Publications and Presentations

Publications

- 2018

- 2017

- 2016

- 2015

- 2014

Presentations

- 2017
  - J. Drobny, A. Hayes, D. Curreli, and D.N.Ruzic

- 2016

- 2015

- 2013

- 2012

- 2011

- 2010
• S. I. Krasheninnikov and R. D. Smirnov, He cluster dynamics in W in the presence of cluster induced formation of He traps, Physica Scripta T167 (2016) 014021.

- 2015

- 2014

- 2013

Presentations

- 2017
• B.D. Wirth on behalf of SciDAC-PSI team, "Modeling Plasma Surface Interactions Involving He on Tungsten", Southwestern Institute of Physics Plasma – Materials Interactions Workshop, Chengdu, China, 20 April 2015.

2014

• K. D. Hammond and B. D. Wirth, "Large-Scale Simulation of Plasma-Facing Materials for Tokamaks and Linear Devices," AIChe annual meeting, Atlanta, Georgia, November 16, 2014.

• Sophie Blondel, XOLOT: a Plasma-Surface Interaction Simulator, invited poster, Smoky Mountains Computational Sciences and Engineering Conference, Gatlinburg, TN, USA, September 2014.


• Karl D. Hammond and Brian D. Wirth, Modeling of Tungsten Surface Evolution Due to Low-Energy Helium Helium Exposure. USA /Japan Workshop on Plasma-facing Materials, June 2014.

• B.D. Wirth, Modeling Plasma Surface Interactions in Tungsten through High Performance Computing, Plenary Review Talk, 21St International Conference on Plasma Surface Interactions (21st PSI), Kanazawa, Japan, 29 May 2014.

• Karl D. Hammond, Faiza Sefta, Thibault Faney, Niklas Justlin, Donghua Xu, and Brian D. Wirth, Modeling of Tungsten Surface Evolution Due to Low-Energy Helium Plasma Exposure, Lorentz Workshop, Leiden, the Netherlands, January 2014.


• S. Krasheninnikov, MD modeling of He bubble growth in W and H desorption from W surface”, oral, 20th ITPA Scrape-Off Layer & Divertor Topical Group Meeting, Prague, Czech Republic, October 20-23, 2014.


• 2013


• Sergei Krasheninnikov, On the Physics of the First Wall in Fusion Devices, invited talk, 2013 International Sherwood Fusion Theory Conference, Santa Fe, New Mexico, USA, April 2013.


• 2012
  • Karl D. Hammond, Faiza Sefta, and Brian D. Wirth, Plasma-Induced Evolution of Surfaces, AIChE annual meeting, October 2012.
  • Brian D. Wirth, F. Sefta, K. Hammond, N. Juslin, and D. Xu, Plasma Surface Interactions (PSI): Bridging from the Surface to the Micron Frontier through Leadership Class Computing Plasma Surface Interactions (PSI): Bridging from the Surface to the Micron Frontier through Leadership Class Computing, invited talk, Scientific Discovery through Advanced Computing (SciDAC-3) Principal Investigator Meeting, Rockville, Maryland, USA, September 2012.
  • David E. Bernholdt and Jay Jay Billings, Plasma Surface Interactions (PSI): Bridging from the Surface to the Micron Frontier through Leadership Class Computing, poster, Scientific Discovery through Advanced Computing (SciDAC-3) Principal Investigator Meeting, Rockville, Maryland, USA, September 2012.

Other Press
• 2015
  • Fusion Researchers Use Titan to Burst Helium Bubbles (OLCF Science Highlight)
    • https://www.olcf.ornl.gov/2015/05/05/fusion-researchers-use-titan-to-burst-helium-bubbles/
  • Double, Double Toil and Trouble: Tungsten Burns and Helium Bubbles (DOE Office of Science Discovery & Innovation Science Highlight)
    • http://science.energy.gov/fes/highlights/2015/fes-2015-07-a/
  • Understanding Helium-Hydrogen Plasma Mediated Tungsten Surface Response to Predict Fusion Plasma Facing Component (ALCF highlight)

Honors and Awards for Project Participants
• 2015
  • Davide Curreli Chosen as a 2015-2016 NCSA Faculty Fellow [NCSA] [UIUC NPRE]
  • Brian Wirth receives DOE 2014 Ernest Orlando Lawrence Award [DOE] [UT]
  • Barry Smith named an Argonne Distinguished Fellow [ANL]