

**II. PUBLICATION LIST  
(APRIL 2014 – MARCH 2015)**

## 1. Slow Neutron Physics and Neutron Scattering

### Papers

Distinct Features of the Histone Core Structure in Nucleosomes Containing the Histone H2A.B Variant

M. Sugiyama, Y. Arimura, K. Shirayama, R. Fujita, Y. Oba, N. Sato, R. Inoue, T. Oda, M. Sato, R. K. Heenan and H. Kurumizaka

Biophysical Journal, **106** (2014) 2206-2213.

A Novel Magnet Design Using Coated Conductor for Spiral Sector FFAG Accelerators

K. Goda, N. Amemiya, T. Nakamura, Y. Mori, T. Ogitsu, T. Kurusu and M. Yoshimoto

IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY, **24** (2014) 4402605.

Conformational Characterization of a Protein Complex Involving Intrinsically Disordered Protein by Small-angle Neutron Scattering Using the Inverse Contrast Matching Method: a Case Study of Interaction Between  $\alpha$ -synuclein and PbaB Tetramer as a Model Chaperone

M. Sugiyama, H. Yagi, T. Yamaguchi, K. Kumoi, M. Hirai, Y. Oba, N. Sato, L. Porcar, A. Martel and K. Kato  
J. Appl. Crystallogr., **47** (2014) 430-435.

Development of Highly-mechanically Polished Metal-substrate for Neutron Supermirrors

S. Takeda, J. Guo, S. Morita, H. Ono, T. Oda, J. Kato, H. Sato, M. Hino, Y. Yamagata and M. Furusaka

J. Phys. Conf. Ser., **528** (2014) 12011-6.

Production of Ultra cold Neutrons by a Doppler Shifter with Pulsed Neutrons at J-PARC

K. Mishima, S. Imajo, M. Hino, T. Ino, Y. Iwashita, R. Katayama, M. Kitaguchi, T. Oda, H. M. Shimizu, M. Utsuro, S. Yamashita and T. Yoshioka

J. Phys. Conf. Ser., **528** (2014) 12030-8.

Temperature Dependence of the Nanostructure in a PbSe–ZnSe Composite thin Film

Y. Oba, S. Abe, M. Ohnuma, N. Sato and M. Sugiyama

J. Phys. D: Appl. Phys., **47** (2014) 6.

New Fabrication Method for an Ellipsoidal Neutron Focusing Mirror with a Metal Substrate

J. Guo, S. Takeda, S. Morita, M. Hino, T. Oda, J. Kato, Y. Yamagata and M. Furusaka

Opt. Express., **22** (2014) 24666-24677.

Observation of the Spatial Distribution of Gravitationally Bound Quantum States of Ultracold Neutrons and Its Derivation Using the Wigner Function

G. Ichikawa, S. Komamiya, Y. Kamiya, Y. Minami, M. Tani, P. Geltenbort, K. Yamamura, M. Nagano, T. Sanuki, S. Kawasaki and M. Hino

Phys. Rev. Lett., **112** (2014) 71101.

Distribution of Glass Transition Temperature in Multilayered Poly (Methyl Methacrylate) Thin Film Supported on a Si Substrate as Studied by Neutron Reflectivity

R. Inoue, M. Nakamura, K. Matsui, T. Kanaya, K. Nishida and M. Hino

Phys. Rev. E, **88** (2014) 32601.

Numerical Simulation of BL06 Neutron Beamline for "VIN ROSE" at J-PARC/MLF

T. Oda, M. Hino, M. Kitaguchi, Y. Kawabata, N. L. Yamada and H. Seto

Progress in Nuclear Science and Technology, **4** (2014) 214-217.

## Structure of Silver Bromide Doped Chalco Genide Glasses

Y. Onodera, T. Usuki, T. Nasu and S. Kohara

Solid State Ionics, **262** (2014) 469-471.

## Books

Hemoglobin (Crystallography in Japan (II)) (in Japanese)

Y. Morimoto

Crystallographic Society of Japan, (2014).

## Reviews

Structural Study of Amorphous and Nano-crystalline Materials by Neutron Scattering (in Japanese)

T. Fukunaga

HAMON, **24** (2014) 94-99.

## 2. Nuclear Physics and Nuclear Data

### Papers

The Influence of p53 Status in Glioblastoma on the Effects of Boron Neutron Capture Therapy

K. Seki, Y. Kinashi and S. Takahashi

Anticancer Res., **35** (2015) 169-174.

A Nuclear Data Project on Neutron Capture Cross Sections of Long-Lived Fission Products and Minor Actinides

M. Igashira, T. Katabuchi, H. Harada, S. Nakamura, A. Kimura, N. Iwamoto, J. Hori and Y. Kiyanagi

Nucl. Data Sheets, **118** (2014) 72-77.

Cross Section Measurement of  $^{237}\text{Np}(n, g)$  at J-PARC/MLF/ANNRI

K. Hirose, K. Furutaka, K. Y. Hara, H. Harada, J. Hori, M. Igashira, T. Kamiyama, T. Katabuchi, A. Kimura, T. Kin,

F. Kitatani, Y. Kiyanagi, M. Koizumi, M. Mizumoto, S. Nakamura, M. Oshima and Y. Toh

Nucl. Data Sheets, **119** (2014) 48-51.

Capture Gross-section Measurement of  $^{241}\text{Am}(n, g)$  at J-PARC/MLF/ANNRI

H. Harada, M. Ohta, A. Kimura, K. Furutaka, K. Hirose, K. Y. Hara, T. Kin, F. Kitatani, M. Koizumi, S. Nakamura, M. Oshima, Y. Toh, M. Igashira, T. Katabuchi, M. Mizumoto, K. Kino, Y. Kiyanagi, T. Fujii, S. Fukutani, J. Hori and K. Takamiya

Nucl. Data Sheets, **119** (2014) 61-64.

Measurements of Capture Gamma Rays from the Neutron Resonances of  $^{74}\text{Se}$  and  $^{77}\text{Se}$  at J-PARC/MLF/ANNRI

J. Hori, H. Yashima, S. Nakamura, K. Furutaka, K. Y. Hara, H. Harada, K. Hirose, A. Kimura, F. Kitatani, M. Koizumi, M. Oshima, Y. Toh, M. Igashira, T. Katabuchi, M. Mizumoto, T. Kamiyama, K. Kino and Y. Kiyanagi

Nucl. Data Sheets, **119** (2014) 128-131.

Measurement of Capture Gamma Rays from  $^{99}\text{Tc}$  Neutron Resonances at the J-PARC/ANNRI

K. Kino, F. Hiraga, T. Kamiyama, Y. Kiyanagi, H. Harada, K. Y. Hara, K. Hirose, A. Kimura, F. Kitatani,

S. Nakamura, M. Igashira, T. Katabuchi, M. Mizumoto and J. Hori

Nucl. Data Sheets, **119** (2014) 140-142.

Cross Section Measurements of the Radioactive  $^{107}\text{Pd}$  and Stable  $^{105}, ^{108}\text{Pd}$  Nuclei at J-PARC/MLF/ANNRI

S. Nakamura, A. Kimura, F. Kitatani, M. Ohta, K. Furutaka, S. Goko, K. Y. Hara, H. Harada, K. Hirose, T. Kin, M. Koizumi, M. Oshima, Y. Toh, K. Kino, F. Hiraga, T. Kamiyama, Y. Kiyanagi, T. Katabuchi, M. Mizumoto, M. Igashira, J. Hori, T. Fujii, S. Fukutani and K. Takamiya

Nucl. Data Sheets, **119** (2014) 143-146.

Measurements of Neutron Capture Cross Sections of  $^{112}\text{Sn}$  and  $^{118}\text{Sn}$  with J-PARC/MLF/ANNRI  
A. Kimura, K. Hirose, S. Nakamura, H. Harada, K. Y. Hara, J. Hori, M. Igashira, T. Kamiyama, T. Katabuchi,  
K. Kino, F. Kitatani, Y. Kiyanagi, M. Koizumi, M. Mizumoto and Y. Toh  
Nucl. Data Sheets, **119** (2014) 150-153.

Measurements of Cross Sections for Neutron-induced Reactions on Chromium and Yttrium Targets at 197 MeV  
S. Sekimoto  
Nucl. Data Sheets, **119** (2014) 197-200.

A New Signal Processing Technique for Neutron Capture Cross Section Measurement Based on Pulse Width Analysis  
T. Katabuchi, T. Matsuhashi, K. Terada, M. Mizumoto, K. Hirose, A. Kimura, K. Furutaka, K. Y. Hara, H. Harada,  
J. Hori, M. Igashira, T. Kamiyama, F. Kitatani, K. Kino, Y. Kiyanagi, M. Koizumi, S. Nakamura, M. Oshima and  
Y. Toh  
Nucl. Data Sheets, **119** (2014) 398-400.

Measurements of High-Energy Excited States and  $\gamma$ -Rays of Fission Products with a  $4\pi$  Clover Detector  
Y. Shima, Y. Kojima, H. Hayashi, A. Taniguchi and M. Shibata  
Nucl. Data Sheets, **120** (2014) 30-32.

Half-Life Measurements of Excited Levels in Fission Products around Mass Number 150  
Y. Kojima, Y. Shima, H. Hayashi, A. Taniguchi and M. Shibata  
Nucl. Data Sheets, **120** (2014) 52-55.

Energy Resolution of Pulsed Neutron Beam Provided by the ANNRI Beamlne at the J-PARC/MLF  
K. Kino, M. Furusaka, F. Hiraga, T. Kamiyama, Y. Kiyanagi, K. Furutaka, S. Goko, K. Y. Hara, H. Harada, M.  
Harada, K. Hirose, M. Ooi, M. Ohta, M. Oshima, Y. Toh, M. Igashira, T. Katabuchi, M. Mizumoto and J. Hori  
Nucl. Instrum. Methods, **A 736** (2014) 66-74.

Pulse-width Analysis for Neutron Capture Cross-section Measurement Using an NaI(Tl) Detector  
T. Katabuchi, T. Matsuhashi, K. Terada, T. Arai, K. Furutaka, K. Y. Hara, H. Harada, K. Hirose, J. Hori, M. Igashira,  
T. Kamiyama, A. Kimura, K. Kino, F. Kitatani, Y. Kiyaangi, M. Koizumi, M. Mizumoto, S. Nakamura, M. Oshima  
and Y. Toh  
Nucl. Instrum. Methods. Phys. Res. A, **764** (2014) 369-377.

Radiation Shielding Experiments for Composites Based on Pb-shot and Boride  
J. Hori, H. Yashima, K. Miyamoto, S. Okuda, M. Ishihara, S. Kito and M. Atarashi  
Progress in Nuclear Science and Technology, **4** (2014) 635-638.

Measurements of the Neutron Activation Cross Sections for Bi and Co at 386 MeV  
H. Yashima, S. Sekimoto, K. Ninomiya, Y. Kasamatsu, T. Shima, N. Takahashi, A. Shinohara, H. Matsumura,  
D. Satoh, Y. Iwamoto, M. Hagiwara, K. Nishiizumi, M.W. Caffee and S. Shibata  
Radiat. Prot. Dosimetry, **161 No. 1-4** (2014) 139-143.

New Application for Boron Neutron Capture Therapy  
M. Suzuki  
Radioisotopes, **64** (2015) 59-66.

## Proceedings

Measurement of Neutron Capture Cross Section of  $^{232}\text{Th}$  in the Low Energy Region  
J. Hori, T. Sano, Y. Takahashi, H. Unesaki and K. Nakajima  
PHYSOR2014, Kyoto, Japan (Sept. 28- Oct. 3, 2014) 1.

Survey on Effect of Crystal Texture of Beryllium on Total Cross-Section to Improve Neutronic Evaluation in JMTR  
N. Takemoto, T. Imaizumi, N. Kimura, K. Tsuchiya, J. Hori, T. Sano and K. Nakajima  
PHYSOR2014, Kyoto, Japan (Sept. 28- Oct. 3, 2014) 1.

Development of a New Type of Manganese Bath for Determination of Neutron Emission Rate of a Neutron Source  
T. Matsumoto, H. Harano, A. Masuda and J. Hori  
2014 IEEE Nuclear Science Symposium, Seattle, USA (Nov. 8-15, 2014) 1-5.

Development of a Neutron Transport System for Neutron Resonance Densitometry  
F. Kitatani, M. Koizumi, H. Tsuchiya, J. Takamine, M. Kureta, H. Harada, M. Seya, J. Hori and T. Sano  
Proc. of the 49th KURRI Scientific Meeting, KURRI (Jan. 28-29, 2015) 41.

## Reviews

Kyoto University Research Reactor Institute Electron Linear Accelerator Neutron Source (in Japanese)  
J. Hori, T. Sano and Y. Takahashi  
Isotope News, **71** (2014) 38-40.

## 3. Reactor Physics and Reactor Engineering

### Papers

A New Concept of Monte Carlo Kinetics Parameter Calculation Using Complex-valued Perturbation  
T. Yamamoto and H. Sakamoto  
Ann. Nucl. Energy., **71** (2014) 480-488.

Optimised Mounting Conditions for Poly (Ether Sulfone) in Radiation Detection  
H. Nakamura, Y. Shirakawa, N. Sato, T. Yamada, H. Kitamura and S. Takahashi  
Int. J. Rad. Appl. Instrum. A, **91** (2014) 131.

Measurements of Turbulence in a Liquid-metal Two-phase Flow by Using Miniature Electro-magnetic Probe  
G. Ariyoshi, Y. Asai, D. Ito, Y. Saito and K. Mishima  
Japanese Journal of Multiphase Flow, **27-5** (2014) 615-622. (in Japanese)

Heat Transfer Study for ADS Solid Target - Surface Wettability and its Effect on a Boiling Heat Transfer-  
D. Ito, K. Hase and Y. Saito  
Nuclear Backend and Transmutation Technology for Waste Disposal: Beyond the Fukushima Accident,  
**ISBN 978-4-431-55110-2** (2014) 95-105.

Experimental Study of Flow Structure and Turbulent Characteristics in Lead-bismuth Two-phase Flow  
G. Ariyoshi, D. Ito and Y. Saito  
Nuclear Backend and Transmutation Technology for Waste Disposal: Beyond the Fukushima Accident,  
**ISBN 978-4-431-55110-2** (2014) 107-115.

Heterogeneity Effect on Neutron Shielding in Borated Concrete and Monte Carlo-Based Cross Section Homogenization Method for Particle Dispersed Media  
T. Yamamoto  
Progress in Nuclear Science and Technology, **4** (2014) 404-407.

Undoped Poly (Phenyl Sulfone) for Radiation Detection  
H. Nakamura, Y. Shirakawa, N. Sato, H. Kitamura and S. Takahashi  
Radiat. Meas., **73** (2015) 14.

Implications for Quinone Cofactor Biogenesis in Amine-oxidizing Enzymes

A. Kita, M. Mure and K. Miki

SPring-8/SACLA Research Report, **SectionA, Vol.3, No. 1** (2015) 1-5.

## Proceedings

Implementation of Two-group Interfacial Area Transport in a One-dimensional Computational Environment

J.P. Schlegel, T. Hibiki, M. Ishii, X. Shen and S. Appathurai

Proceeding of International Topical Meeting on Advances in Thermal Hydraulics 2014 (ATH'14)

Reno, Nevada, USA, Paper No.: 042 (Jun. 15-19, 2014) 555-567.

Experimental Benchmarks on the Thorium-Loaded Accelerator-Driven System at the Kyoto University Critical Assembly

C. H. Pyeon

Technical Mtg. (TM) of “Collaborative Work on Accelerator Driven Subcritical Systems (ADS) and Use of Low-Enriched Uranium (LEU) in ADS” (invited), IAEA, Hefei, China (Sept. 8-12, 2014).

Preparation of Minor Actinides Irradiation in Accelerator-Driven System with 100 MeV Protons at Kyoto University Critical Assembly

T. Yagi, C. H. Pyeon, Y. Takahashi and K. Nakajima

Proc. Actinide and Fission Product Partitioning and Transmutation, Thirteenth Information and Exchange Mtg (13IEMPT), OECD/NEA, Seoul, Korea (Sept. 23-26, 2014).

Investigation on Subcriticality Measurement Using Inherent Neutron Source in Nuclear Fuel

T. Shiozawa, T. Endo, A. Yamamoto, C.H. Pyeon and T. Yagi

PHYSOR2014, Kyoto, Japan (Sept. 28- Oct. 3, 2014).

Concept of Capture Credit Based on Neutron Induced Gamma Ray Spectroscopy

Y. Nauchi, H. Ohta, H. Unesaki, T. Sano and T. Yagi

PHYSOR2014, Kyoto, Japan (Sept. 28- Oct. 3, 2014) 1.

Neutronic Characteristics of Solid Pb-Bi Target in Accelerator-Driven System at Kyoto University Critical Assembly

C. H. Pyeon, H. Nakano, M. Yamanaka, T. Yagi and T. Misawa

PHYSOR2014, Kyoto, Japan (Sept. 28- Oct. 3, 2014).

Monte Carlo Perturbation Analysis on Isothermal Temperature Reactivity Coefficient of Light-Water Moderated and Reflected Critical Assembly

B. K. Jeon, H. J. Shim and C. H. Pyeon

PHYSOR2014, Kyoto, Japan (Sept. 28- Oct. 3, 2014).

Measurement of Subcriticality Using Delayed Neutron Source Combined with Pulsed Neutron Accelerator

T. Misawa, T. Yagi, and C. H. Pyeon

PHYSOR2014, Kyoto, Japan (Sept. 28- Oct. 3, 2014).

Measurement of Large Negative Reactivity of an Accelerator-Driven System in the Kyoto University Critical Assembly

A. Sakon, K. Hashimoto, M. A. Maarof, M. Kawasaki, W. Sugiyama, C. H. Pyeon, T. Sano, T. Yagi and T. Ohsawa

PHYSOR2014, Kyoto, Japan (Sept. 28- Oct. 3, 2014).

Accuracy of Thorium-Loaded Accelerator-Driven System at Kyoto University Critical Assembly

M. Yamanaka, C. H. Pyeon, T. Yagi and T. Misawa

PHYSOR2014, Kyoto, Japan (Sept. 28- Oct. 3, 2014).

Analysis of Integral Experiment for Thorium Fuel Cycle at Kyoto University Critical Assembly

Y. Takahashi, T. Sano, J. Hori, H. Unesaki and K. Nakajima

PHYSOR2014, Kyoto, Japan (Sept. 28- Oct. 3, 2014).

Void Transit Time Calculations by Neutron Noise of Propagation Perturbation Using Complex-valued

Weight Monte Carlo

T. Yamamoto

PHYSOR2014, Kyoto, Japan (Sept. 28- Oct.3, 2014).

Power Spectral Analysis for a Subcritical Reactor System Driven by a Pulsed Spallation Neutron Source

A. Sakon, S. Hohara, W. Sugiyama, K. Hashimoto, C. H. Pyeon, T. Sano and T. Yagi

PHYSOR2014, Kyoto, Japan (Sept. 28- Oct.3, 2014) 1.

Statistical Error Estimation Using Bootstrap Method for the Feynman- $\alpha$  method

T. Endo, T. Shiozawa, A. Yamamoto, C.H. Pyeon and T. Yagi

ANS 2014 Winter Meeting, Anaheim, CA, USA (Nov. 9-13, 2014) 1204-1207.

Study on Boiling Heat Transfer for ADS Solid Target - Surface Wettability & Micro-Bubble Emission Boiling -

D. Ito, M. Kato and Y. Saito

9<sup>th</sup> Korea-Japan Symposium on Nuclear Thermal Hydraulics and Safety (NTHAS-9),

Buyeo, Korea (Nov. 16-19, 2014) 49.

Local Measurements of 3-D Bubble Velocity Vector, Bubble Diameter and Interfacial Area Concentration in a Vertical Large Diameter Square Duct

X. Shen, T. Hibiki, H. Sun and H. Nakamura

Proceeding of the 9<sup>th</sup> Japan-Korea Symposium on Nuclear Thermal Hydraulics and Safety (NTHAS-9),

Buyeo, Korea (Nov. 16-19, 2014) N9P0011.

## Books

Frontiers and Progress in Multiphase Flow I (in Japanese)

(Chapter 2 Flow Characteristics and Void Fraction Prediction in Large Diameter Pipes)

X. Shen, JP Schlegel, P. Joshua, S. Chen, S. Rassame, MJ. GriffithsMatthew, T. Hikiki and M. Ishii

Springer, (2014).

## Others

Increment of Capacity of Casks for LWR Spent Fuel Transport (3) Demonstration of Quantification of Neutron Leakage from a Fuel Assembly

Y. Nauchi, T. Kameyama, H. Unesaki, T. Misawa, T. Sano and T. Yagi

CRIEPI Research Report, **L11004** (2012).

## 4. Material Science and Radiation Effects

### Papers

The Spin State of Iron in Fe<sup>3+</sup>-bearing Mg-perovskite and Its Crystal Chemistry at High Pressure

I. Mashino, E. Ohtani, N. Hirao, T. Mitsui, R. Masuda, M. Seto, T. Sakai, S. Takahashi and S. Nakano

Am. Mineral., **99** (2014) 1555-1561.

Frequency Domain Monte Carlo Simulation Method for Cross Power Spectral Density Driven by Periodically Pulsed Spallation Neutron Source Using Complex-valued Weight Monte Carlo

T. Yamamoto

Ann. Nucl. Energy., **63** (2014) 711-720.

A Neutron Dynamic Therapy with a Boron Tracedrug UTX-51 Using a Compact Neutron Generator

H. Hori, R. Tada, Y. Uto, E. Nakata, T. Morii and K. Masuda

Anticancer Res., **34** (2014) 4557-4560.

Positron Annihilation Study for Enhanced Nitrogen-vacancy Center Formation in Diamond by Electron Irradiation at 77K

Z. Tang, T. Chiba, Y. Nagai, K. Inoue, T. Toyama and M. Hasegawa

Appl. Phys. Lett., **104** (2014) 72101.

Synchrotron Radiation-Based Mössbauer Spectra of  $^{174}\text{Yb}$  Measured with Internal Conversion Electrons

R. Masuda, Y. Kobayashi, S. Kitao, M. Kurokuzu, M. Saito, Y. Yoda, T. Mitsui, F. Iga and M. Seto

Appl. Phys. Lett., **104** (2014) 82411.

Dose-rate Effect was Obsereved in T98G Glioma Cells Following BNCT

Y. Kinashi, K. Okumura, Y. Kubota, E. Kitajima, R. Okayasu, K. Ono and S. Takahashi

Appl. Radiat. Isot., **88** (2014) 81-85.

Facile One-Pot Synthesis of [1, 2, 3]Triazolo[1, 5-a]Pyridines from 2-Acylpyridines by Copper(II)-Catalyzed Oxidative N-N Bond Formation

T. Hirayama, S. Ueda, T. Okada, N. Tsurue, K. Okuda and H. Nagasawa

Chem. Eur. J., **20** (2014) 4156.

Extranuclear Dynamics of  $^{111}\text{Ag}(\rightarrow ^{111}\text{Cd})$  Doped in AgI Nanoparticles

W. Sato, R. Mizuuchi, N. Irioka, S. Komatsuda, S. Kawata, A. Taoka and Y. Ohkubo

Chem. Phys. Lett., **609** (2014) 104-107.

Predominance of Covalency in Water-Vapor-Responsive MMX-Type Chain Complexes Revealed by  $^{129}\text{I}$  Mössbauer Spectroscopy

H. Iguchi, S. Kitao, M. Seto, S. Takaishi and M. Yamashita

Dalton Trans., **43** (2014) 8767-8773.

Slow Dynamics of Supercooled Liquid Revealed by Rayleigh Scattering of Mössbauer Radiation Method in Time Domain

M. Saito, A. Battistoni, S. Kitao, Y. Kobayashi, M. Kurokuzu, Y. Yoda and M. Seto

Hyperfine Interact., **226** (2014) 629-636.

Development of  $^{125}\text{Te}$  Synchrotron-Radiation-Based Mössbauer Spectroscopy

M. Kurokuzu, S. Kitao, Y. Kobayashi, M. Saito, R. Masuda, T. Mitsui, Y. Yoda and M. Seto

Hyperfine. Interact., **226** (2014) 687-691.

Boron Neutron Capture Therapy for Advanced Salivary Gland Carcinoma in Head and Neck

T. Aihara, N. Morita, N. Kamitani, H. Kumada, K. Ono, J. Hiratsuka and T. Harada

Int. J. Clin. Oncol., **19** (2014) 437-444.

Effects of Mg Substitution on Crystal Structure and Hydrogenation Properties of  $\text{Pr}_{1-x}\text{Mg}_x\text{Ni}_3$

K. Iwase, N. Terashita, K. Mori, S. Tashiro, H. Yokota and T. Suzuki

Int. J. Hydrogen Energy, **39** (2014) 12773-12777.

Formation Energy of Oxygen Vacancies in ZnO Determined by Investigating Thermal Behavior of Al and In Impurities

S. Komatsuda, W. Sato and Y. Ohkubo

J. Appl. Phys., **116** (2014) 183502.

Relaxation Transition in Glass-forming Polybutadiene as Revealed by Nuclear Resonance X-ray Scattering

T. Kanaya, R. Inoue, M. Saito, M. Seto and Y. Yoda

J. Chem. Phys., **140** (2014) 144906.

Spatial Correlation between Chemical and Topological Defects in Vitreous Silica: Uvresonance Raman Study

M. Saito, F. D'Amico, F. Bencivenga, R. Cucini, A. Gessini, E. Principi and C. Masciovecchio

J. Chem. Phys., **140** (2014) 244505.

Selective Hg(II) Adsorption from Aqueous Solutions of Hg(II) and Pb(II) by Hydrolyzed Acrylamide-grafted PET Films

N. Rahman, N. Sato, M. Sugiyama, Y. Hidaka, H. Okabe and K. Hara

J. Environ. Sci. Health. A, **49** (2014) 798-806.

Early Stage Irradiation Effects in F82H Model Alloys

S.S. Huang, X.Q. Pan, K. Sato, Q. Xu and T. Yoshiie

J. Nucl. Mater., **449** (2014) 248-251.

A replica Technique for Extracting Precipitates from Neutron-irradiated or Thermal-aged Vanadium Alloys for TEM Analysis

K. Fukumoto and M. Iwasaki

J. Nucl. Mater., **449** (2014) 315-319.

Studies on ADS as a neutron source at the Kyoto University Research Reactor Institute

T. Yoshiie, K. Fukumoto, Y. Ishi, D. Ito, Y. Kuriyama, T. Misawa, Y. Mori, T. Nagasaka, K. Nakajima, Y. Oki,

C.H. Pyeon, Y. Saito, K. Sato, X.Z. Shen, S. Shibata, T. Uesugi and Q. Xu

J. Nucl. Mater., **450** (2014) 16-19.

Positron Annihilation Spectroscopy of Ferritic/Martensitic Steels F82H and T91 Irradiated with Protons and Neutrons at PSI

K. Sato, S. Kawamoto, K. Ikemura, V. Krsjak, C. Vieh, R. Brun, Q. Xu, T. Yoshiie and Y. Dai

J. Nucl. Mater., **450** (2014) 59-63.

Positron Annihilation and TEM Studies in Ion Irradiated Fe and Fe-Cr Model Alloys of Ferritic/Martensitic Steel

Q. Xu, Y. Sugiura, X.Q. Oan, K. Sato, T. Yoshiie, H. Tsuchida and A. Itoh

J. Nucl. Mater., **455** (2014) 122-125.

Structural Origin of Ionic Conductivity for Li<sub>7</sub>P<sub>3</sub>S<sub>11</sub> Metastable Crystal by Neutron and X-ray Diffrcation

Y. Onodera, K. Mori, T. Otomo, H. Arai, Y. Uchimoto, Z. Ogumi and T. Fukunaga

J. Phys. Conf. Ser., **502** (2014) 12021.

Formation of Cu Precipitates in A High-Energy-Particle-Irradiated and Thermally Aged Fe-0.6Cu Alloy

K. Sato, Q. Xu, X.Z. Cao, P. Zhang, B.Y. Wang and H. Tsuchida

J. Phys. Conf. Ser., **505** (2014) 12011.

Positron Beam Facility at Kyoto University Research Reactor

Q. Xu, K. Sato, T. Yoshiie, T. Sano, H. Kawabe, Y. Nagai, K. Nagumo, K. Inoue, T. Toyama, N. Oshima,

A. Kinomura and Y. Shirai

J. Phys. Conf. Ser., **505** (2014) 12030.

Thermal Stability of Locally-Associated Al and In Impurities in Zinc Oxide

S. Komatsuda, W. Sato and Y. Ohkubo

J. Radioanal. Nucl. Chem., (2014) 1249-1252.

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Y. Kasamatsu, K. Toyomura, N. Shiohara, T. Yokokita, Y. Komori, A. Kino, T. Yoshimura, N. Takahashi, H. Haba,

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