

II. PUBLICATION LIST

(APRIL 2016 – MARCH 2017)

1. Slow Neutron Physics and Neutron Scattering

Papers

Development of a large plano-elliptical neutron-focusing supermirror with metallic substrates
Takeda Shin, Yamagata Yutaka, Yamada Norifumi L., Hino Masahiro, Hosobata Takuya, Guo Jiang, Morita Shinya, Oda Tatsuro, Furusaka Michihiro
Opt. Express **12** (2016) 12478-12488.

Effect of Mg substitution on crystal structure and hydrogenation of Ce₂Ni₇-type Pr₂Ni₇
K. Iwase, K. Mori, N. Terashita, S. Tashiro, T. Suzuki
J. Solid State Chem. **247** (2017) 142-146.

Energy-resolved small-angle neutron scattering from steel
Oba Yojiro, Morooka Satoshi, Ohishi Kazuki, Suzuki Jun-ichi, Takata Shin-ichi, Sato Nobuhiro, Inoue Rintaro, Tsuchiyama Toshihiro, Gilbert Elliot Paul, Sugiyama Masaaki
Journal of Applied Crystallography **50**(2) (2016) 334-339.

Magnetic scattering in the simultaneous measurement of small-angle neutron scattering and Bragg edge transmission from steel
Oba Yojiro, Morooka Satoshi, Ohishi Kazuki, Sato Nobuhiro, Inoue Rintaro, Adachi Nozomu, Suzuki Jun-ichi, Tsuchiyama Toshihiro, Gilbert Elliot Paul, Sugiyama Masaaki
Journal of Applied Crystallography **49**(5) (2016) 1659-1664.

Neutron detection in the frame of spatial magnetic spin resonance
Jericha Erwin, Bosina Joachim, Geltenbort Peter, Hino Masahiro, Mach Wilfried, Oda Tatsuro, Badurek Gerald
Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment **845** (2017) 552-555.

Pulsed neutron time-dependent intensity modulation for quasi-elastic neutron scattering spectroscopy
Oda T. Hino M., Kitaguchi M., Geltenbort P., Kawabata Y.
Review of Scientific Instruments **87**(10) (2016) 105124.

Real-time observations of lithium battery reactions – operando neutron diffraction analysis during practical operation
S. Taminato, M. Yonemura, S. Shiotani, T. Kamiyama, S. Torii, M. Nagao, Y. Ishikawa, K. Mori, T. Fukunaga, Y. Onodera, T. Naka, M. Morishima, Y. Ukyo, D. S. Adipranoto, H. Arai, Y. Uchimoto, Z. Ogumi, K. Suzuki, M. Hirayama, R. Kanno
Scientific Reports **6** (2016) 28843.

Structural origin of massive improvement in Li-ion conductivity on transition from (Li₂S)₅(GeS₂)(P₂S₅) glass to Li₁₀GeP₂S₁₂ crystal
Kazuhiro Mori, Takuya Kasai, Kenji Iwase, Fumika Fujisaki, Yohei Onodera, Toshiharu Fukunaga
Solid State Ionics **301** (2017) 163-169.

Synthesis of PuNi₃-type PrCo₃ and its hydrogen absorption-desorption property
K. Iwase, K. Mori, S. Shimizu, S. Tashiro, T. Suzuki
Int. J. Hydrogen Energy **41** (2016) 14788-14794.

Proceedings

An effective deuterium exchange method for a neutron structure analysis by use of unfolding-refolding processes.
A. Kita and Y. Morimoto
Int. Symp. Diffraction Structural Biology, Knoxville (Aug. 7-10, 2016)

B-3 小型多目的中性子回折計建設の進捗状況
小野寺陽平, 森 一広, 吉野泰史, 佐藤節夫, 平賀晴弘, 岩瀬謙二, 塩野貴大, 松田浩平
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 27. (in Japanese)

J-PARC MLF BL06 における TOF-MIEZE 型スピンエコー分光法についての研究
小田達郎, 日野正裕, 川端祐司, 遠藤 仁, 山田悟史, 瀬戸秀紀
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 40. (in Japanese)

J-PARC/MLF BL06 中性子共鳴スピンエコー分光器群(VIN ROSE)と中性子集光ミラー開発の現状 2
日野正裕, 小田達郎, 吉永尚生, 金山雅哉, 川端祐司, 遠藤 仁, 山田悟史, 細島拓也, 武田 晋, 郭 江, 山形 豊,
森田晋也, 古坂道弘, 瀬戸秀紀
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)23. (in Japanese)

KUR B1 孔を利用した低速陽電子ビームライン輝度増強部の開発
葛谷佳広, 大島永康, 木野村淳, 藪内 敦, 佐藤紘一, 徐 虬
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)47. (in Japanese)

NC 制御加工装置による回転楕円体中性子ミラーの製作 II
吉永尚生, 日野 正裕, 金山雅哉, 細島拓也, 山形 豊, 郭 江, 森田晋也, 武田 晋, 古坂道弘, 川端 祐司
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)43. (in Japanese)

中性子散乱を利用したリチウムイオン電池研究の最前線
森 一広
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)54-56. (in Japanese)

Reviews

J-PARC で見たもの -大強度パルス中性子源の威力-
瀬戸秀紀, 高木成幸, 海野昌喜, 森 一広
化学 **71** (2016) 70-71. (in Japanese)

入門講座中性子実験装置「J-PARC 編」(16)スピンエコー分光器: J-PARC 中性子スピンエコー分光器群
(BL06 VIN ROSE)
遠藤 仁, 日野正裕, 小田達郎
日本中性子科学会誌 **26** (2016) 104-108. (in Japanese)

2. Nuclear Physics and Nuclear Data

Papers

Accuracy of Reactor Physics Parameters in Thorium-Loaded Accelerator-Driven System Experiments at Kyoto University Critical Assembly
M. Yamanaka, C. H. Pyeon, T. Yagi and T. Misawa
Nucl. Sci. Eng **183** (2016) 96-106.

Development of three-dimensional reactor analysis code system for accelerator-driven system, ADS3D and its application with subcriticality adjustment mechanism
Sugawara Takanori, Nishihara Kenji, Iwamoto Hiroki, Oizumi Akito, Tsujimoto Kazufumi
Journal of Nuclear Science and Technology **53(12)** (2016) 2018-2027.

Fission fragments mass distributions of nuclei populated by the multinucleon transfer channels of the $^{18}\text{O}+^{232}\text{Th}$ reaction Léguillon
R., Nishio K., Hirose K., Makii H., Nishinaka I., Orlandi R., Tsukada K., Smallcombe J., Chiba S., Aritomo Y., Ohtsuki T., Tatsuzawa R., Takaki N., Tamura N., Goto S., Tsekhanovich I., Petrache C.M., Andreyev A.N.
Physics Letters B **761** (2016) 125-130.

Liquid film dynamics of two-phase annular flow in square and tight lattice subchannels
Daisuke Ito, Petros Papadopoulos and Horst-Michael Prasser
Nuclear Engineering and Design **300** (2016) 467-474.

Measurements of gamma-ray emission probabilities of ^{241}Am and ^{239}Np
Terada Kazushi, Nakamura Shoji, Nakao Taro, Kimura Atsushi, Iwamoto Osamu, Harada Hideo, Takamiya Koichi, Hori Jun-ichi
Journal of Nuclear Science and Technology **13(11)** (2016) 1881-1888.

Medical applications of Cu, Zn, and S isotope effects
Albarede Francis, Télouk Philippe, Balter Vincent, Bondanese Victor P., Albalat Emmanuelle, Oger Philippe, Bonaventura Paola, Miossec Pierre, Fujii Toshiyuki
Metallomics **10** (2016) 1056-1070.

Monte Carlo Analysis of the Accelerator-Driven System at Kyoto University Research Reactor Institute
W. K. Kim, H. C. Lee, C. H. Pyeon, H. C. Shin and D. J. Lee,
Nucl. Eng. Technol. **48** (2016) 304-317.

Proceedings

燃焼度確認時に利用可能な $^{106}\text{Ru}/^{144}\text{Ce}$ 放射能比の測定と燃焼解析
佐藤駿介, 名内泰志, 早川岳人, 木村康彦, 須山賢也
京都大学原子炉実験所第5回炉物理専門研究会 (RPW 2016) (11月30日-12月1日 2016) 54. (in Japanese)

ADS サイクルを用いた MA 低減と Pu-238 生成に関する研究
小川 健斗, 千葉 豪
京都大学原子炉実験所第5回炉物理専門研究会 (RPW 2016) (11月30日-12月1日 2016) 55. (in Japanese)

Investigation for sub-criticality adjustment mechanism of LBE cooled Accelerator-Driven System
A. Oizumi, T. Sugawara, H. Iwamoto, K. Nishihara, K. Tsujimoto
Proc. Third International Workshop on Technology and Components of Accelerator-Driven Systems (TCADS-3)
Mito, Japan (Sep. 6-9, 2016)

Investigation of Nuclear Data of Minor Actinides in Variable Neutron Field for Accurate Determination of Thermal Neutron Capture Cross Section at KURRI
Y. Takahashi, J. Hori, T. Sano, T. Yagi, H. Yashima, C. H. Pyeon, S. Nakamura and H. Harada
Proc. Int. Conf. on the Physics of Reactors (PHYSOR2016) Sun Valley, Idaho, US (May 1-5, 2016) 1-5.

KUCA 固体減速架台における反応度評価の不確かさに関する研究
伊藤誠人, 卞 哲浩, 三澤 毅
京都大学原子炉実験所第5回炉物理専門研究会 (RPW 2016) (11月30日-12月1日 2016) 12. (in Japanese)

三次元多群燃料棒単位詳細炉心計算を再現する高速炉心計算の実現に向けた検討
辻田浩介, 田淵将人, 巽 雅洋
京都大学原子炉実験所第5回炉物理専門研究会 (RPW 2016) (11月30日-12月1日 2016) 25. (in Japanese)

中性子輸送計算に基づく検出確率を用いた未知放射線源の放射能強度推定
菅谷信二, 遠藤知弘, 山本章夫
京都大学原子炉実験所第5回炉物理専門研究会 (RPW 2016) (11月30日-12月1日 2016) 73. (in Japanese)

特異値分解とモード展開法を用いた Ringhals1 号機の炉雑音解析
正部川英亨, 千葉 豪
京都大学原子炉実験所第5回炉物理専門研究会 (RPW 2016) (11月30日-12月1日 2016) 38. (in Japanese)

軽水炉を用いた放射性毒性低減サイクルの検討
和田怜志, 木村 礼, 松宮浩志, 櫻井俊吾, 吉岡研一, 平岩宏司
京都大学原子炉実験所第5回炉物理専門研究会 (RPW 2016) (11月30日-12月1日 2016) 72. (in Japanese)

燃料メーカーにおける核データ不確かさ評価研究の位置付け
山本賢治郎, 池原 正, 金 浩久, 山名哲平
京都大学原子炉実験所第5回炉物理専門研究会 (RPW 2016) (11月30日-12月1日 2016) 23. (in Japanese)

Reviews

ガンマ線スペクトル解析におけるピーク探索と面積計算実態と今後のスペクトル解析のあるべき姿
青山道夫, 秋山正和, 浅井雅人, 阿部敬朗, 佐藤 泰, 高野直人, 高宮幸一, 濱島靖典, 武藤儀一, 山田隆志, 石津秀剛
RADIOISOTOPES **65** (2016) 267-285. (in Japanese)

3. Reactor Physics and Reactor Engineering

Papers

A Batch Size Decision Strategy by Checking Stability of Fission Source Distribution for Monte Carlo Eigenvalue Calculations
S. H. Kim, M. Yamanaka, M. H. Woo, J. Y. Lee, C. H. Shin and C. H. Pyeon
J. Nucl. Sci. Technol. **54** (2017) 301-311.

Analysis of KUCA Measurements by the Reactivity Monitoring MAPTA Method
S. Dulla, S. S. Hoh, G. Marana, M. Nervo, P. Ravetto and C. H. Pyeon
Ann. Nucl. Energy **101** (2017) 397-407.

Bubbly, Slug, and Annular Two-Phase Flow in Tight-Lattice Subchannels
Prasser Horst-Michael, Bolesch Christian, Cramer Kerstin, Ito Daisuke, Papadopoulos Petros, Saxena Abhishek, Zboray Robert
Nuclear Engineering and Technology **48(4)** (2016) 847-858.

Development of interfacial area concentration correlations for small and large bubbles in gas-liquid two-phase flows
Shen Xiuzhong and Deng Baoqing
International Journal of Multiphase Flow **87** (2016) 136-155.

Effective Delayed Neutron Fraction in Accelerator-Driven System Experiments with 100 MeV Protons at Kyoto University Critical Assembly
M. Yamanaka, C. H. Pyeon, S. H. Kim, Y. Kitamura, H. Shiga and T. Misawa
J. Nucl. Sci. Technol. **54** (2017) 293-300.

Monte Carlo Approach of Effective Delayed Neutron Fraction by k-ratio Method with External Neutron Source
M. Yamanaka, C. H. Pyeon and T. Misawa
Nucl. Sci. Eng. **184** (2016) 551-560.

New findings on neutron noise propagation properties in void containing water using neutron noise transport calculations
T. Yamamoto, H. Sakamoto
Progress in Nuclear Energy **90** (2016) 58-68.

Nuclear Date-Induced Uncertainty Qualification of Neutronics Parameters of Accelerator-Driven System
G. Chiba, C. H. Pyeon, W. van Rooijen and T. Endo
J. Nucl. Sci. Technol. **53** (2016) 1653-1661.

On-line Subcriticality Measurement using A Pulsed Spallation Neutron Source
H. Iwamoto, K. Nishihara, T. Yagi and C. H. Pyeon
J. Nucl. Sci. Technol. **54** (2017) 432-443.

Prediction of interfacial area transport in a coupled two-fluid model computation
Schlegel Joshua P., Hibiki Takashi, Shen Xiuzhong, Appathurai Santosh, Subramani Hariprasad
Journal of Nuclear Science and Technology **54** (2017) 58-73.

Proposal for selective isotope transmutation of long-lived fission products using quasi-monochromatic γ -ray beams
Hayakawa Takehito, Miyamoto Shuji, Hajima Ryoichi, Shizuma Toshiyuki, Amano Sho, Hashimoto Satoshi, Misawa Tsuyoshi
Journal of Nuclear Science and Technology **53(12)** (2016) 2064-2071.

Sensitivity and Uncertainty Analyses of Lead Sample Reactivity Experiments at Kyoto University Critical Assembly
C. H. Pyeon, A. Fujimoto, T. Sugawara, H. Iwamoto, K. Nishihara, Y. Takahashi, K. Nakajima and K. Tsujimoto
Nuclear Science and Engineering **185** (2017) 460-472.

Uncertainty analysis of minor actinides transmutation in fast reactor cores
Takeda Toshikazu, Fujimura Koji, Sano Tadafumi, Fouad Basma
Annals of Nuclear Energy **101** (2017) 591-599.

気泡微細化沸騰における流れ場の PIV 計測
伊藤大介, 刀塚 淳, 齊藤泰司
日本機械学会論文集 B 編 (in Japanese) **83** (2017) 1-7. (in Japanese)

Proceedings

A Preliminary Study on Applicability of Artificial Neural Network for Optimized Reflector Designs
S. H. Kim, T. M. Vu and C. H. Pyeon
Proc. 5th Int. Sympo. Innov. Nucl. Energy Systems (INES-5) Tokyo, Japan (Oct. 31- Nov.2, 2016) 1-6.

Analysis and Interpretation of the KUCA ADS Benchmarks with Deterministic Analysis Codes

W. F. G. van Rooijen, C. H. Pyeon, G. Chiba and T. Endo

Proc. Int. Conf. on the Physics of Reactors (PHYSOR2016) Sun Valley, Idaho, US (May 1-5, 2016) 1-6.

Benchmark Tests of Newly-Evaluated Data of ^{235}U for CIELO Project using Integral Experiments of Uranium-Fueled FCA Assemblies

Masahiro Fukushima, Yasunori Kitamura, Kenji Yokoyama, Osamu Iwamoto, Yasunobu Nagaya and Luiz Leal

Proc. Int. Conf. on the Physics of Reactors (PHYSOR2016) Sun Valley, Idaho, US (May 1-5, 2016).

Burn-up sensitivity analysis of minor actinide transmutation fast reactor

T. Sano and T. Takeda

Proc. Int. Conf. on the Physics of Reactors (PHYSOR2016) Sun Valley, Idaho, US (May 1-5, 2016) 684-693.

Coupling Sjostrand and Feynman Methods in Prompt Neutron Decay Constant Analyses A. Talamo, Y. Gohar, F. Gabrielli, A. Rineiski and C. H. Pyeon

Proc. Int. Conf. on the Physics of Reactors (PHYSOR2016) Sun Valley, Idaho, US (May 1-5, 2016) 1-6.

Deterministic Analyses of the Phase-I Kinetic Experiments in the KUCA Subcritical A-core Configurations

F. Gabrielli, A. Rineiski, A. Talamo, Y. Gohar and C. H. Pyeon

Proc. Int. Conf. on the Physics of Reactors (PHYSOR2016) Sun Valley, Idaho, US (May 1-5, 2016) 1-6.

Development of Hybrid Imaging Method for Multiphase Flow using X-ray and Neutrons

Daisuke Ito and Yasushi Saito

Proceedings of 11th International Topical Meeting on Nuclear Reactor Thermal Hydraulics, Operation and Safety Gyeongju, Korea (Oct.9-13, 2016).

Estimation of interfacial area concentrations for two-group bubbles in gas-liquid two-phase flows

X. Shen and B. Deng

Proceeding of the 11th International Topical Meeting on Nuclear Reactor Thermal Hydraulics, Operation and Safety Gyeongju, Korea (Oct.9-13, 2016) N11P0136.

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

S. H. Kim, M. Yamanaka and C. H. Pyeon

Proc. Workshop on Status on Accelerator Driven Systems Research and Technology Development (EuCARD2) CERN, Switzerland (Feb. 7-9, 2017) 1-5.

Experimental Benchmarks on Subcriticality of Accelerator-Driven System with 100 MeV Protons at Kyoto University Critical Assembly

C. H. Pyeon, M. Yamanaka and Y. Takahashi

Proc. Int. Conf. on the Physics of Reactors (PHYSOR2016) Sun Valley, Idaho, US (May 1-5, 2016) 1-6.

On Prediction Accuracy of Neutronics Parameters of Accelerator-Driven Sub-Critical System

G. Chiba, W. F. G. van Rooijen, T. Endo and C. H. Pyeon

Proc. Int. Conf. on Nucl. Data for Sci. Technol., (ND2016) Bruges, Belgium (Sep. 11-16, 2016) 1-6.

Pulsed neutron imaging for non-destructive testing using simulated nuclear fuel samples

Daisuke Ito, Tadafumi Sano, Jun-ichi Hori, Yoshiyuki Takahashi, Hiroyuki Hasemi, Takashi Kamiyama, Ken Nakajima

Proceedings of 8th International Topical Meeting on Neutron Radiography Beijing (Sep. 4-8, 2016)

Technique for bubble velocity vector in gas-liquid two-phase flow by using 4-sensor probe

Saito Yasushi, Ariyoshi Gen and Ito Daisuke

Proceedings of International Conference on Multiphase Flow 2016 Firenze, Italy (May 22-27, 2016).

Turbulent characteristics in lead-bismuth flows flowing in poor and good wettability pipes

Gen Ariyoshi, Daisuke Ito, Yasushi Saito and Kaichiro Mishima

Proceedings of 24th International Conference on Nuclear Engineering Charlotte (Jun. 30, 2016).

Turbulent structures in lead-bismuth flows measured by using intrusive probe methods

Gen Ariyoshi, Daisuke Ito, Yasushi Saito and Kaichiro Mishima

Proceedings of International Conference on Multiphase Flow 2016 Firenze, Italy (May 22, 2016).

Two-phase flow structure in a simulated debris bed

Milka Nava Daisuke Ito and Yasushi Saito

Proceedings of the 51st KURRI Scientific Meeting Kumatori, Japan (Jan. 26-27, 2017) 18.

Uncertainty Quantification of Spatial Correction Factor for Sjöstrand Method due to Cross-section Data

T. Kimura, T. Endo and A. Yamamoto

ANS 2016 winter meeting Las Vegas, NV USA (Nov. 6-10, 2016) 1081-1084.

Variance Reduction Factor Calculations for Neutronics Parameters of Accelerator-Driven System

G. Chiba, W. F. G. van Rooijen, T. Endo and C. H. Pyeon

Proc. Int. Conf. on the Physics of Reactors (PHYSOR2016) Sun Valley, Idaho, US (May 1-5, 2016) 1-6.

Visualization of solidification process in lead-bismuth eutectic

Daisuke Ito, Yasushi Saito, Hirotaka Sato, Takenao Shinohara

Proceedings of 8th International Topical Meeting on Neutron Radiography Beijing, China (Sep. 4-8, 2016).

α 壊変反跳核 ^{229m}Th を捕集した試料からの真空紫外光測定

安田勇輝, 笠松良崇, 重河優大, 高宮幸一, 大槻 勤, 三頭聰明, 篠原 厚

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)41. (in Japanese)

トリウム燃料装荷による PWR 炉心特性への影響評価

小林千将, 竹田 敏, 北田孝典

京都大学原子炉実験所第 5 回炉物理専門研究会 (RPW 2016) (11 月 30 日-12 月 1 日 2016) 22. (in Japanese)

ナノ組織化した鉄鋼材料表面に形成する潤滑油膜観察に向けて

足立 望, 日野正裕, 大場洋次郎, 戸高義一

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)39. (in Japanese)

ロッドバンドル内気液二相流用界面積濃度輸送モデル

沈 秀中, 鄧 保慶

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)36. (in Japanese)

鉛ビスマス気液二相流に及ぼす壁面濡れ性の影響-プール体系におけるボイド率計測-

稲富良太, 有吉 玄, 伊藤大介, 齊藤泰司

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)16. (in Japanese)

鉛ビスマス凝固過程のパルス中性子イメージング

伊藤大介, 齊藤泰司, 佐藤博隆, 篠原武尚

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)15. (in Japanese)

小型分散電源用原子炉システムの開発 -月面・火星ミッションを想定した原子炉炉心の核熱設計-

木村 礼, 和田怜志, 吉田大志, 西岡佳朗, 兵藤義浩

京都大学原子炉実験所第 5 回炉物理専門研究会 (RPW 2016) (11 月 30 日-12 月 1 日 2016) 24. (in Japanese)

中性子照射模擬燃料デブリからの核種溶出挙動-試料調製

坂本峻一, 佐々木隆之, 小林大志, 秋山大輔, 桐島 陽, 佐藤修彰

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)22. (in Japanese)

長寿命超ウラン元素を燃焼可能な軽水炉 RBWR の開発

光安 岳

京都大学原子炉実験所第 5 回炉物理専門研究会 (RPW 2016) (11 月 30 日-12 月 1 日 2016) 53. (in Japanese)

Benchmarks of Subcriticality in Accelerator-Driven System at Kyoto University Critical Assembly

C. H. Pyeon, M. Yamanaka, S. H. Kim, T. M. Vu, T. Endo, W. F. G. van Rooijen and G. Chiba

Proc. Int. Conf. Mathematics & Computational Methods Applied to Nucl. Sci. & Eng. (M&C2017)
Jeju, Korea (Apr. 16-20, 2017) 1-5.

Implementation of Fuel Depletion Sensitivity Calculation Capability into a Deterministic Reactor Physics Code System CBZ for Accelerator-Driven Sub-System Multi-Cycle Burnup Calculations

G. Chiba, W. F. G. van Rooijen, T. Endo and C. H. Pyeon

Proc. Int. Conf. Mathematics & Computational Methods Applied to Nucl. Sci. & Eng. (M&C2017)
Jeju, Korea (Apr. 16-20, 2017) 1-8.

Nuclear Data-Induced Uncertainty Quantification of Neutron Multiplication Factor and Prompt Neutron Decay Constant for Pb-Bi loaded ADS Benchmark Problems at KUCA
T. Endo, G. Chiba, W. F. G. van Rooijen, M. Yamanaka and C. H. Pyeon
Proc. Int. Conf. Mathematics & Computational Methods Applied to Nucl. Sci. & Eng. (M&C2017)
Jeju, Korea (Apr. 16-20, 2017) 1-8.

鉛ビスマス気液二相流におよぼす壁面濡れ性の影響- 強制対流体系におけるボイド率計測-
有吉 玄, 稲富良太, 伊藤大介, 齊藤泰司, 三島嘉一郎
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 17. (in Japanese)

Books

Thorium-Loaded Accelerator-Driven System Experiments in Kyoto University Research Reactor Institute," Thorium Energy for the World
C. H. Pyeon
Springer 2016.

4. Material Science and Radiation Effects

Papers

Attachment Behavior of Fission Products to Solution Aerosol
Takamiya Koichi, Tanaka Toru, Nitta Shinnosuke, Itosu Satoshi, Sekimoto Shun, Oki Yuichi, Ohtsuki Tsutomu
Journal of Radiation Protection and Research **41(4)** (2016) 350-353.

Automated Analysis of XANES: A Feasibility Study of Au Reference Compounds
Chang S-Y, Molleta L B, Booth S G, Uehara A, Mosselmans J F W, Ignatyev K, Dryfe R A W, Schroeder S L M J. Phys.: Conf. Ser. **712** (2016) 12070.

Characteristics of Radiation-Resistant Real-Time Neutron Monitor for Accelerator-Based BNCT
Nakamura Takemi, Sakasai Kaoru, Nakashima Hiroshi, Takamiya Koichi, Kumada Hiroaki
Journal of Radiation Protection and Research **41(2)** (2016) 105-109.

Crystal-Site-Selective Spectrum of Fe₃O₄ Obtained by Mössbauer Diffraction
Nakamura Shin, Mitsui Takaya, Fujiwara Kosuke, Ikeda Naoshi, Kurokuzu Masayuki, Shimomura Susumu
Journal of the Physical Society of Japan **86(2)** (2017) 23706.

Damage Behavior of REE-Doped W-Based Material Exposed to High-Flux Transient Heat Loads
J. Shi, L.M. Luo, J.S. Lin, X. Zan, X.Y. Zhu, Q. Xu, Y.C. Wu
Fusion Eng. Des. **113** (2016) 92-101.

Detection of Deuterium Sites in Tungsten by Thermal Desorption Spectroscopy and Positron Annihilation Spectroscopy
K. Sato, R. Tamiya, Q. Xu, H. Tsuchida, T. Yoshiie
Nucl. Mater. Energ **9** (2016) 554-559.

Dose dependence of irradiation hardening of neutron irradiated vanadium alloys by using temperature control rig in JMTR
Fukumoto Ken-ichi, Onitsuka Takashi, Narui Minoru
Nuclear Materials and Energy **9** (2016) 441-446.

Effect of Dislocations on Helium Retention in Deformed Pure Iron
Y.H. Gong, X.Z. Cao, S.X. Jin, E.Y. Lu, Y.C. Hu, T. Zhu, P. Kuang, Q. Xu, B.Y. Wang
J. Nucl. Mater. **482** (2016) 93-98.

Effect of Second-Phase Particles on the Properties of W-Based Materials under High-Heat Loading
X.Y. Tan, P. Li, L.M. Luo, Q. Xu, K. Tokunaga, X. Zan, Y.C. Wu
Nucl. Mater. Energ **9** (2016) 399-404.

Effects of Cr and W on defects evolution in irradiated F82H model alloys
S.S. Huang, Q. Xu and T. Yoshiie
Materials Letters **178** (2016) 272-275.

Effects of He, D Interaction on Thermal Desorption of He and D₂ and Microstructural Evolution in Pure Fe
Q. Xu and J. Zhang
J. Nucl. Mater. **479** (2016) 255-259.

Effects of microcrystallites on swelling behavior in chemically crosslinked poly (vinyl alcohol) gels
Otsuka Emiko, Kudo Shuhei, Sugiyama Masaaki, Suzuki Atsushi
Journal of Polymer Science Part B: Polymer Physics **2** (2016) 96-102.

Effects of Thermal Aging of Fe Ion-Irradiated Fe-0.6%Cu Alloy Investigated by Positron Annihilation
Y.C. Hu, X.Z. Cao, P. Zhang, H. Tsuchida, Q. Xu, S.X. Jin, E.Y. Lu, Y.X. Li, R.S. Yu, B.Y. Wang, L. Wei
Nucl. Sci. Tech. **28** (2017) 16.

Effects of zirconium element on the microstructure and deuterium retention of W-Zr/Sc₂O₃ composites
H.Y. Chen, L.M. Luo, J.B. Chen, X. Zan, X.Y. Zhu, Q. Xu, G.N. Luo, J.L. Chen, Y.C. Wu
Scientific Reports **6** (2016) 32678.

Electrical resistivity measurement of Fe-0.6%Cu alloy irradiated by neutrons at 14-19 K
Q. Xu, T. Yokotani, K. Sato, F. Hori
J. Nucl. Mater. **481** (2016) 176-180.

Electron Irradiation-Induced Defects in Mo-Diluted FeCrNi Austenitic Alloy during Void Swelling Incubation
B.Y. Wang, E.Y. Lu, C.X. Zhang, Q. Xu, S.X. Jin, P. Zhang and X.Z. Cao
J. Phys. C **674** (2016) 12010.

Energy dispersive-EXAFS of Pd nucleation at a liquid/liquid interface
Chang S-Y, Booth S G, Uehara A, Mosselmans J F W, Cibin G, Pham V-T, Nataf L, Dryfe R A W, Schroeder S L M
J. Phys.: Conf. Ser. **712** (2016) 12058.

Ferrimagnetic Cage Framework in Ca₁₂Fe₁₀Si₄O₃₂Cl₆
Iimura Soshi, Tomota Yudai, Matsuishi Satoru, Masuda Ryo, Seto Makoto, Hiraka Haruhiro, Ikeda Kazutaka, Otomo Toshiya, Hosono Hideo
Inorganic Chemistry **56(1)** (2017) 566-572.

Formation and destruction of physical crosslinks by mild treatments in chemically crosslinked poly(vinyl alcohol) gels
Otsuka Emiko, Sugiyama Masaaki, Suzuki Atsushi
Polymer Bulletin **7** (2016) 1215-1226.

High-Pressure-Hydrogen-Induced Spin Reconfiguration in GdFe₂ Observed by ⁵⁷Fe-Polarized Synchrotron Radiation Mössbauer Spectroscopy with Nuclear Bragg Monochromator
Mitsui Takaya, Imai Yasuhiko, Hirao Naohisa, Matsuoka Takahiro, Nakamura Yumiko, Sakaki Kouji, Enoki Hirotoishi, Ishimatsu Naoki, Masuda Ryo, Seto Makoto
Journal of the Physical Society of Japan **85(12)** (2016) 123707.

In vitro reconstitution and biochemical analyses of the Schizosaccharomyces pombe nucleosome
Koyama Masako, Nagakura Wataru, Tanaka Hiroki, Kujirai Tomoya, Chikashige Yuji, Haraguchi Tokuko, Hiraoka Yasushi, Kurumizaka Hitoshi
Biochemical and Biophysical Research Communications **482(4)** (2017) 896-901.

Investigation of Microstructure and Irradiation Behavior of W-Nb/Ti Composites Prepared by Spark Plasma Sintering
J.B. Chen, L.M. Luo, M.L. Zhao, Q. Xu, X. Zan, Y.C. Wu,
Fusion Eng. Des. **112** (2016) 349-354.

Irradiation Damage from Low-Dose High-Energy Protons on Mechanical Properties and Positron Annihilation Lifetimes of Fe-9Cr alloy
Q. Xu, K. Fukumoto, Y. Ishi, Y. Kuriyama, T. Uesugi, K. Sato, Y. Mori, T. Yoshiie
J. Nucl. Mater. **468** (2016) 260-263.

Laser Excited Novel Near-Infrared Photoluminescence Bands in Fast Neutron-Irradiated MgO·nAl₂O₃
A.Z.M.S. Rahman, A.S.M.A. Haseeb, Q. Xu, J. Evslin, and M. Cinausero
Radiat. Phys. Chem. **125** (2016) 122-126.

Local Fields at Nonmagnetic Impurity Sites in a Perovskite $\text{La}_{0.7}\text{Ca}_{0.3}\text{MnO}_3$

W. Sato, S. Komatsuda, A. Osa, T. Sato and Y. Ohkubo
Hyperfine Interact. **237** (2016) 113.

Magnetic and spin transitions in wüstite: A synchrotron Mössbauer spectroscopic study

Maki Hamada, Seiji Kamada, Eiji Ohtani, Takaya Mitsui, Ryo Masuda, Tatsuya Sakamaki, Nanami Suzuki, Fumiya, Maeda and Masahide Akasaka
Physical Review B **93** (2016) 155165.

Measurement of neutron diffraction with compact neutron source RANS

Y. Ikeda, M. Takamura, A. Taketani, H. Sunaga, Y. Otake, H. Suzuki, M. Kumagai, Y. Oba, T. Hama
I Nuovo Cimento C **38** (2016) 177.

Microstructure and performance of rare earth element-strengthened plasma-facing tungsten material

L.M. Luo, J. Shi, J.S. Lin, X. Zan, X.Y. Zhu, Q. Xu, Y.C. Wu
Scientific Reports **6** (2016) 32701.

Nuclear Resonance Vibrational Spectroscopy and DFT study of Peroxo-Bridged Biferric Complexes: Structural Insight into Peroxo Intermediates of Binuclear Non-heme Iron Enzymes

Park Kiyong, Tsugawa Tomohiro, Furutachi Hideki, Kwak Yeonju, Liu Lei V., Wong Shaun D., Yoda Yoshitaka, Kobayashi Yasuhiro, Saito Makina, Kurokuzu Masayuki, Seto Makoto, Suzuki Masatatsu, Solomon Edward I.
Angewandte Chemie International Edition **4** (2016) 1294-1298.

Observation of Enhancement of the Morin Transition Temperature in Iridium-Doped $\alpha\text{-Fe}_2\text{O}_3$ Thin Film by ^{57}Fe -Grazing Incidence Synchrotron Radiation Mössbauer Spectroscopy

Mitsui Takaya, Mibu Ko, Seto Makoto, Kurokuzu Masayuki, Pati Satya Prakash, Nozaki Tomohiro, Sahashi Masashi
Journal of the Physical Society of Japan **85**(6) (2016) 63601.

Observation of Flux Grown $\alpha\text{-Fe}_2\text{O}_3$ Single Crystal at the Morin Transition by ^{57}Fe Synchrotron Radiation Mössbauer Diffraction

Takaya Mitsui, Shin Nakamura, Naoshi Ikeda, Kosuke Fujiwara, Ryo Masuda, Yasuhiro Kobayashi, and Makoto Seto
J. Phys. Soc. Jpn. **85** (2016) 54705.

One-step synthesis of graphene-Pt nanocomposites by gamma-ray irradiation

Tokai Akihiro, Okitsu Kenji, Hori Fuminobu, Mizukoshi Yoshiteru, Iwase Akihiro
Radiation Physics and Chemistry **123** (2016) 68-72.

Polymorphism of apyrimidinic DNA structures in the nucleosome

Osakabe Akihisa, Arimura Yasuhiro, Matsumoto Syota, Horikoshi Naoki, Sugawara Kaoru, Kurumizaka Hitoshi
Scientific Reports **7** (2017) 41783.

Properties of Lu_2O_3 Doped Tungsten and Thermal Shock Performance

S. Wang, J. Zhang, L.M. Luo, X. Zan, Q. Xu, X.Y. Zhu, K. Tokunaga, Y.C. Wu
Powder Technology **301** (2016) 65-69.

Prospect for application of compact accelerator-based neutron source to neutron engineering diffraction

Ikeda Yoshimasa, Taketani Atsushi, Takamura Masato, Sunaga Hideyuki, Kumagai Masayoshi, Oba Yojiro, Otake Yoshie, Suzuki Hiroshi

Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment **833** (2016) 61-67.

Radiation Synthesis of Binary Hydrogels with Thermoresponsive Pores

Sato Nobuhiro, Ueda Manabu, Matsuyama Tomochika, Sugiyama Masaaki
Transactions of the Materials Research Society of Japan **2** (2016) 127-130.

Retention and Thermal Desorption of Helium in Pure Tungsten

Q. Xu, J. Zhang, K. Maejima, N. Hirashita
Phil. Mag. Lett. **96** (2016) 477-481.

- Size Measurement of Radioactive Aerosol Particles in Intense Radiation Fields Using Wire Screens and Imaging Plates
Oki Yuichi, Tanaka Toru, Takamiya Koichi, Osada Naoyuki, Nitta Shinnosuke, Ishi Yoshihiro, Uesugi Tomonori, Kuriyama Yasutoshi, Sakamoto Masaaki, Ohtsuki Tsutomu
Journal of Radiation Protection and Research **41(3)** (2016) 216-221.
- Slow Dynamics in Glycerol: Collective de Gennes Narrowing and Independent Angstrom Motion
Makina Saito, Yasuhiro Kobayashi, Ryo Masuda, Masayuki Kurokuzu, Shinji Kitao, Yoshitaka Yoda, Makoto Seto
Hyperfine Interact. **237** (2016) 22.
- Structure of a Gold(III) Hydroxide and Determination of Its Solubility
Kawamoto Daisuke, Ando Hiroaki, Ohashi Hironori, Kobayashi Yasuhiro, Honma Tetsuo, Ishida Tamao, Tokunaga Makoto, Okaue Yoshihiro, Utsunomiya Satoshi, Yokoyama Takushi
Bulletin of the Chemical Society of Japan **11** (2017) 1385-1390.
- Study of Defects Introduced by 2 and 9 MeV Electron Irradiation in B2 Type Fe-Al Alloy
Ueno Youhei, Iwase Akihiro, Ohsawa Kazuhito, Xu Qiu, Sato Koichi, Saitoh Yuichi, Hori Fuminobu
Defect and Diffusion Forum **373** (2017) 126-129.
- Subcascade Formation Ratio in Neutron-Irradiated Stainless Steels
T. Yoshiie, Y. Satoh, S.S. Huang, M. Horiki, K. Sato and Q. Xu
J. Phys. C **674** (2016) 12002.
- Synchrotron Radiation Based Mössbauer Absorption Spectroscopy of Various Nuclides
Ryo Masuda, Yasuhiro Kobayashi, Shinji Kitao, Masayuki Kurokuzu, Makina Saito, Yoshitaka Yoda, Takaya Mitsui and Makoto Seto
Hyperfine Interact. **237** (2016) 43.
- Synchrotron Radiation Mössbauer Spectroscopy Using ^{149}Sm Nuclei
Tsutsui Satoshi, Masuda Ryo, Kobayashi Yasuhiro, Yoda Yoshitaka, Mizuuchi Kota, Shimizu Yusei, Hidaka Hiroyuki, Yanagisawa Tatsuya, Amitsuka Hiroshi, Iga Fumitoshi, Seto Makoto
Journal of the Physical Society of Japan **8** (2016) 83704.
- Synchrotron VUV-UV and Positron Lifetime Spectroscopy Study of Vacancy-Type Defects in Reactor Neutron-Irradiated $\text{MgO} \cdot n\text{Al}_2\text{O}_3$ ($n=2$)
A.Z.M.S. Rahman, X.Z. Cao, B.Y. Wang, J. Evslin, Q. Xu and K. Atobe
Cogent Physics **3** (2016) 1133481.
- Synchrotron-based Nickel Mössbauer Spectroscopy
Gee Leland B., Lin Chun-Yi, Jenney Francis E., Adams Michael W.W., Yoda Yoshitaka, Masuda Ryo, Saito Makina, Kobayashi Yasuhiro, Tamasaku Kenji, Lerche Michael, Seto Makoto, Riordan Charles G., Ploskonka Ann, Power Philip P., Cramer Stephen P., Lauterbach Lars
Inorganic Chemistry **14** (2016) 6866-6872.
- Testis-Specific Histone Variant H3t Gene Is Essential for Entry into Spermatogenesis
Ueda Jun, Harada Akihito, Urahama Takashi, Machida Shinichi, Maehara Kazumitsu, Hada Masashi, Makino Yoshinori, Nogami Jumpei, Horikoshi Naoki, Osakabe Akihisa, Taguchi Hiroyuki, Tanaka Hiroki, Tachiwana Hiroaki, Yao Tatsuma, Yamada Minami, Iwamoto Takashi, Isotani Ayako, Ikawa Masahito, Tachibana Taro, Okada Yuki, Kimura Hiroshi, Ohkawa Yasuyuki, Kurumizaka Hitoshi, Yamagata Kazuo
Cell Reports **18(3)** (2017) 593-600.
- The appearance of weak ferromagnetism of hexagonal stabilized ErFeO_3 thin film
S. Jitsukawa, T. Nozue, H. Yokota, S. Nakamura, Y. Kobayashi, S. Kitao and M. Seto
Proceedings of ISAFE/CAPD/PFM 2016. (2016)
- Thermal Stability of Nonmagnetic Cd and In Impurities in Fe_3O_4
W. Sato, T. Ida, S. Komatsuda, T. Fujisawa, S. Takenaka, and Y. Ohkubo
J. Appl. Phys. **120** (2016) 145104.
- Time-resolved positron annihilation study of relaxation dynamics of ion damage in fused quartz
H. Tsuchida, S. Mizuno, H. Tsutsumi, A. Kinomura, R. Suzuki and A. Itoh
Materials Research Express **3** (2016) 55201-55201.

Xeroderma pigmentosum group C protein interacts with histones: regulation by acetylated states of histone H3
Kakumu Erina, Nakanishi Seiya, Shiratori Hiromi M., Kato Akari, Kobayashi Wataru, Machida Shinichi, Yasuda Takeshi, Adachi Naoko, Saito Naoaki, Ikura Tsuyoshi, Kurumizaka Hitoshi, Kimura Hiroshi, Yokoi Masayuki, Sakai Wataru, Sugawara Kaoru
Genes to Cells **22(3)** (2017) 310-327.

Proceedings

Modification of the yellow luminescence in gamma-ray irradiated GaN bulk single crystal (Journal of Physics, IOP(UK))

Y. Torita, N. Nishikata, K. Kuriyama, K. Kushida, A. Kinomura and Q. Xu
33rd International Conference on the Physics of Semiconductors Beijing, China (Jul. 31- Aug. 5, 2016).

Detection of re-emission positrons on metal surfaces during slow positron measurements

Kinomura A, Suzuki R, Ogawa H, Oshima N, O'Rourke B E, Yabuuchi A
14th International Workshop on Slow Positron Beam Techniques & Applications Matsue, Japan (May. 22-27, 2016)
012035-1 - 012035-4.

Evaluation of a positron-beam-pulsing system in KUR reactor-based positron beam facility

Yabuuchi A, Kinomura A, Kuzuya Y, Sato K, Xu Q, Oshima N, O'Rourke B E
14th International Workshop on Slow Positron Beam Techniques & Applications Matsue, Japan (May. 22-27, 2016)
12013-1 - 12013-4.

Evaluation of the optical performance of a brightness enhancement system developed for the KUR slow positron beamline

Kuzuya Yoshihiro, Oshima Nagayasu, Kinomura Atsushi, Yabuuchi Atsushi, Sato Koichi, Xu Qiu
14th International Workshop on Slow Positron Beam Techniques & Applications Matsue, Japan (May. 22-27, 2017)
012012-1 - 012012-4.

宝石評価に向けた光学的間接投影法

川口昭夫, 二宮洋文

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)26. (in Japanese)

KUR 低速陽電子ビームラインにおける陽電子消滅実験

藪内 敦

京都大学原子炉実験所専門研究会短寿命 RI を用いた核分光と核物性研究 III (12 月 20-21, 2016) 24-28.
(in Japanese)

La_{0.7}Ca_{0.3}MnO₃ 中に導入した不純物位置の超微細場測定

佐藤 渉, 小松田沙也加, 越知憲崇, 川田 知, 大久保嘉高

京都大学原子炉実験所専門研究会短寿命 RI を用いた核分光と核物性研究 III (12 月 20-21, 2016) 65-67.
(in Japanese)

Reaction kinetic analysis of reactor surveillance data

T. Yoshiie, A. Kinomura, Y. Nagai

The 2016 Computer Simulation of Radiation Effects in S+D6olids (COSIRES) Loughborough, (Jun. 19-24, 2016)
97-100.

Th 水酸化物固相の溶解度積に及ぼす温度影響の解釈

西川将吾, 小林大志, 佐々木隆之, 上原章寛

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)45. (in Japanese)

γ 線照射還元法を用いた多元系金属ナノ微粒子の合成

戸田晋太郎, 田中元彬, 東海旭宏, 仲西穂高, 谷 真海, 興津健二, 水越克彰, 岩瀬彰宏, 阪本雅昭, 徐 虬, 堀 史説

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)30. (in Japanese)

ストロンチウム及びカルシウムの化学交換法における同位体分別研究 III

裕 隆太, 義本孝明, 佐久間洋一, 藤井俊行, 福谷 哲, 芝原雄司

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)46. (in Japanese)

リチウムイオン二次電池の放射光メスbauer分光測定(Ni-61)

世木 隆

京都大学原子炉実験所 専門研究会短寿命 RI を用いた核分光と核物性研究 III (12 月 20-21, 2016) 75-80.
(in Japanese)

酸化マグネシウムと含有トリチウム水の水酸化物化反応によるトリチウム分離の可能性

橋爪秀夫, 上原章寛, 福谷 哲, 藤井和子, 安藤寿浩

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 35. (in Japanese)

照射誘起結晶性回復の観測とモデリング

木野村 淳

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 51-53. (in Japanese)

多元素メスbauer分光法の凝縮系研究への高度応用

瀬戸 誠, 北尾真司, 小林康浩, 齋藤真器名, 窪田卓見, 増田 亮, 黒葛真行, 神原陽一, 中村真一, 篠田圭司,
小島憲道, 横山拓史, 小寺政人, 山田幾也, 藤田晃司, 高橋正, 松下正史, 山本泰彦, 横田紘子

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 57-60. (in Japanese)

電子線照射 FeAl 金属間化合物中の空孔による水素捕獲

上野陽平, 岩瀬彰宏, 徐 虬, 佐藤紘一, 大澤一人, 河裾厚男, 前川雅樹, 斎藤勇一, 堀 史説

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 31. (in Japanese)

包接化合物を利用した親水性高分子と金属塩とのコンポジットの作製[V]～疎水性表面の改質～

川口昭夫

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 25. (in Japanese)

陽電子消滅法を用いた電子線照射した Fe-Cr 合金の相分離初期過程の検出

鬼塚貴志, 佐藤紘一, 徐 虬, 福元謙一

平成28年度日本金属学会・日本鉄鋼協会北陸信越支部連合講演会 金沢, 日本 (Dec.3, 2016) 56. (in Japanese)

Books

全固体電池のイオン伝導性向上技術と材料, 製造プロセスの開発,

第 11 章 第 8 節「中性子散乱法を用いた超イオン伝導体の中でのリチウムイオン伝導経路の観察」

森 一広

技術情報協会 2017 (in Japanese)

Reviews

Crystal-Site-Specific Electronic States Measured Using Mössbauer Diffraction Method

Makoto Seto

JPSJ News and Comments **14** (2017) 2.

Others

高強度コヒーレント放射の水および生物への作用に関する研究

奥田修一, 田中良晴, 木田侑, 高橋俊晴, S. Nam

大阪府立大学地域連携研究機構・放射線研究センター平成 27 年度放射線施設共同利用報告書 13 (2017).
(in Japanese)

5. Geochemistry and Environmental Science

Papers

^{40}Ar – ^{39}Ar dating and tectonic implications of volcanic rocks recovered at IODP Hole U1342A and D on Bowers Ridge, Bering Sea

Sato Keiko, Kawabata Hiroshi, W. Scholl David, Hyodo Hironobu, Takahashi Kozo, Suzuki Katsuhiko, Kumagai Hidenori

Deep Sea Research Part II: Topical Studies in Oceanography **125-126** (2016) 214-226.

Accurate Determination of Chlorine, Bromine and Iodine in U.S. Geological Survey Geochemical Reference Materials by Radiochemical Neutron Activation Analysis
Sekimoto Shun and Ebihara Mitsuru
Geostandards and Geoanalytical Research **41(2)** (2016) 213-219.

Analysis of cesium isotope compositions in environmental samples by thermal ionization mass spectrometry-3
Shibahara Yuji, Kubota Takumi, Fujii Toshiyuki, Fukutani Satoshi, Takamiya Koichi, Konno Mitsuyuki, Mizuno Satoshi, Yamana Hajimu
Journal of Nuclear Science and Technology **54(2)** (2016) 158-166.

Exclusive attributes of undoped poly (ethylene terephthalate) for alpha particle detection
Nakamura Hidehito, Sato Nobuhiro, Kitamura Hisashi, Maki Daisuke, Shirakawa Yoshiyuki, Takahashi Sentaro
Radiation Measurements **92** (2016) 54-58.

Interaction of rare earth elements and components of the Horonobe deep groundwater
Kirishima Akira, Kuno Atsushi, Amamiya Hiroshi, Kubota Takumi, Kimuro Shingo, Amano Yuki, Miyakawa Kazuya, Iwatsuki Teruki, Mizuno Takashi, Sasaki Takayuki, Sato Nobuaki
Chemosphere **168** (2017) 798-806.

Origin of Spherule Samples Recovered from Antarctic Ice Sheet—Terrestrial or Extraterrestrial?
Sekimoto Shun, Kobayashi Takayuki, Takamiya Koichi, Ebihara Mitsuru, Shibata Seiichi
Nuclear Engineering and Technology **48(2)** (2016) 293-298.

Oxidation of Solid Phase and Ionic Strength Effect to the Cesium Adsorption on Pumice Tuff
Rajib Mohammad, Kobayashi Taishi, Oguchi Chiaki T., Sasaki Takayuki
Journal of Geoscience and Environment Protection **4** (2017) 64-73.

Risk Assessment of Neonatal Exposure to Low Frequency Noise Based on Balance in Mice
Ohgami Nobutaka, Oshino Reina, Ninomiya Hiromasa, Li Xiang, Kato Masashi, Yajima Ichiro, Kato Masashi
Frontiers in Behavioral Neuroscience **11** (2017) 20.

Separation and purification of ^{99m}Tc from ^{99}Mo produced by electron linear accelerator
Sekimoto Shun, Tatenuma Katsuyoshi, Suzuki Yumi, Tsuguchi Akira, Tanaka Atsushi, Tadokoro Takahiro, Kani Yuko, Morikawa Yasumasa, Yamamoto Asaki, Ohtsuki Tsutomu
Journal of Radioanalytical and Nuclear Chemistry **54(2)** (2017) 1361-1366.

Signatures of Multiple Mineralization Processes in the Archean Orogenic Gold Deposit of the Pampalo Mine, Hattu Schist Belt, Eastern Finland
Molnár Ferenc, O'Brien Hugh, Lahaye Yann, Käpyaho Asko, Sorjonen-Ward Peter, Hyodo Hironobu, Sakellaris Grigorios
Economic Geology **111(7)** (2016) 1659-1703.

Slab-derived halogens and noble gases illuminate closed system processes controlling volatile element transport into the mantle wedge
Kobayashi Masahiro, Sumino Hirochika, Nagao Keisuke, Ishimaru Satoko, Arai Shoji, Yoshikawa Masako, Kawamoto Tatsuhiko, Kumagai Yoshitaka, Kobayashi Tetsuo, Burgess Ray, Ballentine Chris J.
Earth and Planetary Science Letters **457** (2017) 106-116.

吸光光度法による溶融塩中の溶存イオンの定量と希土類磁石リサイクルプロセスへの応用
関本英弘
溶融塩および高温化学 **58(2)** (2016) 69-75. (in Japanese)

地下水中アンモニア除去へのアナモックスの適用—パイロット試験及び長期室内試験による検討
藤川陽子, 平大輔, 藤井隆夫, Phan Do Hung, 鈴木市郎, 古川憲治
地下水・土壤汚染とその防止対策に関する研究集会講演論文集 **22** (2016) 94-96. (in Japanese)

Proceedings

高レベル放射性廃棄物の多様化に向けた処分場中性子場解析システムの開発
前田大輝, 大和田賢治, 相澤直人, 岩崎智彦
京都大学原子炉実験所第5回炉物理専門研究会 (RPW 2016) (11月30日-12月1日 2016) 26. (in Japanese)

定説を越え,新たなプラスチックシンチレーション物質に関する研究とその応用

中村秀仁

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 7. (in Japanese)

日本とベトナムにおける環境問題の解決をめざす技術開発—放射性セシウムと砒素の除去

藤川陽子

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 9-13. (in Japanese)

福島原発事故による日本産フトミズ属 (Genus *Pheretima*) への放射性セシウムの移行と体内動態

田中草太, 足達太郎, 藤原慶子, 高橋知之, 高橋千太郎

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 28. (in Japanese)

Zr および Pd の産業利用の現状と環境動態: 長寿命核分裂核種の再利用に伴う被ばく線量の評価の観点から
岩田佳代子, 田中草太, 高島直貴, 高橋知之, 高橋千太郎

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 29. (in Japanese)

放射能汚染検査装置の開発

奥村 良, 山田辰矢

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 32. (in Japanese)

溶液エアロゾルへの核分裂生成物の付着挙動における溶質の影響

西澤佑介, 高宮幸一, 関本 俊, 沖 雄一, 大槻 勤

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 33. (in Japanese)

福島で採取した放射性セシウムを含む微粒子の組成分析

西山雄大, 高宮幸一, 関本 俊, 沖 雄一, 大槻 勤

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 42. (in Japanese)

6. Life Science and Medical Science

Papers

A Genetically Encoded Probe for Live-Cell Imaging of H4K20 Monomethylation

Sato Yuko, Kujirai Tomoya, Arai Ritsuko, Asakawa Haruhiko, Ohtsuki Chizuru, Horikoshi Naoki, Yamagata Kazuo, Ueda Jun, Nagase Takahiro, Haraguchi Tokuko, Hiraoka Yasushi, Kimura Akatsuki, Kurumizaka Hitoshi, Kimura Hiroshi

Journal of Molecular Biology **4828(20)** (2016) 3885-3902.

A polymerization-based method to construct a plasmid containing clustered DNA damage and a mismatch

Takahashi Momoko, Akamatsu Ken, Shikazono Naoya

Analytical Biochemistry **510** (2016) 129-135.

Abnormal Protein Aggregation Due to the Presence of D-Aspartyl Residues in Cataractous Lenses

Fujii Noriko, Fujii Norihiko, Sugiyama Masaaki

Transactions of the Materials Research Society of Japan **2** (2016) 131-134.

An Effective Deuterium Exchange Method for Neutron Crystal Structure Analysis with Unfolding–Refolding Processes

A. Kita and Y. Morimoto

Mol Biotechnol **58** (2016) 130-136.

Bioactive polysaccharide-based pH-sensitive polymers for cytoplasmic delivery of antigen and activation of antigen-specific immunity

Yuba Eiji, Yamaguchi Ayaka, Yoshizaki Yuta, Harada Atsushi, Kono Kenji

Biomaterials **120** (2017) 32-45.

Chromatin architecture may dictate the target site for DMC1, but not for RAD51, during homologous pairing

Kobayashi Wataru, Takaku Motoki, Machida Shinichi, Tachiwana Hiroaki, Machara Kazumitsu, Ohkawa Yasuyuki, Kurumizaka Hitoshi

Scientific Reports **6** (2016) 24228.

Cigarette smoke reversibly activates hypoxia-inducible factor 1 in a reactive oxygen species-dependent manner
Daijo Hiroki, Hoshino Yuma, Kai Shinichi, Suzuki Kengo, Nishi Kenichiro, Matsuo Yoshiyuki, Harada Hiroshi, Hirota Kiichi
Scientific Reports **6** (2016) 34424.

Crystal structures of heterotypic nucleosomes containing histones H2A.Z and H2A
Horikoshi Naoki, Arimura Yasuhiro, Taguchi Hiroyuki, Kurumizaka Hitoshi
Open Biology **6** (2016) 160127.

Design and Synthesis of Heteroleptic Cyclometalated Iridium(III) Complexes Containing Quinoline-type Ligands that Exhibit Dual Phosphorescence
Sarvendra Kumar, Yosuke Hisamatsu, Yusuke Tamaki, Osamu Ishitani, and Shin Aoki
Inorganic Chemistry **55** (2016) 3829.

Design and Synthesis of Tris-Heteroleptic Cyclometalated Iridium(III) Complexes Consisting of Three Different Nonsymmetric Ligands Based on Ligand-Selective Electrophilic Reactions via Interligand HOMO Hopping Phenomena
Yosuke Hisamatsu, Sarvendra Kumar, Shin Aoki
Inorganic Chemistry **56** (2017) 886.

Determination of dissolved natural thorium and uranium in Horonobe and Mizunami Underground Research Laboratory groundwater and its thermodynamic analysis
T. Sasaki, T. Koukani, T. Kobayashi, A. Kirishima, H. Murakami, Y. Amano, T. Mizuno, T. Iwatsuki, H. Sasamoto, K. Miyakawa
J. Nucl. Sci. Technol. **54**(3) (2017) 373-381.

Doxorubicin Delivery Using pH and Redox Dual-Responsive Hollow Nanocapsules with a Cationic Electrostatic Barrier
Teranishi Ryoma, Matsuki Ryota, Yuba Eiji, Harada Atsushi, Kono Kenji
Pharmaceutics **9**(1) (2016) 4.

Dual-stimuli responsive liposomes using pH- and temperature-sensitive polymers for controlled transdermal delivery
Yamazaki Naoko, Sugimoto Takumi, Fukushima Mitsuhiro, Teranishi Ryoma, Kotaka Aki, Shinde Chiharu, Kumei Takayuki, Sumida Yasushi, Munekata Yuki, Maruyama Kei-ichi, Yuba Eiji, Harada Atsushi, Kono Kenji
Polym. Chem. **9** (2017) 1507-1518.

Efficiency of radiation-induced base lesion excision and the order of enzymatic treatment
Shiraishi Iyo, Shikazono Naoya, Suzuki Masao, Fujii Kentaro, Yokoya Akinari
International Journal of Radiation Biology **93** (3) (2017) 295-302.

Efficient Synthesis of Tris-Heteroleptic Iridium (III) Complexes Based on the Zn²⁺-Promoted Degradation of Tris-Cyclometalated Iridium (III) Complexes and Their Photophysical Properties
Yuichi Tamura, Yosuke Hisamatsu, Sarvendra Kumar, Taiki Itoh, Kyouhei Sato, Reiko Kuroda, Shin Aoki,
Inorganic Chemistry **56** (2017) 812.

Evaluation of Molecular Perturbation of a Deuterated Protein by Temperature Factor Refinement in X-Ray Structural Analysis of High-Resolution Diffraction Data
Uemura Takuya, Kita Akiko, Yukio Morimoto
J Biotechnol Biomater **6**(2) (2016) 1000223.

Exposure to diphtheria toxin during the juvenile period impairs both inner and outer hair cells in C57BL/6 mice
Konishi Hiroyuki, Ohgami Nobutaka, Matsushita Aika, Kondo Yuki, Aoyama Yuki, Kobayashi Masaaki, Nagai Taku, Ugawa Shinya, Yamada Kiyofumi, Kato Masashi, Kiyama Hiroshi
Neuroscience **351** (2017) 15-23.

FANCI-FANCD₂ stabilizes the RAD₅₁-DNA complex by binding RAD₅₁ and protects the 5' -DNA end
Sato Koichi, Shimomuki Mayo, Katsuki Yoko, Takahashi Daisuke, Kobayashi Wataru, Ishiai Masamichi, Miyoshi Hiroyuki, Takata Minoru, Kurumizaka Hitoshi
Nucleic Acids Research **44**(22) (2016) 10758-10771.

Ferulic Acid Suppresses Amyloid β Production in the Human Lens Epithelial Cell Stimulated with Hydrogen Peroxide
Nagai Noriaki, Kotani Sachiyo, Mano Yu, Ueno Akina, Ito Yoshimasa, Kitaba Toshio, Takata Takumi, Fujii Noriko
BioMed Research International 2017 (2017) 1-9.

H3K9me3 facilitates hypoxia-induced p53-dependent apoptosis through repression of APAK.

Olcina MM, Leszczynska K, Senra JM, Isa N, Harada H, Hammond EM.

Oncogene **35** (2016) 793-799.

Hypoxia-inducible factor 1 promotes chemoresistance of lung cancer by inducing carbonic anhydrase IX expression
Sowa Terumasa, Menju Toshi, Chen-Yoshikawa Toyofumi F., Takahashi Koji, Nishikawa Shigeto, Nakanishi Takao, Shikuma Kei, Motoyama Hideki, Hijiya Kyoko, Aoyama Akihiro, Sato Toshihiko, Sonobe Makoto, Harada Hiroshi, Date Hiroshi

Cancer Medicine **6** (2017) 288-297.

Identification and characterization of GmPDIL7, a soybean ER membrane-bound protein disulfide isomerase family protein

Okuda Aya, Matsusaki Motonori, Masuda Taro, Urade Reiko

The FEBS Journal **284**(3) (2016) 414-428.

Improved isolation procedure for shikonin from the root of the Chinese medicinal plant *Lithospermum erythrorhizon* and its solubilization with cyclodextrins

H. Azuma, J. Li, R. Youda, T. Suzuki, K. Miyamoto, T. Taniguchi and T. Nagasaki

J. Appl. Res. Med. Arom Plants **3**(2) (2016) 58-63.

Improvement of Peptide-Based Tumor Immunotherapy Using pH-Sensitive Fusogenic Polymer-Modified Liposomes
Yoshizaki Yuta, Yuba Eiji, Komatsu Toshihiro, Uda Keiko, Harada Atsushi, Kono Kenji

Molecules **21**(10) (2016) 1284.

Interaction between intrinsically disordered regions in transcription factors Sp1 and TAF4

Hibino Emi, Inoue Rintaro, Sugiyama Masaaki, Kuwahara Jun, Matsuzaki Katsumi, Hoshino Masaru

Protein Science **11** (2016) 2006-2017.

Isomeric replacement of a single aspartic acid induces a marked change in protein function: The Example of Ribonuclease A

Sakaue H, Kinouchi T, Fujii N, Takumi T and Fujii N

ACS Omega **2** (2017) 260-267.

Kinetics of the competitive reactions of isomerization and peptide bond cleavage at l- α - and d- β -aspartyl residues in an α A-crystallin fragment"

Aki Kenzo and Okamura Emiko

Journal of Peptide Science **23**(1) (2017) 28-37.

Limited effectiveness of household sand filters for removal of arsenic from well water in North Vietnam

Ilmiawati C., Thang N. D., Iida M., Maeda M., Ohnuma S., Yajima I., Ohgami N., Oshino R., Al Hossain M. M. A., Ninomiya H., Kato M.

Journal of Water and Health **14**(6) (2016) 1032-1040.

Manganese-mediated acceleration of age-related hearing loss in mice

Ohgami Nobutaka, Yajima Ichiro, Iida Machiko, Li Xiang, Oshino Reina, Kumasaka Mayuko Y., Kato Masashi

Scientific Reports **6** (2016) 36306.

Modulated expression levels of tyrosine kinases in spontaneously developed melanoma by single irradiation of non-thermal atmospheric pressure plasmas

Kato M, Ninomiya H, Maeda M, Ilmiawati C, Al Hossain MM, Yoshinaga M, Ohgami N

Archives of Toxicology **90**(6) (2016) 1523-1524.

New insight into the dynamical system of α B-crystallin oligomers

Inoue Rintaro, Takata Takumi, Fujii Norihiko, Ishii Kentaro, Uchiyama Susumu, Sato Nobuhiro, Oba Yojiro, Wood Kathleen, Kato Koichi, Fujii Noriko, Sugiyama Masaaki

Scientific Reports **6** (2016) 29208.

One-shot LC-MS/MS analysis of post-translational modifications including oxidation and deamidation of rat lens α - and β -crystallins induced by γ -irradiation

I. Kim, T. Saito, N. Fujii, T. Kanamoto, and N. Fujii

Amino Acids **48** (2016) 2855-2866.

Photoaffinity electrophoretic mobility shift assay using photoreactive DNA bearing 3-trifluoromethyl-3-phenyldiazirine in its phosphate backbone

Y. Sadakane and Y. Hatanaka

Anal. Biochem. **506** (2016) 1-7.

Reply to the commentary "To Gorelenkova Miller and Mieyal (2015): Sulfhydryl-mediated redox signaling in inflammation: role in neurodegenerative diseases" by Mieyal JJ

Kato Masashi, Ninomiya Hiromasa, Maeda Masao, Ilmiawati Cimi, Al Hossain M M A., Yoshinaga Masafumi, Ohgami Nobutaka

Archives of Toxicology **90**(6) (2016) 1523-1524.

Sequence-directed nucleosome-depletion is sufficient to activate transcription from a yeast core promoter in vivo

Ichikawa Yuichi, Morohashi Nobuyuki, Tomita Nobuyuki, Mitchell Aaron P., Kurumizaka Hitoshi, Shimizu Mitsuhiro

Biochemical and Biophysical Research Communications **476**(2) (2016) 57-62.

Structural characterization of the circadian clock protein complex composed of KaiB and KaiC by inverse contrast-matching small-angle neutron scattering

Sugiyama Masaaki, Yagi Hirokazu, Ishii Kentaro, Porcar Lionel, Martel Anne, Oyama Katsuaki, Noda Masanori, Yunoki Yasuhiro, Murakami Reiko, Inoue Rintaro, Sato Nobuhiro, Oba Yojiro, Terauchi Kazuki, Uchiyama Susumu, Kato Koichi

Scientific Reports **6** (2016) 35567.

Structural insight into protein binding of boron tracedrug UTX-97 revealed by the co-crystal structure with lysozyme at 1.26 Å resolution

Y. Morimoto, H. Nagasawa, Y. Uto, T. Chatake and H. Hori

J. Pharm. Sci. **105** (2016) 2298-2301.

Structure and function of human histone H3.Y nucleosome

Kujirai Tomoya, Horikoshi Naoki, Sato Koichi, Machara Kazumitsu, Machida Shinichi, Osakabe Akihisa, Kimura Hiroshi, Ohkawa Yasuyuki, Kurumizaka Hitoshi

Nucleic Acids Research **44**(13) (2016) 6127-6141.

Structure of the human DNA-repair protein RAD52 containing surface mutations

Saotome Mika, Saito Kengo, Onodera Keiichi, Kurumizaka Hitoshi, Kagawa Wataru

Acta Crystallographica Section F Structural Biology Communications **72**(8) (2016) 598-603.

Supramolecular Complexes Formed by the Self-Assembly of Hydrophobic Bis(Zn²⁺-cyclen) Complexes, Copper, and Di- or Trimide Units for Specific Hydrolysis of Phosphate Mono- and Diesters in Two-Phase Solvent Systems (Cyclen = 1,4,7,10-Tetraazacyclododecane)

Yosuke Hisamatsu, Yuya Miyazawa, Takeru Yoneda, Miki Miyauchi, Mohd Zulkefeli, and Shin Aoki, Chemical and Pharmaceutical Bulletin **64**(5) (2016) 451-464.

The Flexible Ends of CENP-A Nucleosome Are Required for Mitotic Fidelity

Roulland Yohan, Ouararhni Khalid, Naidenov Mladen, Ramos Lorrie, Shuaib Muhammad, Syed Sajad Hussain, Lone Imtiaz Nizar, Boopathi Ramachandran, Fontaine Emeline, Papai Gabor, Tachiwana Hiroaki, Gautier Thierry, Skoufias Dimitrios, Padmanabhan Kiran, Bednar Jan, Kurumizaka Hitoshi, Schultz Patrick, Angelov Dimitar, Hamiche Ali, Dimitrov Stefan

Molecular Cell **63**(4) (2016) 674-685.

VHL-deficient renal cancer cells gain resistance to mitochondria-activating apoptosis inducers by activating AKT through the IGF1R-PI3K pathway

Yamaguchi Ryuji, Harada Hiroshi, Hirota Kiichi

Tumor Biology **37**(10) (2016) 13295-13306.

リアルタイム PCR 法を用いた DNA 損傷の定量化とその放射線量評価法への応用

清水喜久雄, 中嶋隆登, 松尾陽一郎, 日高雄二, 佐藤典仁, 山本幸佳

日本放射線安全管理学会誌 **15**(1) (2016) 52-58. (in Japanese)

Proceedings

Activation Mechanism of Cocoonase

Nagisa Tajima, Shigeru Shimamoto, Mitsuhiro Miyazawa and Yuji Hidaka

Proceedings of the 53rd Japanese Peptide Symposium Kyoto, Japan (Oct.26-28, 2016) 105-106.

Age-dependent isomerization and racemization at specific aspartyl residues in lens crystallins Analysis and biological relevance

Noriko Fujii, Takumi Takata, Norihiko Fujii and Hiroshi Sasaki

XXII Biennial Meeting of the International Society for Eye Research Tokyo. (Sep.25-29, 2016)

Age-related abnormal Asp isomers distribution in lens specific α A-crystallin monomeric and polymeric state

Takumi Takata, Takashi Sato, Hiroshi Sasaki and Noriko Fujii

XXII Biennial Meeting of the International Society for Eye Research Tokyo. (Sep.25-29, 2016)

Age-related Asp isomerizations in dissociated alpha-crystallin from aged Lens

Takumi Takata, Noriko Fujii

ARVO2016 Annual meeting USA. (May 1-5, 2016)

Disulfide-Coupled Folding of Pro-Uroguanylin on Molecular Evolution

Kenta Mori, Kosuke Toyama, Shigeru Shimamoto, and Yuji Hidaka

Proceedings of the 53rd Japanese Peptide Symposium Kyoto, Japan (Oct. 26-28, 2016) 103-104.

Generator of Highly Concentrated Pure ^{99m}Tc from Low Specific Activity ^{99}Mo Produced by Reactor and/or Electron Linear Accelerator

K. Tatenuma, A. Tsuguchi, Y. Suzuki, K. Ishikawa, S. Sekimoto, and T. Ohtsuki

Proceedings of "Mo-99 2016 Topical Meeting on Molybdenum-99 Technological Development" St. Louis, Missouri, USA (Sep. 11-14, 2016)

Preparation of an Orexin Precursor Protein Using an E. coli Expression System by Acid Treatment

Natsumi Mitsuoka, Shigeru Shimamoto, and Yuji Hidaka

Proceedings of the 53rd Japanese Peptide Symposium Kyoto, Japan (Oct. 26-28, 2016) 221-222.

Rapid identification and quantification of amino acid isomers occurring in peptides under physiological conditions: a targeted proteomics approach.

Atsuhiko TOYAMA, Noriko FUJII, Toshiya MATSUBAR1, Jun WATANABE

HUPO 15th Annual World Congress (HUPO 2016) Taipei. (Sep. 18-22, 2016)

Regulation of the Disulfide-Coupled Folding of De Novo Designed Peptides by α -Helix Formation

Saya Nishihara, Kosuke Toyama, Shigeru Shimamoto, and Yuji Hidaka

Proceedings of the 53rd Japanese Peptide Symposium Kyoto, Japan (Oct.26-28, 2016) 223-234.

γ 線照射によるラット水晶体 α -及び β -クリスタリンの酸化,脱アミド化及び異性化等の翻訳後修飾の迅速 LC-MS/MS 分析

金 仁求, 齊藤 剛, 金本尚志, 藤井紀子

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 19. (in Japanese)

サンゴ由来レクチン4糖複合体の結晶構造

喜田昭子, 神保充, 酒井隆一, 森本幸生, 武内良太, 田中浩士, 高橋孝志, 三木邦夫

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 44. (in Japanese)

ヒト血清中の D-アミノ酸含有ペプチドの探索及び同定

Ha Seongmin, 藤井 紀子

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 34. (in Japanese)

蛋白質の水和構造解明に向けた D/H コントラスト法の利用

茶竹俊行, 藤原 悟

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 37. (in Japanese)

納豆菌由来 MK-7 の構造特性および納豆菌のガンマ線耐性の研究

柳澤泰任, 高根光紗, 足立達美, 茶竹俊行, 齊藤 剛, 井上倫太郎, 杉山正明, 松尾龍人, 藤原 悟, 大杉忠則, 須見洋行

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 38. (in Japanese)

放射線照射や加齢による蛋白質損傷の化学的解明

藤井紀子, 木野内忠稔, 齊藤 剛, 高田 匠, 金 仁求, 定金 豊, 大神信孝, 安岐健三, 藤井智彦, 金本尚志

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 1-6. (in Japanese)

Books

D-Amino acid residues in proteins related to aging and age-related diseases and a new analysis of the isomers in proteins in D-Amino acids: Physiology, Metabolism, and Application
Yoshimura T, Nishikawa T and Homma H. Noriko Fujii, Takumi Takata, Norihiko Fujii, Kenzo Aki and Hiroaki Sakaue
Springer 2016.

Advances in Asymmetric Autocatalysis and Related Topics 1st Edition
(6. The Importance Of The Idea Of „Parachirality” In Life Science)
Editors: Gyula Palyi Robert Kurdi Claudia Zucchi
(Chapter:6 Noriko Fujii, Norihiko Fujii, Takumi Takata and Hiroaki Sakaue)
Elsevier 2017.

Reviews

白内障の予防と治療を見据えた白内障クリスタリン中の異性体アミノ酸の迅速分析
藤井紀子, 高田 匠, 藤井智彦, 金 仁求
日本白内障学会誌 **28** (2016) 59-62. (in Japanese)

老化で生じる蛋白質中の D-アミノ酸とその分布
藤井紀子
科学と工業 **90** (2016) 315-321. (in Japanese)

老化,放射線による水晶体タンパク質中のアミノ酸一残基ごとの翻訳後修飾の解析
藤井紀子, 金 仁求, 齊藤 剛, 高田 匠
放射線生物研究 **52** (2017) 24-34. (in Japanese)

7. Neutron Capture Therapy

Papers

A prospective multicenter single-arm clinical trial of bevacizumab for patients with surgically untreatable symptomatic brain radiation necrosis Furuse
M, Nonoguchi N, Kuroiwa T, Miyamoto S, Arakawa Y, Shinoda J, Miwa K, Iuchi T, Tsuboi K, Houkin K, Terasaka S, Tabei Y, Nakamura H, Nagane M, Sugiyama K, Terasaki M, Abe T, Narita Y, Saito N, Mukasa A, Ogasawara K, Beppu T, Kumabe T, Nariai T, Tsuyuguchi N, Nakatani E, Kurisu S, Nakagawa Y, Miyatake S.
Neuro-Oncology Practice (2016) 1-9.

Boron neutron capture therapy for malignant brain tumors
Miyatake S, Kawabata S, Hiramatsu R, Kuroiwa T, Suzuki M, Kondo N, Ono K
Neurologia medico-chirurgica B (2016) 361-371.

Comparison of the pharmacokinetics between L-BPA and L-FBPA using the same administration dose and protocol: a validation study for the theranostic approach using [¹⁸F]-L-FBPA positron emission tomography in boron neutron capture therapy
Watanabe Tsubasa, Hattori Yoshihide, Ohta Youichiro, Ishimura Miki, Nakagawa Yosuke, Sanada Yu, Tanaka Hiroki, Fukutani Satoshi, Masunaga Shin-ichiro, Hiraoka Masahiro, Ono Koji, Suzuki Minoru, Kirihata Mitsunori
BMC Cancer **16**(1) (2016) 859.

Cytotoxicity of Tirapazamine (3-Amino-1,2,4-benzotriazine-1,4-dioxide)-Induced DNA Damage in Chicken DT40 Cells
Moriwaki Takahito, Okamoto Saki, Sasanuma Hiroyuki, Nagasawa Hideko, Takeda Shunichi, Masunaga Shin-ichiro, Tano Keizo
Chemical Research in Toxicology **30**(2) (2017) 699-704.

Design study of multi-imaging plate system for BNCT irradiation field at Kyoto university reactor
Tanaka Kenichi, Sakurai Yoshinori, Kajimoto Tsuyoshi, Tanaka Hiroki, Takata Takushi, Endo Satoru
Applied Radiation and Isotopes **115** (2016) 212-220.

Early clinical experience utilizing scintillator with optical fiber (SOF) detector in clinical boron neutron capture therapy: its issues and solutions

Ishikawa Masayori, Yamamoto Tetsuya, Matsumura Akira, Hiratsuka Junichi, Miyatake Shin-Ichi, Kato Itsuro, Sakurai Yoshinori, Kumada Hiroaki, Shrestha Shubhechha J., Ono Koji
Radiation Oncology **11** (2016) 105.

Evaluation of a novel sodium borocaptate-containing unnatural amino acid as a boron delivery agent for neutron capture therapy of the F98 rat glioma

Futamura Gen, Kawabata Shinji, Nonoguchi Naosuke, Hiramatsu Ryo, Toho Taichiro, Tanaka Hiroki, Masunaga Shin-Ichiro, Hattori Yoshihide, Kirihata Mitsunori, Ono Koji, Kuroiwa Toshihiko, Miyatake Shin-Ichi
Radiation Oncology **26** (2017) PMC5260095.

Hypoxia-inducible factor 1-mediated characteristic features of cancer cells for tumor radioresistance

Harada H

Journal of Radiation Research **57**(S1) (2016) i99-i105.

In vivo evaluation of neutron capture therapy effectivity using calcium phosphate-based nanoparticles as Gd-DTPA delivery agent

Dewi N, Mi P, Yanagie H, Sakurai Y, Morishita Y, Yanagawa M, Nakagawa T, Shinohara A, Matsukawa T, Yokoyama K, Cabral H, Suzuki M, Sakurai Y, Tanaka H, Ono K, Nishiyama N, Kataoka K, Takahashi H.
J Cancer Res Clin Oncol **142** (2016) 765-775.

LY6E: a conductor of malignant tumor growth through modulation of the PTEN/PI3K/Akt/HIF-1 axis

Yeom Chan Joo, Zeng Lihua, Goto Yoko, Morinibu Akiyo, Zhu Yuxi, Shinomiya Kazumi, Kobayashi Minoru, Itasaka Satoshi, Yoshimura Michio, Hur Cheol-Goo, Kakeya Hideaki, Hammond Ester M., Hiraoka Masahiro, Harada Hiroshi
Oncotarget **7** (2016) 65837-65848.

Maleimide-functionalized closo-dodecaborate albumin conjugates (MID-AC): Unique ligation at cysteine and lysine residues enables efficient boron delivery to tumor for neutron capture therapy

Kikuchi Shunsuke, Kanoh Daisuke, Sato Shinichi, Sakurai Yoshinori, Suzuki Minoru, Nakamura Hiroyuki
Journal of Controlled Release **237** (2016) 160-167.

Use of boron cluster-containing redox nanoparticles with ROS scavenging ability in boron neutron capture therapy to achieve high therapeutic efficiency and low adverse effects

Gao Zhenyu, Horiguchi Yukichi, Nakai Kei, Matsumura Akira, Suzuki Minoru, Ono Koji, Nagasaki Yukio
Biomaterials **104** (2016) 201-212.

Visualization of Boronic Acid Containing Pharmaceuticals in Live Tumor Cells Using a Fluorescent Boronic Acid Sensor

Hattori Yoshihide, Ishimura Miki, Ohta Yoichiro, Takenaka Hiroshi, Kirihata Mitsunori

ACS Sensors **12**(1) (2016) 1394-1397.

Proceedings

BNCT 実用化に向けた橋渡し研究

鈴木 実, 高垣雅緒, 宮武伸一, 平塚純一, 櫻井英幸, 柳衛宏宣, 東 治人, 中村浩之, 谷森紳治, 安藤 徹, 藤本卓也, 長崎幸夫, 石川善恵, 山川延宏, 小松直樹, 田中憲一, 石川正純, 中村哲志, 林慎一郎
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 48-50. (in Japanese)

Progress in Reactor and Accelerator Based BNCT at Kyoto University Research Reactor Institute

Y. Sakurai

Proceedings of Science (INPC2016) Adelaide, Australia (Sep.11-16, 2016).

局所腫瘍制御, 遠隔転移抑制, 及び癌幹細胞特性との関連性を加味する休止期腫瘍細胞の特性解析
増永慎一郎, 小野公二

京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 14. (in Japanese)

Books

Tumor Microenvironment and Hyperthermia. In "Hyperthermic Oncology from Bench to Bedside" PartII Basic Science in Whole Body

Masunaga S

Springer 2016.

新版 放射線医科学-生体と放射線・電磁波・超音波
鈴木 実
医療科学社 2016. (in Japanese)

Reviews

原発性悪性骨腫瘍に対するホウ素中性子捕捉療法(BNCT)(特集 悪性骨腫瘍の診断と治療の最前線)
鈴木 実, 藤本卓也
整形・災害外科 **59** (8) (2016) 1093-1100. (in Japanese)

治療生物学および放射線治療医の視点から見た中性子捕捉療法の特性
増永慎一郎, 鈴木 実, 田野恵三, 真田悠生, 小野公二
日本口腔腫瘍学会誌 **28** (2016) 134-147. (in Japanese)

ホウ素中性子捕捉療法(BNCT)と他の粒子線治療との違い
宮武伸一, 川端信司, 不破信和
日本臨牀 増刊号 **7** (71) (2016) 615-621. (in Japanese)

夢の細胞選択的粒子線治療 BNCT
宮武伸一
大阪医科大学雑誌 **75** (1・2) (2016) 12-15. (in Japanese)

ホウ素中性子捕捉療法(BNCT)の最新動向
鈴木 実
月刊インナービジョン **31** (2016) 55. (in Japanese)

8. Neutron Radiography and Radiation Application

Papers

Lipid-membrane-incorporated arylboronate esters as agents for boron neutron capture therapy
Ueda Masafumi, Ashizawa Kengo, Sugikawa Kouta, Koumoto Kazuya, Nagasaki Takeshi, Ikeda Atsushi
Org. Biomol. Chem. **15** (2016) 1565-1569.

Proceedings

Development of Portable SNMs Detection System Based on Threshold Energy Neutron Analysis"
T. Misawa, Y. Kitamura, Y. Takahashi and K. Masuda,
Proc of 2016 IEEE Nuclear Science Symposium & Medical Imaging Conference Strasbourg, France
(Oct.29, 2016) N08-27.

Evaluation of void fraction around a tube in two-phase flow across horizontal tube bundle
H. Murakawa, M. Baba, K. Sugimoto, N. Takenaka, D. Ito and Y. Saito
9th International Conference on Multiphase Flow (ICMF-2016) Firenze, Italy (May 22-27, 2016) 433.

X線ラジオグラフィを用いた霜層密度分布の測定
上地拓摩, 松本亮介, 影林和磨, 伊藤大介, 齊藤泰司
2016 年度日本冷凍空調学会年次大会 神戸, 日本 (2016 年 9 月 6-9 日) E222-E222. (in Japanese)

9. TRU and Nuclear Chemistry

Papers

Longgu (Fossilia Osis Mastodi) alters the profiles of organic and inorganic components in
Keishikaryukotsuboreito
Oguri Kazuki, Kawase Masaya, Harada Kazuo, Shimada-Takaura Kayoko, Takahashi Toshiharu, Takahashi
Kyoko Journal of Natural Medicines **70**(3) 483-491. (2016)

10. Health Physics and Waste Management

Papers

Radioactive contamination of arthropods from different trophic levels in hilly and mountainous areas after the Fukushima Daiichi nuclear power plant accident

Tanaka Sota, Hatakeyama Kaho, Takahashi Sentaro, Adati Tarô

Journal of Environmental Radioactivity **164** (2016) 104-112.

Reviews

京大炉を用いた中性子放射化分析の例

関本 俊

日本応用物理学会 放射線分科会会誌「放射線」**42** (2016) 11-14. (in Japanese)

Others

A Simple Method for Sampling and Analysis of Particulate, Inorganic Gaseous and Organic Gaseous Halogens in the Atmosphere

Naofumi Akata, Hirofumi Tsukada, Tomoyuki Takahashi and Satoshi Fukutani

Radiation Environment and Medicine ISSN 2423-9097 (2016) 29-32.

11. Accelerator Physics

Papers

Characterization techniques for fixed-field alternating gradient accelerators and beam studies using the KURRI 150 MeV proton FFAG

Sheehy S. L., Kelliher D. J., Machida S., Rogers C., Prior C. R., Volat L., Haj Tahar M., Ishi Y., Kuriyama Y., Sakamoto M., Uesugi T., Mori Y.

Progress of Theoretical and Experimental Physics **7** (2016) 073G01.

Proceedings

Design study of niobium mushroom-shaped cavity for evaluating RF critical magnetic field of thin-Film superconductor

H. Oikawa, T. Higashiguchi, Y. Iwashita, M. Hino, H. Hayano, S. Kato, T. Kubo, T. Saeki

Proceedings of LINAC2016 East-Lansing, MI, USA (Sep.19, 2016) 372-376.

Non-destructive Texture Measurement of Steel Sheets with Compact Neutron Source “RANS”

Takamura M, Ikeda Y, Sunaga H, Taketani A, Otake Y, Suzuki H, Kumagai M, Hama T, Oba Y

Journal of Physics: Conference Series Bristol (Sep.19, 2016) 32047.

12. Others

Papers

2014 年長野県北部の地震の被害調査と震源のモデル化

池田隆明, 小長井一男, 釜江克宏, 佐藤 京, 高瀬裕也

地震工学論文集 **35** I_975-I_983. (2016) (in Japanese)

3次元高密度強震アレイ観測記録に基づく硬質地盤の地震動空間変動特性と統計的モデル化

内田 治, 上林宏敏, 釜江克宏

日本地震工学会論文集 **8** 8_42-8_61. (2016) (in Japanese)

Conceptualizing maritime security for energy transportation security

Shoki Kosai and Hironobu Unesaki

Journal of Transportation Security **9**(3) (2016) 175-190.

Development of intense terahertz coherent synchrotron radiation at KU-FEL

Sei Norihiro, Zen Heishun, Ohgaki Hideaki

Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment **832**(1) (2016) 208-213.

Dynamics of polybutadiene reinforced with unsaturated carboxylate studied by muon spin relaxation (μ SR)
Mashita Ryo, Kishimoto Hiroyuki, Inoue Rintaro, Koda Akihiro, Kadono Ryosuke, Kanaya Toshiji
Polymer **105** (2016) 510-515.

Energy dependence with an Asian twist? Examining international energy relations in Southeast Asia
Kamonphorn Kanchana, Benjamin C. McLellan, Hironobu Unesaki
Energy Research & Social Science **21** (2016) 123-140.

Energy Security and Sustainability in Japan
Jeffrey Kucharski and Hironobu Unesaki
International Journal of Sustainable Future for Human Security **4(1)** (2016).

Frequency domain optical tomography using a Monte Carlo perturbation method
T.Yamamoto and H.Sakamoto
Optics Communications **364** (2016) 165-176.

Millijoule terahertz coherent transition radiation at LEBRA
Sei Norihiro, Ogawa Hiroshi, Sakai Takeshi, Hayakawa Ken, Tanaka Toshinari, Hayakawa Yasushi, Nogami Kyoko
Japanese Journal of Applied Physics **56(3)** (2017) 32401.

Phase transformation in Fe-Mn-C alloys by severe plastic deformation under high pressure
Adachi Nozomu, Wu Ningning, Todaka Yoshikazu, Sato Hideyuki, Ueki Rintaro
Materials Letters **185** (2016) 109-111.

Redox and Ligand Exchange during the Reaction of Tetrachloroaurate with Hexacyanoferrate(II) at a Liquid-Liquid Interface: Voltammetry and X-ray Absorption Fine-Structure Studies
Uehara Akihiro, Chang Sin-Yuen, Booth Samuel G., Schroeder Sven L.M., Mosselmans J.Frederick W., Dryfe Robert A.W.
Electrochimica Acta **190** (2016) 997-1006.

Screening of nanosatellite microprocessors using californium single-event latch-up test results
Takahiro Tomioka, Yuta Okumura, Hirokazu Masui, Koichi Takamiya, Mengu Cho
Acta Astronautica **126** (2016) 334-341.

ガンマ線スペクトル解析におけるピーク探索と面積計算実態と今後のスペクトル解析のあるべき姿
青山道夫, 秋山正和, 浅井雅人, 阿部敬朗, 佐藤 泰, 高野直人, 高宮幸一, 濱島靖典, 武藤儀一, 山田隆志, 石津秀剛
RADIOISOTOPES **65** (2016) 267-285. (in Japanese)

強震下の超高層集合住宅の挙動解明と今後の被害低減に向けた取り組み
永野 正行, 肥田 剛典, 田沼 毅彦, 中村 充, 井川 望, 保井 美敏, 境 茂樹, 森下 真行, 北堀 隆司, 上林 宏敏
日本地震工学会論文集 **5** (2016) 5_2-5_11. (in Japanese)

超高層 RC 造の長周期地震動による損傷度の簡易評価指標
上林宏敏, 永野正行, 釜江克宏, 川辺秀憲
日本地震工学会論文集 **5** (2016) 5_33-5_45. (in Japanese)

Proceedings

Cu 線小角散乱装置の共同利用開始
佐藤信浩, 大場洋次郎, 井上倫太郎, 杉山正明
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)21. (in Japanese)

KUR-IBS を用いた研究展開
日野正裕, 小田達郎, 足立 望, 大場洋次郎, 吉永尚生, 杉山正明, 川端祐司
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)24. (in Japanese)

Mo 線源 X 線小角散乱装置の共同利用開始
大場洋次郎, 佐藤信浩, 井上倫太郎, 杉山正明
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017)20. (in Japanese)

数十～数百 MeV イオンビーム照射場の利用環境開発－医療・バイオから宇宙まで－
高田卓志
京都大学原子炉実験所第 51 回学術講演会報文集 (1 月 26-27, 2017) 8. (in Japanese)

輸送方程式をどのように数值的に解けるのか

Wilfred van Rooijen

京都大学原子炉実験所第 5 回炉物理専門研究会 (RPW 2016) (11 月 30 日-12 月 1 日 2016) 90. (in Japanese)

Reviews

巻頭言 研究用原子炉の今後の問題点

川端祐司

波紋 **5** (2016) 71. (in Japanese)

固液界面とトライボロジー

平山朋子

ながれ **351** (2016) 297-300. (in Japanese)

電子加速器によるテラヘルツ波の発生

全 炳俊, 清 紀弘, 入澤明典, 加藤 政博

月刊 化学工業 **168** (3) (2017) 176-181. (in Japanese)