

III. PUBLICATION LIST
(APRIL 2018 – MARCH 2019)

1. Slow Neutron Physics and Neutron Scattering

Papers

Rheo-SANS study on relationship between micellar structures and rheological behavior of cationic gemini surfactants in solution

H. Iwase, R. Kawai, K. Morishima, S. Takata, T. Yoshimura and M. Shibayama
Journal of Colloid and Interface Science **538** (2019) 357-366.

Growth of adsorbed additive layer for further friction reduction

T. Hirayama, M. Maeda, Y. Sasaki, T. Matsuoka, H. Komiya and M. Hino
Lubrication Science **25** (2018) 1-8.

Phase transition and hydrogenation properties of Ce₂Ni₇-type Pr₂Co₇ during the hydrogen absorption process

K. Iwase, K. Mori, S. Tashiro and T. Suzuki
International Journal of Hydrogen Energy **43** (2018) 11100-11108.

Direct Evidence for the Effect of Glycerol on Protein Hydration and Thermal Structural Transition

M. Hirai, S. Ajito, M. Sugiyama, H. Iwase, S. Takata, N. Shimizu, N. Igarashi, A. Martel and L. Porcar
Biophysical Journal **112**(2) (2018) 313-327.

Imaging measurement of neutron attenuation by small-angle neutron scattering using soller collimator

Y. Oba, T. Shinohara, H. Sato, Y. Onodera, K. Hiroi, Y. Su and M. Sugiyama
Journal of the Physical Society of Japan **87** (2018) 094004-1-094004-5.

Small-angle scattering study of tetra-poly(acrylic acid) gels

K. Morishima, X.Li, K. Oshima, Y. Mitsukami and M. Shibayama
The Journal of Chemical Physics **149**(16) (2018) 163301.

A cold/ultracold neutron detector using fine-grained nuclear emulsion with spatial resolution less than 100 nm

N. Naganawa, T. Ariga, S. Awano, M. Hino, K. Hirota, H. Kawahara, M. Kitaguchi, K. Mishima, H.M. Shimizu, S. Tada, S. Tasaki and A. Umemoto
The European Physical Journal **C78**(11) (2018) 959.

Macromolecular crowding effect on protein structure and hydration clarified by using X-ray and neutron scattering

H. Mitsuhiro, S. Ajito, M. Sugiyama, H. Iwase, S. Takata, N. Shimizu, N. Igarashi, A. Martel and L. Porcar
Physica B: Condensed Matter **551** (2018) 212.

Proceedings

X線・中性子反射率法による潤滑界面の平均構造評価の試み II /

A trial for structural evaluation of lubrication interface by X-ray and neutron reflectometry II

M. Hino, N. Adachi, Y. Todaka, Y. Oba and T. Hirayama

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb. 5-6, 2019) 15. (in Japanese)

J-PARC MLF BL06 MIEZE 型スピンエコー分光器の現状 /

Current status of the MIEZE-type neutron spin echo spectrometer at J-PARC MLF BL06

T. Oda, M. Hino, Y. Kawabata and H. Endo

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 34. (in Japanese)

A study of TOF-MIEZE reflectometry for nanomagnetic dynamics Polarized Neutron for Condensed Matter Investigation

M. Hino, T. Oda, H. Endo, N.L. Yamada, H. Seto, H. Ohshita and Y. Kawabata
(PNCMI2018) Abington, UK (July 3-6, 2018).

Experimental test of ³He neutron-spin filter in MIEZE spectrometer Polarized Neutron for Condensed Matter Investigation

H. Hayashida, M. Hino, H. Endo, T. Oku, T. Okudaira, K. Sakai and T. Oda
(PNCMI2018) Abington, UK (July 3-6, 2018).

2. Nuclear Physics and Nuclear Data

Papers

Delayed neutron effect in time-domain fluctuation analyses of neutron detector current signals

Y. Kitamura and T. Misawa

Annals of Nuclear Energy **123** (2019) 119-134.

Resonance analysis of $^{151,153}\text{Eu}$ from neutron capture cross section measurements in the energy range from 1 to 20 eV

L. Jaehong, J. Hori, T. Sano and K. Nakajima

Journal of Nuclear Science and Technology **55(8)** (2018) 900-910.

Neutron energy spectrum measurement using an NE213 scintillator at CHARM

T. Kajimoto, T. Sanami, N. Nakao, R. Froeschl, S. Roesler, E. Iliopoulou, A. Infantino, M. Brugger, E.J. Lee, N. Shigyo, M. Hagiwara, H. Yashima, H. Yamazaki, K. Tanaka and S. Endo

Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms **429** (2018) 27-33.

Measurements of Neutron Total and Capture Cross Sections of Am-241 with ANNRI at J-PARC

K. Terada, T. Nakao, A. Kimura, S. Nakamura, K. Mizuyama, N. Iwamoto, O. Iwamoto, H. Harada, T. Katabuchi, M. Igashira, T. Sano, Y. Takahashi, C. H. Pyeon, S. Fukutani, T. Fujii, T. Yagi, K. Takamiya and J. Hori

Journal of Nuclear Science and Technology **55** (2018) 1198-1211.

Measurement and calculation of thermal neutrons induced by the 24 GeV/c proton bombardment of a thick copper target

T. Oyama, M. Hagiwara, T. Sanami, H. Yashima, N. Nakao, E.J. Lee, E. Iliopoulou, R. Froeschl, A. Infantino and S. Roesler

Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms **434(1)** (2018) 29-36.

Development of a neutron source for imaging at the electron linac facility in Kyoto University Research Reactor Institute

Y. Takahashi, Y. Kiyonagi, K. Watanabe, A. Uritani, T. Sano, J. Hori and K. Nakajima

Physica B: Condensed Matter **551** (2018) 488-491.

Proceedings

KUCAにおけるDT加速器開発の現状 /

Development Status of DT Accelerator at KUCA

Y. Kuriyama, Y. Tanaka, N. Kobayashi, T. Takeshita, T. Ueda, H. Yoshino, Y. Iinuma, C.H. Pyeon, Y. Takahashi, M. Yamanaka and Y. Fuwa

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5- 6, 2019) 37. (in Japanese)

Development of a Neutron Spin Filter for a T Violation Search in Compound Nuclei

T. Yamamoto, H.M. Shimizu, M. Kitaguchi, K. Hirota, T. Okudaira, C.C. Haddock, N. Oi, I. Ito, S. Endo, S. Takada, J. Koga, T. Yoshioka, T. Ino, K. Asahi, T. Momose, T. Iwata, K. Sakai, T. Oku, A. Kimura, M. Hino, T. Shima and Y. Yamagata

Proceedings of the International Conference on Neutron Optics (NOP2017) Nara, Japan (July 5-8, 2017) 11018. (in Japanese)

ブーストラップ法を活用した Feynman- α 法の測定共分散評価 /

Estimation of experimental covariance in the Feynman- α method using the bootstrap method

T. Endo

Proceedings of 7th Reactor Physics Workshop (RPW 2018) Kumatori, Japan (Nov. 26-27, 2018) 81-91. (in Japanese)

Adaptive smooth-lasso を用いた感度係数評価に関する検討/

A study of the estimation of the sensitivity coefficients using adaptive smmoth-lasso

R. Katano

Proceedings of 7th Reactor Physics Workshop (RPW 2018) Kumatori, Japan (Nov. 26-27, 2018) 1-21.
(in Japanese)

KUCA 固体減速架台の数値計算ベンチマーク問題/

Benchmark problems for neutron transport calculations about KUCA solid-moderated cores

G. Chiba and T. Endo

Proceedings of 7th Reactor Physics Workshop (RPW 2018) Kumatori, Japan (Nov. 26-27, 2018) 30-48.
(in Japanese)

軽水炉における水の熱中性子散乱則データの違いによる核計算結果への影響評価/

Stdy on Impact of thermal Scattering Law Data Improvements on Nuclear Caliculation for right Water Reactor

S. Takeda, M. Muta, H. Yamaguchi, T. Kitada, Y. Ohoka, S. Matsuoka and H. Nagano

Proceedings of 7th Reactor Physics Workshop (RPW 2018) Kumatori, Japan (Nov. 26-27, 2018) 21-29.
(in Japanese)

Effect of Differences Fuel Material in Neutronic Parameters in Kartini Researc Reactor

A.S. Wicaksono, T. KItada and S. Takeda

Proceedings of 7th Reactor Physics Workshop (RPW 2018) Kumatori, Japan (Nov. 26-27, 2018) 49-56.

様々な各種の崩壊や生成などを考慮した福島第一原子力発電所内部の放射能インベントリ解析/

Radioactivity inventory analysis in the Fukushima Daiichi NPP considering such as various nuclides generation and decay

A. Ishi and G. Chiba

Proceedings of 7th Reactor Physics Workshop (RPW 2018) Kumatori, Japan (Nov. 26-27, 2018) 57-69.
(in Japanese)

Supercritical transient analysis using Multi-resion Integral Kinetic code: Basics and applications

D. Tuya and T. Obara

Proceedings of 7th Reactor Physics Workshop (RPW 2018) Kumatori, Japan (Nov. 26-27, 2018) 70-80.

粒子フィルタ法を用いた未臨界度と中性子生成時間の推定/

Estimation of subcriticality and neutron generation time using particle filter method

T. Ikeda, T. Endo and A. Yamamoto

Proceedings of 7th Reactor Physics Workshop (RPW 2018) Kumatori, Japan (Nov. 26-27, 2018) 92-104.
(in Japanese)

核破砕中性子源によるウラン-鉛ゾーン炉心 ADS 体系における放射化反応率への中性子スペクトルの影響/

Effect of neutron spectrom on reaction rate in ADS experiment with U-Pb zoned core and spallation neutron source

N. Aizawa, M. Yamanaka and C.H. Pyeon

Proceedings of 7th Reactor Physics Workshop (RPW 2018) Kumatori, Japan (Nov. 26-27, 2018) 105-114.
(in Japanese)

Neutron Capture Reaction Data Measurement of Minor Actinides in Fast Neutron Energy Region for Study on Nuclear Transmutation System

T. Katabuchi, O. Iwamoto, J. Hori, N. Iwamoto, A. Kimura, S. Nakamura, Y. Shibahara and K. Terada

Proceedings of the 2018 Symposium on Nuclear Data Tokyo, Japan (Nov. 29-30, 2018).

Reviews

Review of the performance of a ca-bourne survey system, KURAMA-II, used to measure the dose rate after the Fukushima Dai-ichi Nuclear Power Plant accident

S. Tsuda, M. Tanigaki, T. Yoshida and K. Saito

放射線 **44** (2018) 109-118.

放射光で探るレーザー光による超精密原子核制御の可能性:²²⁹Th 極低核励起準位
吉見彰洋, 笠松良崇, 北尾真司, 瀬戸 誠, 増田孝彦, 山口敦史, 依田芳卓, 吉村浩司
放射光(放射光学会誌) **31** (2018) 305-314. (in Japanese)

Other

事故耐性の高い軽水炉用制御棒の開発(3) 新型中性子吸収材の反応度測定/
Development of accident tolerant control rod (3) Reactivity measurement of candidate neutron absorbing materials
太田宏一, 名内泰志, 中村勤也, 佐野忠史/
H. Ohta, Y. Nauchi, K. Nakamura and T. Sano
日本原子力学会 2018 春の年会予稿集/
Annual meeting of the Atomic Energy Society of Japa, Spring 2018 (2018) 2F16. (in Japanese)

3. Reactor Physics and Reactor Engineering

Papers

Comparison of theoretical formulae and bootstrap method for statistical error estimation of Feynman- α method
T. Endo and A. Yamamoto
Annals of Nuclear Energy **124** (2019) 606-615.

Application of Advanced Rossi-alpha Technique to Reactivity Measurements at Kyoto University Critical Assembly
C. D. Kong, J. W. Choe, S. P. Yum, J. R. Jang, W. H. Lee, H. J. Kim, W. K. Kim, N. H. N. Khang, N. D. C. Tung, V. Dos, D. J. Lee, H. C. Shin, M. Yamanaka and C. H. Pyeon
Annals of Nuclear Energy **118** (2018) 92-98.

Experimental Analysis and Uncertainty Quantification using Random Sampling Technique for ADS Experiments at KUCA
T. Endo, G. Chiba, W. F. G. van Rooijen, M. Yamanaka and C. H. Pyeon
Journal of Nuclear Science and Technology **55** (2018) 450-459.

Implementation of a frequency-domain neutron noise analysis method in a production-level continuous energy Monte Carlo code: Verification and application in a BWR
T. Yamamoto
Annals of Nuclear Energy **115** (2018) 494-501.

Uncertainty Quantification of Criticality in Solid-Moderated and -Reflected Cores at Kyoto University Critical Assembly
C. H. Pyeon, M. Yamanaka, M. Ito, G. Chiba, T. Endo, S. H. Kim and W. F. G. van Rooijen
Journal of Nuclear Science and Technology **55** (2018) 812-821.

Some characteristics of gas-liquid two-phase flow in vertical large-diameter channels
X. Shen, J.P. Schlegel, T. Takashi and H. Nakamura
Nuclear Engineering and Design **333** (2018) 87-98.

Improvement of Fission Source Distribution by Correlation Sampling Method in Monte Carlo Perturbation Calculations
S. H. Kim, M. Yamanaka and C. H. Pyeon
Journal of Nuclear Science and Technology **55** (2018) 945-954.

Estimation of porosity and void fraction profiles in a packed bed of spheres using X-ray radiography
D. Ito, K. Ito, Y. Saito, M. Aoyagi, K. Mastsuba and K. Kamiyama
Nuclear Engineering and Design **334** (2018) 90-95.

Monte Carlo perturbation methods using “virtual density” theory for calculating reactivity due to geometry change
T. Yamamoto and H. Sakamoto
Annals of Nuclear Energy **119** (2018) 362-373.

Effect of higher harmonics in the area-ratio pulsed neutron source technique
T. Yamamoto and H. Sakamoto
Progress in Nuclear Energy **108** (2018) 286-294.

Determination of prompt neutron decay constant by time-domain fluctuation analyses of detector current signals
Y. Kitamura, P. Imre and T. Misawa
Annals of Nuclear Energy **120** (2018) 691-706.

Significant spatial dependence observed in inverse kinetics analysis for a loosely coupled-core system of the Kyoto University Critical Assembly
T. Sano, K. Hashimoto, H. Taninaka and H. Unesaki
Journal of Nuclear Science and Technology **56** (2018) 1355-1361.

Experimental Analyses of Bismuth Sample Reactivity Worth at Kyoto University Critical Assembly
C. H. Pyeon, M. Yamanaka, A. Oizumi, M. Fukushima and K. Tsujimoto
Journal of Nuclear Science and Technology **55** (2018) 1324-1335.

Monte Carlo method for solving a B1 equation with complex-valued buckling in asymmetric geometries and generation of directional diffusion coefficients
T. Yamamoto and H. Sakamoto
Annals of Nuclear Energy **122** (2018) 37-46.

Constitutive equations for vertical upward two-phase flow in rod bundle
T. Hibiki, T. Ozaki, X. Shen, S. Miwa, I. Kinoshita, T. Hazuku and S. Rassame
International Journal of Heat and Mass Transfer **127** (2018) 1252-1266.

Bubble coalescence and breakup model evaluation and development for two-phase bubbly flows
X. Shen and T. Hibiki
International Journal of Multiphase Flow **109** (2018) 131-149.

Undersize solute element effects on defect structure development in copper under electron irradiation
Y. Satoh, T. Yoshiie and S. Arai
Philosophical Magazine **8** (2018) 646-672.

Proceedings

京都大学臨界集合体実験装置における加速器駆動システム実験 /
Accelerator-Driven System Experiment at Kyoto University Critical Assembly
M. Yamanaka
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 1. (in Japanese)

垂直ロッドバンドル流路内における局所界面積濃度の特性に関する研究 /
Experimental study on interfacial area concentration in gas-liquid two-phase flows in a rod bundle flow channel
X. Shen, S. Miwa, Y. Xiao, H. Sun and T. Hibiki
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 38. (in Japanese)

大口径流路内多次元気液二相流の流動機構解明に関する研究 /
Study on flow mechanism of multi-dimensional gas-liquid two-phase flow in large-diameter channels
X. Shen, T. Hibiki and H. Nakamura
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 52-54. (in Japanese)

Evaluation of Feedback Reactivity Coefficients by Inverse Kinetics in Monju
A. Kitano and K. Nakajima
2018 International Congress on Advances in Nuclear Power Plants (ICAPP 2018) Charlotte, NC, USA (Apr.8-11, 2018).

Sensitivity Coefficient Analysis of Omega-Eigenvalue based on First-Order Perturbation Theory
T. Endo and A. Yamamoto
PHYSOR2018 Cancun, Mexico (Apr.22-26, 2018) 1240-1253.

Dead-Time and Spatial Corrections for the KUCA Subcritical Assembly Experiments
A. Talamo, Y. Gohar, M. Yamanaka and C. H. Pyeon
Proc. Int. Conf. on the Reactor Physics (PHYSOR2018) Cancun, Mexico (Apr.22-26, 2018) 1-8.

Uncertainty by Nuclear Data and Highly-Enriched Uranium in keff Evaluation at Kyoto University Critical Assembly
M. Yamanaka and C. H. Pyeon
Proc. Int. Conf. on the Reactor Physics (PHYSOR2018) Cancun, Mexico (Apr.22-26, 2018) 1-8.

Feynman- α Analysis for a Subcritical Reactor System Driven by an Unstable Spallation Neutron Source in the Kyoto University Critical Assembly
K. Nakajima, A. Sakon, S. Hohara, K. Hashimoto, M. Yamanaka, T. Sano and C.H. Pyeon
PHYTRA4 – The Fourth International Conference on Physics and Technology of Reactors and Applications
Marrakech, Morocco (Sept.17-19, 2018).

Research of Measurement Condition for a Reactor Noise Measurement in the Power Operation of Kyoto University Reactor, KUR
S. Hohara, K. Nakajima, A. Sakon, K. Hashimoto and T. Sano
The Fourth International Conference on Physics and Technology of Reactors and Applications
Marrakech, Morocco (Sept.17-19, 2018).

An evaluation of one-group interfacial area transport equation with its constitutive bubble coalescence and breakup models in bubbly two-phase flows (Paper No.: 568)
X. Shen and T. Hibiki
Proceeding of the 12th International Topical Meeting on Nuclear Reactor Thermal-Hydraulics, Operation and Safety (NUTHOS-12) Qingdao, China (Oct.14-18, 2018).

Reactivity and Activation Measurements of Novel Neutron-Absorbing Materials for Accident-Tolerant Control Rod
H. Ohta, Y. Nauchi, K. Nakamura and T. Sano
ANS winter meeting Washington DC, USA (Nov.11-15, 2018).

Development of portable SNMs detection system with D-D neutron source based on combination of noise analysis and threshold energy neutron analysis method
T. Misawa, Y. Kitamura, Y. Takahashi, K. Masuda and B.A. Mahmoud
IEEE 2018 Nuclear Science Symposium and Medical Imaging Conference
Sydney, Australia (Nov.10-17, 2018).

Effect of porosity distribution on two-phase pressure drop in a packed bed
T. Kurisaki, D. Ito, K. Ito, Y. Saito, Y. Imaizumi, K. Matsuba and K. Kamiyama
Proceedings of 11th Korea-Japan Symposium on Nuclear Thermal Hydraulics and Safety (NTHAS-11)
Busan, Korea (Nov.18-21, 2018).

Measurements of liquid velocity and void fraction in vertical upward LBE two-phase flow under poor wettability conditions
G. Ariyoshi, D. Ito, K. Ito and Y. Saito
Proceedings of 11th Korea-Japan Symposium on Nuclear Thermal Hydraulics and Safety (NTHAS-11)
Busan, Korea (Nov.18-21, 2018).

Measurement and analysis of one-dimensional solidification process in lead-bismuth eutectic
D. Ito, K. Ito and Y. Saito
Proceedings of 11th Korea-Japan Symposium on Nuclear Thermal Hydraulics and Safety (NTHAS-11)
Busan, Korea (Nov.18-21, 2018).

Modeling of bathtub vortex in consideration of realistic axial velocity distribution
K. Ito, D. Ito, Y. Saito, T. Ezure and M. Tanaka
Proceedings of ANS Winter Meeting & Expo 2018, Embedded Topical Meeting: Advances in Thermal Hydraulics (ATH 2018) Orlando, FL, USA (Nov.11-15, 2018) 1120-1132.

Reviews

京都大学研究炉の運転再開について
中島 健, 三澤 毅
日本原子力学会・炉物理部会 会報「炉物理の研究」70 (2018). (in Japanese)

研究用原子炉 KUR の新規制基準への対応
中島健
Isotope News 757 (2018) 48-51. (in Japanese)

4. Material Science and Radiation Effects

Papers

Combined effect of laser thermal shock and helium ion irradiation on W-Y₂O₃ composites

Y.X. Zhang, X.Y. Tan, L.M. Luo, Y. Xu, X. Zan, Q. Xu, Tokunaga Kazutoshi, X.Y. Zhu and Y.C. Wu
Fusion Engineering and Design **140** (2019) 102-106.

Preparation of ultrafine-grained/nanostructured tungsten materials: An overview

Y. C Wu, Q.Q Hou, L.M. Luo, X. Zan, X.Y. Zhu, Li Ping, Q. Xu, J.G. Cheng, G.N. Luo and J.L. Chen
Journal of Alloys and Compounds **779** (2019) 926-941.

Superconducting transition temperatures in the electronic and magnetic phase diagrams of Sr₂VFeAsO_{3-δ}, a superconductor

Y. Tojo, T. Shibuya, T. Nakamura, K. Shoji, H. Fujioka, M. Matoba, S. Yasui, M. Itoh, S. Iimura, H. Hiramatsu, H. Hosono, S. Hirai, W. Mao, S. Kitao, M. Seto and Y. Kamihara
Journal of Physics: Condensed Matter **31** (2019) 115801.

Chiral crystal-like droplets displaying unidirectional rotational sliding

T. Kajitani, K. Motokawa, A. Kosaka, Y. Shoji, R. Haruki, D. Hashizume, T. Hikima, M. Takata, K. Yazawa, K. Morishima, M. Shibayama and T. Fukushima
Nature Materials **3** (2019) 266-272.

TEM studies of 1 MeV Fe⁺ ion-irradiated W alloys by wet chemical method: high-temperature annealing and deuterium retention

X.Y. Ding, J.Q. Liu, L.M. Luo, Q. Xu, X. Gao, J.J. Huang, B. Yu, J.G. Li and Y.C. Wu
Nuclear Fusion **59** (2019) 016008.

Gamma-ray irradiation effect on ZnO bulk single crystal: Origin of low resistivity

J. Tashiro, Y. Torita, T. Nishimura, K. Kuriyama, K. Kushida, Q. Xu and A. Kinomura
Solid State Communications **292** (2019) 24-26.

Surface damage evolution during transient thermal shock of W-2%vol Y₂O₃ composite material in different surfaces

G. Yao, Z.Y. Tan, L.M. Luo, K.J. Hong, X. Zan, Q. Xu, X.Y. Zhuo, Y.Y. Lian, X. Liu and Y.C. Wu
Fusion Engineering and Design **139** (2019) 86-95.

Densification and microstructure evolution of W-TiC-Y₂O₃ during spark plasma sintering

Y.F. Zhou, Z.Y. Zhao, X.Y. Tan, L.M. Luo, Y. Xu, X. Zan, Q. Xu, K. Tokunaga, X.Y. Zhu and Y. C. Wu
International Journal of Refractory Metals and Hard Materials **79** (2019) 95-101.

Depth synergistic effect of irradiation damage on tungsten irradiated by He-ions with various energies

Y.L. Liu, E.Y. Lu, L.G. Song, R.Y. Bai, Q. Xu, S.X. Jin, T. Zhu, X.Z. Cao, Q.L. Zhang, D.Q. Yuan, B.Y. Wang and L.Q. Ge
Journal of Nuclear Materials **517** (2019) 192-200.

Evolution of Superconductivity with Sr-Deficiency in Antiperovskite Oxide Sr_{3-x}SnO

M. Oudah, J.N. Hausmann, S. Kitao, A. Ikeda, S. Yonezawa, M. Seto and Y. Maeno
Scientific Reports **9** (2019) 1831.

Development of a novel red-emitting cesium hafnium iodide scintillator

S. Kodama, S. Kurosawa, M. Ohno, A. Yamaji, M. Yoshino, J. Pejchal, R. Král, Y. Ohashi, K. Kamada, Y. Yokota, M. Nikl and A. Yoshikawa
Radiation Measurements **124** (2019) 54-58.

Influence of Nb Content on the Microstructure and Deuterium Retention of W-Nb Alloys

L.M. Luo, J.B. Chen, J.S. Lin, X. Zan, X.Y. Zhu, Q. Xu and Y.C. Wu
Fusion Engineering and Design **129** (2018) 120-129.

Characterization of Helium-Vacancy Complexes in He-Ions Implanted Fe₉Cr by Using Positron Annihilation Spectroscopy

T. Zhu, S.X. Jin, P. Zhang, L.G. Song, X.Y. Lian, P. Fan, Q.L. Zhang, D.Q. Yuan, H.B. Wu, R.S. Yu, X.Z. Cao, Q. Xu and B.Y. Wang
Journal of Nuclear Materials **505** (2018) 69-72.

Nuclear spin relaxation of ^{111}Cd at the A site in spinel oxides, CdFe_2O_4 and CdIn_2O_4

W. Sato, S. Komatsuda and Y. Ohkubo

Journal of Radioanalytical and Nuclear Chemistry **316(3)** (2018) 1289-1293.

Thermal stability of irradiation-induced metastable lattice structures in NiTi intermetallic compound

M. Ochi, H. Kojima, K. Fukuda, Y. Kaneno, S. Semboshi, F. Hori, Y. Saitoh and A. Iwase

Transactions of the Materials Research Society of Japan **43(2)** (2018) 53-56.

(Ar-CO-C[triple bond, length as m-dash]C)(PEt_3)Au and (Ar-C[triple bond, length as m-dash]C)(PEt_3)Au complexes bearing pyrenyl and ferrocenyl groups: synthesis, structure, and luminescence properties

M. Głodek, A. Makal, P. Paluch, G.M. Kadziolka, Y. Kobayashi, J. Zakrzewski and D. Płażuk

Dalton Transactions **47(19)** (2018) 6702-6712.

Helium Irradiation Behavior of Tungsten-Niobium Alloys under Different Ion Energies

M.Y. Xu, L.M. Luo, Y.F. Zhou, X. Zan, Y. Xu, Q. Xu, K. Tokunaga, X.Y. Zhu and Y.C. Wu

Fusion Engineering and Design **132** (2018) 7-12.

Versatile Mechanical Properties of Novel g-SiCx Monolayers from Graphene to Silicene: A First-Principles Study

X.K. Lu, T.Y. Xin, Q. Zhang, Q. Xu, T.H. Wei and Y.X. Wang

Nanotechnology **29** (2018) 315701.

Effect of Ti addition on microstructural evolution of V-Cr-Ti alloys to balance irradiation hardening with swelling suppression

K. Fukumoto, K. Tone, T. Onitsuka and T. Ishigami

Nuclear Materials and Energy **15** (2018) 122-127.

Spin order in FeV_2O_4 determined by single crystal Mössbauer spectroscopy in applied magnetic field

S. Nakamura, Y. Kobayashi, S. Kitao and M. Seto

Physica B: Condensed Matter **536** (2018) 620-624.

Valence fluctuating compound $\alpha\text{-YbAlB}_4$ studied by ^{174}Yb Mössbauer spectroscopy and X-ray diffraction using synchrotron radiation

M. Oura, S. Ikeda, R. Masuda, Y. Kobayashi, M. Seto, Y. Yoda, N. Hirao, S.I. Kawaguchi, Y. Ohishi, S. Suzuki,

K. Kuga, S. Nakatsuji and H. Kobayashi

Physica B: Condensed Matter **536(1)** (2018) 162-164.

An Overview of Oxidation-Resistant Tungsten Alloys for Nuclear Fusion

D.G. Liu, L. Zheng, L.M. Luo, X. Zan, J.P. Song, Q. Xu, X.Y. Zhu and Y.C. Wu

Journal of Alloys and Compounds **765** (2018) 299-312.

Positron Lifetime Calculation of Vacancy Clusters in Tantalum Containing Hydrogen and Helium

Q. Xu, E. Popov, T. Troev, J. Zhang and Y. Dai

Journal of Nuclear Materials **506** (2018) 71-75.

Effect of laser beam thermal shock on the helium ion irradiation damage behavior of W-TiC- Y_2O_3 composites

M.Y. Xu, L.M. Luo, Y. Xu, X. Zan, Q. Xu, K. Tokunaga, X.Y. Zhu and Y.C. Wu

Journal of Nuclear Materials **509** (2018) 198-203.

Factors Driving Stable Growth of He Clusters in W: First-Principles Study

Y.J. Feng, T.Y. Xin, Q. Xu and Y.X. Wang

Nuclear Fusion **58** (2018) 076024.

Thermal Stability and Evolution of Microstructures Induced by He Irradiation in W-TiC Alloys

Q. Xu, X.Y. Ding, L.M. Luo, M. Miyamoto, M. Tokitani, J. Zhang and Y.C. Wu

Nuclear Materials and Energy **15** (2018) 76-79.

Detection of Phase Separation of Neutron-Irradiated Fe-Cr Binary Alloys using Positron Annihilation Spectroscopy

Y. Noshita, K. Sato, H. Yamashita, R. Kasada, Q. Xu, M. Hatakeyama and S. Sunada

Nuclear Materials and Energy **15** (2018) 175-179.

Vibrations and chemical states of iron ions in soda-lime glasses determined by element-specific X-ray analyses

K. Okada, Y. Nagashima, K. Shiraki, H. Kageyama, H. Ofuchi, Y. Yoda, Y. Kobayashi, N. Umesaki and Y. Sakurai

X-Ray Spectrometry **47(5)** (2018) 359-371.

- Microstructure and transient laser thermal shock behavior of W–TiC–Y₂O₃ composites prepared by wet chemical method
M.Y. Xu, L.M. Luo, J.S. Lin, Y. Xu, X. Zan, Q. Xu, K. Tokunaga, X.Y. Zhu and Y.C. Wu
Journal of Alloys and Compounds **766** (2018) 784-790.
- Contribution of irradiation-induced defects to hardening of a low-copper reactor pressure vessel steel
M. Shimodaira, T. Toyama, K. Yoshida, K. Inoue, N. Ebisawa, K. Tomura, T. Yoshiie, M.J. Konstantinović, G. Robert and Y. Nagai
Acta Materialia **155(15)** (2018) 402-409.
- Radiophotoluminescence phenomenon in copper-doped aluminoborosilicate glass
R. Hashikawa, Y. Fujii, A. Kinomura, T. Saito, A. Okada, T. Wakasugi and K. Kadono
Journal of the American Ceramic Society **102(4)** (2018) 1642-1651.
- Investigation of mechanical properties of stress-relieved and electron-irradiated tungsten after hydrogen charging
K. Sato, H. Yamashita, A. Hirotsako, S. Komazaki, Q. Xu, M. Onoue, R. Kasada, K. Yabuuchi and A. Kimura
Nuclear Materials and Energy **17** (2018) 29-33.
- Thermal behavior of In impurities in ZnO
W. Sato, H. Shimizu, S. Komatsuda and Y. Ohkubo
Journal of Applied Physics **124(10)** (2018) 105101-7.
- Measurement of displacement cross sections of aluminum and copper at 5 K by using 200 MeV protons
Y. Iwamoto, M. Yoshida, T. Yoshiie, D. Satoh, H. Yashima, H. Matsuda, S. Meigo and T. Shima
Journal of Nuclear Materials **508** (2018) 195-202.
- Gamma-ray irradiation impact of humic substances on apparent formation constants with Cu(II)
T. Sasaki, R. Goto, T. Saito, T. Kobayashi, T. Ikuji and Y. Sugiyama
Journal of Nuclear Science and Technology **55** (2018) 1299-1308.
- Variable-bandwidth ⁵⁷Fe Synchrotron Mössbauer Source
T. Mitsui, R. Masuda, M. Seto and N. Hirao
Journal of the Physical Society of Japan **87(9)** (2018) 093001.
- Isotropic thermal conductivity in rolled large-sized W-Y₂O₃ bulk material prepared by powder metallurgy route and rolling deformation technology
G. Yao, X.Y. Tan, M.Q. Fu, L.M. Luo, X. Zan, Q. Xu, J.Q. Liu, X.Y. Zhu, J.G. Cheng and Y.C. Wu
Fusion Engineering and Design **137** (2018) 325-330.
- Effect of temperature and dose on vacancy-defect evolution in 304L stainless steel irradiated by triple ion beam
T. Zhu, B. Wang, D. Yuan, S. Jin, P. Zhang, E. Lu, L. Song, Y. Liu, H. Ma, Q. Zhang, P. Fan, X. Cao and Q. Xu
Journal of Nuclear Materials **512** (2018) 94-99.
- Measurement of the excitation function of ⁹⁶Zr(α,n)⁹⁹Mo for an alternative production source of medical radioisotopes
M. Hagiwara, H. Yashima, T. Sanami and S. Yonai
Journal of Radioanalytical and Nuclear Chemistry **318(1)** (2018) 569-573.
- Nuclear Bragg reflection of ⁵⁷FeBO₃ in radio-frequency magnetic field observed with Si-APD linear array detector
S. Kishimoto, R. Haruki, R. Masuda, M.M. Tanaka and T. Mitsui
Japanese Journal of Applied Physics **58(1)** (2018) 016501.
- Structure, microscopic ordering, and viscous properties of amorphous poly(n-alkylsilsesquioxane) liquids and solids synthesized by cosolvent-free hydrolytic polycondensation of n-alkyltrimethoxysilanes
K. Kajihara, R. Setp, K. Kanamura, Y. Onodera and S. Kohara
Physica Status Solidi A **216** (2018) 1800475-1-1800475-8.
- Six tris(bipyridyl)iron(II) complexes with 2-substituted 1,1,3,3-tetracyanopropene, perchlorate and tetrafluoroborate anions; order versus disorder, hydrogen bonding and C-N... π interactions
A. Addala, Z. Setifi, Y. Morimoto, B. Artetxe, T. Matsumoto, J. Gutiérrez-Zorrilla M. and C. Glidewell
Acta Crystallographica Section E Crystallographic Communications **74(12)** (2018) 1717-1726.
- Electronic properties and compressional behavior of Fe-Si alloys at high pressure
S. Kamada, N. Suzuki, F. Maeda, N. Hirao, M. Hamada, E. Ohtani, R. Masuda, T. Mitsui, Y. Ohishi and S. Nakano
American Mineralogist **103(12)** (2018) 1959-1965.

A Nuclear Resonance Vibrational Spectroscopic Study of Oxy Myoglobins Reconstituted with Chemically Modified Heme Cofactors: Insights into the Fe-O₂ Bonding and Internal Dynamics of the Protein
T. Ohta, T. Shibata, Y. Kobayashi, Y. Yoda, T. Ogura, S. Neya, A. Suzuki, M. Seto and Y. Yamamoto
Biochemistry **57(48)** (2018) 6649-6652.

Viscoelastic change of block copolymer ion gels in a photo-switchable azobenzene ionic liquid triggered by light
C. Wang, K. Hashimoto, R. Tamate, H. Kokubo, K. Morishima, X. Li, M. Shibayama, F. Lu, T. Nakanishi and M. Watanabe
Chemical Communications **12** (2018) 1710-1713.

Precise determination of hyperfine interactions and second-order doppler shift in ¹⁴⁹Sm Mössbauer transition
S. Tsutsui, R. Masuda, Y. Yoda and M. Seto
Hyperfine Interactions **239** (2018) 50.

Correlation between mechanical properties and Cu precipitates induced by neutron irradiation of Fe Cu alloys
X. Qiu, T. Yokotani, T. Onitsuka and K. Sato
Journal of Nuclear Materials **512** (2018) 314-319.

Nuclear Resonance Vibrational Spectroscopy Definition of O₂ Intermediates in an Extradiol Dioxygenase: Correlation to Crystallography and Reactivity
K.D. Sutherland, Y. Wasada-Tsutsui, M. Mbughuni Michael, S. Rogers Melanie, K. Park, L.V. Liu, Y. Kwak, M. Srnec, L.H. Böttger, M. Frenette, Y. Yoda, Y. Kobayashi, M. Kurokuzu, M. Saito, M. Seto, H. Michael, J. Zhao, E. A. Ercan, J.D. Lipscomb and E.I. Solomon
Journal of the American Chemical Society **140(48)** (2018) 16495-16513.

Thermal evolution of irradiation defects in ferritic/martensitic steel during isochronal annealing
Z. Te, C. Xingzhong, J. Shuoxue, Z. Peng, L. Eryang, K. Peng, G. Yihao, G. Liping, X. Qiu and W. Baoyi
Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms **436** (2018) 35-39.

Charge disproportionation of Mn3d and O2p electronic states depending on strength of p-d hybridization in (LaMnO₃)₂(SrMnO₃)₂ superlattices
H. Nakao, C. Tabata, Y. Murakami, Y. Yamasaki, H. Yamada, S. Ishihara and M. Kawasaki
Physical Review B **98(24)** (2018) 245146.

Proceedings

Nuclear resonant small-angle scattering for investigation of microstructures in electronic states
S. Kitao, M. Kurokuzu, Y. Kobayashi, M. Seto, Y. Yoda and S. Kishimoto
International Conference on Synchrotron Radiation Instrumentation (SRI2018) / AIP Conf. Proc. 2054(2019)
Taipei, Taiwan (June10-15, 2019) 50013.

X線小角散乱法による鉄鋼材料中のマイクロ組織の解析 /
Characterization of microstructures in steels using small-angle X-ray scattering
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 13. (in Japanese)

フッ化物イオン電池用 Ce_{0.95}Sr_{0.05}F_{2.95} 固体電解質の構造および電気化学特性/
Structural and electrochemical properties of Ce_{0.95}Sr_{0.05}F_{2.95} solid electrolyte for Fluoride Ion Batteries
A. Okumura, K. Mori, F. Fujisaki, M. Yonemura and Y. Ishikawa
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 20. (in Japanese)

原子炉および電子加速器を用いた種々のメスバウアー線源の作成 /
Various Mössbauer source preparation using reactor and electron accelerator
S. Kitao, Y. Kobayashi, T. Kubota, M. Saito, R. Masuda, M. Kurokuzu, S. Hosokawa, H. Tajima, S. Yazaki and M. Seto
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 28. (in Japanese)

金属間化合物合金に対する量子線照射効果による微細構造変化 /
Microstructural change of intermetallic compounds irradiated with particle beam
A. Takano, Y. Sumikura, K. Sugita, K. Osawa, G. Jo and H. Hori
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 33. (in Japanese)

照射還元法により合成した Cu 合金ナノ粒子の安定性と微細構造 /

Synthesis of Cu nanoparticles stabilized by alloying under gamma-ray irradiation field.

Y. Uchimura, S. Toda, M. Tanaka, Y. Mizukoshi, N. Taguchi, S. Tanaka, T. Matsui, X. Qiu and F. Hori
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 35. (in Japanese)

高純度タングステンにおける電子線照射誘起空孔の回復挙動 /

Irradiation-Induced Vacancy Defects and Its Recovery Behavior in High-Purity Tungsten

M. Tanaka, A. Yabuuchi and A. Kinomura

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 36. (in Japanese)

Analysis of irradiated materials by intense slow positron beams

A. Kinomura

Proceedings of the 37th Symposium on Materials Science and Engineering, Research Center of Ion Beam Technology Koganei, Tokyo (Dec.5, 2019) 3-6.

Radiation Damage Calculation in Phits and Benchmarking Experiment for Cryogenic-Sample High-Energy Proton Irradiation

Y. Iwamoto, H. Matsuda, S. Meigo, D. Satoh, Tokai, T. Nakamoto, M. Yoshida, Y. Ishi, Y. Kuriyama, T. Uesugi, H. Yashima, T. Yoshiie, T. Shima and R. M. Ronningen

61st ICFA ABDW on High-Intensity and High-Brightness Hadron Beams HB2018 Daejeon (June18-22, 2018) 116-121.

Operation of field emitter arrays under high dose rate gamma-ray irradiation

T. Morito, Y. Handa, Y. Gotoh, N. Sato, I. Takagi, M. Nagao, M. Akiyoshi and T. Okamoto

31st International Vacuum Nanoelectronics Conference, IVNC 2018 Kyoto, Japan (July9-13, 2018) 8520096.

Gamma-Ray Irradiation Effects of CdS/CdTe Photodiode for Radiation Tolerant FEA Image Sensor

T. Okamoto, T. Igari, T. Fukui, Y. Gotoh, N. Sato, M. Akiyoshi and I. Takagi

31st International Vacuum Nanoelectronics Conference, IVNC 2018 Kyoto, Japan (July9-13, 2018) 8520196.

Radiation tolerance of a compact image sensor made of CdTe based photoconductive film and field emitter array

T. Masuzawa, Y. Neo, H. Mimura, T. Okamoto, M. Nagao, M. Akiyoshi, N. Sato, I. Takagi and Y. Gotoh

10th Japan-Korea Nanoelectronics Symposium Hachinohe, Japan (Oct.12-14, 2018).

Recent progress in development of radiation tolerant image sensor with field emitter array

T. Masuzawa, Y. Neo, H. Mimura, M. Nagao, M. Akiyoshi, I. Takagi, Y. Gotoh, T. Okamoto, T. Igari and N. Sato

31st International Vacuum Nanoelectronics Conference, IVNC 2018 Kyoto, Japan (July9-13, 2018) 8520056.

Reviews

An overview of oxidation-resistant tungsten alloys for nuclear fusion

L. D. Guang, Z. Liang, L.L. Ma, Z. Xiang, S.J. Peng, X. Qiu, Z.X. Yong and W.Y. Cheng

Journal of Alloys and Compounds **765** (2018) 299-312.

Evolution of Nuclear Resonant Scattering Research at SPring-8

M. Seto

SPring-8/SACLA Research Frontiers 2017 (2018) 12-15.

ガンマ線をもちいたナノ-マイクロ秒の原子・分子のミクロな運動性の研究

齋藤真器名

自動車技術 **72** (2018) 120-121. (in Japanese)

多色 γ 線を用いた原子・分子運動の観察

齋藤真器名

Isotope news **758** (2018) 21-24. (in Japanese)

陽電子寿命測定と第一原理計算から視えてきたハイエントロピー合金 CoCrFeMnNi 中の空孔形成と移動のエンタルピー /

Evaluation of Vacancy Formation and Migration Enthalpies in CoCrFeMnNi High-entropy Alloy using Positron Lifetime Measurements and Firstprinciples Calculations

杉田一樹, 水野正隆, 荒木秀樹, 白井泰治 /

K. Sugita, M. Mizuno, H. Araki and Y. Shirai

あたりあ **57** (2018) 323-327. (in Japanese)

量子ビーム実験と構造モデリングによる亜鉛リン酸塩ガラスの熱膨張係数異常の起源の解明
小野寺陽平, 小原真司, 正井博和
放射光 32 (2019) 67-74. (in Japanese)

5. Geochemistry and Environmental Science

Papers

Ultrahigh-pressure form of SiO₂ glass with dense pyrite-type crystalline homology
M. Murakami, S. Kohara, N. Kitamura, J. Akola, H. Inoue, A. Hirata, Y. Hiraoka, Y. Onodera, I. Obayashi, J. Kalikka,
N. Hirao, T. Musso, A. S. Foster, Y. Idemoto, O. Sakata and Y. Ohishi
Physical Review B **99** (2019) 045153-1-045153-12.

Deposition and Dispersion of Radio-Cesium Released Due to the Fukushima Nuclear Accident: Sensitivity to
Meteorological Models and Physical Modules
M. Kajino, T.T. Sekiyama, Y. Igarashi, G. Katata, M. Sawada, K. Adachi, Y. Zaizen, H. Tsuruta and T. Nakajima
Journal of Geophysical Research: Atmospheres **124**(3) (2019) 1823-1845.

Analysis on the influence of forest soil characteristics on radioactive Cs infiltration and evaluation of residual
radioactive Cs on surfaces
Y. Mori, M. Yoneda, Y. Shimada, S. Fukutani, M. Ikegami and R. Shimomura
Environmental Monitoring and Assessment **190**(4) (2018) 256.

Distribution and Chemical Speciation of Molybdenum in River and Pond Sediments Affected by Mining Activity in
Erdenet City, Mongolia
T. Solongo, K. Fukushi, O. Altansukh, Y. Takahashi, A. Akehi, G. Baasansuren, Y. Ariuntungalag, O. Enkhjin, B.
Davaajargal, D. Davaadorj and N. Hasebe
Minerals **8**(7) (2018) 288.

Laser step-heating ⁴⁰Ar/³⁹Ar analyses of biotites from meta-granites in the UHP Brossasco-Isasca Unit of Dora-
Maira Massif, Italy
T. Itaya, H. Hyodo, T. Imayama and C. Groppo
Journal of Mineralogical and Petrological Sciences **4** (2018) 171-180.

Cooling history and exhumation of the Nepheline Syenites, NW Iran: Constraints from Apatite fission track
N. Ashraf, N. Hasebe and J. Ahmad
Iranian Journal of Earth Sciences **10**(2) (2018) 109-120.

Petrology, geochemistry and geodynamic setting of Eocene-Oligocene alkaline intrusions from the Alborz-
Azerbaijan magmatic belt, NW Iran
N. Ashrafi, A. Jahangiri, N. Hasebe, N. Eby and G. Nelson
Geochemistry **78**(4) (2018) 432- 461.

Proceedings

廃水中トリチウムの処理に向けた試み /
New Approach for Tritium Separation from Water
S. Fukutani
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 6. (in Japanese)

福島原発事故で放出された放射性エアロゾルの生成メカニズムの解明 /
Production mechanism of radioactive aerosols released from Fukushima Daiichi Nuclear Power Plant
K. Takamiya, T. Tanaka, S. Nitta, Y. Nishiyama, Y. Nishizawa, F. Futagami, Y. Takeuchi, Y. Oki, N. Osada, Y.
Ishi, T. Uesugi, Y. Kuriyama, M. Sakamoto, A. Kirishima, M. Onodera, N. Sato, S. Sekimoto and T. Ohtsuki
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 7-10. (in Japanese)

Measurement of ¹³⁴Cs / ¹³⁷Cs activity ratio of cesium micro-particles and contaminated soil particles using well-type
germanium detector.
M. Soliman, F. Futagami, K. Takamiya, S. Sekimoto, T. Oki and T. Ohtsuki
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 14.

海塩粒子の塩素及び臭素損失 /

Depletion of Cl, Br in the sea salt aerosol.

N. Ito, A. Mizohata, Y. Iinuma and R. Okumura

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 21. (in Japanese)

Eu:LiCAF を用いた加速器 BNCT における中性子測定技術開発 /

Development of neutron detection technology using Eu:LiCAF scintillator

D. Nio, K. Sakasai, H. Nakashima, S. Tanaka, H. Kumada and K. Takamiya

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 22. (in Japanese)

東京電力(株)福島第一原子力発電所事故における線量評価 /

Dose assessment of radiation exposure due to the Fukushima-Daiichi nuclear power plant accident

T. Takahashi

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 44-46. (in Japanese)

福島第一原発周辺土壌に沈着した FP の深部移行挙動 /

Vertical migration behavior of FP deposited on soil around Fukushima Daiichi Nuclear Power Plant

D. Matoba, T. Sasaki and T. Kobayashi

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 32. (in Japanese)

Tectonic setting leading to subduction initiation of Izu-Bonin-Mariana arc -new implications from the Philippine Sea basins-

O. Ishizuka, K. Tani, Y. Harigane, G. Shimoda, T. Sato, S. Umino, I. Sakamoto, Y. Ohara, Y. Yokoyama, A. Perez, C. Conway and S. Sekimoto

American Geophysical Union Fall meeting Washington DC, USA (Dec.10-14, 2018).

Sustainable way of treating groundwater polluted with arsenic, iron and ammonium by a combination of biological filtration and one-stage nitrification - anammox process 10-03-O (Theme3)

Y. Fujikawa Y., Ph. D. Hung, D. Hira, M. Sugahara and K. Furukawa

structures in Electronic States Tokyo, Japan (Dec.5, 2018) 18.

Reviews

環境の分析技術 無機機器分析(1)

藤川陽子

環境技術 47 (2018) 221-225. (in Japanese)

環境の分析技術 無機機器分析(2)

藤川陽子

環境技術 47 (2018) 287-291. (in Japanese)

沈み込み帯の火山岩中かんらん石斑晶とマントルかんらん岩のハロゲン・希ガスからみた水の沈み込み過程
角野浩史, 小林真大

月刊 地球/ The earth monthly 40 (2018) 260-271. (in Japanese)

日本のエネルギーの現状

藤川陽子

環境技術 47 (2018) 236-238. (in Japanese)

Others

フィリピンパラワン島における炭酸塩の熱ルミネッセンス年代測定/

Thermoluminescence dating of carbonates from Palawan island of the Philippines

河原弘樹, 長谷部徳子, 小形 学, 福士圭介, 田村明弘, 藤井直樹, 山川 稔/

H. Kawahara, N. Hasebe, M. Ogata, K. Fukushi, A. Tamura, N. Fuji and M. Yamakawa

フィッション, トラックニュースレター = Fission track news letter 31 (2018) 23-25. (in Japanese)

原子間力顕微鏡を用いたジルコンの α リコイルトラック年代測定/
Alpha recoil track dating on zircon by using atomic force microscope
早坂 怜, 長谷部徳子, 松木 篤, 福間剛士, 田村明弘/
R. Hayasaka, N. Hasebe, A. Matsuki, T. Fukuma and A. Tamura
フィッション, トラックニュースレター = Fission track news letter **31** (2018) 20-22. (in Japanese)

U-Pb 法を用いた東南極北東部の年代測定/
The dating of Northeast Antarctica by zircon U-Pb Method
西野紗也子, 長谷部徳子, 田村明弘, 石川尚人/
S. Nishino, N. Hasebe, A. Tamura and N. Ishikawa
フィッション, トラックニュースレター = Fission track news letter **31** (2018) 17-19. (in Japanese)

アパタイト FT 法に基づいた東北日本弧における隆起, 削剥史の推定: 島弧山地形成過程の解明を目指して
/Estimation of uplift/denudation history of NE Japan Arc based on the apatite fission-track (AFT) method:
Toward understanding of the mountain building process in an island arc
福田将真, 末岡 茂, 長谷部徳子, 田村明弘, 荒井章司, 田上高広/
S. Fukuda, S. Sueoka, N. Hasebe, A. Tamura, S. Arai and T. Tagami
フィッション, トラックニュースレター = Fission track news letter **31** (2018) 13-16. (in Japanese)

茂住祐延断層のジルコン FT 熱年代解析: 熱史モデルによる再検討/
Thermal analysis along the Mozumi-Sukenobu fault, central Japan, based on zircon
fission-track thermochronometry: Reexamination by using thermal history modeling
末岡 茂, 郁芳随徹, 長谷部徳子, 田上高広/
S. Sueoka, Z. Ikuho, N. Haesbe and T. Tagami
フィッション, トラックニュースレター = Fission track news letter **31** (2018) 9-12. (in Japanese)

6. Life Science and Medical Science

Papers

Formation of Clusters in Whiskies During the Maturation Process
K. Morishima, N. Nakamura, K. Matsui, Y. Tanaka, H. Masunaga, S. Mori, T. Iwashita, X. li and M. Shibayama
Journal of Food Science **84**(1) (2019) 59-64.

Highly active copper(i) complexes of aroylthiourea ligands against cancer cells – synthetic and biological studies
K. Jeyalakshmi, J. Haribabu, C. Balachandran, E. Narmatha, S.P.B. Nattamai, S. Aoki, S. Awale and R. Karvembu
New Journal of Chemistry **43**(7) (2019) 3188-3198.

Negative charge at aspartate 151 is important for human lens α A-crystallin stability and chaperone function
T. Takata, T. Matsubara, H.T. Nakamura and N. Fujii
Experimental Eye Research **182** (2019) 10-18.

Stereoselective aldol reactions of dihydroxyacetone derivatives catalyzed by chiral Zn^{2+} complexes
M. Yasuda, Y. Saga, T. Tokunaga, S. Itoh and S. Aoki
Tetrahedron **75**(6) (2019) 757-777.

Simple and Convenient Method for the Isolation, Culture, and Re-collection of Cancer Cells from Blood by
Using Glass-Bead Filters
B. Shashni, H. Matsuura, R. Saito, T. Hirata, S. Ariyasu, K. Nomura, H. Takemura, K. Akimoto, N. Aikawa,
A. Yasumori and S. Aoki
ACS Biomaterials Science & Engineering **2** (2019) 438-452.

Stereospecific Synthesis of Tris-heteroleptic Tris-cyclometalated Iridium (III) Complexes via Different
Heteroleptic Halogen-Bridged Iridium(III) Dimers and Their Photophysical Properties
Y. Tamura, Y. Hisamatsu, A. Kazama, K. Yoza, K. Sato, R. Kuroda and S. Aoki
Inorganic Chemistry **57**(8) (2018) 4571-4589.

NRVS Studies of the Peroxide Shunt Intermediate in a Rieske Dioxygenase and Its Relation to the
Native $Fe^{II} O_2$ Reaction
K.D. Sutherlin, B.S. Rivard, L.H. Böttger, L.V. Liu, M.S. Rogers, M. Srncic, K. Park, Y. Yoda, S. Kitao,
Y. Kobayashi, M. Saito, M. Seto, M. Hu, J. Zhao, J.D. Lipscomb and E.I. Solomon
Journal of the American Chemical Society **140** (2018) 5544-5559.

Not Oligomers but Amyloids are Cytotoxic in the Membrane-Mediated Amyloidogenesis of Amyloid- β Peptides
N. Itoh, E. Takada, K. Okubo, Y. Yano, M. Hoshino, A. Sasaki, M. Kinjo and K. Matsuzaki
ChemBioChem **19(5)** (2018) 430-433.

Oxytocin Inhibits Corticosterone-induced Apoptosis in Primary Hippocampal Neurons
H.M. Latt, H. Matsushita, M. Morino, Y. Koga, H. Michiue, T. Nishiki, K. Tomizawa and H. Matsui
Neuroscience **379** (2018) 383-389.

Asp 58 modulates lens α A-crystallin oligomer formation and chaperone function
T. Takata, H.T. Nakamura, R. Inoue, K. Morishima, N. Sato, M. Sugiyama and N. Fujii
The FEBS Journal **285(12)** (2018) 2263-2277.

Identification of Isomeric Aspartate residues in β B2-crystallin from Aged Human Lens
T. Takata, K. Murakami, A. Toyama and N. Fujii
Biochimica et Biophysica Acta (BBA) - Proteins and Proteomics **7** (2018) 767-774.

D-Amino acids in protein: The mirror of life as a molecular index of aging
N. Fujii, T. Takata, N. Fujii, K. Aki and H. Sakae
Biochimica et Biophysica Acta (BBA) - Proteins and Proteomics **1866(7)** (2018) 840-847.

Regioselective O-Glycosylation of Nucleosides via the Temporary 2
H. Someya, T. Itoh, M. Kato and S. Aoki
Journal of Visualized Experiments **137** (2018) e57897.

Mutagenic potential of 8-oxo-7,8-dihydroguanine (8-oxoG) is influenced by nearby clustered lesions"
N. Shikazono and K. Akamatsu
Mutation Research/Fundamental and Molecular Mechanisms of Mutagenesis **810** (2018) 6-12.

Cryoprotectant-free high-pressure cooling and dynamic nuclear polarization for more sensitive detection of hydrogen in neutron protein crystallography
I. Tanaka, N. Komatsuzaki, W.X. Yue, T. Chatake, K. Kusaka, N. Niimura, D. Miura, T. Iwata, Y. Miyachi, G. Nukazuka and H. Matsuda
Acta Crystallographica Section D Structural Biology **74(8)** (2018) 787-791.

Luminescent Iridium Complex-Peptide Hybrids (IPHs) for Therapeutics of Cancer: Design and Synthesis of IPHs for Detection of Cancer Cells and Induction of Their Necrosis-Type Cell Death
A.A. Masum, Y. Hisamatsu, K. Yokoi and S. Aoki
Bioinorganic Chemistry and Applications **7578965** (2018)1-18.

Purification and structural characterization of water-soluble menaquinone-7 produced by *Bacillus subtilis natto*
T. Chatake, Y. Yanagisawa, R. Inoue, M. Sugiyama, T. Matsuo, S. Fujiwara, T. Ohsugi and H. Sumi
Journal of Food Biochemistry **e12630** (2018) 1-7.

Design and synthesis of a luminescent iridium complex-peptide hybrid (IPH) that detects cancer cells and induces their apoptosis
A.A. Masum, K. Yokoi, Y. Hisamatsu, K. Naito, B. Shashni and S. Aoki
Bioorganic & Medicinal Chemistry **26(17)** (2018) 4804-4816.

Use of a Compact Tripodal Tris(bipyridine) Ligand to Stabilize a Single-Metal-Centered Chirality: Stereoselective Coordination of Iron(II) and Ruthenium(II) on a Semirigid Hexapeptide Macrocyclic
Y. Kobayashi, M. Hoshino, T. Kameda, K. Kobayashi, K. Akaji, S. Inuki, H. Ohno and S. Oishi
Inorganic Chemistry **9** (2018) 5475-5485.

Structural Basis for Selective Binding of Export Cargoes by Exportin-5
R. Yamazawa, C. Jiko, S. Choi, I.Y. Park, A. Nakagawa, E. Yamashita and S.J. Lee
Structure **26(10)** (2018) 1393-1398.

The Effect of *p53* Status on Radio-Sensitivity of Quiescent Tumor Cell Population Irradiated With γ -Rays at Various Dose Rates
S. Masunaga, J. Kobayashi, K. Tano, Y. Sanada, M. Suzuki and K. Ono
Journal of Clinical Medicine Research **10(11)** (2018) 815-821.

Protein assemblies ejected directly from native membranes yield complexes for mass spectrometry
D.S. Chorev, L.A Baker, D. Wu, Beilsten-Edmands Victoria, Rouse Sarah L., Zeev-Ben-Mordehai Tzviya, C. Jiko, F. Samsudin, C. Gerle, S. Khalid, A.G. Stewart, S.J. Matthews, K. Grünewald and C.V. Robinson
Science **6416** (2018) 829-834.

Design and synthesis of boron containing monosaccharides by the hydroboration of d-glucal for use in boron neutron capture therapy (BNCT)
T. Itoh, K. Tamura, H. Ueda, T. Tanaka, K. Sato, R. Kuroda and S. Aoki
Bioorganic & Medicinal Chemistry **26(22)** (2018) 5922-5933.

Concentrations and biological half-life of radioactive cesium in epigeic earthworms after the Fukushima Dai-ichi Nuclear Power Plant accident
S. Tanaka, T. Adati, T. Takahashi, K. Fujiwara and S. Takahashi
Journal of Environmental Radioactivity **192** (2018) 227-232.

Proceedings

マルチドメイン蛋白質の階層的な動的構造と機能発現との関係性に関する研究 /
Solution structure of multi-domain protein
H. Nakagawa, T. Saio, M. Sugiyama and R. Inoue
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 11. (in Japanese)

フィブリノーゲンによるインスリン B 鎖アミロイド線維の形成阻害 /
Inhibition of amyloid fibril formation of insulin B chain by fibrinogen
E. Chatani, N. Yamamoto, T. Akai, R. Inoue, M. Sugiyama and A. Tamura
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 12. (in Japanese)

ヒト水晶体内 α -クリスタリン中における Asp58 部位の重要性と白内障との関係 /
Asp Isomerizations Caused Lens Protein Insolubilization
T. Takata, K. Morishima, R. Inoue, N. Sato, M. Sugiyama and N. Fujii
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 16. (in Japanese)

クライオ電顕のための牛心筋 FoF1ATP 合成酵素の試料調整 /
Preparation of bovine FoF1ATP synthase for cryo-EM structural analysis
C. Jiko, C. Gerle and Y. Morimoto
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 24. (in Japanese)
超遠心分析と X 線小角散乱を用いたタンパク質溶液の相補的構造解析 /
Structural analysis of a protein solution by complementary use of analytical ultracentrifugation and small angle X-ray scattering
K. Morishima, N. Sato, R. Inoue and M. Sugiyama
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 26. (in Japanese)

アミロイド β タンパク質産生量を減少させるタンパク質 ILEI の物理化学的解析 /
Physicochemical study on ILEI suppressing amyloid- β generation
E. Hibino, K. Morishima, R. Inoue, M. Sugiyama, M. Nakano, N. Watanabe, T. Sugi and M. Nishimura
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 27. (in Japanese)

重水素化支援小角中性子散乱中性子散乱及び分析超遠心法による α -クリスタリンのサブユニット交換の機構解明 /
Clarification of mechanism of subunit dynamics of α -crystallin through deuteration assisted small-angle neutron scattering and analytical ultra-centrifuge
R. Inoue, K. Morishima, T. Takata, N. Sato, K. Wood, R. Urade, N. Fujii and M. Sugiyama
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 49-51. (in Japanese)

小麦タンパク質グリアジンの凝集体構造の SAXS による解析 /
SAXS analysis of nanostructures of hydrated wheat gliadins
R. Urade, N. Sato, M. Sugiyama, Y. Higashino, R. Inoue and K. Morishima
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 19. (in Japanese)

重水素化を利用したタンパク質の変性に関する研究 /
Elucidation of denatured protein using deuteration
A. Kita
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 47-48. (in Japanese)

Adhesion-free Separation of Particles/Cells Using Three Dimensional Negative Dielectrophoretic Force
M. Mizoguchi, K. Yamamoto, B. Shashni, S. Aoki and M. Motosuke
Proceedings of 9th Asia-Pacific Conference of Transducers and Micro-Nano Technology (APCOT 2018)
Hong Kong, China (June24-27, 2018).

Book

タンパク質のアモルファス凝集と溶解性—基礎研究からバイオ産業・創薬研究への応用まで—

第Ⅱ編 第4章 小角散乱法

黒田 裕, 有坂文雄, 白木賢太郎, 岩下和輝, 三村真大, 宗 正智, 後藤祐児, 今村比呂志, 渡邊秀樹, 千賀由佳子, 本田真也, 太田里子, 杉山正明, 城所俊一, 若山諒大, 内山 進, デミエン ホール, 廣田奈美, 五島直樹, 河村義史, 廣瀬修一, 野口 保, 丹羽達也, 田口英樹, 伊豆津健一, 津本浩平, 伊倉貞吉, 池口雅道, 荒川 力, 江島大輔, 浅野竜太郎, 赤澤陽子, 萩原義久, 小澤大作, 武内敏秀, 永井義隆, 安藤昭一朗, 石原智彦, 小野寺 理, 加藤昌人, 米田早紀, 鳥巢哲生, 黒谷篤之, 柴田寛子, 石井明子

黒田 裕, 有坂文雄

(株)シーエムシー出版 (in Japanese)

Reviews

4 液混合液体クロマトグラフィーポンプを用いた各種濃度溶液の作成

森本幸生

Jasco Report **60(1)** (2018) 1-4. (in Japanese)

Gliadins from wheat grain: an overview、from primary structure to nanostructures of aggregates

R. Urade, N. Sato and M. Sugiyama

Biophysical Reviews **10(2)** (2018) 435-443.

がん診断・治療のための異分野連携

-血中循環がん細胞の検出、補捉法の開発-

青木 伸

理大科学フォーラム **404** (2018) 10-13. (in Japanese)

ナットウキナーゼによる血栓溶解ならびに疾病予防 (特集 つまらない, もれない血管力)

須見洋行, 矢田貝智恵子, 茶竹俊行, 森本幸生, 柳澤泰任, 満尾 正, 井上浩義, 丸山真杉

Food style **21 22** (2018) 43-47. (in Japanese)

水晶体構成蛋白質中におけるアミノ酸の自発的化学修飾が引き起こす白内障発症機構に関する研究

高田 匠

日本白内障学会誌 **30** (2018) 7-12. (in Japanese)

生物物理学的手法を用いた納豆菌の研究：納豆菌が生産する生理活性物質と納豆菌の放射線耐性/

Biophysical study of Bacillus subtilis natto: Physiologically active substances produced by Bacillus subtilis natto, and radioresistance of Bacillus subtilis natto

茶竹俊行, 齊藤 剛, 柳澤泰任

放射線生物研究/Radiation biology research communications **53** (2018) 280-290. (in Japanese)

蛋白質中の D-アミノ酸と老化

藤井紀子, 高田 匠, 金 仁求

臨床免疫・アレルギー科 **70** (2018) 467-474. (in Japanese)

老化による蛋白質中の D-アミノ酸生成と加齢性疾患

藤井紀子

海洋化学研究 / Transactions of the Research Institute of Oceanography **31(2)** (2018) 84-90. (in Japanese)

Other

有機水銀分解酵素・重原子結合型の高分解能結晶構造解析/

Crystal structure analysis of organomercurial lyase and its heavy atom derivatives

森本幸生, 喜田昭子

Photon Factory Activity Report 2017 **35** (2018) 19. (in Japanese)

7. Neutron Capture Therapy

Papers

Effect of a change in reactor power on response of murine solid tumors in vivo, referring to impact on quiescent tumor cell population

S. Masunaga, Y. Sakurai, H. Tanaka, T. Takata, M. Suzuki, Y. Sanada, K. Tano, A. Maruhashi and K. Ono
International Journal of Radiation Biology (2019) 1-11.

Proposal for determining absolute biological effectiveness of boron neutron capture therapy—the effect of $^{10}\text{B}(n,\alpha)^7\text{Li}$ dose can be predicted from the nucleocytoplasmic ratio or the cell size

K. Ono, H. Tanaka, Y. Tamari, T. Watanabe, M. Suzuki and S. Masunaga
Journal of Radiation Research **60(1)** (2019) 29-36.

Radiological diagnosis of brain radiation necrosis after cranial irradiation for brain tumor: a systematic review

M. Furuse, N. Nonoguchi, K. Yamada, T. Shiga, J.D. Combes, N. Ikeda, S. Kawabata, T. Kuroiwa and S. Miyatake
Radiation Oncology **14(1)** (2019) 28.

Folate receptor-targeted novel boron compound for boron neutron capture therapy on F98 glioma-bearing rats

T. Kanemitsu, S. Kawabata, M. Fukumura, G. Futamura, R. Hiramatsu, N. Nonoguchi, F. Nakagawa, T. Takata, H. Tanaka, M. Suzuki, S. Masunaga, K. Ono, S. Miyatake, H. Nakamura and T. Kuroiwa
Radiation and Environmental Biophysics **58(1)** (2019) 59-67.

Boron neutron capture therapy for vulvar melanoma and genital extramammary Paget's disease with curative responses

J. Hiratsuka, N. Kamitani, R. Tanaka, E. Yoden, R. Tokiya, M. Suzuki, R.F. Barth and K. Ono
Cancer Communications **1** (2018) 38.

Modeling the detection efficiency of an HP-Ge detector for use in boron neutron capture therapy

S. Nakamura, A. Wakita, M. Ito, H. Okamoto, S. Nishioka, K. Iijima, K. Kobayashi, T. Nishio, H. Igaki and J. Itami
Applied Radiation and Isotopes **125** (2018) 80-85.

Boron Neutron Capture Therapy of Malignant Gliomas

S. Miyatake, S. Kawabata, R. Hiramatsu, T. Kuroiwa, M. Suzuki and K. Ono
Progress in Neurological Surgery **32** (2018) 48-56.

Preliminary design study of a simple neutron energy spectrometer using a CsI self-activation method for daily QA of accelerator-based BNCT

R. Kurihara, A. Nohtomi, G. Wakabayashi, Y. Sakurai and H. Tanaka
Journal of Nuclear Science and Technology **56(1)** (2018) 70-77.

Feasibility study on the use of 3D silicon microdosimeter detectors for microdosimetric analysis in boron neutron capture therapy

N. Hu, R. Uchida, L.T. Tran, A. Rosenfeld and Y. Sakurai
Applied Radiation and Isotopes **140** (2018) 109-114.

Boron Neutron Capture Therapy for High-Grade Skull-Base Meningioma

K. Takeuchi, R. Hiramatsu, Y. Matsushita, H. Tanaka, Y. Sakurai, M. Suzuki, K. Ono, S. Miyatake, T. Kuroiwa and S. Kawabata
Journal of Neurological Surgery Part B: Skull Base Suppl **4** (2018) S322-S327.

Development of real-time thermal neutron monitor array for boron neutron capture therapy

H. Tanaka, T. Takata, Y. Sakurai, S. Kawabata, M. Suzuki, S. Masunaga and K. Ono
Therapeutic Radiology and Oncology (2018) 2-51.

Preliminary feasibility study on differential diagnosis between radiation-induced cerebral necrosis and recurrent brain tumor by means of [^{18}F]fluoro-borono-phenylalanine PET/CT

R. Beshr, K. Isohashi, T. Watabe, S. Naka, G. Horitsugi, V. Romanov, H. Kato, S. Miyatake, E. Shimosegawa and J. Hatazawa
Annals of Nuclear Medicine **32(10)** (2018) 702-708.

Boron Neutron Capture Therapy Combined with Early Successive Bevacizumab Treatments for Recurrent Malignant Gliomas – A Pilot Study

H. Shiba, K. Takeuchi, R. Hiramatsu, M. Furuse, N. Nonoguchi, S. Kawabata, T. Kuroiwa, N. Kondo, Y. Sakurai, M. Suzuki, K. Ono, S. Oue, E. Ishikawa, H. Michiue and S. Miyatake
Neurologia medico-chirurgica **58(12)** (2018) 487-494.

Influence of field-of-view and section thickness of diagnostic imaging on thermal neutron flux estimation in dose-planning for boron neutron capture therapy
H. Sato, T. Takata and Y. Sakurai
Radiological Physics and Technology **12(1)** (2018) 76-85.

Proceedings

Enhanced tumor-targeted delivery of p-boronophenylalanine using fructose-functionalized polymers for boron neutron capture therapy

Y. Yao, T. Nomoto, Y. Inoue, M. Suzuki, M. Matsui, H. Takemoto, K. Tomoda and N. Nishiyama
18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018).

Metabolism-controlled boron delivery systems composed of p-boronophenylalanine and poly(vinyl alcohol)

T. Nomoto, Y. Inoue, Y. Yao, M. Suzuki, H. Takemoto, M. Matsui, K. Tomoda and N. Nishiyama
18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018).

Boron Tracedrugs: Drug-Design Challenge for Neutron Dynamic Therapy

H. Hori, T. Sugihara, T. Tashiro, H. Terada, R. Takeuchi, N. Kamegawa and Y. Morimoto
18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018).

Effect of the Change in a Reactor Power on the Response of Murine Solid Tumors in Vivo, Referring to that in Intratumor Quiescent Cells and Its Clinical Significance in Boron Neutron Capture Therapy (BNCT)

S. Masunaga, Y. Sakurai, H. Tanaka, T. Takata, K. Tano, Y. Sanada, M. Suzuki, A. Maruhashi and K. Ono
104th Scientific Assembly and Annual Meeting, Radiological Society of North America Chicago, USA (Oct.28-Nov.2, 2018).

Disruption of Hif-1 α enhances the sensitivity to BNCT in murine squamous cell carcinoma

Y. Sanada, T. Takata, Y. Sakurai, H. Tanaka, K. Tano and S. Masunaga
18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018).

Functional evaluation of kojic acid-modified carborane developed as a boron drug for melanoma BNCT

S. Dowaki, K. Matsuura, R. Kawasaki, Y. Hattori, Y. Sakurai, S. Masunaga, M. Kirihata and T. Nagasaki
18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018).

Effect of the change in reactor power on the response of murine solid tumors in vivo, also referring to that in quiescent tumor cells, and its clinical significance in boron neutron capture therapy (BNCT)

S. Masunaga
18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018).

The role of GM-CSF during early cellular responses after BNCR and gamma irradiation

L. Chen, S. Imamichi, S. Masunaga, T. Onodera, Y. Sasaki and M. Masutani
18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018).

Pilot study of gadolinium accumulation in tumour with intra-arterial administration of gadoteridol-entrapped water-in-oil-in-water emulsion in VX-2 rabbit hepatic cancer model for neutron capture therapy

M. Yanagawa, H. Yanagie, T. Fujino, T. Matsukawa, A. Kubota, Y. Morishita, Y. Sakurai, K. Mouri, M. Fujihara, R. Mizumachi, Y. Murata, Y. Nonaka, D. Novrain, T. Hirata, A. Shinohara, K. Yokoyama, T. Sugihara, M. Suzuki, S. Masunaga, Y. Sakurai, H. Tanaka, K. Ono, R. Nishimura, M. Ono, J. Nakajima and H. Takahashi

18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018).

The combination effect of neutron irradiation and exposure to DNA-alkilating agent on glioblastoma cell lines with different MGMT and p53 status

Y. Kinashi, T. Ikawa and S. Takahashi
18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018)
228-229.

Boron neutron capture therapy for malignant pleural mesothelioma: Acase report

M. Suzuki, N. Kondo, Y. Tamari, E. Shibata, T. Kijima, Y. Kinashi, S. Masunaga, T. Takata, H. Tanaka and Y. Sakurai
18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018).

Study on application of BNCT to synovial sarcoma

T. Fujimoto, M. Suzuki, S. Kuratsu, T. Sudo, T. Sakuma, Y. Sakurai, T. Takata, Y. Tamari, H. Tanaka, S. Masunaga, Y. Kinashi, N. Kondo, H. Igaki, I. Fujita, T. Andoh, M. Morishita, S. Yahiro, R. Shigemoto, T. Kawamoto, T. Akisue, H. Ichikawa, R. Kuroda and T. Hirose
18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018).

Treatment of major cervical invasion of head and neck cancer with boron neutron capture therapy

M. Ohmae, I. Kato, Y. Fujita, M. Suzuki, S. Masunaga, K. Ono, Y. Sakurai, M. Nakazawa and N. Uzawa
18th International Congress on Neutron Capture Therapy (ICNCT-18) Taipei, Taiwan (Oct.28-Nov.2, 2018).

Books

Handbook of Boron Science With Applications in Organometallics, Catalysis, Materials and Medicine
Volume 4: Boron in Medicine
An Overview of Clinical and Biological Aspects of Current Boron Neutron Capture Therapy (BNCT) for
Cancer Treatment
M. Takagaki, K. Uno and N. S. Hosmane
WORLD SCIENTIFIC (EUROPE) (2018).

「BNCT 基礎から臨床応用まで」—BNCT を用いて治療にかかわる人のためのテキスト— 増刷版
中性子捕捉療法を理解するための生物学の基礎 " "
増永慎一郎
日本中性子捕捉療法学会 (著)
大阪公立大学共同出版会 (2018). (in Japanese)

「BNCT 基礎から臨床応用まで」—BNCT を用いて治療にかかわる人のためのテキスト— 増刷版
中性子捕捉療法による抗腫瘍効果
増永慎一郎
日本中性子捕捉療法学会 (著)
大阪公立大学共同出版会 (2018). (in Japanese)

Reviews

Design of drug delivery systems for physical energy-induced chemical surgery
T. Nomoto and N. Nishiyama
Biomaterials **178** (2018) 583-596.

悪性骨・軟部腫瘍, 多発肺転移に対するホウ素中性子捕捉療法適応に向けての戦略
鈴木 実, 藤本卓也, 安藤 徹
日本整形外科雑誌 **92** (2018) 757-764. (in Japanese)

国内の BNCT 施設の現状
櫻井良憲
放射線化学会誌 **105** (2018) 41-46. (in Japanese)

最近報告されたがんの統計と疫学的解析結果報告について
増永慎一郎
日本ハイパーサーミア学会誌 **34** (2018) 138-140. (in Japanese)

質疑応答, 臨床一般/ホウ素原子と中性子線によるがん治療は可能か?
増永慎一郎
日本医事新報 **4903** (2018) 61-62. (in Japanese)

8. Neutron Radiography and Radiation Application

Papers

Synthesis of the reported structure of homocereulide and its vacuolation assay

T. Naka, Y. Hattori, H. Takenaka, Y. Ohta, M. Kirihata and S. Tanimori

Bioorganic & Medicinal Chemistry Letters **29(5)** (2019) 734-739.

Flow visualization of heavy oil in a packed bed using real-time neutron radiography

E. Shoji, K. Yamagiwa, M. Kubo, T. Tsukada, S. Takami, K. Sugimoto, D. Ito, Y. Saito and S. Teratani

Chemical Engineering Science **196** (2019) 425-432.

Cellular uptake evaluation of pentagamaboronon-0 (PGB-0) for boron neutron capture therapy (BNCT) against breast cancer cells

A. Hermawan, R.A. Susidarti, R. D. Ramadani, L. Qodria, R.Y. Utomo, M. Ishimura, Y. Hattori, Y. Ohta, M. Kirihata and E. Meiyanto

Investigational New Drugs 2019 1-8.

Local void fraction and heat transfer characteristics around tubes in two-phase flows across horizontal in-line and staggered tube bundles

H. Murakawa, M. Baba, T. Miyazaki, K. Sugimoto, H. Asano and D. Ito

Nuclear Engineering and Design **334** (2018) 66-74.

A new detector system for the measurement of high-energy prompt γ -rays for low-energy neutron induced fission

H. Makii, K. Nishio, K. Hirose, R. Orlandi, R. Léguillon, T. Ogawa, T. Soldner, F.-J. Hamsch, M. Aïche, A. Astier, S. Czajkowski, R. Frost, S. Guo, U. Köster, L. Mathieu, T. Ohtsuki, C.M. Petrache, A. Pollitt, S. Sekimoto, K. Takamiya and I. Tsekhanovich

Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment **906** (2018) 88-96.

Generation of $^4\text{He}^*_2$ Clusters via Neutron- ^3He Absorption Reaction Toward Visualization of Full Velocity Field in Quantum Turbulence

T. Matsushita, V. Sonnenschein, W. Guo, H. Hayashida, K. Hiroi, K. Hirota, T. Iguchi, D. Ito, M. Kitaguchi, Y. Kiyonagi, S. Kokuryu, W. Kubo, Y. Saito, H.M. Shimizu, T. Shinohara, S. Suzuki, H. Tomita, Y. Tsuji and N. Wada

Journal of Low Temperature Physics none 2018 1-8.

Proceedings

Identification and Quantification of Nuclear Nuclides Using a Pulsed Neutron Imaging Technique

D. Ito, Y. Takahashi, T. Sano, J. Hori and K. Nakajima

JPS Conference Proceedings Vol. 24, Proceedings of the Second International Symposium on Radiation Detectors and Their Uses (ISR2018) Tsukuba, Japan (Jan.23-26, 2018).

4π Compton Gamma Imaging toward Determination of Radioactivity

K. Uema, H. Tomita, K. Kanamori, T. Takahashi, T. Iguchi, J. Hori, T. Matsumoto, T. Shimoyama and J. Kawarabayashi

JPS Conference Proceedings Vol. 24, Proceedings of the Second International Symposium on Radiation Detectors and Their Uses (ISR2018) Tsukuba, Japan (Jan.23-26, 2018).

高速度中性子イメージングにおける時間分解能の向上 /

Improvement of temporal resolution in high speed neutron imaging

D. Ito, K. Ito and Y. Saito

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb5-6, 2019) 40. (in Japanese)

鉛ビスマス-窒素二相流の分布特性に関する研究 /

Distribution characteristics in LBE/nitrogen gas two-phase flow

G. Ariyoshi, D. Ito, K. Ito and Y. Saito

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb5-6, 2019) 41. (in Japanese)

多点センサを用いた静電容量式液膜厚さ計測手法の高度化 /

Development of electrical capacitance method for liquid film thickness measurement by use of multipoint liquid film sensor

T. Matsushita, D. Ito, K. Ito and Y. Saito

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb5-6, 2019) 42. (in Japanese)

多孔質内における気液二相流圧力損失に及ぼす偏流の影響 /

Effect of drift on a gas-liquid two-phase pressure drop in porous media

T. Kurisaki, D. Ito, K. Ito and Y. Saito

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb5-6, 2019) 43. (in Japanese)

中性子イメージングの高度化 /

Development on Neutron Imaging Application

Y. Saito, D. Ito, H. Asano, H. Murakawa, K. Sugimoto, T. Tsukada, E. Shoji, M. Kubo, H. Umekawa, R. Matsumoto, T. Ami, Y. Yamagata, S. Morita, U. Matsushima, T. Numao, T. Harada, T. Sakai, M. Matsubayashi, M. Kanematsu, K. Mizuta, M. Tamaki, Y. Tsuji and S. Takami

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb5-6, 2019) 55-59. (in Japanese)

高エネルギー粒子照射研究における評価手法の高度化 /

Advancement of Characterization Techniques in High-Energy-Particle Irradiation Studies

A. Kinomura, K. Inoue, K. Sato, T. Nishimura, M. Akiyoshi, T. Onitsuka, K. Kanda and S. Nakao

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb5-6, 2019) 60-63. (in Japanese)

Estimation of Frost Formation on the Plate Fin-tube Heat Exchanger by Using 3D Neutron Computed Tomography

Y. Nagasawa, R. Matsumoto, T. Uechi, D. Ito and Y. Saito

ACRA 2018 - 9th Asian Conference on Refrigeration and Air-Conditioning Sapporo, Japan (Jun.10-13, 2018) 6-13, ACRA2018-B224.

Frost density profile measured by using X-ray radiography

Y. Nagasawa, R. Matsumoto, T. Uechi, D. Ito and Y. Saito

Proceedings of the 16th International Heat Transfer Conference, IHTC-16 Beijing, China (Aug.10-18, 2018) 6369-6374.

Imaging of Actinide Nuclides using Neutron Resonance Absorption

T. Sano, D. Ito, J. Hori, Y. Takahashi, J. Lee, N. Abe and K. Nakajima

2018 IEEE NSS-MIC Sydney, Australia (Oct.10-17, 2018).

Development of Medium-Chain Alkyl Sulfoniododecaborate Containing L-Amino Acids for Boron Neutron Capture Therapy

Y. Hattori, A. Nagasawa, M. Ishimura, J.K. H. Chen, Y. Ohta, H. Takenaka, K. Matsumoto, K. Uehara, T. Asano and M. Kirihata

Peptide Science 2018(10th International Peptide Symposium) Kyoto, Japan (Dec.3-7, 2018).

Other

X線ラジオグラフィを用いた除霜時の融解水挙動の評価 /

Evaluation of Melted Water Behavior During Defrosting by Using X-ray Radiography

塩川貴大, 松本亮介, 長澤佳輝, 西浦雄人, 齊藤泰司, 伊藤大介 /

T. Shiokawa, R. Matsumoto, Y. Nagasawa, Y. Nishimura, Y. Saito and D. Ito

2018年度日本冷凍空調学会年次大会講演論文集(2018.9.4-7, 郡山)

JSRAE annual conference 2018 (2018) B333-1-B333-6. (in Japanese)

9. TRU and Nuclear Chemistry

Papers

Wet chemical processing for nuclear waste glass to retrieve radionuclides

K. Takao, T. Mori, M. Kubo, A. Uehara and Y. Ikeda

Journal of Hazardous Materials **362** (2019) 368-374.

Enhancement of superconductivity by pressure-induced critical ferromagnetic fluctuations in UCoGe
M. Manago, S. Kitagawa, K. Ishida, K. Deguchi, N.K.Sato and T. Yamamura
Physical Review B **99** (2019) 020506.

Adsorption study of U and Th by N,O-hybrid donor ligand-immobilized hydrogels
M. Nakase, T. Yamamura, K. Shirasaki, M. Nagai and K. Takeshita
Separation Science and Technology (2019) 1-8.

Study on the leaching behavior of actinides from nuclear fuel debris
A. Kirishima, M. Hirano, D. Akiyama, T. Sasaki and N. Sato
Journal of Nuclear Materials **502** (2018) 169-176.

Solubilities and solubility products of thorium hydroxide under moderate temperature conditions
S. Nishikawa, T. Kobayashi, T. Sasaki and I. Takagi
Radiochimica Acta **106(8)** (2018) 655-667.

Actinide molecular ion formation in collision/reaction cell of triple quadrupole ICP-MS/MS and its application to quantitative actinide analysis
T. Suzuki, T. Yamamura, C. Abe, K. Konashi and Y. Shikamori
Journal of Radioanalytical and Nuclear Chemistry **318(1)** (2018) 221-225.

Measurements of gamma-ray emission probabilities in the decay of americium-244g
S. Nakamura, K. Terada, A. Kimura, T. Nakao, O. Iwamoto, H. Harada, A. Uehara, K. Takamiya and T. Fujii
Journal of Nuclear Science and Technology **56(1)** (2018) 123-129.

Development of new methods for aqueous chemistry on element 104, rutherfordium: Batchtype solid-liquid extraction and coprecipitation
Y. Kasamatsu
Journal of Nuclear and Radiochemical Sciences **18** (2018) 24-31.

Cation-cation interaction between $\text{Np}^{\text{V}}\text{O}^{2+}$ and Li^+ in a concentrated LiCl solution
T. Fujii, Y. Shibahara, C. Kato and A. Uehara.
Progress in Nuclear Science and Technology **5** (2018) 41-43.

Proceedings

アクチノイド物性化学分野における課題と研究計画 /
Subjects and research programs in the division of Condensed-matter Chemistry in Actinides
T. Yamamura
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb5-6, 2019) 2. (in Japanese)

ウランの金属酸化物への収着反応に関する分光学的評価 /
Spectroscopic evaluation on sorption reaction of uranium to metal oxide
D. Harumoto, T. Kobayashi and T. Sasaki
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb5-6, 2019) 31. (in Japanese)

化学交換法による同位体分別研究 /
Study of Isotope Separation via Chemical Exchange Reaction
R. Hazama, T. Yoshimoto, Y. Sakuma, T. Fujii, S. Fukutani and Y. Shibahara
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb5-6, 2019) 39. (in Japanese)

Investigation of Direct Observation System for Crossover in Vanadium Redox-Folw Battery by Using Radioactive V-48
K. Shirasaki and T. Yamamura
ECS Meeting (ElectroChemical Society) Yonezawa, Japan (Aug.27-29, 2018).

Review

$^{229\text{m}}\text{Th}$ と $^{235\text{m}}\text{U}$ の核壊変の化学状態依存性/
Chemical effect on the nuclear decays of $^{229\text{m}}\text{Th}$ and $^{235\text{m}}\text{U}$
笠松良崇, 菊永英寿
DIOISOTOPES **67(10)** (2018) 471-482. (in Japanese)

10. Health Physics and Waste Management

Papers

Using Experimental Transfer Factors to Estimate the Ratio between the Committed Effective Dose from Ingestion of Radio-tellurium to that of Radio-cesium Released by the Fukushima Daiichi Nuclear Power Plant Accident
T. Takahashi, K. Fujiwara, T. Kinouchi, S. Fukutani and S. Takahashi
Japanese Journal of Health Physics **53(1)** (2018) 12-16.

Estimation of the radiation dose of ^{107}Pd in palladium products and preliminary proposal of appropriate clearance level
S. Takahashi, M. Ikeda, K. Iwata, S. Tanaka, R. Akayama and T. Takahashi
Journal of Nuclear Science and Technology **55(12)** (2018) 1490-1495.

Tritium separation from parts-per-trillion-level water by a membrane with protonated manganese dioxide
H. Koyanaka and S. Fukutani
Journal of Radioanalytical and Nuclear Chemistry **318** (2018) 175-182.

Estimation of the Release Time of Radio-Tellurium During the Fukushima Daiichi Nuclear Power Plant Accident and Its Relationship to Individual Plant Events
S. Takahashi, S. Kawashima, A. Hidaka, S. Tanaka and T. Takahashi
Nuclear Technology **5** (2018) 646-654.

Proceedings

燃料デブリのガラス固化に関する実験的研究 /
Vitrification of simulated MCCI debris and dissolution behavior of nuclides
Y. Kodama, T. Sasaki, N. Sato, A. Kirishima, D. Akiyama, S. Sekimoto, R. Okumura and T. Kobayashi
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 17. (in Japanese)

原子炉中性子によって生じる DNA 損傷の分析 /
DNA damage with the neutrons from reactor
H. Terato, Y. Tokuyama, K. Mori, N. Osada, H. Tanaka and T. Saito
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 23. (in Japanese)

溶液中のトリチウムに対する水酸化物のプロトン交換反応 /
Exchange reaction of proton in hydroxide with tritium in aqueous solution
H. Hashizume, A. Uehara, S. Fukutani, K. Fujii and T. Ando
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 30. (in Japanese)

耐放射線小型軽量撮像素子の開発－構成要素のガンマ線照射下における挙動 /
Development of radiation tolerant compact image sensor – characteristics of components under gamma-ray irradiation.
Y. Gotoh, T. Morito, Y. Handa, M. Nagao, T. Okamoto, T. Igari, T. Fukui, T. Masuzawa, Y. Neo, H. Mimura, N. Sato, M. Akiyoshi and I. Takagi
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 29. (in Japanese)

11. Accelerator Physics

Proceedings

FFAG 加速器これまでの歩みと今後の展開 /
Research and Development and Future Plans of FFAG accelerators at KURNS
Y. Ishi
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 3-5. (in Japanese)

1.5 MW 大強度高繰り返しシンクロトロンにおけるビーム挙動の解析 /
Analysis of Beam Dynamics in a 1.5 MW High-Intensity Rapid Cycle Synchrotron
Y. Fuwa, Y. Ishi, T. Uesugi and Y. Kuriyama
Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 25. (in Japanese)

Design of Multi-MW Rapid Cycling Synchrotron for Accelerator Driven Transmutation System
Y. Fuwa, N. Amemiya, Y. Ishi, Y. Kuriyama and T. Uesugi
Proceedings of 9th International Particle Accelerator Conference Vancouver, Canada (Apr.29-May5, 2018)
1057-1059.

Improvement of RF Capture with Multi-Turn H- Injection in KURRI FFAG Synchrotron
T. Uesugi, Y. Fuwa, Y. Ishi, Y. Kuriyama, Y. Mori and H. Okita
Proceedings of 9th International Particle Accelerator Conference Vancouver, Canada (Apr.29-May5, 2018)
1066-1066.

Practical betatron tune behavior during acceleration in scaling FFAG rings at KURNS
Y. Ishi, Y. Fuwa, Y. Kuriyama, H. Okita, T. Uesugi, Y. Mori and J-B. Lagrange
Proceedings of 9th International Particle Accelerator Conference Vancouver, Canada (Apr.29-May5, 2018)
3287-3289.

Control System Upgrade for the FFAG Accelerator Complex at KURNS
Y. Kuriyama, Y. Fuwa, Y. Ishi, Y. Mori, H. Okita and T. Uesugi
Proceedings of 12th PCaPAC, International Workshop on Emerging Technologies and Scientific Facilities Control
Hsinchu, Taiwan (Oct.16-19, 2018).

Review

タングステン繊維状ナノ構造を用いたミュオニウム生成
藪内 敦, 大野哲靖, 三宅康博, 池戸 豊, 下村浩一郎, 西山樟生, 小嶋健児, 河村成肇, STRASSER Patrick,
藤森 寛, 牧村俊助, 中村惇平, 齊藤直人, 三部 勉, 大谷将士, 神田聡太郎, 西村昇一郎, 北村 遼, 長嶋泰之,
鈴木卓爾, 長友 傑
プラズマ・核融合学会誌 **94** (2018) 315-319. (in Japanese)

12. Others

Papers

Measurement of bunch length evolution in electron beam macropulse of S-band linac using coherent edge radiation
N. Sei, H. Zen and H. Ohgaki
Physics Letters A **383(5)** (2019) 389-395.

2018年6月18日の大阪府北部の地震(MJMA6.1)で得られた箕面市とその周辺での強震動アレイ記録の特徴
/Feature of the Strong-Motion Array Observation Records obtained at Minoh City and its neighboring Area during
the Earthquake in Osaka-Fu Hokubu on 18 June 2018
上林宏敏 / H. Uebayashi
Journal of Japan Association for Earthquake Engineering **19(1)** (2019) 1_68-1_81. (in Japanese)

Development of Continuous Line Scanning System Prototype for Proton Beam Therapy
R. Kohno, K. Hotta, T. Dohmae, Y. Matsuzaki, T. Nishio, T. Akimoto, T. Tachikawa, T. Asaba, J. Inoue, T. Ochi,
M. Yamada and H. Miyanaga
International Journal of Particle Therapy **3(4)** (2018) 429-438.

Aggregate of oligonucleotides bearing azobenzene unit as radiation-activated drug carrier.
T. Itagaki, R. Kurihara and K. Tanabe
Photomedicine and Photobiology **39** (2018) 27-28.

非線形性を考慮した不均質地盤の地震動空間変動特性と基礎地盤安定性/
Spatially Variation of Seismic Ground Motions and Foundation Ground Stability of Inhomogeneous Layered Ground
Considering Nonlinearity
O. Uchida, K. Arai, H. Uebayashi and K. Kamae
Journal of Japan Association for Earthquake Engineering **18(2)** (2018) 2_166-2_183. (in Japanese)

Simple Evaluation Index for Structural Damage of High-Rise Reinforced Concrete Buildings due to Long-Period Strong Ground Motion

H. Uebayashi, M. Nagano, K. Kamae and H. Kawabe

Journal of Japan Association for Earthquake Engineering **18(3)** (2018) 3_75-3_90.

Real-Time Lossless Compression of Waveforms Using an FPGA

N.M. Truong, M. Aoki, Y. Igarashi, M. Saito, S. Ito, D. Nagao, Y. Nakatsugawa, H. Natori, Y. Seiya, N. Teshima and K. Yamamoto

IEEE Transactions on Nuclear Science **65(9)** (2018) 2650-2656.

Multi-Channel Fiber-Optic Temperature Sensor System using An Optical Time-Domain Reflectometer

H. J. Kim, H. Byun, Y. B. Song, S. H. Shin, S. Cho, C. H. Pyeon and B. Lee

Results in Physics **11** (2018) 743-748.

和歌山平野の3次元地下構造モデル構築と中央構造線断層帯による強震動予測/

Three-dimensional Subsurface Structure Model beneath the Wakayama Plain and Strong Ground Motion Prediction for the Median Tectonic Line

H. Uebayashi, M. Ohori, H. Kawabe, K. Kamae, K. Yamada, K. Miyakoshi, T. Iwata, H. Sekiguchi and K. Asano

Journal of Japan Association for Earthquake Engineering **18(5)** (2018) 5_33-5_56. (in Japanese)

^{99m}Tc production via the (γ , n) reaction on natural Mo

T. Takeda, M. Fujiwara, M. Kurosawa, N. Takahashi, M. Tamura, T. Kawabata, Y. Fujikawa, K.N. Suzuki, N. Abe, T. Kubota and T. Takahashi

Journal of Radioanalytical and Nuclear Chemistry **318(2)** (2018) 811-821.

Efficient laser acceleration of deuteron ions through optimization of pre-plasma formation for neutron source development

A. Sunahara, T. Asahina, H. Nagatomo, R. Hanayama, K. Mima, H. Tanaka, Y. Kato and S. Nakai

Plasma Physics and Controlled Fusion **61(2)** (2018) 025002.

An institutional analysis of the Japanese energy transition

J.B. Kucharski and H. Unesaki

Environmental Innovation and Societal Transitions **29** (2018) 126-143.

マルチキャピラリーX線レンズを用いた顕微メスbauer分光/

Mössbauer microspectrometer with a multicapillary X-ray lens

篠田 圭司, 小林 康浩/ K. Shinoda and Y. Kobayashi

岩石鉱物科学/Japanese Magazine of Mineralogical and Petrological Sciences **47(4)** (2018) 163-167. (in Japanese)

Proceedings

B-3 小型多目的中性子回折計の進捗状況 2018 /

The current state for the compact versatile neutron diffractometer on the B-3 beam port, 2018

K. Mori, R. Okumura, H. Yoshino, M. Kanayama, S. Sato, H. Hiraka, K. Iwase, A. Okumura and F. Kobayashi

Proceedings of the 53rd KURNS Scientific Meeting Kumatori, Japan (Feb.5-6, 2019) 18. (in Japanese)

Coherent Edge Radiation Sources in Linac-Based Infrared Free-Electron Laser Facilities

N. Sei, K. Hayakawa, Y. Hayakawa, K. Nogami, H. Ogawa, H. Ohgaki, T. Sakai, Y. Sumitomo, T. Tanaka and H. Zen

Proceedings of Linear Accelerator Conference-LINAC Beijing, China (Sept.16-21, 2018) 154-156.

Books

原子力年鑑 2019

「Part V: 原子力教育・人材育成」の「1. 原子力教育」の「2. 特色ある教育の例」の「(4) 京都大学」

中島 健

「原子力年鑑」編集委員会

日刊工業新聞社(2018). (in Japanese)

新版 X 線反射率法入門

9 章 1~4

日野正裕, 宮田 登

桜井健次 編

講談社 (2018). (in Japanese)

トラウマ研究 1

トラウマを生きる 第 10 章 トランスジェンダーとトラウマ

高垣雅緒

田中 雅一, 松嶋 健 編

京都大学学術出版会 (2018). (in Japanese)

Review

国内外の原子力教育事情(2)京都大学原子核工学専攻・原子核工学コース

高木郁二, 中島健

日本原子力学会誌(アトモス) **61** (2019) 143- 145. (in Japanese)

Other

^{88}Zr from soil with artificial digestive juices

T. Kubota, K. Iwata, S. Fukutani, T. Takahashi, S. Yanou, S. Shibata, H. Haba and S. Takahashi

Desorption of RIKEN Accel. Prog. Rep. **51** (2018) 10-12.