

**Poster - Film Structure and Composition****PO3001 Quicker from Science to Society - About a Design Tool for Optimum Multi-Scale Film Structures**

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**PO3002 The effects of nano-architecture on CrN thin films deposited by reactive magnetron sputtering with pulsed substrate biasing**

Peter Kelly<sup>1</sup>, John Freeman<sup>1</sup>, Glen West<sup>1</sup>, James Bradley<sup>2</sup>, Bernd Liebig<sup>2</sup>, Ivanka Iordanova<sup>3</sup>

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**PO3004 DC magnetron sputtering deposition and characterisation of gold oxide thin films**

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**PO3005 Effect of the composition on the thermal stability of sputtered copper-platinum oxide films**

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**PO3006 Face-Centered Cubic (Al,Cr)2O3 Thin Films**

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**PO3007 Crystallization and thermal stability of nanocrystalline gamma-Al2O3 thin films prepared by reactive magnetron sputtering**

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PO3008 **Empirical method for Ti oxidation state determination in undoped and doped titania films by Auger electron spectroscopy**

Victor Micheli<sup>1</sup>, Ruben Bartali<sup>2</sup>, Gloria Gottardi<sup>2</sup>, Ioana Luciu<sup>3</sup>, Jacques Perrière<sup>4</sup>, Nadhira Laidani<sup>2</sup>

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PO3009 **Sputter Deposition of Thin Films on Different Substrate Materials Analyzed by means of Modulated IR Radiometry**

Francisco Macedo<sup>1</sup>, Sutharat Chotikaprakhan<sup>2</sup>, Puchong Kijamnajsuk<sup>2</sup>, Filipe Vaz<sup>3</sup>, Roberto Faria Junior<sup>3</sup>, Jurgen Gibkes<sup>4</sup>, Josef Pelzl<sup>4</sup>, Bruno Bein<sup>4</sup>

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PO3011 **Low temperature deposition of silicon oxide thin films by plasma enhanced CVD using Tetraethoxysilane**

Marzieh Abbasi Firouzjah<sup>1</sup>, Seyyed Iman Hosseini<sup>1</sup>, Mehdi Shariat<sup>1</sup>, Babak Shokri<sup>1</sup>, Yadollah Ahmadizadeh<sup>2</sup>

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PO3014 **Surface analyses of CrN coatings by Electron Back Scatter Diffraction**

Herbert Scheerer<sup>1</sup>, Holger Hoche<sup>2</sup>, Elena M. Slomski<sup>3</sup>, Torsten Troßmann<sup>4</sup>, Christina Berger<sup>3</sup>

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- PO3015 **Effects of pressure and substrate temperature in the deposition of ZrN thin films deposited by DC magnetron sputtering**  
Rodrigo Basso<sup>1</sup>, Daiane Roman<sup>2</sup>, Juliane C Bernardi<sup>2</sup>, Cintia L G Amorim<sup>2</sup>, Carlos A Figueroa<sup>2</sup>, Israel J R Baumvol<sup>2</sup>  
<sup>1</sup> UCS, Caxias do Sul, Brazil, <sup>2</sup> PGMAT-UCS, Caxias do Sul, Brazil
- PO3016 **Reactive magnetron co-sputtering of hard and conductive ternary transition metal nitride thin films:Ti-Zr-N and Ti-Ta-N**  
Grégory Abadías<sup>1</sup>, Loukas Koutsokeras<sup>2</sup>, Sergey Dub<sup>3</sup>  
<sup>1</sup> University of Poitiers, Chasseneuil-Futuroscope, France, <sup>2</sup> University of Ioannina, Ioannina, Greece, <sup>3</sup> Institute for Superhard Materials, Kiev, Ukraine
- PO3017 **Structure and properties of Cr-B, Cr-N and Cr-B-N thin films prepared by pulsed DC magnetron sputtering from SHS targets with various B / Cr ratios**  
David Pilloud<sup>1</sup>, Philipp Kiryukhantsev-Korneev<sup>2</sup>, Jean-François Pierson<sup>3</sup>  
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- PO3018 **Selected adjustment of specific CrN-coatings to cover surface imperfections**  
Herbert Scheerer<sup>1</sup>, Elena M. Slomski<sup>2</sup>, Torsten Troßmann<sup>3</sup>, Christina Berger<sup>3</sup>  
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- PO3019 **Structure and properties of (Ti,Cr,Nb)CN and (Zr,Al,V)CN coatings deposited on nitrated high-speed steel by cathodic arc method**  
Mihai Balaceanu<sup>1</sup>, Viorel Braic<sup>1</sup>, Catalin N. Zoita<sup>1</sup>, Mariana Braic<sup>1</sup>, Adrian E. Kiss<sup>1</sup>, Alina Vladescu<sup>1</sup>  
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- PO3020 **Magnetron sputtered CrAlN coatings: correlation between hardness, crystalline structure and process parameters**  
Christelle Dublanche-Tixier<sup>1</sup>, Claire Tendero<sup>2</sup>, Cédric Jaoul<sup>1</sup>, Pascal Tristant<sup>1</sup>, Stéphane Valette<sup>1</sup>, Marie-Hélène Lindic<sup>3</sup>, François Vérinaud<sup>3</sup>  
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- PO3021 <sup>1</sup>  
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PO3022 **Effect of methane on structural and optical properties of a-SiCN thin film deposited by MWPACVD**

Simon Bulou<sup>1</sup>, Laurent Le Brizoual<sup>2</sup>, Patrice Miska<sup>1</sup>, Ludovic de Poucques<sup>1</sup>, Robert Hugon<sup>1</sup>, Mohammed Belmahi<sup>1</sup>, Jamal Bougdira<sup>1</sup>

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PO3023 **Effect of air annealing on mechanical properties and structure of amorphous B4C films**

Valeriy Kulikovskiy<sup>1</sup>, Vladimir Vorliceck<sup>2</sup>, Radim Ctvrtlik<sup>3</sup>, Petr Bohac<sup>2</sup>, Hana Lapsanska<sup>3</sup>

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PO3025 **Crystallisation of sputtered lanthanum cuprate films: ex situ and in situ XRD analyses**

Nolwenn Tranvouez<sup>1</sup>, Jean-Francois Pierson<sup>2</sup>, Fabien Capon<sup>2</sup>, Jean-Philippe Bauer<sup>2</sup>

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PO3026 **DEVELOPMENT AND CHARACTERIZATION OF PALLADIUM BASED MEMBRANES BY PVD-MAGNETRON SPUTTERING FOR H2 SEPARATION**

Ekain Fernandez<sup>1</sup>, Pablo Corengia<sup>1</sup>, Jon Zuñiga<sup>1</sup>, Sara Miguel<sup>1</sup>, Miren Etxeberria<sup>1</sup>, Ivan Cuesta<sup>1</sup>

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**Poster - Bioactive Films and Surfaces****PO3029 Multifunctional Bioactive Nanostructured Films for Metallic and Polymer Implants**

Dmitry Shtansky<sup>1</sup>, Evgeny Levashov<sup>2</sup>, Irina Bashkova<sup>2</sup>, Alexander Sheveiko<sup>2</sup>, Natalia Gloushankova<sup>3</sup>, Alexei Grigoryan<sup>4</sup>

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**PO3030 Tribological wear investigation of vacuum plasma sprayed Ti-coatings for the application on cementless implanted prosthesis**

Friederike Deuerler<sup>1</sup>, Ramona Rynko<sup>1</sup>, Adrian Schuld<sup>1</sup>, Ingo Erdmann<sup>1</sup>, Henry Pusch<sup>1</sup>, Philip Gruner<sup>2</sup>, Heiko Gruner<sup>2</sup>

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**PO3031 Failure mechanisms of DLC coated joint replacements**

Kerstin Thorwarth<sup>1</sup>, Götz Thorwarth<sup>1</sup>, Claudiu Falub<sup>2</sup>, Michael Stiefel<sup>3</sup>, Ulrich Müller<sup>1</sup>, Cyril Voisard<sup>4</sup>, Roland Hauer<sup>1</sup>

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**PO3032 Quaternary carbonitride systems as protective layers on biomedical implants**

Mihai Balaceanu<sup>1</sup>, Viorel Braic<sup>1</sup>, Irina Titorencu<sup>2</sup>, Alina Vladescu<sup>1</sup>, Catalin N Zoita<sup>1</sup>, Mariana Braic<sup>1</sup>

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**PO3033 Ion implantation of titanium, nanotopography and osseointegration**

Iñigo Braceras<sup>1</sup>, Roberto Muñoz<sup>1</sup>, Jaione Lorenzo<sup>1</sup>, Noelia Alvarez<sup>1</sup>

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**PO3034 HYDROXYAPATITE PRODUCTION ON CP-Ti BY ECAE AND MAO PROCESSES**

Akgun Alasaran<sup>1</sup>, Gencaga Purcek<sup>2</sup>, Yenel Vangolu<sup>1</sup>, Ozgu Bayrak<sup>1</sup>, Ibrahim Karaman<sup>3</sup>, Ayhan Celik<sup>1</sup>

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**PO3035 Tribological and mechanical behaviours of Ti-containing DLC nanocomposite coatings in biological environment**

Ana Escudeiro<sup>1</sup>, Roseli M. Balesta<sup>2</sup>, Alichandra M. G. Castro<sup>2</sup>, Manuel Evaristo<sup>2</sup>, Tomas Polcar<sup>3</sup>, Albano Cavaleiro<sup>2</sup>

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- PO3036 **Cell adhesion study of plasma treated polycaprolactone**  
Tinke Jacobs<sup>1</sup>, Nathalie De Geyter<sup>1</sup>, Rino Morent<sup>1</sup>, Tim Desmet<sup>2</sup>, Peter Dubruel<sup>2</sup>, Christophe Leys<sup>1</sup>  
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- PO3037 **In-vitro adhesion life time of DLC coatings and XPS interface analysis**  
Ulrich Müller<sup>1</sup>, C.V. Falub<sup>2</sup>, G. Thorwarth<sup>3</sup>, C. Voisard<sup>4</sup>, R. Hauert<sup>3</sup>  
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- PO3038 **Plasma functionalization and bioactivity of polymers and DLC materials: the role of amine groups in the growth of cells**  
carmen lopez-santos<sup>1</sup>, francisco yubero<sup>1</sup>, jose cotrino<sup>2</sup>, agustin gonzalez-elipe<sup>1</sup>, mar fernandez<sup>3</sup>, blanca vazquez<sup>3</sup>, julio san roman<sup>3</sup>  
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- PO3039 **PE-CVD processes improve cell affinity of polymer scaffolds for Tissue Engineering**  
Francesca Intranuovo<sup>1</sup>, Eloisa Sardella<sup>2</sup>, Roberto Gristina<sup>2</sup>, Marina Nardulli<sup>1</sup>, Lisa White<sup>3</sup>, Daniel Howard<sup>3</sup>, Kevin M. Shakesheff<sup>3</sup>, Morgan R. Alexander<sup>3</sup>, Pietro Favia<sup>1</sup>  
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- PO3040 **Plasmachemical grafting of RGD peptides onto cyclo olefin polymer foils to improve the proliferation of cells**  
Michael Mueller<sup>1</sup>, Theresa Huben<sup>1</sup>, Christian Oehr<sup>1</sup>  
<sup>1</sup> Fraunhofer IGB, Stuttgart, Germany
- PO3041 **STUDY OF SURFACE MODIFICATION ON BIOCOMPATIBLE Ag-TiCN COATINGS AFTER CELL CULTURE**  
Ramon Escobar Galindo<sup>1</sup>, Nora Manninem<sup>2</sup>, Mariana Henriques<sup>3</sup>, Carlos Palacio<sup>4</sup>, Sandra Carvalho<sup>3</sup>  
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- PO3042 **Excimer light sources for sterilization of thin cavities in industrial application**  
Helmut Halfmann<sup>1</sup>, Markus Roth<sup>1</sup>  
<sup>1</sup> OSRAM GmbH, Wipperfürth, Germany
- PO3043 **Tailor-made Ag release properties of Ag-containing functional plasma polymer coatings**  
Enrico Körner<sup>1</sup>, Axel Ritter<sup>1</sup>, Myriam Aguirre<sup>1</sup>, Elisabeth Michel<sup>1</sup>, Barbara Hanselmann<sup>1</sup>, Dirk Hegemann<sup>1</sup>  
<sup>1</sup> Empa, St. Gallen, Switzerland

- PO3044 **Surface modified stainless steel with antimicrobial activity by silver ion implantation**  
Oihana Zubillaga<sup>1</sup>, Virginia Madina<sup>1</sup>, Iñigo Braceras<sup>1</sup>, Laura Sánchez<sup>1</sup>, Noelia Álvarez<sup>1</sup>, Jaione Lorenzo<sup>1</sup>  
<sup>1</sup> INASMET-TECNALIA, San Sebastian, Spain
- PO3045 **Fluorinated Diamond-like Carbon Coating on Polylactic Acid Film Prepared by Plasma-enhanced Chemical Vapor Deposition**  
Dheerawan BOONYAWAN<sup>1</sup>, Chanokporn Chaiwong<sup>1</sup>, Somruthai Tunma<sup>1</sup>, Pornchai Rachtanapun<sup>1</sup>  
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- PO3046 **Deposition of metalorganic thin films via PECVD for antibacterial applications**  
Luis Duque<sup>1</sup>, Renate Foerch<sup>2</sup>, Toby Jenkins<sup>3</sup>, Peter Ciernak<sup>4</sup>  
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- PO3047 **Deposition of amino-rich coatings by RF magnetron sputtering of Nylon: In-situ characterization of the deposition process**  
Ondrej Kylian<sup>1</sup>, Jaroslav Kousal<sup>1</sup>, Anna Artemenko<sup>1</sup>, Andrei Choukourov<sup>1</sup>, Martin Petr<sup>1</sup>, Oleksandr Polonskyi<sup>1</sup>, Danka Slavinska<sup>1</sup>, Hynek Biederman<sup>1</sup>  
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- PO3048 **Reduction of bacterial adhesion on Si ion implanted surgical stainless steel**  
Iñigo Braceras<sup>1</sup>, Alicia Calzado<sup>2</sup>, Amparo M. Gallardo-Moreno<sup>3</sup>, Juan Carlos Galván<sup>4</sup>, M. Luisa González-Martín<sup>3</sup>, Marta Multigner<sup>4</sup>, Miguel A. Pacha-Olivenza<sup>3</sup>, Carolina Vera<sup>1</sup>, Nuria Vilaboa<sup>2</sup>, José Luis González-Carrasco<sup>4</sup>  
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- PO3049 **Inactivation of Bacillus spores Using a Low-pressure Room Temperature Plasma chamber**  
Bo Yang<sup>1</sup>, Jierong Chen<sup>2</sup>, Qingsong Yu<sup>3</sup>  
<sup>1</sup> School of ENP of Xi'an Jiao Tong Univ., xi'an, China, <sup>2</sup> School of Energy and Power Engineering of Xi'an Jiao Tong University, xi'an, China, <sup>3</sup> Center for Surface Science and Plasma Technology, Department of Mechanical and Aerospace Engineering, University of Missouri, Columbia, United States
- PO3050 **Treatments with direct cold flame of atmospheric plasma torch for local disinfection**  
Won Gyu Lee<sup>1</sup>, Tae Kyung Kim<sup>1</sup>, Hyang Ho Son<sup>2</sup>  
<sup>1</sup> Kangwon National University, Chuncheon, South Korea, <sup>2</sup> Kanwon National University, Chuncheon, South Korea

- PO3051 **Microwave generated Plasma as UV-Source for the Disinfection of Water/Wastewater**  
Rudolf Emmerich<sup>1</sup>, Jürgen Vogt<sup>2</sup>, Thomas Schwart<sup>3</sup>, Jacqueline Süß<sup>3</sup>, Julia Gasse<sup>4</sup>, J. Kampe<sup>4</sup>  
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- PO3052 **Inactivation of E. coli in Water Using Pulsed Dielectric Barrier Discharge in a Coaxial Reactor**  
Rosendo Pena-Eguiluz<sup>1</sup>, Alma Neli Hernandez Arias<sup>2</sup>, Bernjamine Gonzalo Rodríguez-Méndez<sup>3</sup>, Regulo Lopez-Callejas<sup>3</sup>, Raul Valencia-Alvarado<sup>3</sup>, Antonio Mercado-Cabrera<sup>3</sup>, Arturo Eduardo Muñoz Castro<sup>3</sup>, Samuel Roberto Barocio Delgado<sup>3</sup>, Anibal de la Piedad Beneitez<sup>2</sup>  
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- PO3053 **Plasma-Assisted Click Synthesis as an Alternative Strategy for the Fabrication of Non-Fouling Surfaces**  
Marek Jasieniak<sup>1</sup>, Hardi Ys<sup>1</sup>, Simon Harnisson<sup>2</sup>, Maude Le Hellaye<sup>3</sup>, Hans Griesser<sup>1</sup>  
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- PO3054 **Oxidation properties of protein and amino acid using RF oxygen plasma**  
Nobuya Hayashi<sup>1</sup>, Akari Nakahigashi<sup>1</sup>, Masaaki Goto<sup>1</sup>  
<sup>1</sup> Saga University, Saga, Japan
- PO3055 <sup>1</sup>  
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- PO3056 **Sterilization with ECR microwave plasma**  
Akira Yonesu<sup>1</sup>, Rui Morita<sup>1</sup>, Taiki Anraku<sup>1</sup>, Nobuya Hayashi<sup>2</sup>  
<sup>1</sup> Ryuky University, Nishihara-cho, Japan, <sup>2</sup> Saga University, Saga, Japan
- PO3057 **Antibacterial coating of catheters with lipid nanoparticles using atmospheric plasma sources**  
Gerold Lukowski<sup>1</sup>, Ronny Brandenburg<sup>2</sup>, Manfred Stieber<sup>2</sup>, Wolf-Dieter Jülich<sup>1</sup>, Klaus-Dieter Weltmann<sup>2</sup>, Karsten Schröder<sup>2</sup>, Jörg Ehlbeck<sup>2</sup>  
<sup>1</sup> Institute of Marine Biotechnology, Greifswald, Germany, <sup>2</sup> Leibniz Institute for Plasma Science and Technology, Greifswald, Germany

- PO3058 **Plasma Enhanced Thin Film Coating of Capillaries for Biomedical Applications.**  
Ramasamy Pothiraja<sup>1</sup>, Nikita Bibinov<sup>1</sup>, Philipp Mertmann<sup>1</sup>, Awakowicz Awakowicz<sup>1</sup>  
<sup>1</sup> Ruhr-Universität Bochum, Bochum, Germany
- PO3059 **Use of polymer track membranes with nanostructured surface as drainage in antiglaucomatous operations**  
Liubov Kravets<sup>1</sup>, Tatyana Ryazantseva<sup>2</sup>, Vera Elinson<sup>3</sup>  
<sup>1</sup> Joint Institute for Nuclear Research, Dubna, Russian Federation, <sup>2</sup> Saratov State Medical University, Saratov, Russian Federation, <sup>3</sup> Tsiolkovsky Moscow State Aviation Technological University, Moscow, Russian Federation
- PO3060 **STUDY OF IMMUNOSENSOR CAPACITY OF A PLASMA MODIFIED PMMA SURFACE**  
Nerea Briz<sup>1</sup>, Bergoi Ibarlucea<sup>1</sup>, Jesus Valero<sup>1</sup>  
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**Poster - Photovoltaic Thin Films**

- PO3061 **Inhomogeneities of PECVD plasmas for the deposition of microcrystalline silicon solar cells induced by a disturbed electrode surface**  
Stefan Muthmann<sup>1</sup>, Ralf Schmitz<sup>2</sup>, Wolfgang Appenzeller<sup>2</sup>, Andreas Mück<sup>2</sup>, Aad Gordijn<sup>2</sup>  
<sup>1</sup> IEF-5 Photovoltaik, FZ Juelich, Juelich, Germany, <sup>2</sup> IEF-Photovoltaik Forschungszentrum Juelich, Juelich, Germany
- PO3062 **Control of deposition rate and structure of crystalline Si film by dual frequency PECVD**  
Youn J. Kim<sup>1</sup>, Yoon S. Choi<sup>1</sup>, In S. Choi<sup>1</sup>, Jeon G. Han<sup>1</sup>  
<sup>1</sup> Sungkyunkwan University, Suwon, SouthKorea
- PO3064 **Cermet structured Pt/Al<sub>2</sub>O<sub>3</sub> thin films as solar selective absorber coatings at high temperature**  
HSIN-YEN CHENG<sup>1</sup>, Wan-Yu Wu<sup>2</sup>, Jyh-Ming Ting<sup>3</sup>  
<sup>1</sup> Materials Science and Engineering, Tainan, Taiwan, <sup>2</sup> Department of Materials Science/Tainan University, Tainan, Taiwan, <sup>3</sup> Department of Materials Science and Engineering/National Cheng Kung University/Institute of Nanotechnology and Microsystems Engineering/National Cheng Kung University/Center for Micro/Nano Science and Technology/National Cheng Kung University, Tainan, Taiwan
- PO3065 **Influence of sputtering power on the properties of Au-SnO<sub>2</sub> thin films prepared by dc reactive magnetron sputtering**  
Akepati Reddy<sup>1</sup>, Nuno Figueiredo<sup>2</sup>, Pamanje Sreedhara Reddy<sup>3</sup>, Albano Cavaleiro<sup>4</sup>  
<sup>1</sup> SEG-CEMUC, University of Coimbra, Coimbra, Portugal, <sup>2</sup> University of Coimbra, Coimbra, Portugal, <sup>3</sup> Sri Venkateswara University, Tirupati, India, <sup>4</sup> SEG-CEMUC University of Coimbra, Coimbra, Portugal

**Poster - Corrosion resistant and barrier coatings****PO3066 Plasma etching of SnO<sub>2</sub>:F films at atmospheric pressure for silicon thin film solar cells**

Elena Lopez<sup>1</sup>, Beate Leupolt<sup>1</sup>, Ines Dani<sup>1</sup>, Stefan Kaskel<sup>1</sup>, Eckhard Beyer<sup>1</sup>  
<sup>1</sup> Fraunhofer IWS, Dresden, Germany

**PO3067 Transparent Corrosion Protection for Metals**

Rudolf Emmerich<sup>1</sup>, Ralf Dreher<sup>1</sup>, Matthias Graf<sup>1</sup>, Helfried Urban<sup>1</sup>, Rüdiger Bräuning<sup>1</sup>  
<sup>1</sup> Fraunhofer Institut Chemische Tech., Pfinztal, Germany

**PO3068 PVD coating and Substrate Pretreatment Concepts for Corrosion and Wear Protection of Magnesium Alloys**

Holger Hoche<sup>1</sup>, Stefan Groß<sup>2</sup>, Jürgen Schmidt<sup>3</sup>, Christian Schrader<sup>3</sup>  
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**PO3070 Improvement of the corrosion protection using magnetron sputtered Mg-Al alloys**

Michael Störmer<sup>1</sup>, Carsten Blawert<sup>1</sup>, Christian Horstmann<sup>1</sup>, Volker Heitmann<sup>1</sup>, Wolfgang Dietzel<sup>1</sup>  
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**PO3072 Estimation of Spallation Life of Thermal Barrier Coating of Gas Turbine Blade by Thermal Gradient Fatigue Test**

il hwan kim<sup>1</sup>, in hwan shin<sup>1</sup>, dong keun lee<sup>1</sup>, chang sung seok<sup>1</sup>, jae mean koo<sup>1</sup>, tack woon lee<sup>2</sup>, bum soo kim<sup>3</sup>  
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**PO3073 Corrosion effects of Plasma immersion ion implantation-enhanced Cr deposition on SAE 1070 carbon steel**

Carina B Mello<sup>1</sup>, Mario Ueda<sup>1</sup>, Rogério M Oliveira<sup>1</sup>, Jose A Garcia<sup>2</sup>  
<sup>1</sup> National Institute for Space Research, São José dos Campos SP, Brazil, <sup>2</sup> Centro de Ingeniería Avanzada de Superficies AIN, Cordovilla - Pamplona, Spain

- PO3074 **Influence of a-C:H:Cr Multilayer DLC Coatings on the Wear and Corrosion Resistance of Low-alloy Steel**  
Raphael Weiß<sup>1</sup>, Kirsten Bobzin<sup>2</sup>, Nazlim Bagcivan<sup>2</sup>, Sebastian Theiß<sup>2</sup>  
<sup>1</sup> Surface Engineering Institute, RWTH, Aachen, Germany, <sup>2</sup> Surface Engineering Institute, RWTH Aachen University, Aachen, Germany
- PO3075 <sup>1</sup>  
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- PO3076 **Assessment of Thermo-Mechanical Fatigue Life of Thermal Barrier Coatings applied Gas Turbine Blade**  
in hwan shin<sup>1</sup>, dong keun lee<sup>1</sup>, il hwan kim<sup>1</sup>, chang sung seok<sup>1</sup>, jae mean koo<sup>1</sup>, tack woon lee<sup>2</sup>, bum soo kim<sup>3</sup>  
<sup>1</sup> sungkyunkwan university, suwon, SouthKorea, <sup>2</sup> KPS Gas Turbine Technology Service Center, incheon, South Korea, <sup>3</sup> KEPRI, Power Generation Laboratory, daejeon, South Korea
- PO3077 **Suppression of oxygen-induced embrittlement in Ti by plasma immersion ion implantation (PIII)-based processing**  
Rossen Yankov<sup>1</sup>, Andreas Kolitsch<sup>1</sup>, Frans Munnik<sup>1</sup>, Johannes von Borany<sup>1</sup>, Alexander Donchev<sup>2</sup>, Michael Schütze<sup>2</sup>  
<sup>1</sup> Forschungszentrum Dresden-Rossendorf, Dresden, Germany, <sup>2</sup> DECHEMA, Frankfurt am Main, Germany
- PO3078 **Magnetron sputtered CrN coatings for corrosion protection of metallic bipolar plates in high-temperature polymeric fuel cells**  
Alberto Garcia-Luis<sup>1</sup>, Daniel González-Santamaría<sup>1</sup>, Francisco José Fernández<sup>1</sup>, Asier Gofñi<sup>1</sup>, Marta Brizuela<sup>1</sup>, Pablo Corengia<sup>1</sup>  
<sup>1</sup> INASMET-Tecnalia, San Sebastian, Spain
- PO3079 **Oxidation resistance of doped AlTiTaN Coatings: Effect of nature and quantity of the doping element**  
David DUDAY<sup>1</sup>, Patrick CHOQUET<sup>1</sup>, Thierry GIROT<sup>1</sup>, Nathalie VALLE<sup>1</sup>, Claude MICHOTTE<sup>2</sup>, Marianne PENOY<sup>2</sup>, Christian MITTERER<sup>3</sup>  
<sup>1</sup> CRP Gabriel Lippmann, BELVAUX, Luxembourg, <sup>2</sup> CERATIZIT, MAMER, Luxembourg, <sup>3</sup> University of LEOBEN, LEOBEN, Austria
- PO3080 **Hard amorphous Si-B-C-N coatings with high thermal stability and oxidation resistance prepared by pulsed magnetron sputtering**  
Petr Steidl<sup>1</sup>, Pavel Calta<sup>1</sup>, Jaroslav Vlcek<sup>1</sup>, Petr Zeman<sup>1</sup>  
<sup>1</sup> Dep. of Physics, Uni. of West Bohemia, Plzen, CzechRepublic
- PO3081 **Influence of the microstructural and chemical composition of nanostructured CrAl(Y,Zr)N coatings on the oxidation resistance**  
Juan Carlos Sanchez Lopez<sup>1</sup>, Said El Mrabet<sup>1</sup>, Teresa Cristina Rojas<sup>1</sup>, Marta Brizuela<sup>2</sup>, Alberto Garcia-Luis<sup>2</sup>  
<sup>1</sup> ICMS-CSIC, Sevilla, Spain, <sup>2</sup> Inasmet-Tecnalia, Donostia, Spain

PO3082 **Microhardness and Corrosion Behavior of Ni-SiC Electrodeposited Coatings in Presence of Organic Additives**

Hachemi BEN TEMAM<sup>1</sup>, Abdelouahad CHALA<sup>2</sup>, Saad Rahmane<sup>2</sup>

<sup>1</sup> Laboratoire de Chimie Appliquée, Biskra, Algeria, <sup>2</sup> Laboratoire de Chimie Appliquée, Université de Biskra, Biskra, Algeria

PO3083 **Corrosion Behavior of Plasma Electrolytic Fabricated Silicon Nitride/Titania Nanocomposite Layer**

Alireza Sabour Rouhaghdam<sup>1</sup>, Mahmood Aliofkhaezai<sup>1</sup>

<sup>1</sup> Tarbiat Modares University, Tehran, Iran

PO3084 **Silicon oxide permeation barrier coating of PET bottles and foils using a biased microwave plasma**

Simon Steves<sup>1</sup>, Michael Deilmann<sup>2</sup>, Nikita Bibinov<sup>2</sup>, Peter Awakowicz<sup>2</sup>

<sup>1</sup> AEPT, Ruhr-Universität Bochum, Bochum, Germany, <sup>2</sup> Institute for Electrical Engineering and Plasma Technology, Ruhr-Universität Bochum, Bochum, Germany

PO3085 **Enhanced barrier for PET-bottles by combination of interior and exterior plasma-assisted coating**

Karim Bahroun<sup>1</sup>, Walter Michaeli<sup>1</sup>, Friederike v. Fragstein<sup>1</sup>

<sup>1</sup> Institute of Plastics Processing, Aachen, Germany

PO3086 **Investigations of plasma polymerized SiOx barrier films for polymer food packaging**

Matthias Walker<sup>1</sup>, Simone Plog<sup>1</sup>, Joachim Schneider<sup>1</sup>, Andreas Schulz<sup>1</sup>, Ulrich Stroth<sup>1</sup>

<sup>1</sup> Inst. f. Plasmaforschung, Uni Stuttgart, Stuttgart, Germany

PO3087 **PECVD SiOx-based multilayer water barrier coatings on PLA**

Alessandro Patelli<sup>1</sup>, Simone Vezzu<sup>1</sup>, Marino Colasuonno<sup>1</sup>, Lorenzo Zottarel<sup>1</sup>, Roberta Sulcis<sup>1</sup>

<sup>1</sup> CIVEN, Marghera - Venezia, Italy

PO3088 **Coatings for permeation barriers: from 2D to 3D substrates**

Jakob Barz<sup>1</sup>, Maximilian Baier<sup>1</sup>, Michael Haupt<sup>1</sup>, Christian Oehr<sup>1</sup>

<sup>1</sup> Fraunhofer IGB, Stuttgart, Germany

PO3089 **Plasma Metallization of Textiles Applied as Barrier Materials**

Joanna Koprowska<sup>1</sup>, Jaroslaw Janukiewicz<sup>2</sup>, Jan Ziaja<sup>3</sup>

<sup>1</sup> Textile Research Institute (IW), Lodz, Poland, <sup>2</sup> Institute of Telecommunication, Teleinformatics and Acoustics, Wrocław University of Technology, Wrocław, Poland, <sup>3</sup> Institute of Electrical Engineering Fundamentals, Wrocław University of Technology, Wrocław, Poland

**Poster - Plasma and Ion Sources**

- PO3090 **Reduction of plasticizer leaching from PVC by barrier coatings deposited using DBD processes at atmospheric pressure**  
Mercedes Cerezuola Barreto<sup>1</sup>, Jochen Borris<sup>1</sup>, Michael Thomas<sup>1</sup>, Renate Hänsel<sup>2</sup>, Michael Stoll<sup>2</sup>, Claus-Peter Klages<sup>1</sup>  
<sup>1</sup> Fraunhofer IST, Braunschweig, Germany, <sup>2</sup> Research Institute of Leather and Plastic Sheetting FILK, Freiberg, Germany
- PO3091 **Advanced plasma technology for wafer based and large area RIE and PECVD processes**  
Dirk Rost<sup>1</sup>, Jens Landrock<sup>1</sup>, Michael Zeuner<sup>1</sup>, Matthias Nestler<sup>1</sup>, Sebastian Winkler<sup>1</sup>  
<sup>1</sup> Roth&Rau MicroSystems GmbH, Hohenstein-Ernstthal, Germany
- PO3092 **Multiple frequency capacitive plasmas for PVD: Ferromagnetic film properties correlated to external process parameters**  
Stefan Bienholz<sup>1</sup>, Egmont Semmler<sup>1</sup>, Peter Awakowicz<sup>1</sup>  
<sup>1</sup> AEPT / Ruhr-Universität Bochum, Bochum, Germany
- PO3094 **INFLUENCE OF AUXILIARY PLASMA SOURCE AND ION BOMBARDMENT ON STOICHIOMETRY OF TiO<sub>2</sub> THIN FILMS**  
Stephan Mändl<sup>1</sup>, A. Gjevori<sup>2</sup>, J.W. Gerlach<sup>3</sup>, D. Manova<sup>3</sup>, W. Assmann<sup>4</sup>  
<sup>1</sup> Leibniz-Inst. f Oberflächenmodifizierung, Leipzig, Germany, <sup>2</sup> Faculty of Natural Sciences, University of Tirana, Tirana, Albania, <sup>3</sup> Leibniz-Institut für Oberflächenmodifizierung, Leipzig, Germany, <sup>4</sup> Maier-Leibnitz-Laboratorium, Garching, Germany
- PO3095 **An investigation of electrical parameters of an industrial plasma ion beam assisted coating environment**  
Andreas Ohl<sup>1</sup>, Rüdiger Foest<sup>1</sup>, Mario Hannemann<sup>1</sup>, Jens Harhausen<sup>1</sup>, Hartmut Steffen<sup>1</sup>, Ruben Wiese<sup>1</sup>, Klaus-Dieter Weltmann<sup>1</sup>  
<sup>1</sup> INP-Greifswald e.V., Greifswald, Germany
- PO3096 **Characteristics of SiH<sub>4</sub>/H<sub>2</sub> VHF Plasma Produced by Short Gap Discharge**  
Yoshinobu Kawai<sup>1</sup>, Tatsuyuki Nishimiya<sup>2</sup>, Tomoyoshi Baba<sup>2</sup>, Tsukasa Yamane<sup>2</sup>, Yoshiaki Takeuchi<sup>2</sup>, Yasuhiro Yamauchi<sup>2</sup>, Hiromu Takatsuka<sup>2</sup>, Hiroshi Muta<sup>1</sup>, Kiichiro Uchino<sup>1</sup>  
<sup>1</sup> Kyushu University, Kasuga, Japan, <sup>2</sup> Mitsubishi Heavy Industries Ltd., Nagasaki, Japan
- PO3097 **The Development and Analysis of Plasma Microfluidic Devices**  
Olumuyiwa Olabanji<sup>1</sup>, James Bradley<sup>1</sup>  
<sup>1</sup> The University of Liverpool, Liverpool, UnitedKingdom
- PO3098 **Influence of structure of WC-Co electrode on the deposition rate and properties of electrospark coatings**  
Evgenia Zamulaeva<sup>1</sup>, Evgenia Zamulaeva<sup>2</sup>, Evgeny Levashov<sup>2</sup>, Alexander Kudryashov<sup>2</sup>  
<sup>1</sup> MISIS, Moscow, RussianFederation, <sup>2</sup> National University of Science and Technology "MISIS", Moscow, Russian Federation

PO3099 **Low-Damage Plasma Processing of Inorganic/Organic Hybrid Materials for Development of Flexible Devices**

Yuichi Setsuhara<sup>1</sup>, Ken Cho<sup>1</sup>, Kosuke Takenaka<sup>1</sup>, Masaharu Shiratani<sup>2</sup>, Makoto Sekine<sup>3</sup>, Masaru Hori<sup>3</sup>

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