

Technical Session	Technical Session Organizer
1.4 Partially Ionized Plasmas	Igor Kaganovich (ikaganov@pppl.gov)

Session WE 1.4: Partially Ionized Plasmas

Wednesday, May 24, 2017 from 10:00-12:00, Wildwood 13

Session Chair: Vladislav Vekselman, PPPL

10:00 WE 1.4-1 (invited) ON ELECTRON HEATING IN MAGNETRON SPUTTERING DISCHARGES

J. T. Gudmundsson^{1,2}, D. Lundin³, M. A. Raadu¹, C. Huo¹, T. M. Minea³, N. Brenning^{1,4}

¹*Department of Space and Plasma Physics, KTH-Royal Institute of Technology, Stockholm, Sweden*

²*Science Institute, University of Iceland, Reykjavik, Iceland*

³*Laboratoire de Physique des Gaz et Plasmas - LPGP, Universite Paris-Sud, Orsay, France*

⁴*Plasma and Coatings Physics Division, Linkoping University, Linkoping, Sweden*

10:30 WE 1.4-2 MATCHING PLASMAS AND ELECTRODES IN NUMERICAL SIMULATION OF HIGH-PRESSURE ARC DISCHARGES: A SUMMARY

M. S. Benilov

FCEE, Departamento de Fisica, Universidade da Madeira, Funchal, Portugal

10:45 WE 1.4-3 SELF-CONSISTENT NUMERICAL SIMULATION OF CARBON ARC FOR NANOPARTICLE SYNTHESIS

A. Khrabry¹, A. Khodak¹, I. Kaganovich¹, V. Vekselman¹, V. Nemchinsky²

¹*Princeton Plasma Physics Laboratory, Princeton, NJ, United States*

²*Keiser University, Fort Lauderdale, United States*

11:00 WE 1.4-4 INTERACTION OF ATMOSPHERIC PRESSURE PLASMA JET WITH HELIUM FLOW

V. Samara, S. Ptasinska

Radiation Laboratory, University of Notre Dame, Notre Dame, IN, US

11:15 WE 1.4-5 REMOTE GENERATION OF LARGE-VOLUME ELECTROPOSITIVE PLASMA AT REDUCED PRESSURE BY MEANS OF GUIDED FAST IONIZATION WAVES FROM A PLASMA JET AS A POWER SOURCE

H. Razavi, S. Mohades, M. Laroussi

Electrical and Computer Engineering, Old Dominion University, Norfolk, VA, United States

11:30 WE 1.4-6 ON PEAK CURRENT DENSITY IN ATMOSPHERIC PULSE-MODULATED RF DISCHARGES WITH VERY HIGH FREQUENCY

Y. Zhang¹, Y. Wang²

¹*School of Electrical Eng., Shandong University, Jinan, China*

²*School of Physics and Optoelectronic Engineering, Dalian University of Tech., Dalian, China*

11:45 WE 1.4-7 METHODS FOR DIRECT SOLUTION OF THE BOLTZMANN EQUATION FOR GAS DISCHARGES

S. B. Swanekamp, A. S. Richardson, B. Srinivasan

Plasma Physics Division, Naval Research Laboratory, Washington, DC

Session TH 1.2: Partially Ionized Plasmas/Space Plasmas

Thursday, May 25, 2017 from 10:00-11:15, Wildwood 10

Session Chairs:

10:00 TH 1.2-1 THE EFFECT OF NEUTRALS DEPLETION ON PLASMA DIAMAGNETISM

A. Fruchtman¹, S. Shinohara², D. Kuwahara²

¹*Physics department, Holon Institute of Technology, Holon, Israel*

²*Division of Advanced Mechanical Systems Engineering, Tokyo University of Agriculture and Technology, Tokyo, Japan*

10:15 TH 1.2-2 INVESTIGATION OF THE SIMILARITY LAW IN DISCHARGES AT HIGH PRESSURE USING A KINETIC GLOBAL MODEL

Y. Fu¹, G. Parsey¹, J. Kerk¹, J. Verboncoeur¹, A. Chiristlieb¹, X. Wang²

¹*Department of Computational Mathematics, Science and Engineering, Michigan State University, East Lansing, United States*

²*Department of Electrical Engineering, Tsinghua University, Beijing, China*

10:30 TH 1.2-3 ION ACOUSTIC GARDNER SOLITONS IN SUPERTHERMAL PLASMA WITH ELECTRON BEAM

N. S. Saini, N. Kaur

Physics, Guru Nanak Dev University, Amritsar, Punjab, India

10:45 TH 1.2-4 KINETIC MODEL TO INTERPRET WHISTLER WAVES IN MULTICOMPONENT NON-MAXWELLIAN SPACE PLASMAS

W. Nasir¹, M. N. Sarwar²

¹*PHYSICS, Forman Christian College (A Chartered University), Lahore, PAKISTAN*

²*PHYSICS, Government College University, lahore, PAKISTAN*

11:00 TH 1.2-5 ION EMISSION ENERGETICS FROM A POSITIVELY BIASED HOLLOW CATHODE CONTACTOR

G. Miars¹, O. Leon¹, B. Gilchrist¹, G. L. Delzanno², F. L. Castello², J. E. Borovsky³

¹*The University of Michigan, Ann Arbor, MI, United States*

²*Los Alamos National Laboratory, Los Alamos, NM, United States*

³*Space Science Institute, Boulder, CO, United States*