

# Poster Session Program

## POSTER SESSION 1, Wednesday, July 10, 14:30-16:30

- P1-T1-01** S. Raskar; H. Telfah; and **I. V. Adamovich**; *Measurements of Excited Metastable Species and Associative Ionization in a Heated Nonequilibrium Flow Plasma Reactor*
- P1-T1-02** J. Suijker; **B. Bagheri**; *The reaction mechanisms between atomic oxygen and water using high-level quantum mechanical calculations*
- P1-T1-03** K. Lemishko; **S. Mohr**; A. Nelson; J. Tennyson; *Machine learning estimator for electron impact ionisation fragmentation patterns*
- P1-T2-04** **S.K. Kodanova**; M.K. Issanova; T.S. Ramazanov; *Investigation of the Coulomb Logarithm for transport coefficients in warm dense matter*
- P1-T3-05** **A. Pikalev**; X. Chen; V. Guerra; G. Zhang; M. C. M. van de Sanden; *Insights into CO<sub>2</sub> conversion with plasma-electrolysis synergy*
- P1-T3-06** **Y. Inagaki**; Y. R. Hayashi; N. Shirai; S. Takakusagi; and K. Sasaki; *Direct conversion of benzene to phenol in plasma-irradiated aqueous solution*
- P1-T3-07** **J. Gans**; Q. Shen; A. Hughes; C. van Deursen; W. Bongers; F. Peeters; M.C.M van de Sanden; *Nitrogen fixation: Synergy between microwave plasma and catalyst*
- P1-T3-08** **V. Kudrle**; T. Vaněčková; O. Jašek; Z. Bonaventura; R. Brunovský; Z. Navrátil; P. Slavíček; *Possibilities of plasma conversion of CO<sub>2</sub> and H<sub>2</sub>/H<sub>2</sub>O to CH<sub>4</sub> at extraterrestrial conditions*
- P1-T4-09** A.S. Stodolna; T.W. Mechielsen; **K. Papamichou**; S. Oostrom; V. Navarro Paredes; M. van de Kerkhof; *Studying the interaction of scanner materials with EUV-generated plasma*
- P1-T4-10** **J. Pawlat**; K. Wolny-Koladka; P. Terebun; M. Kwiatkowski; D. Zarzeczny; M. Zdaniewicz; S. Bodziacki; *Processing of diatomaceous earth after beer filtration process with non equilibrium plasma*
- P1-T4-11** **A. Saito**; T. Nozaki; T. Miyazaki; Y. Inagaki; K. Sasaki; *Distribution of radicals in plasma catalysis for CO<sub>2</sub> methanation using an atmospheric pressure plasma jet*
- P1-T4-12** **M.S. Benilov**; *Ionization layer with collision-free atoms at the edge of partially to fully ionized plasmas*
- P1-T4-13** **C. Cro**; H. Kaufmann; N. Almeida; P. Almeida; M. Benilov; *Phenomenological description of vacuum breakdown and detailed modelling of cathode spots*
- P1-T4-14** **D. Zarzeczny**; J. Pawlat; P. Terebun; M. Kwiatkowski; A. Starek-Wójcicka; M. Krajewska; E. Grządka; B. Chudzik; *The impact of plasma treatment using the GlidArc generator on apple juice in a stationary and flow system*
- P1-T4-15** **D. F. N. Santos**; N. A. Almeida; L. G. Benilova; M. S. Benilov; *Modelling non-equilibrium near-cathode plasma at layers ignition of high-pressure arcs on refractory cathodes*
- P1-T4-16** **P. Viegas**; A. Filipe; J. Silveira; T. C. Dias; A. S. Morillo-Candas; O. Guaitella; V. Guerra; *Surface recombination in Pyrex in CO<sub>2</sub> DC glow discharges*
- P1-T5-17** **W. Khan**; P. Dvorak; *Concentration and rotational temperature of N<sub>2</sub> ions in RF plasma jet measured by LIF*

# Poster Session Program

- P1-T5-18** A.D. Pajdarova; M. Farahani; **T. Kozak**; J. Capek; *Reverse discharge in bipolar HiPIMS and its dependence on magnetic field geometry*
- P1-T5-19** **F.J. Arellano**; M. Kusaba; S. Wu; R. Yoshida; S. Hamaguchi; *Machine learning prediction of the electron density and the electron energy distribution function from the optical emission spectra*
- P1-T5-20** **A. Meindl**; C.K. Kiefer; R. Antunes; A. Hecimovic; U. Fantz; *Investigation of Stark broadening in plasma conversion reactors by means of high resolution optical emission spectroscopy*
- P1-T5-21** **C. Pascual-Fort**; A. Brisset; N De Oliveira; N. Minesi; C.O Laux; G..D Stancu; *Spatial characterization of N(4S) in a microwave plasma jet at atmospheric pressure by fs-TALIF*
- P1-T5-22** M. Krbal; **D. Prokop**; L. Kuthanova; S. Kadlec; T. Hoder; *Breakdown with solid insulation flashover in naturally occurring gases; SF<sub>6</sub> and its alternatives*
- P1-T5-23** **D.J. Schreuder**; G. Mattausch; B. Zimmermann; E. von Hauff; *Optical Emission Spectroscopy of an Electron Beam Sustained Hybrid Discharge of Nitrogen at 1 mbar*
- P1-T5-24** **D. Maletic**; N. Selakovic; D. Popovic; S. Milosevic; G. Malovic; Z Lj Petrovic; *Mass spectrometry measurements of the capillary single electrode helium plasma jet*
- P1-T5-25** **D. Sadi**; E. Baratte; T. Silva ; O. Guaitella; *Ro-vibrational temperatures of CO(X) deduced from emission of third positive and angstrom system of CO in CO<sub>2</sub> glow discharge*
- P1-T5-26** **E. Maťaš**; M. Neogrady; L. Moravsky; S. Matejcik; *Quantitative analysis of NO<sub>2</sub> generated in Atmospheric Pressure Plasma Jet using Ion Mobility Spectrometry*
- P1-T5-27** **G. F. Alfaro**; M. N.Shneider; A. Gerakis; *Coherent scattering from ponderomotive-driven density perturbations for plasma diagnostics*
- P1-T5-28** **G. Kreyder**; D. Stefan; L. Invernizzi; G. Lombardi; K. Gazeli; S. Prasanna; S.M. Starikovskaia; *Nitrogen atoms ps-TALIF in atmospheric pressure*
- P1-T5-29** **P. Hartmann**; J. Carmona-Reyes; L.Y. Luo; L. Matthews; T. Hyde; *Mapping the field around a Langmuir probe with charged dust particles*
- P1-T5-30** **J. Hnilica**; K. Bernatova; P. Klein; Z. Hubicka; M. Cada; P. Vasina; *Time and energy-resolved mass spectrometry study of the HiPIMS discharge operated in Ar and Ar-N<sub>2</sub> atmospheres*
- P1-T5-31** G. Tetard; A. Michau; **S. Prasanna**; P. Brault; K. Hassouni; *Self consistent simulation of dust formation and dynamic in non-equilibrium RF Ar-acetylene plasma*
- P1-T5-32** **K. Jurik**; M. Stastny; P. Drexler; K. Mrozek; A. Obrusnik; *Analysis of a radiofrequency-driven resonant plasma source*
- P1-T5-33** **K. Sasaki**; K. Fushimi; N. Shirai; *Measurement of negative ion density in streamer discharge in air by transient cavity ringdown spectroscopy*
- P1-T6-34** **M. D. Acciarri**; **C. Moore**; S. D. Baalrud; *Particle in Cell Simulations and Correlation Heating*
- P1-T6-35** **H. Akashi**; K. Mizuno; T. Yoshinaga; *Optimization of Null Collision Method in Monte Carlo Model*

# Poster Session Program

- P1-T6-36** F. Taccogna; **A. Panarese**; P. Minelli; F. Cichocki; *Particle-in-Cell modeling of SPIDER negative ion source*
- P1-T6-37** **A. Popoli**; G. Pierotti; F. Ragazzi; A. Cristofolini; *Development of an efficient plasma global model in MATLAB*
- P1-T6-38** T. C. Dias; V. Guerra; **C. D. Pintassilgo**; *Electron kinetics in AC electric fields: testing the limitations of the HF approximation in the two-term Boltzmann equation*
- P1-T6-39** T. C. Dias; **V. Guerra**; *Are local field and local energy approximations appropriate for nanosecond discharges?*
- P1-T6-40** **C. H. Moore**; A.K. Jindal; R. Martinez; A. Padgett; *Comparison of 2D and 3D PIC-DSMC Simulations of Pin-to-Plane Breakdown Through a Thin-Film Dielectric Coated Electrode*
- P1-T6-41** **D. Nikic**; A. Fierro; C.H. Moore; J.M. Lehr; *Simulations of centimeter-scale, atmospheric pressure, positive streamer discharges using EMPIRE-PIC*
- P1-T6-42** **D. Eremin**; L. Vogelhuber; J. Kallaehn; K. Koehn; D. Krueger; L. Xu; R.P. Brinkmann; *Nonadiabatic energization of electrons in spokes observed in magnetrons with a nonuniform magnetic field*
- P1-T6-43** T. M. Santos; **E. Calvo**; J. P.L. Monteiro; P. Sa; M. J. Pinheiro; *Towards Sustainable Space Exploration: Assessing Hall Thrusters for CubeSat Missions*
- P1-T6-44** T. M. Santos; **E. Calvo**; J. P.L. Monteiro; P. Sa; M. J. Pinheiro; *Design and Validation of a Low-Power Hall Thruster for CubeSats: A Scaling Laws Approach*
- P1-T6-45** **E. Litch**; H. Lee; S. K. Nam; M. J. Kushner; *Pulsed Low Bias Frequencies for High Aspect Ratio Plasma Etching*
- P1-T6-46** **F. Taccogna**; P. Minelli; F. Cichocki; *Particle-in-Cell modeling of needle-to-plate ns-pulse spark discharge*
- P1-T6-47** **G. Huebner**; N. Schoeneweih; D. Filla; S. Wilczek; T. Mussenbrock; I. Korolov; *The effect of gas pressure on plasma dynamics in surface dielectric barrier discharges driven by nanosecond voltage pulses*
- P1-T6-48** **G. Fubiani**; F. Gaboriau; L. Garrigues; *PIC-MCC modelling of the dynamics of rotating spokes in a Penning discharge*
- P1-T6-49** **I. Tsonev**; O. Biondo; A. Bogaerts; *Simulation of a pulsed CO<sub>2</sub> plasma based on a six-temperature energy approach*
- P1-T6-50** **J. Skacel**; P. Parodi; G. Gangemi; F. Bariselli; T. Magin; Z. Bonaventura; *Simulation of Space Platform Charging in Very Low Earth Orbit with Particle Methods*
- P1-T6-51** D. Simoes; J. Martins; S. Baghel; J. P. Booth; D. R. Ferreira; O. Guaitella; L. Marques; N. Pinhao; C. D. Pintassilgo; **L. L. Alves**; *Plasma-surface coupled modelling of ammonia production in DC discharges*
- P1-T6-52** **A. Malagon-Romero**; J. Teunissen; *Towards efficient data-driven numerical models for streamer discharges*
- P1-T6-53** **R. Almeida**; P. Almeida; G. Naidis; M. Benilov; *Dynamics of Breakdown along a Dielectric Surface in Air at 1 atm*
- P1-T6-54** **J. P. Booth**; S. Zhang; and G. A. Curley; *Oxygen atom kinetics in pulsed Radiofrequency Capacitively-coupled plasmas at intermediate pressures*

# Poster Session Program

- P1-T6-55** S. Zhang; A. Alvarez Laguna; N. Lequette and **J. P. Booth**; *Modelling for RF-CCPs at Intermediate Pressure: Doubts on Drift-Diffusion Models*
- P1-T7-56** **A. U. Utegenov**; Ye. Yerlanuly; Zh. Onaybergenov; A. Abdrakhmanov; S.A. Orazbayev; T.S. Ramazanov; *Characterization of nanomaterials obtained in DC glow discharge plasma of Ar-C<sub>2</sub>H<sub>2</sub>*
- P1-T7-57** **T. Miyazaki**; K. Sasaki; N. Shirai; *Influence of gas temperature and neutral particle density on self-organized luminous patterns in atmospheric-pressure DC glow discharge*
- P1-T8-58** **A. Robledo-Martinez**; L. A. Garcia-Villarreal; C. Gonzalez-Armendariz; J. M. Basurto; *Lightning discharges in a Jovian atmosphere*
- P1-T9-59** **A. Derzsi**; R. Masheyeva; F. Beckfeld; J. Schulze; Z. Donko; *Determination of the effective secondary electron emission coefficient for low-pressure RF discharges based on pixel-based similarity of spatio-temporal excitation map images*
- P1-T9-60** **Z. Donko**; B. Z. Bentz; P. Hartmann; A. Derzsi; *Electron density measurements and calculations in a helium capacitively-coupled radio-frequency plasma*
- P1-T9-61** **E. Juengling**; S. Wilczek; T. Mussenbrock; M. Boeke; A. von Keudell; *Plasma sheath tailoring by a magnetic field for three-dimensional plasma etching*
- P1-T9-62** **G. Saab**; C. Lahoud; S. Youssef; M. Mikikian; *Fluid simulation of a CCRF dusty plasma using COMSOL: First stage under dust-free conditions*
- P1-T9-63** **J. Thiel**; Ts. V. Tsankov; U. Czarnetzki; *Multidimensional effects in low-pressure discharges*
- P1-T9-64** **M. Matasova**; M. Klas; P. Cermak; S. Matejcik; *Statistical analysis of microgap vacuum breakdown mechanisms for palladium electrodes in pulsed electric fields*
- P1-T9-65** **T.W. Mechielsen**; A.S. Stodolna; P. Van der Walle; C.J Meekens; H. Lensen; *A novel low-temperature hydrogen plasma source for EUV lithography applications*
- P1-T10-66** **A. Takacova**; T. Orriere; G. Gomit; T. Hoder; *Investigation of a liquid droplet affected by an electrical charge injection*
- P1-T10-67** J. Haton; **A. Belinger**; S. Dap; L. Stafford and N. Naude; *Memory effect of a diffuse dielectric barrier discharge obtained in air: surface and volume mechanisms*
- P1-T10-68** **P. Bilek**; G. Arora; P. Hoffer; V. Prukner; M. Simek; *Radially and axially resolved optical emission observed during the initial phase of nanosecond discharge in liquid water*
- P1-T10-69** **C. Bajon**; E. Barrate; D. Sadi; O. Guaitella; A. Belinger; S. Dap; T. Hoder; N. Naude; *CO<sub>2</sub> and CO vibrational excitation in Townsend and filamentary DBD at atmospheric pressure: in situ FTIR measurements*
- P1-T10-70** **J. Cech**; P. Stahel; D. Trunec; R. Hornak; L. Prokes; P. Rudolf; B. Marsalek; E. Marsalkova; P. Lukes; Z. Machala; *CaviPlasma: The properties of energy-efficient plasma source for the treatment of liquids on the scale of cubic metres per hour*
- P1-T10-71** **C. K. Kiefer**; R. Antunes; A. Hecimovic; A. Meindl; U. Fantz; *CO<sub>2</sub> dissociation using a lab-scale microwave plasma torch: an investigation of industrially relevant parameters*
- P1-T10-72** **D. Aceto**; P. R. Rotondo; M. Ambrico; G. Dilecce; F. Faretra; R. M. De Miccolis Angelini; P. F. Ambrico; *Atmospheric Pressure: Low Temperature Plasma applications for decontamination of agrifood products*

## Poster Session Program

- P1-T10-73** S. Marin-Meana; M. Oliva-Ramirez; **M.C. Garcia**; J. Cotrino; A.R. Gonzalez-Elipe; A. Gomez-Ramirez; *Optical emission spectroscopy characterization of a novel atmospheric pressure argon-ammonia gliding arc*
- P1-T10-74** **E. Benova**; P. Marinova; T. Bogdanov; Y. Todorova; M. Kirilova; I. Yotinov; I. Schneider; Y. Topalova; *Toxicity reduction of landfill leachate by direct plasma treatment*
- P1-T11-75** **A. Ashirbek**; Ye. Ussenov; M. Dosbolayev; M. Gabdullin; T. Ramazanov; *Impact of convective flow on filaments in narrow gap DBD*
- P1-T11-76** **L. Alomari**; T. Orriere; R. Bellanger; B. Teychene; E. Moreau; *Investigation of the liquid velocity gradient induced by a plasma dielectric barrier discharge and its impact on reactive species generation*
- P1-T11-77** **N. Bente**; H. Piquet; N. Merbahi; E. Bru; *Thermal modelling of an atmospheric pressure cylindrical DBD reactor for NO<sub>x</sub> removal*
- P1-T12-78** **S. J. Shetty**; S. Atikukke; M. Veis; T. Roch; P. Veis; *Studies of the self-absorption of boron doublet at 249 nm for an accurate Cf-LIBS analysis of diboride thin layers*