács A.*

#### **MS-8-P-2492**

##### **Evaluation of the Carbon-doped GeSbTe by Atom Probe Tomography(APT) combined with Transmission Electron Microscopy(TEM)**

Presenting author: **Chae B. G.**

*Authors: Chae B. G., Lee J. H., Kim Y. T., Lee B. H., Gu G. H., Lee S. Y., Park C. G.,*

#### **MS-8-P-2584**

##### **Kinked Si nanowires controlled by twins**

Presenting author: **He Z.**

*Authors: He Z., Nguyen Hung T., Pribat D.*

### **MS-8-P-2606**

#### **Tunnel conductivity switching in a single nano floating gate memory induced by scanning tunnelling microscopy**

Presenting author: **Gambardella A.**

*Authors: Gambardella A., Preziosi M., Cavallini M.*

### **MS-8-P-2613**

#### **Size-dependent structural quality of InAs Nanowires Grown by Molecular Beam Epitaxy**

Presenting author: **Zhang Z.**

*Authors: Zhang Z., Lu Z., Chen P., Xu H., Guo Y., Liao Z., Shi S., Lu W., Zou J.,*

### **MS-8-P-2633**

#### **Field mapping in the TEM by off-axis electron holography.**

Presenting author: **Cooper D.**

*Authors: Cooper D., Rouveire J. L.*

### **MS-8-P-2664**

#### **TEM studies of high aspect ratio surfaces coated with thin dielectric films by atomic layer deposition**

Presenting author: **Schindler P.**

*Authors: Schindler P., Logar M., Usui T., Provine J., Karthaler H. P., Prinz F. B.*

### **MS-8-P-2675**

#### **Investigation of GaAs/AlGaAs heterostructure core-shell nanowires by aberration corrected STEM**

Presenting author: **Zheng C. L.**

*Authors: Zheng C. L., Wong-Leung J., Kauko H., Zhu Y., Dwyer C., Van Helvoort A., Gao Q., Tan H. H., Jagadish C., Etheridge J.*

### **MS-8-P-2703**

#### **Analysis of structural defects in three-dimensional Ge crystals grown on (001)-Si substrates.**

Presenting author: **Arroyo Rojas Dasilva Y.**

*Authors: Arroyo Rojas Dasilva Y., Erni R., Gröning P., Isa F., Isella G., Kreiliger T., von Känel H.*

### **MS-8-P-2794**

#### **Epitaxial high-k dielectrics: ternary rare-earth based oxides**

Presenting author: **Wendt F.**

*Authors: Wendt F., Schäfer A., Mantl S., Hardtdegen H., Mikulics M., Lenk S., Barthel J., Schubert J., Luysberg M.,*

### **MS-8-P-2808**

#### **FIB/TEM characterization of Si/Ge/Sn alloys**

Presenting author: **Benedetti A.**

*Authors: Benedetti A., Stefanov S., Chiussi S.*

### **MS-8-P-2815**

#### **Strain determination by CBED in Si-rib structures for photonic devices**

Presenting author: **Balboni R.**

*Authors: Balboni R., Bolognini G., Corticelli F., Ferri M., Mancarella F., Marini D., Montanari B. G.*

**MS-8-P-2819**

**TEM investigations of In<sub>x</sub>Ga<sub>1-x</sub>As quantum dots in GaP**

Presenting author: **Selve S.**

*Authors: Selve S., Niermann T., Stracke G., Simke J., Strittmatter A., Bimberg D.*

**MS-8-P-2843**

**On the influence of the sample preparation and analysis method of TEM bismuth telluride**

Presenting author: **Balzuweit K.**

*Authors: Milagres T., Balzuweit K., Nascimento V. B., Ladeira L. O., Soares E. A., Carvalho V. E.*

**MS-8-P-2872**

**Amorphization of Indium Phosphide by High Energy Gold Ion Bombardment**

Presenting author: **Khalil A. S.**

*Authors: Khalil A. S.*

**MS-8-P-2877**

**Mechanism of the Ti-assisted Al-induced layer exchange (Ti.AILLE)**

Presenting author: **Kraschewski S. M.**

*Authors: Kraschewski S. M., Butz B., Gannott F., Zaumseil J., Spiecker E.*

**MS-8-P-2953**

**Alkali metal-TCNQ organic semiconducting charge transfer complex materials on textile as 3D templates as flexible electronic devices**

Presenting author: **Field M. R.**

*Authors: Ramanathan R., Field M. R., Bansal V.*

**MS-8-P-3000**

**Dependence of microstructure in AlN thin films on the annealing temperature for sapphire substrate**

Presenting author: **Kuwano N.**

*Authors: Kuwano N., Jesbains K., Akiyoshi R., Hayashi K., Soejima Y., Itakura M., Miyake H., Hiramatsu K.*

**MS-8-P-3096**

**Polarity-Related Growth Mechanism of Branched GaN Nanostructures with InGaN Quantum Wells**

Presenting author: **Zamani R. R.**

*Authors: Zamani R. R., Oppo C. I., Müller M., Karbaum C., Bertram F., Christen J., Malindretos J., Rizzi A.*

**MS-8-P-3138**

**Dark field holography strain analysis of buried AlAs/oxide stressor layers**

Presenting author: **Kießling F.**

*Authors: Kießling F., Niermann T., Schulze J. H., Strittmatter A., Schliwa A., Pohl U. W., Lehmann M.*

**MS-8-P-3317**

**Investigating the structural properties of multi-layers InAs quantum dots structures using scanning transmission electron microscopy**

Presenting author: **Landi S. M.**

*Authors: Landi S. M., Senna C. A., Pires M. P., Souza P. L.*

**MS-8-P-3337**

**Electron tomography and aberration-corrected TEM and STEM study of the polarity of colloidal wurtzite CdSe nanopyrramids used in assemblies and as seeds for CdS pod growth**

Presenting author: **Brescia R.**

*Authors: Brescia R., Bertoni G., Turner S., Ghosh S., Arciniegas M. P., Manna L.*

**MS-8-P-3339**

**TEM analysis and electrical probing on thin TEM lamellas of CBRAM stacks**

Presenting author: **Seidel F.**

*Authors: Seidel F., Richard O., Bender H., Hantschel T., Goux L., Jurczak M., Vandervorst W.*

**MS-8-P-3402**

**In-situ TEM with electrical characterisation of tapered InAs nanowires with Ohmic contacts**

Presenting author: **Zandbergen H. W.**

*Authors: Zhang C., Xu Q., Zandbergen H. W.*

**MS-8-P-3461**

**Microstructure characterization of Ti/Al/Ti/Au and Ti/Al/Mo/Au based ohmic contacts on AlGaIn/GaN Heterostructures**

Presenting author: **Chandran N.**

*Authors: Chandran N., Kolaklieva L., Dhanasekaran V., Kakanakov R., Sall M., Polychroniadis E. K.*

**MS-8-P-5731**

**TEM investigation of semipolar GaN grown on Si(001) offcut substrates using AlN and 3C-SiC buffer layer**

Presenting author: **Kalmykov A. E.**

*Authors: Sorokin L. M., Kalmykov A. E., Myasoedov A. V., Bessolov V. N., Kukushkin S. A.*

**MS-8-P-5804**

**Electroluminescence imaging of defects in GaN HEMT structures**

Presenting author: **Priesol J.**

*Authors: Priesol J., Šatka A., Sládek L.*

**MS-8-P-5886**

**Quantitative HRTEM analysis of epitaxial perovskite multilayer on Si(001) single crystal substrate**

Presenting author: **Ghica C.**

*Authors: Ghica C., Negrea R. F., Teodorescu V. S., Maraloiu V. A., Nistor L. C., Chirila C., Pintilie L.*

**MS-8-P-5976**

**TEM Characterization of Low Temperature Gallium Nitride Layer grown under different Nitridation conditions**

Presenting author: **Muraleedharan K.**

*Authors: Muraleedharan K., Sabyasachi Saha, Krishna YGR, Banerjee D., Raghavan S.*

**MS-8-P-5977**

**HR STEM study of InGaAs/InAlAs heterostructures and interfaces morphology**

Presenting author: **Presniakov M. Y.**

*Authors: Presniakov M. Y., Trunkin I. N., Vasiliev A. L., Galiev G. B., Pushkarev S. S.,*

**MS-8-P-6002**

**Plan-view CBED analysis of crystal polarity in core-shell GaN rods**

Presenting author: **Dieker C.**

*Authors: Dieker C., Tessarek C., Christiansen S., Spiecker E.*

**MS-8-P-6006**

**Switching behavior of single Ag-TCNQ nanowires: an in situ Transmission Electron Microscopy study**

Presenting author: **Ran K.**

*Authors: Ran K., Rösner B., Butz B., Fink R., Spiecker E.*