Publications and Presentations

- Annual Progress Reports
- Publications
  - 2020
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- Presentations
  - 2020
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You may also be interested in publications of our prior project on plasma surface interactions.

### Annual Progress Reports

- 2018 Annual Report (Year 1), submitted 1 June 2018

### Publications

#### 2020

#### 2019


#### 2018


Presentations

• 2020

• 2019

• 2018
  • Keren Guterl, Sergei Krasheninnikov, Igor Bykov, Stefan A Bringui, Philip B Snyder, Theoretical study of hydrogen desorption from tungsten in divertor conditions, American Physical Society Division of Plasma Physics Annual Meeting, Portland, Oregon, November 7, 2018.
  • Mitchell Wood, Mary Alice Cusentino, Aidan P Thompson, Scale-bridging from the Atoms Up; Employing Machine Learning to Improve the Accuracy and Scalability of Molecular Dynamics, American Physical Society Division of Plasma Physics Annual Meeting, Portland, Oregon, November 7, 2018.
  • Tim Younkin, Khachik Sargsyan, Tiernan Casey, Habib Nasri Najm, Russ Doerner, Daisuke Nishijima, David L Green, John Canik, Ane Lasa, Philip C Roth, Davide Curreli, Jon T Drobny, Parker Forehand, Brian Wirth, Quantification of the Effect of Uncertainty On Impurity Migration In PISCES-A Simulated With GTR, American Physical Society Division of Plasma Physics Annual Meeting, Portland, Oregon, November 7, 2018.
• Robert D Kolasinski, Dwaipayan Dasgupta, Josh A Whaley, Aaron Engel, Frances I Allen, Dean Alan Buchenauer, Dimitrios Maroudas, Brian Wirth, Effects of helium plasmas on tungsten surfaces characterized by helium ion microscopy, ion channeling, and in-situ spectroscopic ellipsometry, American Physical Society Division of Plasma Physics Annual Meeting, Portland, Oregon, November 7, 2018.


• Russell Doerner, Sergei Krasheninnikov, Matthew Baldwin, Dai-su ke Nishijima, Marlene Patino, Using 3He-containing plasma to track the motion of helium atoms in tungsten, American Physical Society Division of Plasma Physics Annual Meeting, Portland, Oregon, November 7, 2018.

• Andrei I Smolyakov, Sergei Krasheninnikov, SOL ballooning instabilities due to sheath boundary conditions and X-point geometry, American Physical Society Division of Plasma Physics Annual Meeting, Portland, Oregon, November 6, 2018.


• Davide Curreli, Jon T Drobn, Ane Lasa, Sophie Blondel, John Canik, David L Green, Tim Younkin, Brian Wirth, Coupled PIC-BCA simulations of the near-surface plasma at the ITER Outer Target, American Physical Society Division of Plasma Physics Annual Meeting, Portland, Oregon, November 6, 2018.

• John Canik, Anne Lasa, Sophie Blondel, Mark R Cianciosa, Davide Curreli, Jon T Drobn, Wael Elwasif, David L Green, Philip C Roth, Tim Younkin, Brian Wirth, Russ Doerner, Dai-su ke Nishijima, Matthew Baldwin, Status of integrated simulation of PFC surface evolution within the PSI-SciDAC project, American Physical Society Division of Plasma Physics Annual Meeting, Portland, Oregon, November 6, 2018.


• M.S. Shephard, E. Yoon, E.S. Seol, A. Truszkowska, G. Perumpilly, O. Sahni, W. Tobin, Distributed Mesh Infrastructure for Particle-in-Cell Simulations, APS DPP meeting, Portland, OR, Nov. 6, 2018.

• PSI SciDAC: Predicting the Performance and Impact of Dynamic PFC Surfaces- Brian Wirth, SciDAC PI Meeting 2018, Rockville, Maryland.


• Xolotl: a cluster dynamics code to predict gas bubble evolution in solids - Sophie Blondel, invited presentation at The 2018 Computer Simulation of Radiation Effects in Solids (COSRES), Shanghai, China.


• Illustrative examples of analysis and modeling of impurity erosion and redeposition experiments in DIII-D with integrated PMI models, presented in part at the 23rd International Conference on Plasma Surface Interactions in Controlled Fusion Devices 2018, Princeton, New Jersey.

• Taming the Electrostatic Alfven Wave and Ampere Cancellation Problems - Ilon Joseph, Transport Task Force Workshop (TTF) 2018, San Diego, California.

• Hydrogen retention in tungsten with self-induced trap formation - Roman Smirnov, poster presentation at the 23rd International Conference on Plasma Surface Interactions in Controlled Fusion Devices (PSI) 2018, Princeton, New Jersey.


• Russell Doerner, Sergei Krasheninnikov, Matthew Baldwin, Dai-su ke Nishijima, Marlene Patino, Using 3He-containing plasma to track the motion of helium atoms in tungsten, American Physical Society Division of Plasma Physics Annual Meeting, Portland, Oregon, November 7, 2018.