

Technical Session ( <i>Click on session to view schedule</i> )	Technical Session Organizer
4.7 Plasma Material Interactions	Tatyana Sizyuk ( <a href="mailto:tsizyuk@purdue.edu">tsizyuk@purdue.edu</a> )

### Session TH 1.3: Plasma Material Interactions

Thursday, May 25, 2017 from 10:00-12:00, Wildwood 12

Session Chair: Tatyana Sizyuk, Purdue University

#### 10:00 TH 1.3-1 (invited) ENERGY DEPENDENT PULSED ELECTRON DEPOSITION OF AMORPHOUS TITANIUM DIOXIDE FILMS

D. Das<sup>1</sup>, A. Barman<sup>1</sup>, D. Banerjee<sup>1</sup>, [A. Kanjilal](#)<sup>1</sup>, M. Gupta<sup>2</sup>, D. Phase<sup>2</sup>, A. Ponomaryov<sup>3</sup>, S. Zvyagin<sup>3</sup>, R. Singhal<sup>4</sup>  
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<sup>4</sup>Department of Physics, Malaviya National Institute of Technology, Jaipur, PIN 302017, India

#### 10:30 TH 1.3-2 OUTGASSING AND SECONDARY ELECTRON REDUCTION FROM LASER-PROCESSED ANODES

[S. B. Fairchild](#)<sup>1</sup>, D. Gortat<sup>2</sup>, P. T. Murray<sup>3</sup>, T. C. Back<sup>4</sup>, N. Lockwood<sup>5</sup>, D. C. Ingram<sup>6</sup>

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<sup>2</sup>Institute for Manufacturing, University of Cambridge, Cambridge, UK

<sup>3</sup>MurHop Technical Consulting, LLC, Dayton, OH, United States

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<sup>5</sup>Directed Energy Directorate, Air Force Research Laboratory, Albuquerque, NM, United States

<sup>6</sup>Dept of Physics and Astronomy, Ohio University, Athens, OH, United States

#### 10:45 TH 1.3-3 IONIZATION COMPRESSION OF HIGH POWER PICOSECOND CO2 LASER

[L. A. Johnson](#)<sup>1</sup>, D. F. Gordon<sup>1</sup>, J. P. Palastro<sup>1</sup>, V. Hasson<sup>2</sup>

<sup>1</sup>Division of Plasma Physics, U.S. Naval Research Laboratory, Washington, DC, United States

<sup>2</sup>PaR System, Shoreview, MI, United States

#### 11:00 TH 1.3-4 NEON PLASMA JET INTERACTIONS WITH CONDUCTIVE AND NON-CONDUCTIVE TARGETS

A. Kone, [B. Caillier](#), C. Muja, F. P. Sainct, P. Guillot

Laboratoire Diagnostics des Plasmas Hors Equilibre, Universite de Toulouse, INU Champollion,, Albi, France

#### 11:15 TH 1.3-5 ION DYNAMICS AND ABLATION MECHANISMS OF FEMTOSECOND AND NANOSECOND LASER PRODUCED PLASMAS

A. Aelseid, [P. K. Diwakar](#), A. Hassanein

Center for Materials Under Extreme Environment (CMUXE), School of Nuclear Engineering, Purdue University, West Lafayette, United States

#### 11:30 TH 1.3-6 INVESTIGATION OF ENHANCED LASER-INDUCED BREAKDOWN (LIB) FOR APPLICATION IN HIGH-ENERGY LASER (HEL) DAMAGE MITIGATION

[C. Campbell](#), D. Staack

Department of Mechanical Engineering, Texas A&M University, College Station, Texas, United States

#### 11:45 TH 1.3-7 PLASMA ELECTROLYTIC BORIDING

[Y. Jiang](#), Y. Bao, M. Wang

Hohai Univerisy, Changzhou, Jiangsu, China