

IWSMT-13

13th International Workshop on Spallation Materials Technology



Chattanooga, Tennessee, USA
Oct. 30 – Nov. 4, 2016

Scope

The International Workshop on Spallation Materials Technology (IWSMT) is the premier international forum to present and discuss the latest research and development of materials utilized in spallation sources and accelerator driven systems (ADS). It is also an outstanding forum for exchanging information from operational experience and post irradiation examination (PIE) of irradiated specimens and components. The thirteenth meeting will again focus on the progress with materials-related studies for accelerator based neutron sources and on issues with operating and future spallation facilities. Our intent is to promote open discussion of the latest material advances and challenges and to encourage new international collaborations. For this meeting organizers would like to invite collaboration with colleagues in the High Energy Physics and Radioactive Ion Beam communities in order to facilitate and promote cooperation between the different international communities that share many common materials-related challenges.

Topics

1. Effects of radiation damage, helium, hydrogen, and other transmutation elements in target and structural materials
2. Operational experience and results from PIE of irradiated components
3. Research in the area of mitigating pressure wave effects in pulsed targets, i.e., cavitation erosion and fatigue
4. Research and development (R&D) of spallation targets for neutron and ADS applications
5. Source technology and engineering: fatigue analysis, welding, weld evaluation, and thermo-mechanical/fluid modeling
6. Production and handling of volatile transmutation elements and activated target components
7. Innovative materials technology and techniques for R&D of applications with extreme irradiation environments
8. Application of materials data to the design and safety study of components in spallation sources and ADS systems

Presentations and Publication:

Accepted papers will be presented as invited, oral, or poster.

High-quality full papers with sufficient materials science and engineering content relevant to the workshop topics will be selected by the organizers to be included in a special volume of the *Journal of Nuclear Materials*.

Meeting Venue and Website:

IWSMT-13 will take place Oct. 30 - Nov. 4, 2016, at the Marriott Hotel in Chattanooga, TN, USA, which hosts the Tennessee Aquarium and many other excellent attractions.

Information on the venue and meeting is located on the IWSMT-13 website:

<https://conference.sns.gov/event/20/>

International Organizing Board:

Louis K. Mansur, USA – Chairman
Bernard W. Riemer, ORNL, USA
Yong Dai, PSI, Switzerland
Kenji Kikuchi, Ibaraki Univ., Japan
Stuart A. Maloy, LANL, USA
Xuejun Jia, CAS, China
John Haines, ESS, Sweden
Milan Konstantinovic, SCK-CEN, Belgium



Welcome to IWSMT-13



- And welcome to Chattanooga Tennessee
- Grateful for participants traveling from afar
- Exciting and diverse program of oral presentations and posters
- Privileged to have Dr. Steven Zinkle as keynote speaker
 - Univ. of Tennessee Governor's Chair for Nuclear Materials
- Acknowledge participants from related accelerator facilities dealing with similar materials and technology challenges

Supporting co-sponsors

- Los Alamos National Laboratory – Stuart Maloy
- Paul Scherrer Institut – Yong Dai
- China Spallation Neutron Source – Xuejun Jia
- SNS Instrument and Source Division – Don Abercrombie

International Organizing Board

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- John Haines, ESS, Sweden
- Milan Konstantinovic, SCK-CEN, Belgium

Local Organizing Committee

- Bernie Riemer
- David McClintock
- Sabine Curry
- Irina Popova
- Wei Lu

Workshop Assistants

- Judy Potok
- Gaye Smith

Practical matters

- Have presentations files available for loading on the projector computer prior to your session
- This is a workshop and discussion is valued
 - Dedicated discussion periods have been planned
 - Open to proposed special discussion topics
- Please try to respect allotted times
- Volunteers to act as session conveners
- Workshop dinner is in the Tennessee Aquarium – Ocean Journey building – Wednesday at 7 PM
 - Walk, free tourist trolley, other options

Late program changes

Please take note of the marked up program

- Poster session has officially been moved to Wednesday afternoon 13:00-18:00
 - Request that posters be placed today for casual viewing
- Withdrawn presentations:

Thursday morning

Low Cycle Fatigue Behavior of 15-15Ti Steel in Static Lead-Bismuth Eutectic with 10-6wt% Oxygen Concentration at 550°C

Chunjing LI

Corrosion Behavior of Ti₃SiC₂ in Flowing Lead Bismuth Eutectic at 1000°C

Zunqi Xiao

Oxidation Behaviors of CLAM Steel in stagnant Liquid Lead-bismuth Eutectic at 500 °C

Shaojian Yan

Thursday afternoon

HiRadMat at CERN SPS - A dedicated test facility with high intensity beam pulses to material samples

Adrian Fabich

- Withdrawn poster:

Characterization of W suppliers for ESS Target

Fernando Sordo

Journal of Nuclear Material manuscripts

- After review by JNM guest editors, candidate abstract authors were notified and requested to bring review-ready manuscripts
 - Please provide manuscripts no later than November 30
- Additional manuscripts may be considered here at IWSMT
- Appropriate JNM topics are more selective than for earlier IWSMT meetings; please review topics:
<http://www.journals.elsevier.com/journal-of-nuclear-materials>
- Instructions on submission will be provided

Future of IWSMT

- Anticipated changes in International Advisory Board
- Narrower manuscript topic selection for Journal of Nuclear Material publication
- Abundance of workshops and conferences
- Want to hear from participants what is good, not so good, what may be improved
- IWSMT-14 host location to be announced at Workshop Banquet