Wednesday, September 9, 2020

10:00 - 11:00 Poster Session D | Entrance East
Characterization and simulation of films and processes; Energy conversion related coatings

POD002 **Oxide semiconductors and related devices produced by high power impulse magnetron sputtering and selective area atomic layer deposition methods**
Christy Fadel[1], Stéphane Cuynet[1], Claudia De Melo[1], Marcos Soldera[2], Jean-François Pierson[1], Frank Müklich[3], David Horwat[1]
[1] Institut Jean lamour, Nancy, France, [2] Institut für Fertigungstechnik, Dresden, Germany, [3] Lehrstuhl für Funktionswerkstoffe, Saarbrücken, Germany

POD006 **Multiscale simulation of multicathode reactive magnetron sputtering processes at industrial scale**
Petr Zikán, Kryštof Mrózek, Martin Kubečka, Adam Obrusník
PlasmaSolve s.r.o., Brno, Czech Republic

POD007 **Gas flow simulations of a DBD plasma for deposition processes in pipes**
Mariagrazia Troia[1], Andreas Schulz[1], Matthias Walker[1], Sven Boehler[2], Florian Eder[2]
[1] IGVP, University of Stuttgart, Stuttgart, Germany, [2] Siemens AG Corporate Technology, Erlangen, Germany

POD008 **Diagnostic of Magnetron Sputtering by using a Passive Thermal Probe**
Julia Cipo[1], Felix Schlichting[1], Finn Zahari[2], Lars Thormählen[2], Dirk Meyners[2], Hermann Kohlstedt[2], Holger Kersten[1]
[1] Kiel University, Kiel, Germany, [2] Faculty of Engineering / Kiel University, Kiel, Germany

POD009 **Energy flux measurements on atmospheric pressure plasma spray torches with passive thermal probes**
Kristian Reck[1], Maximilian Stummer[2], Thorben Kewitz[3], Luka Hansen[1], Simon Chwatal[4], Alexander M. Schwan[4], Andreas Hinterer[2], Rüdiger Foest[3], Jürgen M. Lackner[4], Holger Kersten[1]
[1] Christian-Albrechts-Universität zu Kiel, Kiel, Germany, [2] INOCON Technologie GmbH, Attnang-Puchheim, Austria, [3] Leibniz Institute for Plasma Science, Greifswald, Germany, [4] JOANNEUM RESEARCH Forschungsgesellschaft, Niklasdorf, Austria

POD010 **Directionally Resolved Characterization of Sputter Processes with Force Probes and Quartz Crystal Microbalances**
Mathis Klette, Manuel Maas, Thomas Trottenberg, Holger Kersten, , , , , ,
Kiel University, Kiel, Germany

POD011 **Predicting coating uniformity on substrates with planetary rotation in 2D and 3D**
Martin Kubečka[1], Petr Zikan[2], Krystof Mrozek[2], Adam Obrusnik[2]
[1] PlasmaSolve s.r.o., Brno, Czech Republic, [2] PlasmaSolve, Brno, Czech Republic

POD012 **Self-consistent modelling of a linear microwave plasma source**
Stefan Merli[1], Yannick Kathage[2], Stefan Hanke[2], Andreas Schulz[1], Matthias Walker[1]
[1] IGVP, University of Stuttgart, Stuttgart, Germany, [2] Karlsruhe Institute of Technology (KIT), Karlsruhe, Germany

POD013 **Characterization of Surface Topometry and Determination of Layer Thickness by Scanning White Light Interference Microscopy**
Matthias Weise, Uwe Beck, Andreas Hertwig
Bundesanstalt für Materialforschung, Berlin, Germany

POD014 **An automated evaluation for the Rockwell indentation test**
Reinhold Bethke[1], Jan Gäbler[1], Markus Rauhut[2], Damjan Hatic[2], Ali Mogiseh[2], Thomas Waibel[2], Michael Eder[3], Stephan Eder[3], Serhan Bastürk[4], Nazlim Bagcivan[4]
[1] Fraunhofer IST, Braunschweig, Germany, [2] Fraunhofer ITWM, Kaiserslautern, Germany, [3] BAQ GmbH, Braunschweig, Germany, [4] Schaeffler AG, Herzogenaurach, Germany

POD015 **Evaluation of impedance spectroscopy for the characterization of dielectric thin films**
Stefan Braun, Hans-Dieter Schnabel, , , , , , , ,
Westsächsische Hochschule Zwickau, Zwickau, Germany

POD016 **Oxidation resistance of Ta doped WB2-z coatings**
Christoph Fuger[1], Vincent Moraes[2], Rainer Hahn[1], Hamid Bolvardi[3], Peter Polcik[4], Paul Heinz Mayrhofer[2], Helmut Riedl[1]
[1] CDL-SEC, TU Wien, Wien, Austria, [2] Institute of Materials Science, TU Wien, Wien, Austria, [3] Oerlikon Surface Solutions AG, Liechtenstein, Liechtenstein, [4] Plansee Composite Materials GmbH, Lechbruck am See, Germany

POD017 **Influence of the sputtering mode on thermochromic properties of LaCoO3 selective layers for thermal solar collectors**
Fabien Capon[1], Daria Kharkhan[1], David Pilloud[1], Sylvie Migot[1], Denis Mangin[1], Nicolas Portha[2], Silvère Barrat[1]
[1] Institut Jean Lamour, Nancy, France, [2] Viessmann, Faulquemont, France

POD018 **Securing in-line layer thickness measurements by using spectroscopic plasma monitoring for real-time control and adjustment of refractive indices in production processes**
Jan-Peter Urbach, Thomas Schütte, Peter Neiss
PLASUS GmbH, Mering, Germany

POD019 **In-situ plasma monitoring during pulsed laser deposition of Cu2O thin films and comparison with HiPIMS**
Jan Lancok[1], Stefan Andrei Irimiciuc[2], Michal Novotný[1], Lenka Volfová[1], Přemysl Fitl[3], Martin Vrnata[3], Valentin Craciun[2]
[1] Institute of Physics CAS, Prague, Czech Republic, [2] NILPRP, Bucharest, Romania, [3] University of Chemistry and Technology, Prague, Czech Republic

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POD020 **The Multipole Resonance probe as a real-time in-situ plasma diagnostic for process monitoring and control**
Moritz Oberberg, Geoffrey Mellar, Maria Dell, Peter Awakowicz
Ruhr-Universität Bochum, Bochum, Germany

POD021 **A robust method for in-situ gas monitoring of CVD processes using optical emission spectroscopy of a pulsed remote plasma**
Joe Brindley, Benoit Daniel, Victor Bellido-Gonzalez, Dermot Monaghan
Gencoa Limited, Liverpool, United Kingdom

16:00 - 17:00 Poster Session F | Entrance East
Plasma and ion surface engineering: plasma and ion source technologies; Plasmas in liquids; Plasma assisted synthesis; Atmospheric plasmas; Partciles and powders in plasmas

POF002 **12 µm PVD in HiPIMS**
Christoph Schiffers, Oliver Lemmer, Werner Kölker, Stephan Bolz, , , , , ,
CemeCon AG, Würselen, Germany

POF004 **Anisotropic mechanical performance of TiO2 coatings produced by magnetron sputtering at oblique incidence**
Germán Alcalá[1], Sandra Muñoz-Piña[2], Iván Fernández[2], Rafael Álvarez[3], Alberto Palmero[3]
[1] Complutense University of Madrid, Madrid, Spain, [2] Nano4Energy SLNE, Madrid, Spain, [3] Instituto de Ciencia de Materiales de Se, Seville, Spain

POF006 **Ready for the next step in tool performance !**
Philipp Immich[1], Philipp Immich[2], Gabriela Negrea[2], Michiel Erden[2], Rajesh Ganesan[2], Ruud Jacobs[2]
[1] IHI Hauzer Techno Coating, Venlo, Netherlands, [2] IHI Hauzer Techno Coating B.V., Venlo, Netherlands

POF007 **Utilization of a Cold Plasma Source for the Metal Foil Pump of a Fusion Reactor**
Yannick Kathage[1], Stefan Hanke[1], Alejandro Vazquez Cortes[1], Christian Day[1], Stefan Merli[2], Andreas Schulz[2], Matthias Walker[2]
[1] KIT Campus Nord ITEP, Eggenstein-Leopoldshafen, Germany, [2] University of Stuttgart IGVP, Stuttgart, Germany

POF008 **Investigations on the two step process of plasma electrolytic based etching**
Maik Froehlich
University of Applied Sciences Zwickau, Zwickau, Germany

POF010 **Controllable growth of graphene layer on dielectric substrate in microwave plasma torch at atmospheric pressure**
Jozef Toman, Ondřej Jašek, Jana Jurmanová, Miroslav Šnírer, Vít Kudrle, Vilma Buršíková
Masaryk University, Brno, Czech Republic

POF013 **Energy balance of a diffuse coplanar surface barrier discharge (DCSBD)**

Lukas Rosenfeldt, Luka Hansen, Kristian Reck, Holger Kersten
Christian-Albrechts-Universität zu Kiel, Kiel, Germany

POF014 **Argon-water DBD pretreatment and vapor-phase silanization of silica – Plasma-chemical model and experimental data**

Vitaly Raev[1], V. V. Raghavendra Sai[2], Divagar Murugan[2], Claus-Peter Klages[1]
[1] IOT TU Braunschweig, Braunschweig, Germany, [2] Indian Institute of Technology Madras, Chennai, India

POF015 **OPTICAL EMISSION SPECTROSCOPY OF A LINEAR GAS-FLOW SPUTTER SOURCE FOR NANOPARTICLE GAS-AGGREGATION**

Harry Nizard[1], Zhili Liang[1], Harry Nizard[2], Daniel Gloess[1], Peter Frach[1], Manuela Junghähnel[1], Gerald Gerlach[2]
[1] Fraunhofer FEP, Dresden, Germany, [2] TU Dresden, Dresden, Germany

POF017 **Modification of the dry lubricant powders polyetheretherketone, polyimide and hexagonal boron nitride by atmospheric pressure plasma and subsequent embedding into nickel dispersion coatings**

Andreas Pfuch, Sven Gerullis, Antonia Gerschütz, Oliver Beier, Björn Sten Mark Kretzschmar, Jürgen Schmidt, Bernd Grünler
INNOVENT e.V., Jena, Germany