

Contents

(PWI)

Influence of He Implantation on Deuterium Trapping at Defects Induced in W by Irradiation with MeV-Range W Ions

..... Vladimir Kh. ALIMOV, Yuji HATANO, Kazuyoshi SUGIYAMA,
Beata TYBURSKA-PÜSCHEL, Makoto OYA, Yoshio UEDA,
Kanetsugu ISOBE and Akira HASEGAWA 1

Retention and Release Behaviors of Plasma-Loaded Hydrogen in Ferritic Steels

..... M. HIGAKI, T. OTSUKA and K. HASHIZUME 6

Bi-Directional Hydrogen Isotopes Permeation through the First Wall of a Magnetic Fusion Power Reactor

..... Haishan ZHOU, Yoshi HIROOKA, Naoko ASHIKAWA and Takeo MUROGA 10

Structural Analysis of Carbon Co-Deposited Layer in LHD

..... N. ASHIKAWA, Suk-Ho HONG, Y. HAMAJI, Y. TORIKAI, Y. UEDA,
K. NISHIMURA and the LHD experiment group 15

(Blanket)

Recovery of Hydrogen Isotopes by Liquid-Gas Contactor from $\text{Li}_{17}\text{Pb}_{83}$ Blanket

..... Satoshi FUKADA, Taiki MUNEOKA, Ryosuke YOSHIMURA,
Kazunari KATAYAMA, Yuki EDAO and Takumi HAYASHI 19

Hydrogen Isotopes Permeation in a Fluoride Molten Salt for Nuclear Fusion Blanket

..... Akira NAKAMURA, Satoshi FUKADA and Ryosuke NISHIUMI 25

Dependence of Surface Orientation of Erbium Oxide on Hydrogen Behaviors

..... Wei MAO, Takumi CHIKADA, Akihiro SUZUKI,
Takayuki TERAI and Hiroyuki MATSUZAKI 30

Study on Control of Non-Metallic Impurities in Liquid Lithium

..... Koshiro ESAKI, Kazuma HIYANE, Satoshi FUKADA, Eiichi WAKAI,
Yuzuru ITO, Francesco NITTI and JAEA IFMIF group 36

Short-Term Nitrogen Trapping in Liquid Lithium by Pure Titanium

..... Takuma HIGASHI, Akihiro SUZUKI, Takayuki TERAI and Juro YAGI 41

Lithium Isotope Separation using Cation Exchange Resin and Cross-Linkage Effect on Isotope Fractionation

..... Tatsuya SUZUKI, Yu TACHIBANA, Masao NOMURA and Yasuhiko FUJII 45

Experimental Investigation of Thermal Properties of the Li_4SiO_4 Pebble Beds

..... Yongjin FENG, Kaiming FENG, Yang LIU, Baoping GONG and Yinfen CHENG 49

Correlation between Annihilation of Irradiation Defects and Tritium Release Behavior for Advanced Tritium Breeding Material $\text{Li}_{2+x}\text{TiO}_3$

..... Misaki SATO, Kenta YUYAMA, Yasuhisa OYA and Kenji OKUNO 53

(Materials)

Effect of Long-Term Thermal Aging on Microstructure and Mechanical Property Changes of Fe-15Cr Ferritic Alloys	Dongsheng CHEN, Akihiko KIMURA, Wentuo HAN and Wenyue TANG	57
Microstructural Evolution of 9Cr-ODS and JLF-1 in a HIP Joint after Post-Bond Heat Treatment	Haiying FU, Takuya NAGASAKA and Takeo MUROGA	61
Parameter Selection in Dissimilar Friction Stir Welding of ODS Ferritic Steel and RAFM Steel F82H	Wentuo HAN, Akihiko KIMURA, Dongsheng CHEN, Zhexian ZHANG, Hisashi SERIZAWA, Yoshiaki MORISADA and Hidetoshi FUJII	65
Corrosion Properties of F82H in Flowing High Temperature Pressurized Water	Motoki NAKAJIMA, Takanori HIROSE, Hisashi TANIGAWA and Mikio ENOEDA	69
Crack Growth Behavior of F82H Steel in the 288°C Water	Yuzuro ITO, Masahiro SAITO, Katsunori ABE and Eiichi WAKAI	73
Helium Irradiation Hardening in Fe, F82H-IEA and F82H-ODS Steel	Siwei CHEN, Yongming WANG, Naoyuki HASHIMOTO and Somei OHNUKI	79
Effects of Ta and C on Irradiation Hardening of Austenitic Stainless Steel	Yasuyuki SAKAI, Yutaka KURIBAYASHI, Kiyohiro YABUCHI, Akira HASEGAWA, Shuhei NOGAMI, Junya KANEDA and Naoto SHIGENAKA	83
Effect of Chromium Content on Mechanical Properties of V-xCr-4Ti-0.15Y Alloys	Takeshi MIYAZAWA, Takeo MUROGA and Yoshimitsu HISHINUMA	89
Correlation of Microstructure Evolution and Hardening in Ion-Irradiated Pure Tungsten	Zhexian ZHANG, Wentuo HAN and Akihiko KIMURA	94
Thermo-Mechanical Analysis of Tungsten and its Alloys Monoblock Divertor under Heat Load Conditions Relevant to a Fusion Reactor	Makoto FUKUDA, Shuhei NOGAMI, Akira HASEGAWA, Kiyohiro YABUCHI, Koichiro EZATO, Satoshi SUZUKI, Hitoshi TAMURA and Takeo MUROGA	99
Effects of Heat Treatments and Addition of Minor Elements of Boron and Nitrogen on Mechanical Properties and Microstructures of Reduced-Activation Ferritic/Martensitic Steel	Eiichi WAKAI, Masami ANDO and Nariaki OKUBO	104
(Reactor System Relevant Studies)		
Evaluation Study of Source Term for Severe Accident Analysis of Molten Salt Reactors	Michio YAMAWAKI, Yuji ARITA, Ken-ichi FUKUMOTO, Masami TAIRA and Ryota FUJIMURA	113
Optimization of Monitoring Method for CGR Measurement of XM-19	Hideki YUYA, Toshio KUZUYA and Satoshi MAYUMI	120