

### **MS-3. Thin films, coatings and surfaces**

10 September, 16:45 - 18:45 / 11 September, 16:30 - 18:30

#### **MS-3-P-1406**

##### **TEM characterisation of PVD Cu/W nanoscale multilayers**

Presenting author: **Karlík M.**

*Authors: Karlík M., Callisti M., Polcar T.*

#### **MS-3-P-1527**

##### **Crystallization of Fe<sub>60</sub>Cr<sub>8</sub>Nb<sub>8</sub>B<sub>24</sub> amorphous alloys and coatings**

Presenting author: **Botta W. J.**

*Authors: Koga G. Y., Gallego J., Melle A. K., Yavari A. R., Bolfarini C., Kiminami C. S., Botta W. J.*

#### **MS-3-P-1660**

##### **Ta based thin films on Ti and SS316L substrates for biomedical applications**

Presenting author: **Jara A.**

*Authors: Jara A., Fréty N., Gonzalez G.,*

#### **MS-3-P-1678**

##### **TEM study of a sol-gel alumina coating on K44X steel after high temperature treatment**

Presenting author: **Dörfel I.**

*Authors: Dörfel I., Nofz M., Sojref R., Geipel C.*

#### **MS-3-P-1736**

##### **Thin Films of Thermally Evaporated Au/Atomic Layer Deposited TiO<sub>2</sub> on Glass Substrates**

Presenting author: **Kawasaki M.**

*Authors: Kawasaki M., Chen M. J., Yang J. R., Chiou W. A., Shiojiri M.*

#### **MS-3-P-1806**

##### **Structural Investigation of ZnO:Al Films Deposited on the Si Substrates by Radio Frequency Magnetron Sputtering**

Presenting author: **Chen Y. Y.**

*Authors: Chen Y. Y., Yang J. R., Cheng S. L., Shiojiri M.*

#### **MS-3-P-1809**

##### **Direct observation of functional layer structure for reverse osmosismembrane by scanning electron microscopy**

Presenting author: **Miao X. P.**

*Authors: Miao X. P., Huang W. Q.*

#### **MS-3-P-1818**

##### **Structural characterization of thin films of BiFeO<sub>3</sub>(BFO)/Ca<sub>0.96</sub>Ce<sub>0.04</sub>MnO<sub>3</sub>(CCMO)//YAIO<sub>3</sub>(YAO) by transmission electron microscopy**

Presenting author: **Saidi W.**

*Authors: Saidi w., Pailloux F., Pacaud J., Bibes M., Barthélémy A.*

### **MS-3-P-1855**

#### **APT versus STEM EDX 3D mapping of transition metal nitride thin films**

Presenting author: **Parlinska-Wojtan M.**

*Authors: Parlinska-Wojtan M., Sowa R.*

### **MS-3-P-1890**

#### **Microstructural characterization of Fe-based amorphous coatings produced by HVOF**

Presenting author: **Gallego J.**

*Authors: Gallego J., Berger J. E., Coimbra D. D., Schulz R., Savoie S., Bolfarini C., Kiminami C. S., Botta W. J.*

### **MS-3-P-1933**

#### **Direct observation of phase changes of MgZnO thin film in in-situ heating TEM study**

Presenting author: **Yoo S. J.**

*Authors: YOO S. J., LEE J. H., KIM C. Y., KIM H. S., KIM J. G.*

### **MS-3-P-1989**

#### **Cristallographic structure and oxydation state of cerium in Pt-doped cerium oxide thin films deposited by CVD**

Presenting author: **Potin V.**

*Authors: Simon P., Zanfoni N., Avril L., Imhoff L., Domenichini B., Potin V.*

### **MS-3-P-1990**

#### **Relationships between elaboration conditions, structural parameters and electrical properties in metal oxides nanometric periodic multilayers**

Presenting author: **Potin V.**

*Authors: Potin V., Cacucci A., Martin N.*

### **MS-3-P-2059**

#### **Microstructural Analysis of Self-Organized Nanolamellae in Polycrystalline TiAlN Coatings**

Presenting author: **Matko I.**

*Authors: Matko I., Todt J., Sartory B., Pitonak R., Keckes J.*

### **MS-3-P-2082**

#### **Microscopic study of TiC/ amorphous C thin films**

Presenting author: **Oláh N.**

*Authors: Oláh N., Illés L., Sulyok A., Menyhárd M., Kaptay G., Balázs K.*

### **MS-3-P-2093**

#### **Metal-insulator transitions in extreme electron density SrTiO<sub>3</sub> quantum wells**

Presenting author: **Zhang J. Y.**

*Authors: Zhang J. Y., Hwang J., Jackson C. A., Raghavan S., Stemmer S.*

### **MS-3-P-2205**

#### **Structural features contributing to electrical resistivity in Cu-Mn alloy films**

Presenting author: **Misják F.**

*Authors: Misják F., Nagy K. H., Lobotka P., Radnóczy G.*

**MS-3-P-2213**

**Relation between surface and internal structure of Cu-Mn thin films**

Presenting author: **Nagy K. H.**

*Authors: Nagy K. H., Misják F., Czigány Z., Radnóczy G.*

**MS-3-P-2230**

**In situ investigation of Ni induced crystallization in amorphous Si thin films**

Presenting author: **Radnóczy G. Z.**

*Authors: Radnóczy G. Z., Dodony E., Battistig G., Pécz B., Vouroutzis N., Stoemenos J., Frangis N.*

**MS-3-P-2303**

**In situ crystallization of Cu-Mn amorphous alloy films**

Presenting author: **Radnóczy G.**

*Authors: Radnóczy G., Nagy K., Tóth-Kiss R. J., Misják F.*

**MS-3-P-2312**

**Preparation of superhydrophilic grid-like mesoporous titania films via structural transformation**

Presenting author: **Feng Z. D.**

*Authors: Feng Z. D., Zhou H., Wang C., Li S. W., Xu B. B., Luo X. T.*

**MS-3-P-2354**

**TEM study of nanostructured Cu-Cr alloys**

Presenting author: **Harzer T. P.**

*Authors: Harzer T. P., Raghavan R., Djaziri S., Dehm G.*

**MS-3-P-2381**

**Ag induced low-dimensional structures on the Si(110) surface**

Presenting author: **Mantsevich V. N.**

*Authors: Mantsevich V. N., Oreshkin A. I., Savinov S. V., Oreshkin S. I.*

**MS-3-P-2390**

**Microscopy of nanocrystalline diamond films**

Presenting author: **Tóth L.**

*Authors: Tóth L., Pécz B., Rossi S., Alomari M., Kohn E., Anaya J., Kuball M.*

**MS-3-P-2393**

**Phase Control of Transition-Metal Oxide Films through Interfacial Octahedral Connections**

Presenting author: **Aso R.**

*Authors: Aso R., Kan D., Shimakawa Y., Kurata H.,*

### **MS-3-P-2424**

#### **Physicochemical issues of hardening mechanisms in Me-N – based nanocomposite coatings**

Presenting author: **Sowa R.**

*Authors: Sowa R., Arabasz S., Parlinska-Wojtan M.*

### **MS-3-P-2496**

#### **Spatially resolved EELS to probe the pore structure of porous coatings grown by magnetron sputtering**

Presenting author: **Lacroix B.**

*Authors: Lacroix B., Godinho V., Fernández A.*

### **MS-3-P-2505**

#### **Effects of Sodium based electrolytic on microstructure and protective properties of Al<sub>2</sub>O<sub>3</sub> coatings formed on pure aluminum alloy substrates by plasma electrolytic oxidation**

Presenting author: **Ayday A.**

*Authors: Ayday A., Durman M.*

### **MS-3-P-2517**

#### **Effect of the Li<sup>+</sup> co-doping on the morphological characteristics of Y<sub>2</sub>O<sub>3</sub>: Er<sup>3+</sup> films deposited by ultrasonic spray pyrolysis.**

Presenting author: **Soto A. B.**

*Authors: Meza-Rocha A. N., Soto A. B., Huerta E. F., Falcony C.*

### **MS-3-P-2558**

#### **Co-terminated structure of the spinel Co<sub>3</sub>O<sub>4</sub>(001) surface confirmed by high-resolution annular dark field scanning transmission electron microscopy.**

Presenting author: **Kitta M.**

*Authors: Kitta M., Akita T., Kohyama M.*

### **MS-3-P-2642**

#### **Nanostructure and strain properties of InAs QDs grown on (211)B GaAs surface**

Presenting author: **Florini N.**

*Authors: Florini N., Dimitrakopoulos G. P., Kioseoglou J., Hatzopoulos Z., Pelekanos N. T., Kehagias T.*

### **MS-3-P-2749**

#### **TEM characterization of electrochemically deposited Fe- Pd films**

Presenting author: **Damm C.**

*Authors: Damm C., Konczak C., Schlörb H., Haehnel V., Schultz L., Sturm T., Pöhl A., Rellinghaus B.*

### **MS-3-P-2826**

#### **TEM characterization of H<sub>2</sub>-selective Pd-based membranes**

Presenting author: **Gan Y.**

*Authors: Gan Y., Walmsley J. C., Holmestad R., Peters T. A., Stange M.*

### **MS-3-P-2855**

#### **CoxFe3-xO4 films for sensor applications**

Presenting author: **Madigou V.**

*Authors: MADIGOU V., VILLAIN S., BENDAHAN M., ARAB M., BERNARDINI S., LEROUX C.*

### **MS-3-P-2956**

#### **Microstructural analysis of metal oxide coatings synthesised using novel energetic deposition methods**

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

*Authors: Murdoch B. J., Mayes E. L., Field M. R., Partridge J. G., McCulloch D. G.*

### **MS-3-P-2988**

#### **Hydrogen exposed to microstructure of Er2O3 coating layer prepared by MOCVD process**

Presenting author: **Shinkawa T.**

*Authors: Shinkawa T., Hisinuma Y., Tanaka T., Muroga T., Mikmekova S., Sunada S., Ikeno S., Matsuda K.*

### **MS-3-P-2989**

#### **Role of defects in the formation of two-dimensional electron gas at LaAlO3/SrTiO3 interfaces**

Presenting author: **Zhang Y.**

*Authors: Zhang Y., Bark C. W., Zhou H., Ryu S., Eom C. B., Zou X. D., Pan X. Q.*

### **MS-3-P-3010**

#### **Microstructure and strain of InGaAs epilayers grown by MOVPE on electrochemically prepared porous GaAs substrates**

Presenting author: **Bazioti C.**

*Authors: Dimitrakopoulos G. P., Bazioti C., Grym J., Gladkov P., Hulicius E., Pangrac J., Pacherová O., Komninou P.*

### **MS-3-P-3020**

#### **Direct imaging of atomic structure of TiN/MgO(001) interface by Cs-corrected STEM**

Presenting author: **Wei L. L.**

*Authors: Wei L. L., Do H., Chang L.*

### **MS-3-P-3027**

#### **Structural transition by thermal annealing of ZnO:Al films sputtering-deposited on glass substrates**

Presenting author: **Chen Y. Y.**

*Authors: Chen Y. Y., Chen P. Y., Cheng S. L., Huang B. M., Yang J. R., Shiojiri M.*

### **MS-3-P-3100**

#### **Growth and Structure of Physical Vapour Deposition grown MAX phase on Graphene**

Presenting author: **Zan R.**

*Authors: Zan R., Vishnyakov V., Bangert U., Guo Y., Halsall M., Proctor J., Colligon J.*

### **MS-3-P-3153**

#### **TEM characterization of defect free heterostructures grown on a compact home-build molecular beam epitaxy system**

Presenting author: **Ospina C. A.**

*Authors: Covre da Silva S. F., Lanzoni E. M., Coelho Neto P. M., Garcia Junior A. J., de Barroa A. T., Pimentel V., Ospina C. A., Bettini J., Malachias A., Ferreira S. O., Deneke C. F.*

### **MS-3-P-3179**

#### **Microstructural characterization of AlGaIn/GaN heterostructures grown on low angle-off 4H-SiC substrates**

Presenting author: **Gkanatsiou A.**

*Authors: Gkanatsiou A., Lioutas C. B., Frangis N., Prystawko P., Leszczynski M.,*

### **MS-3-P-3239**

#### **A direct bond analysis of SrTiO<sub>3</sub>/SrIrO<sub>3</sub> (3 bilayers)/(111) SrTiO<sub>3</sub> oxide heterostructures based on aberration-corrected HRTEM images**

Presenting author: **Xie L.**

*Authors: Xie L., Anderson T. J., Eom C. B., Pan X.*

### **MS-3-P-3260**

#### **Investigation of initial stage of sputtered ZnO thin film by TEM**

Presenting author: **Medlín R.**

*Authors: Medlín R., Novák P.*

### **MS-3-P-3349**

#### **Structure of Ni doped ZnO thin films prepared by magnetron sputtering**

Presenting author: **Savkova J.**

*Authors: Rajendran S., Savkova J., Sutta P., Medlín R., Novak P.*

### **MS-3-P-3385**

#### **Study of the Deposition of DLC in steels API 5L for corrosion protection**

Presenting author: **Bottega Peripolli S.**

*Authors: Bottega Peripolli S., Silva Gomes L., Trava-Airoldi V., Guimarães de Oliveira L., Lucchese Marcia M., Machado G.*

### **MS-3-P-3394**

#### **Determining the Crystal Structure of Metastable cubic SiN at the TiN/SiN Interface**

Presenting author: **Persson P. O.**

*Authors: Fallqvist A., Hultman L. G., Persson P. O.*

### **MS-3-P-3411**

#### **Using STEM-EELS to Observe Effects of Metallic Adhesion Layers on Plasmon Resonance in Electron Beam Lithographically Patterned Gold Thin Films**

Presenting author: **Madsen S. J.**

*Authors: Madsen S. J., Koh A. L., Kempen P. J., Sinclair R.*

### **MS-3-P-3428**

#### **Development of nanoporous substrate PS/Au for SERS.**

Presenting author: **Rubira A. F.**

*Authors: Fragal V. H., Silva R., Muniz E. C., Madina Neto A., Rubira A. F.*

**MS-3-P-3431**

**CHARACTERIZATION OF LOW ELECTROCHROMIC VANADIUM OXIDE THIN FILMS PRODUCED BY MAGNETRON SPUTTERING.**

Presenting author: **Arenas J.**

*Authors: Acosta D., Pérez A., Magaña C., Hernández F., Arenas J.*

**MS-3-P-3540**

**Electron beam micro-, nanofabrication and TEM studies of fine crystalline spots in thin amorphous films**

Presenting author: **Kolosov V. Y.**

*Authors: Kolosov V. Y., Veretennikov L. M., Schwamm C. L.*

**MS-3-P-5697**

**Sputtering Targets Produced from Magnetite Nanoparticles**

Presenting author: **Perez-Herrero G.**

*Authors: Perez-Herrero G., Baggio-Saitovitch E., Solorzano I. G.*

**MS-3-P-5702**

**Nanoanalytical investigations at the interface of 4H-SiC/SiO<sub>2</sub> MOSFETs**

Presenting author: **Schamm-Chardon S.**

*Authors: Tan H., Beltran A. M., March K., Mortet V., Bedel-Pereira E., Cristiano F., Strenger C., Bauer A. J., Schamm-Chardon S.*

**MS-3-P-5714**

**Atomic Force Microscope to study mechanical interactions between neurons and nanostructured materials**

Presenting author: **Daza J.**

*Authors: Daza J., Monsalve G., Sutachan J., Gonzalez E.*

**MS-3-P-5968**

**Significant increase of Cr-C-Cr bond length in the surface relaxation of Cr<sub>2</sub>AlC thin film**

Presenting author: **Chen Y. T.**

*Authors: Chen Y. T., Music D., Shang L., Mayer J., Schneider J. M.*

**MS-3-P-6008**

**Microstructure and phase modifications of CGDS and HVOF-sprayed CoNiCrAlY bond coats remelted by electron beam.**

Presenting author: **Gavendová P.**

*Authors: Gavendová P., Čupera J., Hanusová P., Čížek J., Dlouhý I.*