

II. PUBLICATION LIST
(APRIL 2025 – MARCH 2026)

1. Slow Neutron Physics and Neutron Scattering

Papers

Supramolecular Interface Engineering via Interdiffusion for Reusable and Dismantlable Polymer Adhesion
Yamaoka Kenji, Wada Takuma, Ogasa Iori, Komyo Takeru, Luo Chao, Ikura Ryohei, Hino Masahiro, Yamada Masako, Seto Hideki, Fujii Yoshihisa, Uetsuji Yasutomo, Takashima Yoshinori
Advanced Materials 38(6) (2026) e07939 (doi)10.1002/adma.202507939

Disorder in the Antifluorite Sulfide Cathode: $\text{Li}_{1.7}\text{Cu}_{0.15}\text{S}_2$
Miura Akira, Cheng Yi-Ting, Masahiro Takenaka, Nambu Yusuke, Sasaki Shunsuke, Nagao Masanori, Mitsudome Takato, Fujii Yuta, Tadanaga Kiyoharu, Machida Nobuya, Bartel Christopher J.
Chemistry of Materials 37(21) (2025) 8521-8528 (doi)10.1021/acs.chemmater.5c01328

Transition-Edge Sensor Spectrometer for Precision Spectroscopy of Antiprotonic Atoms
Morgan Kelsey, Azuma Toshiyuki, Baptista Gonalo, Becker Daniel, Bennett Douglas, Butin Franois, Dean Jonathan W., Eizenberg Ofir, Fowler Joseph W., Fujioka Hiroyuki, Gamba Davide, Gard Johnathon D., Garroum Nabil, Guerra Mauro, Hashimoto Tadashi, Higuchi Takashi, Hori Masaki, Indelicato Paul, Keller Mark, Machado Jorge, Mates John A.B., Nakamura Nathan, Nobles Jason, Nez Franois, Ohayon Ben, Okada Shinji, Ortiz Nathan, Rathi Shikha, Roosa Michael, Rouss  Jean-Yves, Saito Takeshi, Schmidt Daniel, Senetaire Quentin, Sommerfeldt Jonas, Szypryt Paul, Ullom Joel, Weber Joel, Yzombard Pauline, Zito Marco, Paul Nancy, Swetz Daniel
IEEE Transactions on Applied Superconductivity 36(6) (2026) 1- 6 (doi)10.1109/tasc.2026.3672351

Impact of a Reflecting Material on the Search for Neutron–Antineutron Oscillations using Ultracold Neutrons
Fujioka Hiroyuki, Higuchi Takashi
Progress of Theoretical and Experimental Physics 2026(2) (2025) 023C01 (doi)10.1093/ptep/ptaf189

In Situ High-Voltage Generation with a Cockcroft–Walton Multiplier for a Xenon Gas Time Projection Chamber
Akiyama Shinichi, Hikida Junya, Yoshida Masashi, Nakamura Kazuhiro, Ban Sei, Hirose Masanori, Ichikawa Atsuko K, Iwashita Yoshihisa, Kikawa Tatsuya, Nakajima Yasuhiro, Nakamura Kiseki D, Nakaya Tsuyoshi, Obara Shuhei, Sakashita Ken, Sekiya Hiroyuki, Sugashima Bungo, Urano Soki, Hatsumi Sota, Kobayashi Sota, Sasaki Hayato
Progress of Theoretical and Experimental Physics 2025(5) (2025) 053H03 (doi)10.1093/ptep/ptaf066

Proceedings

Development and numerical simulation of a segmented Soller Collimator for Neutron Imaging
Yunhao Gu, Masahiro Hino, Takashi Higuchi, Yoshichika Seki, Ryuto Fujitani
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 41

Development of evaluation method for metal additive manufacturing at the KUR CN-3
Yoshichika Seki, Yuki Kambe, Daisuke Kono, Takuya Hosobata, Masahiro Hino
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 45 (in Japanese)

Development of neutron focusing mirrors and the application for neutron beam optics in the new research reactor at "Monju" site II
Masahiro Hino, Takuya Hosobata, Masahiro Takeda, Yutaka Yamagata, Takashi Higuchi, Ryuto Fujitani, Hitoshi Endo
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 34 (in Japanese)

Exploring quantum magnetism with neutrons
Yusuke Nambu
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 7-8 (in Japanese)

Half-life measurements of sub-nanosecond isomeric state with LaBr_3 scintillator
Yui Okuda, Michihiro Shibata, Akihiro Taniguchi
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 49 (in Japanese)

Spin Phase Continuous Modulation toward inelastic scattering spectrometers
Ryuto Fujitani, Masahiro Hino, Takashi Higuchi
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 52 (in Japanese)

Others

Impact of a Reflecting Material on a Search for Neutron--Antineutron Oscillations using Ultracold Neutrons

Fujioka Hiroyuki, Higuchi Takashi

Arxiv (2025) (doi)10.48550/arXiv:2508.17725

Initial results of the TRIUMF ultracold advanced neutron source

B. Algohi, D. Anthony, L. Barron-Palos, M. Bosse, M. P. Bradley, A. Brossard, T. Bui, J. Chak, R. Chiba, C. Davis, R. de Vries, K. Drury, B. Franke, D. Fujimoto, R. Fujitani, M. Gericke, P. Giampa, C. Gibson, R. Golub, K. Hatanaka, T. Hepworth, T. Higuchi, G. Ichikawa, I. Ide, S. Imajo, A. Jaison, B. Jamieson, M. Katotoka, S. Kawasaki, M. Kitaguchi, W. Klassen, E. Korkmaz, E. Korobkina, F. Kuchler, M. Lavvaf, T. Lindner, N. Lo, S. Longo, K. W. Madison, Y. Makida, J. Malcolm, J. Mammei, R. Mammei, Z. Mao, C. Marshall, J. W. Martin, R. Matsumiya, M. McCrea, E. Miller, M. Miller, K. Mishima, T. Mohammadi, T. Momose, M. Nalbandian, T. Okamura, S. Pankratz, R. Patni, R. Picker, K. Qiao, W. D. Ramsay, W. Rathnakela, T. Reimer, D. Salazar, J. Sato, W. Schreyer, T. Shima, H. M. Shimizu, S. Sidhu, S. Stargardter, R. Stutters, P. Switzer, I. Tanihata, Tushar, S. Vanbergen, W. T. H. van Oers, N. Yazdandoost, Q. Ye, A. Zahra, M. Zhao

Arxiv (2025) (doi)10.48550/arXiv:2509.02916

Neutron EDM Experiment with an Advanced Ultracold Neutron Source at TRIUMF

T. Higuchi, B. Algohi, D. Anthony, L. Barron Palos, M. Bradley, A. Brossard, T. Bui, J. Chak, R. Chiba, C. Davis, R. de Vries, K. Drury, D. Fujimoto, R. Fujitani, M. Gericke, P. Giampa, R. Golub, T. Hepworth, G. Ichikawa, S. Imajo, A. Jaison, B. Jamieson, M. Katotoka, S. Kawasaki, M. Kitaguchi, W. Klassen, E. Korkmaz, E. Korobkina, M. Lavvaf, T. Lindner, N. Lo, S. Longo, K. Madison, Y. Makida, J. Malcolm, J. Mammei, R. Mammei, Z. Mao, C. Marshall, J. W. Martin, M. McCrea, E. Miller, M. Miller, K. Mishima, T. Mohammadi, T. Momose, T. Okamura, H. J. Ong, R. Patni, R. Picker, K. Qiao, W. D. Ramsay, W. Rathnakela, D. Salazar, J. Sato, W. Schreyer, T. Shima, H. M. Shimizu, S. Sidhu, S. Stargardter, P. Switzer, I. Tanihata, Tushar, S. Vanbergen, W. T. H. van Oers, Y. Watanabe, N. Yazdandoost, Q. Ye, A. Zahra, M. Zhao

Arxiv (2025) (doi)10.48550/arXiv:2507.05278

Novel concept for low-energy antineutron production and its application for antineutron scattering experiments

Filippi Alessandra, Fujioka Hiroyuki, Higuchi Takashi, Venturelli Luca

Arxiv (2025) (doi)10.48550/arXiv:250306972

2. Nuclear Physics and Nuclear Data

Papers

Systematic investigation of photon strength functions with monochromatic γ -ray beams

Gheorghe Ioana, Aumann Thomas, Baumann Martin, van Beek Patrick, Kuchenbrod Philipp, Lalić Nikolina, Scheit Heiko, Symochko Dmytro, Wang Hongwei, Fan Gongtao, Nishio Katsuhisa, Ohtsuki Tsutomu, Suzaki Fumi, Hirose Kentaro, Inagaki Makoto, Ari-izumi Takashi, Garrote Frank L. Bello, Bjørøen Marianne, Eriksen Tomas, Ingeberg Vetle Wegner, Paulsen Wanja, Pedersen Line G., Reaz Fardous, Belyshev Sergey, Stopani Konstantin, Lui Yiu-Wing, Filipescu Dan, Tudora Anabella, Goriely Stephane, Miyamoto Shuji, Utsunomiya Hiroaki

EPJ Web of Conferences 329 (2025) 01014 (doi)10.1051/epjconf/202532901014

Measurements of neutron capture cross-section for nuclides of interest in decommissioning (III): $^{170}\text{Er}(n,\gamma)^{171}\text{Er}$ and $^{180}\text{Hf}(n,\gamma)^{181}\text{Hf}$ reactions

Nakamura Shoji, Shibahara Yuji, Endo Shunsuke, Rovira Gerard, Kimura Atsushi

Journal of Nuclear Science and Technology 62(7) (2025) 617-630 (doi)10.1080/00223131.2025.2457589

Measurements of neutron capture cross-sections for nuclides of interest in decommissioning (IV): $^{165}\text{Ho}(n,\gamma)^{166\text{m}}\text{Ho}$ reactions

Nakamura Shoji, Shibahara Yuji, Endo Shunsuke, Rovira Gerard, Kimura Atsushi

Journal of Nuclear Science and Technology 62(11) (2025) 1086-1099 (doi)10.1080/00223131.2025.2525327

^{57}Fe Mössbauer spectrometry on $\text{SrTiO}_{3-\delta}$ perovskite oxides co-doped with dilute Fe and Sn

Nomura Kiyoshi, Takahashi Masashi, Kokubo Hiroko, Naka Takashi, Kobayashi Yasuhiro, Yoshimura Yuika, Koike Yuya, Kubuki Shiro, Okabayashi Jun, Barrero Cesar

Journal of Radioanalytical and Nuclear Chemistry 334(6) (2025) 4121- 4127 (doi)10.1007/s10967-025-10141-y

^{61}Ni Mössbauer Spectroscopy on Hofmann-type complex $\{\text{Fe}(\text{Ethyl isonicotinate})_2[\text{Ni}(\text{CN})_4]\}$, $\{\text{Fe}(\text{Allyl isonicotinate})_2[\text{Ni}(\text{CN})_4]\}$

Kitase Kosuke, Kitazawa Takafumi, Kitao Shinji, Kubota Takumi, Kobayashi Yasuhiro, Seto Makoto

Journal of Radioanalytical and Nuclear Chemistry 335(4) (2026) 2869-2874 (doi)10.1007/s10967-026-10820-4

Fundamental properties of novel zero-dimensional halide Na_2HfI_6 and application for neutron detection by Li doping
Fujiwara Chihaya, Kurosawa Shunsuke, Yamaji Akihiro, Yoshikawa Akira, Matsubayashi Nishiki, Takata Takushi, Tanaka Hiroki

Journal of the Ceramic Society of Japan 25178 (2026) 2178 (doi)10.2109/jcersj2.25178

Novel zero-dimensional halide perovskite $\text{Li}_2\text{Hf}(\text{Br}, \text{I})_6$ with red/NIR emission wavelength for thermal neutron detection

Fujiwara Chihaya, Kurosawa Shunsuke, Yamaji Akihiro, Yoshikawa Akira, Matsubayashi Nishiki, Takata Takushi, Tanaka Hiroki

Materials Today Physics 60 (2026) 101997 (doi)10.1016/j.mtphys.2025.101997

AXEL: High-pressure xenon gas TPC for neutrinoless double beta decay search

Hikida J., Akiyama S., Ban S., Hirose M., Ichikawa A.K., Iwashita Y., Kikawa T., Nakajima Y., Nakamura K.D., Nakaya T., Obara S., Sakashita K., Sekiya H., Yoshida M., Sugashima B., Urano S., Hatsumi S., Kobayashi S., Sasaki H., Evan L.
Nuclear Instruments and Methods in Physics Research Section A: Accelerators, Spectrometers, Detectors and Associated Equipment 1080 (2025) 170706 (doi)10.1016/j.nima.2025.170706

Two-Step Monte Carlo Calculation Method for Sensitivity Coefficients of Reactor Period with Respect to Kinetics Parameters

Yamamoto Toshihiro, Sakamoto Hiroki

Nuclear Science and Engineering 199(9) (2025) 1365-1375 (doi)10.1080/00295639.2025.2463815

X-Ray-Induced Quenching of the Th^{229} Clock Isomer in CaF_2

Guan Ming, Bartokos Michael, Beeks Kjeld, Fujimoto Hiroyuki, Fukunaga Yuta, Haba Hiromitsu, Hiraki Takahiro, Kasamatsu Yoshitaka, Kitao Shinji, Leitner Adrian, Masuda Takahiko, Nagasawa Nobumoto, Okai Koichi, Ogake Ryoichiro, Pimon Martin, Pressler Martin, Sasao Noboru, Schaden Fabian, Schumm Thorsten, Seto Makoto, Shigekawa Yudai, Shimizu Kotaro, Sikorsky Tomas, Tamasaku Kenji, Takatori Sayuri, Watanabe Tsukasa, Yamaguchi Atsushi, Yoda Yoshitaka, Yoshimi Akihiro, Yoshimura Koji

Physical Review Letters 136(1) (2026) 013203 (doi)10.1103/75bb-thn7

A novel reduced-order model and two-stage optimization strategy for high-efficiency predicting thermal-hydraulic behavior in a 6×6 fuel bundle

Min Guangyun, Shen Xiuzhong, Wang Laishun, Jiang Naibin

Progress in Nuclear Energy 191 (2026) 106032 (doi)10.1016/j.pnucene.2025.106032

Proceedings

Development of controlling method of gamma rays by nuclear resonant forward scattering

Hiroyuki Yamashita

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 63-65 (in Japanese)

In vivo Imaging of Gold Nanoparticles via Neutron Activation

Nanase Koshikawa, Yuka Kikuchi, Jun Kataoka, Yuichiro Kadonaga, Atsushi Toyoshima, Masashi Murakami, Hiroki Kato, Kazuhiro Ooe, Koichi Takamiya

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 19 (in Japanese)

Present Status of Mössbauer Spectroscopy Using Sources Irradiated by KUR

Shinji Kitao, Ryo Masuda, Yasuhiro Kobayashi, Hiroyuki Yamashita, Makoto Seto

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 51 (in Japanese)

Search for neutron-antineutron oscillations with ultracold neutrons

Takashi Higuchi, Hiroyuki Fujioka

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 48 (in Japanese)

Others

Muonic X-Ray Measurement for the Nuclear Charge Distribution: the Case of Stable Palladium Isotopes

Saito T.Y., Niikura M., Matsuzaki T., Sakurai H., Igashira M., Imao H., Ishida K., Katabuchi T., Kawashima Y., Kubo M.K., Miyake Y., Mori Y., Ninomiya K., Sato A., Shimomura K., Strasser P., Taniguchi A., Tomono D., Watanabe, Y.

Arxiv (2025) (doi)10.48550/arXiv:2204.03233

Precision Spectroscopy of Antiprotonic Atoms for Investigation of Low-energy Antinucleon-nucleus Interactions
Higuchi Takashi, Fujioka Hiroyuki

Arxiv (2025) (doi)10.48550/arXiv:2501.08759

Towards Precision Spectroscopy of Antiprotonic Atoms for Probing Strong-field QED

Baptista Goncalo, Rathi Shikha, Roosa Michael, Senetaire Quentin, Sommerfeldt Jonas, Azuma Toshiyuki, Becker Daniel, Butin Francois, Eizenberg Ofir, Fowler Joseph, Fujioka Hiroyuki, Gamba Davide, Garroum Nabil, Guerra Mauro, Hashimoto Tadashi, Higuchi Takashi, Indelicato Paul, Machado Jorge, Morgan Kelsey, Nez Francois, Nobles Jason, Ohayon Ben, Okada Shinji, Schmidt Daniel, Swetz Daniel, Ullom Joel, Yzombard Pauline, Zito Marco, Paul Nancy

Arxiv (2025) (doi)10.48550/arXiv:2501.08893

Mass measurement by using newly developed doughnut-shaped helium gas cell at KISS

Y. Hirayama, M. Mukai, P. Schury, Y.X. Watanabe, S. Iimura, H. Ishiyama, S.C. Jeong, H. Miyatake, T. Niwase, M. Rosenbusch, A. Takamine, A. Taniguchi, Y. Yamanouchi, and M. Wada

RIKEN Accelerator Progress Report 2024 58 (2025) 43 (doi)10.34448/RIKEN.APR.58-042

3. Reactor Physics and Reactor Engineering

Papers

Applying the derivative source method to flux derivatives in Monte Carlo fixed source problems caused by interface shifts between spontaneous fission materials

Yamamoto Toshihiro, Sakamoto Hiroki

Annals of Nuclear Energy 227(A) (2026) 111916 (doi)10.1016/j.anucene.2025.111916

Data-fusion-based variable-fidelity reduced-order model for accurate thermal–hydraulic behavior prediction in a 6×6 rod bundle

Min Guangyun, Shen Xiuzhong, Xue Jingtao, Wang Laishun, Jiang Naibin

Annals of Nuclear Energy 226 (2026) 111905 (doi)10.1016/j.anucene.2025.111905

Design of open-tank-in-pool-type educational critical assemblies using UO_2 and U-7Mo fuels

Song Kyoseong, Pyeon Cheol Ho, Shim Hyung Jin

Annals of Nuclear Energy 213 (2025) 111139 (doi)10.1016/j.anucene.2024.111139

Mesh-free perturbation source method using the closest point pair method in k-eigenvalue Monte Carlo perturbation calculations

Yamamoto Toshihiro, Sakamoto Hiroki

Annals of Nuclear Energy 225 (2026) 111787 (doi)10.1016/j.anucene.2025.111787

Monte Carlo methods based on “virtual density” theory for calculation of k-eigenvalue sensitivity under nonuniform anisotropic deformation

Yamamoto Toshihiro, Sakamoto Hiroki

Annals of Nuclear Energy 213 (2025) 111181 (doi)10.1016/j.anucene.2024.111181

Prediction model for the initial dryout vapor quality in helically coiled tubes

Wang Ningyuan, Chen Deqi, Liu Hanzhou, Bu Shanshan, Yu Hongxing

Energy 347 (2026) 140377 (doi)10.1016/j.energy.2026.140377

Data-driven turbulence measurement, modeling, and prediction in a six-by-six fuel rod bundle in nuclear energy systems

Min Guangyun, Liu Junyong, Shen Xiuzhong, Jiang Naibin

Engineering Applications of Artificial Intelligence 167(3) (2026) 113945 (doi)10.1016/j.engappai.2026.113945

Cryogenic Systems for the TUCAN EDM Experiment

Martin Jeffery W., Algohi B., Anthony D., Barrón-Palos L., Bradley M., Brossard A., Bui T., Chak J., Davis C., de Vries R., Drury K., Fujimoto D., Fujitani R., Gericke M., Giampa P., Golub R., Hepworth T., Higuchi T., Ichikawa G., Imajo S., Jaison A., Jamieson B., Katotoka M., Kawasaki S., Kitaguchi M., Klassen W., Korkmaz E., Korobkina E., Lavvaf M., Lindner T., Lo N., Longo S., Madison K., Makida Y., Malcolm J., Mammei J., Mammei R., Marshall

C., McCrea M., Miller E., Miller M., Mishima K., Mohammadi T., Momose T., Okamura T., Ong H.J., Patni R., Picker R., Ramsay W.D., Rathnakela W., Sato J., Schreyer W., Shima T., Shimizu H., Sidhu S., Stargardter S., Switzer P., Tanihata I., Vanbergen S., van Oers W.T.H., Watanabe Y., Zahra A., Zhao M.
EPJ Web of Conferences 333 (2025) 03004 (doi)10.1051/epjconf/202533303004

Fissile nuclear material identification in shielding conditions using a neutron resonance analysis technique
Fabiana Rossi, Jaehong Lee, Yuki Yoshimi, Kota Hironaka, Mitsuo Koizumi, Tomooki Shiba, Kazushi Terada, Jun-ichi Hori
ESARDA BULLETIN 67 (2025) 59-67 (doi)10.3011/ESARDA.IJNSNP.2025.1

Development of measurement system acquiring time-resolved energy-domain Mössbauer spectra
Yamashita Hiroyuki, Kitao Shinji, Kobayashi Yasuhiro, Fujiwara Kosuke, Mitsui Takaya, Seto Makoto
Japanese Journal of Applied Physics 64(12) (2025) 120902 (doi)10.35848/1347-4065/ae224b

Development of a new method for simultaneous monitoring of criticality and nuclear material security/accountancy in a multiplicative system
Saga Toshiki, Takahashi Yoshiyuki, Unesaki Hironobu
Journal of Nuclear Science and Technology 1 (2026) 1-11 (doi)10.1080/00223131.2026.2613429

Measurements of boiling two-phase flow dynamics in a heated tube using high-speed neutron imaging
Ito Daisuke, Ami Takeyuki, Odaira Naoya, Ito Kei, Saito Yasushi
Journal of Nuclear Science and Technology 62(12) (2026) 1191-1198 (doi)10.1080/00223131.2025.2551721

Predictive accuracy of neutronics of light-water-moderated and graphite-reflected core with low-enriched uranium fuel at UTR-KINKI
Shiga Hiroshi, Watanabe Kenichi, Tabuchi Masato, Wakabayashi Genichiro, Yamanishi Hirokuni, Pyeon Cheol Ho
Journal of Nuclear Science and Technology 63(1) (2025) 112-119 (doi)10.1080/00223131.2025.2516858

Special issue on progressive reactor physics for current and future challenges
Tada Kenichi, Aizawa Naoto, Fujita Tatsuya, Fukushima Masahiro, Pyeon Cheol Ho
Journal of Nuclear Science and Technology 63(1) (2026) 1-2 (doi)10.1080/00223131.2026.2613783

Comparison of LaBr₃: Ce and CeBr₃ scintillators for ⁵⁵Fe detection
Park Jae Hyung, Song Siwon, Kim Seunghyeon, Lee Sangjun, Kim Jinhong, Pyeon Cheol Ho, Kim Sin, Lee Bongsoo
Nuclear Engineering and Technology 57(7) (2025) 103506 (doi)10.1016/j.net.2025.103506

Analysis of strain distribution of lead–bismuth eutectic inside a stainless steel cup by wavelength-resolved neutron imaging
Odaira Naoya, Kodama Katsuaki, Ito Daisuke, Saito Yasushi, Parker Joseph Don, Shinohara Takenao
Nuclear Materials and Energy 45 (2025) 102005 (doi)10.1016/j.nme.2025.102005

Evaluation of advanced drift-flux correlation for predicting low-flow and low-pressure two-phase flow behaviors in rod bundles
Kinoshita Ikuo, Hibiki Takashi, Shen Xiuzhong, Chen Shao-Wen
Progress in Nuclear Energy 192 (2026) 106008 (doi)10.1016/j.pnucene.2025.106008

Measurement of gamma-ray dose rate distribution at the Kindai university reactor using the thermoluminescent properties of BeO ceramic plates
Takahashi Leo, Wakabayashi Genichiro, Watanabe Kenichi, Tanaka Hiroki, Takata Takushi, Nohtomi Akihiro, Shinsho Kiyomitsu
Radiological Physics and Technology 19(1) (2025) 91-100 (doi)10.1007/s12194-025-00981-4

Isotope-selective Ion trapping via sympathetic cooling using a surface-electrode trap with a hole for collimated atomic loading
Miyamoto Masanari, Higuchi Takashi, Furusawa Kentaro, Sekine Norihiko, Hayasaka Kazuhiro, Tanaka Utako
Scientific Reports 16(1) (2025) 300 (doi)10.1038/s41598-025-29512-2

Proceedings

Conversion of Kyoto University Critical Assembly (KUCA) to Low-Enriched Uranium Fuel: Status and Future Plans
Hironobu Unesaki, Yoshiyuki Takahashi, Yasunori Kitamura, Tsuyoshi Misawa

International Group on Research Reactors (IGORR) 22nd Conference Ibaraki, Japan (Jun. 15-19, 2025)

A Study on the Acceleration of Monte Carlo-Based Perturbation Calculations for Neutron Transport Problems
Yiming Wang, Toshihiro Yamamoto

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 39 (in Japanese)

Effect of Borehole Spatial Position on the Gas Concentration Field in a Goaf Area

Haifeng Ma, Xiuzhong Shen, Wenwang YANG

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Elucidation and Modeling of Flow Characteristics and Interfacial Transport Mechanisms in Gas-Liquid Two-Phase Flow

Xiuzhong Shen, Takashi Hibiki, Haomin Sun

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 67-69 (in Japanese)

Neutron irradiation experiment for ITER diagnostic systems in JADA

Sin-iti Kitazawa, Masao Ishikawa, Ryota Imazawa, Eiichi Yatsuka, Tomohiko Ushiki, Kunpei Nojiri, Shigehiro Kono, Kazuhiro Totimoto, Nemoto Yoshiki, Shunsuke Tainaka, Takanori Kikuchi, Yasufumi Yoshino, Ryou Okumura, Koichi Takamiya

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 16 (in Japanese)

Numerical Simulation and AI-Driven Prediction of Thermodynamic Performance in Curved Channel Printed Circuit Heat Exchangers

Feiran Wang, Yasushi Saito, Daisuke Ito, Naoya Odaira, Sichao Tan, Jiming Wen

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Profundity in fluid dynamics research – our vortex modeling study as example –

Kei Ito

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 4-6 (in Japanese)

Relationship with Critical Assembly

Tsuyoshi Misawa

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 13-15 (in Japanese)

Research on the Dynamics of Pollutants in Water, Soil, and Sediment Environments and Environmental Remediation Technologies

Yoko Fujikawa

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 70-72 (in Japanese)

Reviews

核物質を含む中性子増倍系の γ 線スペクトル測定による特性把握

Yasushi Nauchi

FBNews 584 (2025) 46027 (in Japanese)

Others

Development of a bipolar 50 V output digital-to-analog converter system for ion-shuttling operations

Oshio T., Nishimoto R., Higuchi T., Hayasaka K., Koike K., Morisaka S., Miyoshi T., Ohira R., Tanaka U.

Arxiv (2025) (doi)10.48550/arXiv:2412.07363

In-situ high voltage generation with Cockcroft-Walton multiplier for xenon gas time projection chamber

Akiyama Shinichi, Hikida Junya, Yoshida Masashi, Nakamura Kazuhiro, Ban Sei, Hirose Masanori, Ichikawa Atsuko K., Iwashita Yoshihisa, Kikawa Tatsuya, Nakajima Yasuhiro, Nakamura Kiseki D., Nakaya Tsuyoshi, Obara Shuhei, Sakashita Ken, Sekiya, Hiroyuki, Sugashima Bungo, Urano Soki, Hatsumi Sota, Kobayashi Sota, Sasaki Hayato

Arxiv (2025) (doi)10.48550/arXiv:2501.08554

4. Material Science and Radiation Effects

Papers

Investigating Thermoelectric Properties of GeTe Alloys with Multi Element Doping: Insights from High-Entropy Engineering

Sun Yifan, Kurosaki Ken, Imamura Tetsuya, Torata Ryusuke, Ohishi Yuji, Palaporn Dulyawich, Nachaithong Theeranuch, Pinitsoontorn Supree, Padchasri Jintara, Kidkhunthod Pinit, Suwannaruang Methus, Tanusilp Sora-at
ACS Omega 10(29) (2025) 32112-32121 (doi)10.1021/acsomega.5c03826

Phase Transitions of Eutectic High Entropy Alloy AlCoCrFeNi_{2.1} Under Shock Compression

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Anisotropic Band-Split Magnetism in Magnetostrictive CoFe₂O₄

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A novel liquid film shearing polishing technique for silicon carbide and its processing damage mechanisms

Chen Hongyu, Wan Hongbing, Hong Binbin, Hang Wei, Zhu Te, Zhang Peng, Cao Xingzhong, Xu Qiu, Wang Rong, Han Xuefeng, Lyu Binghai

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Multiscale Insights into Sodium Storage in Hard Carbon from Operando Small- and Wide-Angle Neutron Scattering Measurements

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Remodelling hierarchical $NiCo_2O_4@ZnS$ nanorods with multi-walled carbon nanotubes as a counter electrode for dye-sensitized solar cell applications

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6. Life Science and Medical Science

Papers

Targeting Both Monomer and Oligomer with Fibrinogen Efficiently Suppresses Amyloid Fibril Formation and Cell Toxicity of Amyloid β 1-42

Yamamoto Naoki, Yuzu Keisuke, Morishima Ken, Inoue Rintaro, Sugiyama Masaaki, Koyama Daisuke, Chatani Eri

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7. Neutron Capture Therapy

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Yoshinori Sakurai, Natsuko Kondo, Kazuyo Igawa, Sachiko Yoshihashi, Atsushi Takada, Hiroyuki Michiue, Shinichiro Hayashi, Kenichi Tanaka, Masataka Oita, Satoshi Nakamura, Takushi Takata, Takuya Maeyama, Isao Murata

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Yasuki Okuno, Hiroki Tanaka, Takushi Takata, Nishiki Matsubayashi, Shunsuke Hidaka

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Natsuko KONDO, Yoshinori SAKURAI

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高井まどか, 三浦佳子 (監修)
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Visualization of Liquid Water Behavior in a Polymer Electrolyte Fuel Cell with Gas Flow Channels Formed on a Gas Diffusion Layer

NAKAGAWA Katsufumi, OBAYASHI Yuto, MURAKAWA Hideki, SUGIMOTO Katsumi, ASANO Hitoshi, SHIRASE Yuto, SCHREIBER Christopher, DZRAMADO Eric, INUKAI Junji, ADACHI Hironori, NASU Mitsunori, ODAIRA Naoya, ITO Daisuke, SAITO Yasushi

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Yasushi Saito

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Development of boron-containing scintillators Naoya Odaira, Yasuki Okuno

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 35 (in Japanese)

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Shigeomi Takai, Hirotaka Ezaka, Honoka Yakagi, Takeshi Yabutsuka, Naoya Odaira, Daisuke Ito, Yasushi Saito

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 56 (in Japanese)

9. TRU and Nuclear Chemistry

Papers

Pharmacokinetic Profiling Using ³H-Labeled Eggshell Membrane and Effects of Eggshell Membrane and Lysozyme Oral Supplementation on DSS-Induced Colitis and Human Gut Microbiota

Shimizu Miho, Sugai Wataru, Ohto-Fujita Eri, Atomi Aya, Nogawa Norio, Takamiya Koichi, Yoshinaga Hisao, Asano Yoshihide, Yamashita Takashi, Sato Shinichi, Enomoto Atsushi, Hatakeyama Nozomi, Yasuda Shunsuke, Tanaka Kazuya, Atomi Tomoaki, Harada Kenji, Hasebe Yukio, Watanabe Toshiyuki, Atomi Yoriko

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Development of synthetic method for partially oxidized phthalocyanine complexes extensible to minor actinides
Takumi Saito, Miki Harigai, Hisao Yoshinaga, Takashi Shimada, Tomoo Yamamura

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Lu-177 preparations

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Kenji Shirasaki, Kohshin Washiyama, Tomoo Yamamura

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Masanobu Nogami, Keigo Uchida, Shion Matsumoto, Chikage Abe, Tomoo Yamamura

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Hiroki Nakada, Yoshitaka Kasamatsu, Koichi Takamiya, Makoto Inagaki

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 22 (in Japanese)

Experiments on Co-Precipitation of Oxalate Europium with Group 2 Elements Toward Elucidating the Chemical
Properties of Element 102, Nobelium

Ryota Kikuchi, Ruilin Wang, Yuta Itakura, Masashi Kaneko, Hiroyuki Kazama, Ryohei Nakanishi, Ruilin Wang,
Yuta Itakura, Miu Konno, Khult Enni, Kyosuke Shibamoto, Kenta Mori, Kazushi Kawamoto, Ryoma Kishimoto,
Koichi Takamiya, Makoto Inagaki, Hiromitsu Haba, Akihiro Nanbu, Yoshitaka Kasamatsu

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Plan for instruments related to neutron irradiation and neutron activation analysis in the new research reactor at
the Monju site

Makoto Inagaki, Koichi Takamiya, Tsutomu Miura, Kohshin Washiyama, Kazuhiko Akiyama, Takahito Osawa,
Yoshitaka Kasamatsu, Naoki Shirai, Kunihiro Tsuchiya, Go Yoshida, Nobuhiro Sato

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Solubility and solid phase of coprecipitated Zr and Ce hydroxides

Naoki Harada, Taishi Kobayashi, Daiju Matsumura, Atsushi Ikeda-Ohno, Takayuki Sasaki

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Structural Stability of Radio-activated Gold Compounds via Neutron Irradiation

Kazuki Kajiyama, Masashi Murakami, Akina Mitsukai, Yoshifumi Shirakami, Yuichiro Kadonaga, Nanase
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Study of Isotope Separation via Chemical Exchange Reaction

Shu Hayakawa, Ryota Sawamura, Ryunosuke Karashimada, Gao Shan, Yoshikazu Ozawa, Kensuke Osada, Ichio
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Low Solubility and Transport Consequences of Europium Addition in AgSbTe₂ Thermoelectrics

Norrawit Tonmitr, Peeranat Chunlanin, Methus Suwannaruang, Theeranuch Nachaithong, Yifan Sun, Ken
Kurosaki, Sora-at Tanusilp

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Demetrio Antonio ROMERO HERNÁNDEZ, Yuki YAMASHITA, Kazuyuki OSHITA

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Takeshi IIMOTO

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Miyashita Takeshi, Chen Ye, Kuriyama Yasutoshi, Tomida Masashi, Tachibana Hidenobu, Iwashita Yoshihisa, Nonoyama Takayuki, Hidani Sena, Murakami Taichi, Matsuura Taeko

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Ishi Yoshihiro, Uesugi Tomonori, Mori Yoshiharu, Nishio Katsuhisa

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12. Other

Papers

Evaluating the response ratio of an ionization chamber filled with air to that with P-10 gas for ⁴¹Ar calibration

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Toyama Mari, Suganoya Ryuji, Nagao Noriharu
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