

## Session Program

22-28 Jun 2019



## PPPS 2019

### ***Poster - Industrial/Commercial/Medical Applications and Plasma and Pulse Power Diagnostics***

DoubleTree at the Entrance to Universal Orlando  
5780 Major Blvd. Orlando, Florida, 32819, USA

## Wednesday 26 June

13:30

### Poster - Industrial/Commercial/Medical Applications and Plasma and Pulse Power Diagnostics

**Poster Session** | **Location:** Double Tree at the Entrance to Universal Orlando, Universal Center | **Conveners:** Yunping Zhang, Shutong Song, Mr Li Lin

#### 3P73 - Visible Spectroscopy Techniques for Diagnosing Plasmas in High-Energy-Density Power-Flow Systems

**Speaker**

Dr Mark D. Johnston

#### 3P01 - Novel High Voltage Pulsing to Generate Uniform Glow Discharge Air Plasma for Environment Friendly Inline Treatment of Textile

**Speaker**

Dr Vishal Jain

#### 3P83 - Design of Ultra Wide Band Large Capacitance Load Pulse Source

**Speaker**

Mr Dongdong Huang

#### 3P84 - Design and calibration of magnetic pick-up coil (B-dot) probes for measuring strong magnetic fields using commercial electronic components

**Speaker**

Raul Melean

#### 3P77 - A FREQUENCY RESPONSE TEST DEVICE FOR NANO-SECOND COAXIAL RESISTOR DIVIDER

**Speaker**

Ms Jiayin Yan

#### 3P87 - Design and Performance of a 6 GHz Analog Optical Link

**Speaker**

Matthew Lara

#### 3P85 - Z Line-VISAR: Spatially Resolved Load Current Diagnostic at the Z Pulsed Power Facility\*

**Speaker**

David Bliss

#### 3P88 - Design and Analysis on Coil Parameter of Linear Rogowski Coil for Measurement of High Frequency Pulsed Current

**Speaker**

Ms Kyoko Fujiwara

#### 3P78 - LUMPED PARAMETER MODEL AND ANALYSIS OF WIDE BAND RESISTANCE CAPACITANCE PARALLEL VOLTAGE DIVIDER FOR OVERVOLTAGE MONITORING

**Speaker**

Jiayin Yan

**3P76 - Measurement on Electrical Conductivity of Exploding Copper Wire During Current Dwell Time****Speaker**

Mr Sungbin Park

**3P71 - High Power Microwave Pulse Testing of Electronic Devices using Reverberating Chambers****Speaker**

Dr Tomas Hurtig

**3P86 - Vacuum Ultraviolet Spectroscopy for Power Flow Studies on the 1 MA, 100 ns MAIZE LTD****Speaker**

Mr Trevor Johannes Smith

**3P02 - Reactive Sputtering of Aluminum Acetylacetonate for Deposition of Alumina Films****Speaker**

Elidiane Rangel

**3P04 - Spectroscopic Measurement of Active Species Generated in Streamer Discharge on Water Surface****Speaker**

Prof. Takashi Sakugawa

**3P05 - Reillumination of Expiring Corona-like Pulsed Discharges in Water****Speaker**

Raphael Rataj

**3P06 - Plasma Properties in a High Pressure ALD Reactor****Speaker**

Mr Chenhui Qu

**3P07 - Electrical Discharge in Gas-liquid Mixture: Breakdown Voltage and Energy Deposition Distribution in Each Phase****Speaker**

Mr KUNPENG WANG

**3P08 - Evaluation of electric field and charge on bio-substrates induced by nanosecond pulsed helium plasma jet****Speaker**

xi li

**3P09 - TWO TEMPERATURE SIMULATION OF SUBATMOSPHERIC ARC DISCHARGE\*****Speaker**

Dr Madhusudhan Kundrapu

**3P10 - Gas Temperature Determination of Nonthermal Plasma Through Boltzmann Plot Method****Speaker**

Mr Marcus Ashford

**3P12 - One-dimensional Numerical Simulation on Nanosecond Pulsed Discharge**

**Speaker**

Dr Guofeng Lou

**3P13 - Corona Discharge Induced Submicron Water Droplet Coalescence and Growth in a Subsaturated Cloud Chamber****Speakers**

Dr Pengyu Wang, Dr Chuan Li

**3P14 - Argon cold atmospheric pressure plasma jet enhancing seed germination and seedlings growth of fenugreek (*Trigonella foenum-graecum*)****Speaker**

Dr Abdel-Aleam Mohamed

**3P17 - Investigation on shock wave generated by underwater discharge due to different progress of plasma****Speaker**

Mitsuhiko Sato

**3P18 - CALCULATION OF ARC CONDUCTANCE AFFECTED BY FLOW FIELD FOR IMPROVEMENT OF CURRENT INTERRUPTION PERFORMANCE****Speaker**

Yuji Komai

**3P21 - Development of 3D Electromagnetic Thermal Fluid Simulation for Elucidation of Gas Contamination Process of Circuit Breaker****Speaker**

Shoya Nishizawa

**3P22 - Performance of a Pulsed Electromagnetic Micropropulsion System with Low Energy Surface Flashover Igniter****Speaker**

Adam Patel

**3P23 - High density plasma thruster****Speaker**

Mr Dejan Nikic

**3P25 - Pulsed power supply design for vacuum arc thrusters application****Speaker**

Mr Marvin Kuehn

**3P26 - Study of Conductivity on Hydrogen Peroxide Concentration by High Repetitive Underwater Discharge****Speaker**

Daiki Sugawara

**3P27 - Sterilization of E. coli in seawater using discharge in water and dielectric barrier discharge****Speaker**

Hisanori Sone

**3P28 - Flexible Control of Pulsed Power Generator for Research Applications with Sensors**

<p><b>Speaker</b> Masahiro Akiyama</p>
<p><b>3P29 - Plasma source for generating ultrasonic and ultraviolet radiation in water</b></p> <p><b>Speaker</b> Joseph Groele</p>
<p><b>3P30 - Production of crushed sand using underwater pulsed discharge</b></p> <p><b>Speaker</b> Mr Naoki Matsumoto</p>
<p><b>3P31 - Aggregation inhibition of nanoparticle dispersion by nonthermal plasma irradiation</b></p> <p><b>Speaker</b> Mr Katsushi Suenaga</p>
<p><b>3P33 - Calculation and Analysis of Self-resistance of Grounding Material</b></p> <p><b>Speaker</b> Zhu Yinan</p>
<p><b>3P34 - Growth of photocatalytically active coatings on aluminum by Plasma Electrolytic Oxidation</b></p> <p><b>Speaker</b> Nilson C Cruz</p>
<p><b>3P37 - Electric breakdown in granite as a function of pressure and temperature conditions</b></p> <p><b>Speaker</b> Dr Antoine de Ferron</p>
<p><b>3P38 - Excess ion energy being essential for ultra-shallow implantation</b></p> <p><b>Speaker</b> Prof. Noriyuki Sakudo</p>
<p><b>3P39 - Investigation of Energy Control in Coaxial Reactor for Ozone Production by Using Nanosecond Pulsed Powers</b></p> <p><b>Speaker</b> Yoshifumi Sanuki</p>
<p><b>3P43 - Temperature effect on the surface flashover plasma of the GIS insulator</b></p> <p><b>Speaker</b> Dr Guo-ming MA</p>
<p><b>3P44 - Erosion characteristics for different geometric electrodes in an AC rotating arc reactor</b></p> <p><b>Speaker</b> Dr Kwan-Tae Kim</p>
<p><b>3P46 - Lorentz Force Eddy Currents for Nondestructive Testing</b></p> <p><b>Speaker</b> Agni Dhanabal</p>
<p><b>3P45 - Statistical examination of spoke evolution in HiPIMS</b></p>

**Speaker**

Dr Peter Klein

**3P56 - Variation of Physical Parameters in Plasma Wound Healing****Speaker**

Jimo Lee

**3P64 - Time-resolved ATR-FTIR to Reveal inactivation Kinetics of E. coli by Atmospheric DBD Plasma****Speaker**

Dr Liyang Zhang

**3P62 - Improved electrode configuration for the production of plasma activated water****Speaker**

Yun Sik Jin

**3P58 - The Influence of Applying High Electrical Field Pulses on Unfolded Protein Response of cells****Speaker**

Mr Akira Izutani

**3P53 - Magnetic field effects on efficiency of non-viral gene delivery using magnetic nanoparticles****Speaker**

Allen Garner

**3P66 - PLASMA SOURCE FOR KILLING BACTERIA AND BIOFILMS ON SURFACES****Speaker**

Dr Jim Browning

**3P59 - Inactivation process observation of HeLa cells induced by atmospheric-pressure pulsed plasma jet****Speaker**

Mr Tomohiro Ueji

**3P52 - MODELING PLASMA SPECIES FORMATION FOR HIGH VOLTAGE ATMOSPHERIC COLD PLASMAS****Speaker**

Ms Nancy Isner

**3P65 - SURFACE DISCHARGE PLASMA INHIBITED THE BIOSYNTHESIS OF STAPHYLOXANTHIN IN STAPHYLOCOCCUS AUREUS****Speaker**

Ms Yupan Zhu

**3P60 - Optimization of GFP introduction into HL-60 cells with a combination of two different rectangular pulses****Speaker**

Prof. Susumu Kono

**3P50 - CELL GEOMETRY-INVARIANT CALCULATION OF PLASMA MEMBRANE POTENTIAL DUE TO ELECTRIC PULSES USING VARIATIONAL CALCULUS**

**Speaker**  
Adam Darr

### **3P54 - Effects of Nanosecond Pulsed Electric Fields Application and Combination of Anticancer Drug on Cancer Cell**

**Speaker**  
Mr Soichiro Enomoto

### **3P68 - Investigation of bactericidal characteristics in packaged condition in high frequency high voltage pulse sterilization of food**

**Speaker**  
Naoya Minemura

### **3P69 - Consideration of sterilizing method for Stacked Pieces in Packaged Foods Using Pulsed Plasma**

**Speaker**  
Katsunari Itakura

### **3P40 - Improvement of ozone generation characteristics with shorter rise time of nanosecond pulse voltage**

**Speaker**  
Hideaki Fukuoka

### **3P11 - Temporal Gas Temperature Measurement of Single Filament in Atmospheric Pressure Plasma Jet**

**Speaker**  
Jiayin Li

### **3P74 - Development of an LIF-dip system to measure electric field magnitude**

**Speaker**  
Dr Christopher Durot

### **3P89 - Investigation of the Structural, Thermal and Electrical Properties of Plasma Polymerized o-Methoxyaniline Thin Films**

**Speaker**  
Mr Md. Mehdi Masud

### **3P81 - Analysis of Cygnus Electrical Signals**

**Speaker**  
Mr Hoai-Tam (Tam) Truong

### **3P42 - Broadband Power Measurements of High-Voltage, 10-ns Pulses for Plasma Ignition for Combustion**

**Speaker**  
Christopher Tremble

### **3P79 - Electro-Optical Measurement of Electric Fields for Pulsed Power Systems**

**Speaker**  
Israel Owens

### **3P82 - HIGH CURRENT SENSING THROUGH FARADAY ROTATION OF POLARIZED LIGHT OF VARYING WAVELENGTHS IN FIBERS III\***

**Speaker**  
Mr Sean Coffey

15:00

## **3P51 - A Bipolar High Voltage Pulse Generator Used for Irreversible Electroporation Ablation**

**Speaker**

Lanxi Li