



Monday, April 22

Registration Open

08:00-
2F, Lobby

Opening Session

08:30-09:00
Room A (Grand Ballroom A, 2F)

Keynote Session

09:00-10:30
Room A (Grand Ballroom A, 2F)

Coffee Break

10:30-11:00
2F, Lobby

Oral Session 01

[O1A]
11:00-12:30
Room A (Grand Ballroom A, 2F)

[O1B]
11:00-12:40
Room B (Grand Ballroom B, 2F)

Lunch Break

12:30-14:00

Oral Session 02

[O2A]
14:00-15:30
Room A (Grand Ballroom A, 2F)

[O2B]
14:00-15:25
Room B (Grand Ballroom B, 2F)

Coffee Break

15:30-15:50
2F, Lobby

Poster Session 1

15:50-18:00
Room C (Grand Ballroom C, 2F)



Keynote Session

Monday, April 22 / 09:00-10:30

Room A (Grand Ballroom A, 2F)

KN1 09:00-09:45

Technical Discussion on Tritiated Water Treatment for Fukushima Daiichi Nuclear Power Station

Toshihiko Yamanishi^{1*}, Hideki KAKIUCHI², Hiroshi Tauchi³, Tokuhiko Yamamoto⁴, Ichiro Yamamoto⁵

¹Japan Agency for Quantum and Radiological Science and Technology, Japan, ²Institute for Environmental Sciences, Japan, ³Ibaraki University, Japan, ⁴Japan Atomic Energy Agency, Japan, ⁵Nagoya University of Arts and Sciences, Japan

KN2 09:45-10:30

H3AT: A New Tritium Facility at UKAEA

Damian Brennan, Colin Walters, Mark Naden, Dave Coombs, Barry Butler, Alex Perevezentsev, Rachel Strickland

United Kingdom Atomic Energy Authority, UK



Oral Session 01

[O1A]

Monday, April 22 / 11:00-12:30

Room A (Grand Ballroom A, 2F)

O1A.1 11:00-11:25

The Development of Deuterium-Tritium Target for Inertial Confinement Fusion on Gekko XII-LFEX Facility

Yasunobu Arikawa^{1*}, Yuki Iwasa¹, Kohei Yamanoi¹, Keisuke Iwano¹, Shinsuke Fujioka¹, Akifumi Iwamoto², Mitsuo Nakai¹, Yuji Hatano³, Masanori Hara³, Satoshi Akamaru³, Takayoshi Norimatsu¹

¹Osaka University, Japan, ²National Institute of Fusion Science, Japan, ³University of Toyama, Japan

O1A.2 11:25-11:50

Tritium Permeation Behavior in Plasma-Facing Components and Structural Materials

Masashi Shimada*, Robert J. Pawelko

Idaho National Laboratory, USA

O1A.3 11:50-12:10

Observations of Tritium Inventory in JET-ILW Dust Particles and Applications to Metal Wall Fusion Devices

Naoko Ashikawa^{1*}, Teppei Otsuka², Yuji Torikai³, Nobuyuki Asakura⁴, Anna Widdowson⁵, Marek Rubel⁶, Hikaru Furuta³, Hironori Kurotaki⁴, Masami Ando⁴, Dai Hamaguchi⁴, Suguru Masuzaki¹, Yuji Hatano⁷, Hirofumi Hanamura⁴, Stefan Jachmich⁵, Takumi Hayashi⁴

¹National Institute of Fusion Science, Japan, ²KINDAI University, Japan, ³Ibaraki University, Japan, ⁴National Institutes for Quantum and Radiological Science and Technology, Japan, ⁵Culham Center of Fusion Energy, UK, ⁶KTH Royal Institute of Technology, Sweden, ⁷University of Toyama, Japan

O1A.4 12:10-12:30

Assessment on Helium Embrittlement of Austenitic Steels Used in Tritium Storage and Delivery System

Sojeong Yang¹, Jae-Uk Lee², Hyun-Goo Kang², Min Ho Chang², Takuji Oda^{1*}

¹Seoul National University, Republic of Korea, ²National Fusion Research Institute, Republic of Korea



Oral Session 01

[O1B]

Monday, April 22 / 11:00-12:40

Room B (Grand Ballroom B, 2F)

O1B.1 11:00-11:20

Validation of Tritium Protection Factors in Respiratory Protective Equipment - Setup and Initial Tests

Michael McDonald*, Armando Antoniazzi

Kinectrics, Canada

O1B.2 11:20-11:40

Design of a Cryostat for Spectroscopic Investigation of All Hydrogen Isotopologues in the Liquid Phase

Bennet Krasch, Robin Groessle, Daniel Kuntz, Sebastian Mirz

Karlsruhe Institute of Technology, Germany

O1B.3 11:40-12:00

Current R&D Activities on Tritium Permeation Barrier for Tritium Plant of CFETR

Zhangguikai*, Yangfeilong, Xiangxin, Tangtao, Chenchangan, Wangxiaolin

China Academy of Engineering Physics, China

O1B.4 12:00-12:20

The 5th Organically Bound Tritium (OBT) Inter-Laboratory Exercise: Analysis of Fish Sample

Sang Bog Kim*

Canadian Nuclear Laboratories, Canada

O1B.5 12:20-12:40

Preliminary Design and Tritium Assessment of CFETR HCCB TBB

Xiaoyu WANG*, Xinghua WU, Long ZHANG, Qixiang CAO, Xingfu YE, Ruyan LI, Hongbin LIAO, Xueqin WANG, Jun WANG

Southwestern Institute of Physics, China



Oral Session 02

[O2A]

Monday, April 22 / 14:00-15:30

Room A (Grand Ballroom A, 2F)

O2A.1 14:00-14:25

Kinetics of Tritium Absorption/Desorption of Massive and Dust Materials

Payet Mickael*, Garcia-Argote Sebastien, Feuillastre Sophie, Pieters Gregory, Bernard Elodie, Grisolia Christian

The French Alternative Energies and Atomic Energy Commission, France

O2A.2 14:25-14:50

Advanced Electron Microscopy of Helium Nanobubbles in a Palladium Alloy

David B. Robinson^{1*}, Noelle R. Catarineu¹, Norman C. Bartelt¹, Xiaowang Zhou¹, Suzy Vitale¹

, Joshua D. Sugar¹, Warren L. York¹, Caitlin A. Taylor¹, E. Lynn Bouknight², Kirk L. Shanahan²

¹Sandia National Laboratories, USA, ²Savannah River National Laboratory, USA

O2A.3 14:50-15:10

Comparison of Hydrogen Isotope Retention in Divertor Tiles of JET with ITER-Like Wall Exposed during 2011-2012 and 2015-2016 Campaigns

Yasuhisa Oya^{1*}, Suguru Masuzaki², Masayuki Tokitani², Moeko Nakata¹, Fei Sun¹, Makoto Oyaidzu³, Kanetsuku Isobe³, Nobuyuki Asakura³, Teppei Otsuka⁴, Anna M. Widdowson⁵, Jari Likonen⁶, Marek Rubel⁷

¹Shizuoka University, Japan, ²National Institute of Fusion Science, Japan, ³National Institutes for Quantum and Radiological Science and Technology, Japan ⁴Kindai University, Japan, ⁵Culham Science Centre, UK, ⁶VTT Technical Research Centre of Finland, Finland, ⁷Royal Institute of Technology, Sweden

O2A.4 15:10-15:30

³He Release, Crystal Lattice Evolution and ³He Bubble Evolution in Titanium Tritides: A Survey of Experimental Results

X.S. Zhou*, G.J. Chen, H.F. Wang, W. Ding, W.D. Wang, S.M. Peng, X.G. Long

China Academy of Engineering Physics, China



Oral Session 02

[O2B]

Monday, April 22 / 14:00-15:25

Room B (Grand Ballroom B, 2F)

O2B.1 14:00-14:25

Design Status of the Torus Vacuum Pumping System for Tritiumprocessing in the EU-DEMO

Thomas Giegerich^{1*}, Christian Day¹, Curt Gliss², Stefan Hanke¹, Thomas Haertl², Yannick Hoerstensmeyer¹, Mihaela Ionescu-Bujor¹, Ralf Mueller¹, Benedikt Peters¹, Holger Strobel¹

¹Karlsruhe Institute of Technology, Germany, ²EUROfusion, Germany

O2B.2 14:25-14:45

Operation of a CECE Process with Very High Tritium

T. Whitehorne*, C. Muirhead, F. Mattie, H. Boniface, C. Chenard, S. Suppiah

Canadian Nuclear Laboratories, Canada

O2B.3 14:45-15:05

Tritium Supply and Processing for the First KATIRN Tritium Operation

S. Welte*, D. Hillesheimer, L. T. Le, S. Schaefer, F. Priester, E. Fanghaenel, M. Sturm

Karlsruhe Institute of Technology, Germany

O2B.4 15:05-15:25

Latest Design Developments for the Fuel Cycle and Tritium Plant for the European DEMO Fusion Reactor

Barry Butler^{1*}, Rachel Lawless¹, Tamsin Jackson¹, Robert George¹, Joao Lopes¹, Sophie Davies¹, Alessia Santucci², Christian Day³, Thomas Giegerisch³, Bernhard Ploek⁴

¹United Kingdom Atomic Energy Authority, UK, ²Energy and Sustainable Economic Development, Italy

³Karlsruhe Institute of Technology, Germany, ⁴Max-Planck-Institut für Plasmaphysik, Germany



Poster Session 1

Monday, April 22 / 15:50-18:00

Room C (Grand Ballroom C, 2F)

P1_01

Preparation of Y₂O₃/Al₂O₃ Multilayer Coating as Tritium Permeation Barrier

Long Wang^{1*}, Yongjin Feng¹, Xiaoyu Wang¹, Ke Shi², Jijun Yang², Kaiming Feng¹, Ning Liu², Chuanhui Liang³, Wei Jin³, Aart Willem Kleijn³

¹Southwestern Institute of Physics, China, ²Schuan University, China, ³China Academic of Engineering Physics, China

P1_02

Tritium Transport and Distribution in a High Temperature Gas-Cooled Reactor

Sung Nam Lee, Nam-il Tak

Korea Atomic Energy Research Institute, Republic of Korea

P1_03

Development of 2/3D and Multi-Physics Tritium Transport Model for ITER TBM System

Ni Muiyi^{1*}, Nie Baojie¹, Zhao Xueli², Vander Laan Jaap³

¹Sun Yat-Sen University, China, ²Institute of Plasma Physics, China. ³International Thermonuclear Experimental Reactor, France

P1_04

A Study on the Risk Management of Fusion Exhaust Gas Recovery Process

Woo-Chan Jung^{1*}, Pil-Kap Jung¹, Young-Min Kim¹, Hung-Man Moon¹, Min-Ho Chang², Hyeon-Gon Lee²

¹Daesung Industrial Gases, Republic of Korea, ²National Fusion Research Institute, Republic of Korea

P1_05

Estimation on Protection Unit for Tritium

Sung Paal Yim*, Cheo Kyung Lee

¹Korea Atomic Energy Research Institute, Republic of Korea, ²Handong Global University, Republic of Korea



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P1_06

Conceptual Design of a Combined Tritium Extraction System with an Intermediate Heat Exchanger and Its Leakage to the Environment Analysis for Nuclear Fusion Reactors.

Marta Velarde, J. Fradera, J.M. Perlado

¹Institute of Nuclear Fusion, Spain, ²IDOM, Spain

P1_07

Seismic Testing of Glovebox Feedthrough Connectors and Vacuum Pumps

L. M. Angelette*, A. S. Poore, J. E. Klein, P. R. Beaumont, W. A. Stafford, J. J. Grinnell

Savannah River National Laboratory, USA

P1_08

An Experiment-Oriented Analysis of a Non-Steady-State Model for the Permeation of Multi-Component Hydrogen Isotopes through Metals

Nicolae Bidica^{1*}, Anisia Bornea¹, Ion Cristescu², Nicolae Sofilca¹, Ciprian Bucur¹, Marian Curuia¹

¹JCSI Rm. Valcea, Romania, ²Karlsruhe Institute of Technology, Germany

P1_09

The Tests of the Deuterium Permeation through the Rohacell 71HF - a Candidate Material for the SIC-2 Windows for the ITER HFS Reflectometry

Dmitrii Cherkez*, Alexander Spitsyn, Dmitrii Shelukhin, Vladimir Vershkov

¹National Research Center "Kurchatov Institute", Russian Federation

P1_10

New 3D Tritium Permeation Modelling Software Developed by the UKAEA

Alistair Joyce*, Anthony Hollingsworth

United Kingdom Atomic Energy Authority, UK

P1_11

Assessment of Tritium Inventory in the Tritiated Metallic Waste from a Fusion Reactor

Zhibin Chen*, Chao Chen, Zhen Wang, Shanqi Chen, Daochuan Ge

Chinese Academy of Sciences, China

P1_12

The Study of Tritium Removal from Irradiated Nuclear Graphite Base on Hydrogen Isotope

Ke Deng¹, Xijun Wu², Mingjun Zhang¹, Qin Zhang¹, Guo Yang¹, Zhaowei Ma¹, Guanghua Wang¹, Wei Liu^{1*}

¹Chinese Academy of Science, China, ²University of South China, China



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P1_13

A Summary of the Tritium Source Term Study in the 10 MW High Temperature Gas-Cooled Reactor

Mengqi Lou¹, Xuegang Liu¹, Liqiang Wei¹, Feng Xie^{1*}, Jiejuan Tong¹, Xianbao Duan², Bin Shan³, Guiqiu Zheng⁴

¹Tsinghua University, China, ²Wuhan Institute of Technology, China, ³Huazhong University of Science & Technology, China,

⁴Massachusetts Institute of Technology, USA

P1_14

Tritium Distributions in LILWs of Korean Candu Reactor

Young-Ku Choi¹, Min-Hoon Baik², Jae-Kwang Lee², Tae Hyung Kim², Hong Joo Ahn^{2*}, Jong Kwang Lee²

¹Sun Kwang T&S, Republic of Korea, ²Korea Atomic Energy Research Institute, Republic of Korea

P1_15

Tritium Research and Development Status at KAERI

Hongsuk Chung^{1*}, Jisoo Kim¹, Kwangjin Jung¹, Samuel Park¹, Min Ho Chang², Heeseok Kang³

¹KAERI-UST, Republic of Korea, ²National Fusion Research Institute, Republic of Korea, ³Korea Atomic Energy Research Institute, Republic of Korea

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New Technologies for Conditioning Liquid Radioactive Wastes

Nikolay Kazakovsky, Vladimir Korolev*, Arkadiy Yukhimchuk

The Russian Federal Nuclear Center – All-Russian Scientific Research Institute of Experimental Physics, Russian Federation

P1_17

Detritiation of Tungsten After Tritium Gas Exposure

N. Bobyr^{1*}, A. Spitsyn¹, A. Anikin², B. Ivanov², A. Bukin², N. Zabirova², Y. Hatano³

¹National Research Center "Kurchatov Institute", Russian Federation, ²Joint Stock Company "A.A. Bochvar High-technology Research Institute of Inorganic Materials", Russian Federation, ³University of Toyama, Japan

P1_18

Radiological Characterisation of Solid Waste Resulting from the Refurbishing of Tritium Laboratory

Viorel Fugaru*, Cristian Postolache, George Bubueanu, Catalin Stelian Tuta, Mihail-Razvan Ioan

Horia Hulubei National Institute of Research & Development for Physics and Nuclear Engineering, Romania

P1_19

Tritium Emissions and Monitoring during KSTAR Device Operation

Hee-Soo Kim*, Sangtae Kim¹, Kaprai Park¹, Si-Woo Woon¹

National Fusion research Institute, Republic of Korea



P1_20

Influence of Thermal Aging on Deuterium Retention and Trapping in Reduced Activation Ferritic/Martensitic Steels

Siwei Zhang, Zongming Shao, Wei Wang*, Xiang Ji, Chunjing Li

Chinese Academy of Sciences, China

P1_21

Synthesis and Characteristic of Biomimetic Graphene Oxide/Al₂O₃ Composite Tritium Permeation Barrier

Hao YANG, Wei WANG, Siwei ZHANG, Xiang JI*, Chunjing LI, FDS Team

Chinese Academy of Sciences, China

P1_22

Effect of Electron-Ion Interactions and Electronic Stopping on Irradiation Damage in β -Li₂TiO₃

Woong-Kee Kim, Oda Takuji*

Seoul National University, Republic of Korea

P1_23

Imaging Hydrogen Effects in Pinch Welded Materials

Joy McNamara*, Paul Korinko, Michael Morgan, Ross Smith, Andrew Duncan

Savannah River National Laboratory, USA

P1_24

Quality Assurance and Industrial Standardization of Eutectic Alloy Pb-15.7(2)Li

Jose Luis Herranz, Luis A. Sedano

FUS-ALIANZ Science, Engineering & Consulting, Spain

P1_25

Tritium Effects on Aromatic Carbon Loaded Polymers

Brent Peters^{1*}, Tim Krentz¹, Jay Gaillard¹, Steve Serkiz¹, Mark Kranj¹, Dale Hitchcock¹, Josef Velten¹, Timothy DeVol²

¹Savannah River National Laboratory, USA, ²Clemson University, USA

P1_26

Small Angle Neutron Scattering to Characterize Decay Helium Bubbles in Tritium Precharged Stainless Steels

Dale A. Hitchcock*, Timothy M. Krentz, Michael J. Morgan

Savannah River National Laboratory, USA



P1_27

Damage Distribution Dependence on Hydrogen Isotope Retention Behavior in Neutron - Fe²⁺ Implanted W

Moeko Nakata^{1*}, Akihiro Togari¹, Zhao Mingzhong¹, Fei Sun¹, Yuji Hatano², Takeshi Toyama³, Naoaki Yoshida⁴, Hideo Watanabe⁴, Masashi Shimada⁵, Dean Buchenauer⁶, Yasuhisa Oya¹

¹Shizuoka University, Japan, ²University of Toyama, Japan, ³Tohoku University, Japan, ⁴Kyushu University, Japan, ⁵Idaho National Laboratory, USA, ⁶Sandia National Laboratories, USA

P1_28

Effects of Radiation Defects Induced by Ion Irradiation on Crystal Structure of Li₂TiO₃

Donggyu Lee, Woong-Kee Kim, Takuji Oda*

Seoul National University, Republic of Korea

P1_29

Effect of Heat Treatment on Deuterium Retention in CuCrZr Alloys

Haodong Liu^{1*}, Haishan Zhou¹, Sixiang Zhao², Lu Wang¹, Yuping Xu¹, Fang Ding¹, Guangnan Luo¹

¹American Society of Interventional Pain Physicians, China, ²Lanzhou University of Technology, China

P1_30

The Deuterium Permeation Behavior in Fe Ions Damaged Tungsten Studied by Gas-Driven Permeation Method

Mingzhong Zhao^{1*}, Moeko Nakata¹, Fei Sun¹, Yuji Hatano², Yoji Someya³, Kenji Tobita³, Yasuhisa Oya¹

¹Shizuoka University, Japan, ²University of Toyama, Japan, ³National Institutes for Quantum and Radiological Science and Technology, Japan

P1_31

In-Situ Tritium Release Measurement from Lithium Aluminate Pellets during Irradiation

Walter Luscher^{1*}, David Senor¹, Matt MacDougall¹, Gary Hoggard²

¹Pacific Northwest National Laboratory, USA, ²Idaho National Laboratory, USA

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Deuterium Retention Behavior in Tungsten: Comparison of Deuterium Gas Charging W and Plasma Irradiating W

Xiaoqiu Ye*, Wei Wang, Changan Chen, Wenhua Luo, Deli Luo

China Academy of Engineering Physics, China



P1_33

Tritium Aging Effects on Fracture Toughness of Stainless Steel Weldments

Michael J. Morgan, Dale A. Hitchcock, Timothy M. Krentz, Scott L. West

Savannah River National Laboratory, USA

P1_34

A Kinetic Study on the Mechanism of Hydrogen Evolution From Er₂O₃ Tritium Permeation Barrier

Mingwang Ma*, Ruiyun Wan, Binghua Tang

China Academy of Engineering Physics, China

P1_35

Predicting Tritium Uptake in Nuclear Graphite from In-Core Fluoride Salt Irradiations

Kieran Dolan*, Guiqiu Zheng, David Carpenter, Lin-wen Hu

Massachusetts Institute of Technology, USA

P1_36

Time Domain Thermoreflectance (TDTR) Signatures of He Bubbles in Metals

Elieel Villa-Aleman*

Savannah River National Laboratory, USA

P1_37

H/He Co-Irradiation Induced Structural Change and the Evolution of Gas Bubbles in Li₄SiO₄

Jingwen Ba, Rui Li, Quanwen Wu, Rongguang Zeng, Xiayan Yan, Tao Tang*

China Academy of Engineering Physics, China

P1_38

Results from Tritium Capable Experiments at the New H3AT Facility

Anthony Hollingsworth^{1*}, A. De Backer¹, M.Y.Lavrentiev¹, J.Hess¹, J. Likonen², K. Heinola³, I. Jecu⁴, M-F. Barthe^{5,6}, P. Desgardin^{5,6}, E. Meslin⁷

¹United Kingdom Atomic Energy Authority, UK, ²VTT Technical Research Centre of Finland, Finland, ³University of Helsinki, Finland, ⁴National Institute for Laser, Plasma and Radiation Physics, Romania, ⁵Conditions Extrêmes et Matériaux Haute Température et Matériaux Haute Température et Irradiation, France, ⁶Centre National de la recherche scientifique, France, ⁷Service de Recherches de Métallurgie Physique, France



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Towards Accurate Molecular Dynamics Simulations of Helium Bubble Nucleation and Growth in Palladium Tritide

Xiaowang Zhou, Norman C. Bartelt*, Ryan B. Sills

Sandia National Laboratories, USA

P1_40

Microstructural Evolution During Neutron Irradiation of Lithium Aluminate for Tritium Production

DJ Senor*, DE Burkes

Pacific Northwest National Laboratory, USA

P1_41

The Tritium Release Performance of Li₄SiO₄-Based Solid Solutions as Advanced Tritium Breeders

Linjie Zhao, Xiaojun Chen, Chengjiang Xiao, Heyi Wang, Xingui Long, Shuming Peng*

China Academy of Engineering Physics, China

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Research Activities on Tritium Handling Materials in Caep

Tao Tang*, Guikai Zhang, Huaqin Kou, Xin Xiang, Quanwen Wu, Jingwen Ba, Xiaojun Deng, Renjin Xiong, Feilong Yang, Li Hu

China Academy of Engineering Physics, China

P1_43

Hydrogen Isotope Retention and Release Properties of Beryllium Intermetallic Compounds as Advanced Neutron Multipliers for Fusion Applications

Jae-Hwan Kim^{1*}, Mitsutaka Miyamoto², Masaru Nakamichi¹

¹National Institutes for Quantum and Radiological Science and Technology, Japan, ²Shimane University, Japan

P1_44

Deuterium Retention in Advanced Steels for Fusion Reactor Structural Application

Xunxiang Hu^{1*}, Lizhen Tan¹, Kun Wang¹, Caleb P. Massey², David T. Hoelzer¹, Yutai Katoh¹

¹Oak Ridge National Laboratory, USA, ²University of Tennessee, USA



P1_45

Electron Tomography and Energy Loss Spectroscopy of Helium Nanobubbles Formed in a Palladium Tritide

Noelle R. Catarineu*, David B. Robinson, Norman C. Bartelt, Joshua D. Sugar, Warren L. York, Suzanne Vitale

Sandia National Laboratories, USA

P1_46

Trap and Release of Hydrogen Isotopes Absorbed in Nano-Structured Graphite

Yuki Kondo*, Hisao Atsumi

Kindai University, Japan

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Analysis on Thermal Desorption of Hydrogen Isotopes Released from Graphite

Hisao Atsumi*

Kindai University, Japan

P1_48

Fabrication of Li₂TiO₃ Pebbles Using Nano-Powder for Tritium Breeding Material

Yi-Hyun Park*, Jongil Kim, Duck Young Ku, Mu-Young Ahn, Youngmin Lee, Seungyon Cho

National Fusion Research Institute, Republic of Korea

P1_49

Removing the Memory Effect of an Alumina-Based Catalyst

David W. James*, Gregory C. Staack, Kaitlin J. Lawrence

Savannah River National Laboratory, USA

P1_50

Tritium Retention in Beryllium and Titanium Beryllide after High-Dose Neutron Irradiation

Vladimir Chakin^{1*}, Rolf Rolli¹, Ramil Gaisin¹, Michail Klimenkov¹, Pavel Vladimirov¹, Masaru Nakamichi²

¹Karlsruhe Institute of Technology, Germany, ²National Institutes for Quantum and Radiological Science and Technology, Japan

P1_51

First-Principles Calculation of Stability and Mobility of Helium in Alpha-Uranium

Jae Hyuk Kim¹, Jae Uk Lee², Hyun Goo Gang², Min Ho Chang², Takuji Oda^{1*}

¹Seoul National University, Republic of Korea, ²National Fusion Research Institute, Republic of Korea



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In-Situ Determination of Parameters of Hydrogen Isotopes Interaction with Materials Using Dynamic Sorption/Desorption Method

Timur Kulsartov¹, Zhanna Zaurbekova^{1*}, Yuriy Ponkratov², Vyacheslav Gnyrya²

¹Kazakh-Britain Technical University, Kazakhstan, ²Institute of Atomic Energy, Kazakhstan

P1_53

Analysis of the Reactor Experiments Results on Irradiation of Pb83Li17 Lead-Lithium Eutectic

Timur Kulsartov^{1*}, Zhanna Zaurbekova¹, Yergazy Kenzhin², and Aset Shaimerdenov²

¹Institute of Atomic Energy, Kazakhstan, ²Institute of Nuclear Physics, Kazakhstan

P1_54

Diffusion Characterization of Hydrogen Isotopes in Hastelloy Nalloy for the Application of Fluoride-Salt-Cooled High Temperature Reactors (FHRs)

Dongxun Zhang, Wei Liu, Wenguan Liu, Yuan Qian

Chinese Academy of Sciences, China

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Forging Process Effects on the Fracture Toughness Properties of Types 316L, 304L, and 21-6-9 Tritium-Precharged Stainless Steels

Michael Morgan*, Timothy Krentz

Savannah River National Laboratory, USA

P1_56

Isothermal Desorption Rate of Helium from Metal

Lei Wang*, Yuan Wang, Yongrong Xie

China Academy of Engineering Physics, China

P1_57

Effect of Ferrite Content on Fracture Toughness of Tritium-Precharged-and-Aged Stainless-Steel Weldments

Michael Morgan, Timothy Krentz, Scott West, Joy McNamara, Andrew Duncan*, Paul Korinko

Savannah River National Laboratory, USA



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Modelling the Processes of Hydrogen Isotopes Interaction with Solids Surface

Yevgen Chikhray^{1*}, Saulet Askerbekov¹, Yergazy Kenzhin², Yuriy Gordienko³, Etsuo Ishitsuka⁴

¹Institute of Experimental and Theoretical Physics, Kazakhstan, ²Institute of Nuclear Physics, Kazakhstan, ³National Nuclear Center of the Republic of Kazakhstan, Kazakhstan, ⁴Japan Atomic Energy Agency, Japan

P1_59

Tritium Permeation through Ce-ODS Steel

Yudai Urabe¹, Kenichi Hashizume^{1*}, Teppei Otuka², Kan Sakamoto³

¹Kyushu University, Japan, ²Kindai University, Japan, ³Nippon Nuclear Fuel Development, Japan

P1_60

Tritium Dissolution Behavior in Rare-Earth Oxides

M. Khalid Hossain¹, Kenichi Hashizume^{1*}, Shinnosuke Jo¹, Kaname Kawaguchi¹, Yuji Hatano²

¹Kyushu University, Japan, ²University of Toyama, Japan

P1_61

Titanium Hydrides with Controlled H/T Ratio for AMS Facilities Calibration

Cristian Postolache*, Viorel Fugaru, Catalin Stelian Tuta, George Bubueanu, Andrei Antohe, Mihail-Razvan Ioan

Horia Hulubei National Institute of Physics and Nuclear Engineering, Romania

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Synthesis of Sodalite Membrane toward the Enrichment of Hydrogen Isotopes

Bangjun Ma*, Xiaofang Wang, Chang-An Chen

China Academy of Engineering Physics, China

P1_63

Highlight of Complex Reactional Scheme in LaNi₄Mn and Al Reaction

Chambelland*, Pichot, Macaud

The French Alternative Energies and Atomic Energy Commission, France