

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. Algoi, 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. Algoi, 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 $\text{Th}229$ 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., Algoji 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

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 23

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

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 50

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

Parsons Sophie Emilene, Katagiri Kento, Chen Hangman, Hari Anirudh, Cubit Ernest W., Irvine Sara Jessica, Luccioni Dorian, Lin Rayen, Madril Laura Elizabeth, Reddy Tharun, McKinney William J., Ren Jie, Yang Wuxian, Ozaki Norimasa, Amouretti Alexis, Kodama Ryosuke, Nakamura Hirotaka, Nakanishi Yusuke, Ota Masato, Seto Yusuke, Takagi Sota, Okuchi Takuo, Umeda Yuhei, Inubushi Yuichi, Miyanishi Kohei, Sueda Keiichi, Togashi Tadashi, Yabashi Makina, Yabuuchi Toshinori, Li Wanghui, Specht Paul Elliot, Cao Penghui, Chen Wen, Vohra Yogesh K., Dresselhaus-Marais Leora

Advanced Engineering Materials 28(4) (2026) e202502073 (doi)10.1002/adem.202502073

Anisotropic Band-Split Magnetism in Magnetostrictive CoFe₂O₄

Lane Harry, Kaur Guratinder, Kawamata Masahiro, Nambu Yusuke, Keller Lukas, Ewings Russell A., Voneshen David J., Williams Travis J., Walker Helen C., Viehland Dwight, Gehring Peter M., Stock Chris

Advanced Functional Materials 36(17) (2026) e16830 (doi)10.1002/adfm.202516830

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

Applied Surface Science 688 (2025) 162317 (doi)10.1016/j.apsusc.2025.162317

Research on high-quality and low-damage liquid film shearing polishing of 4H-SiC and its surface/subsurface damage evolution

Chen Hongyu, Wan Hongbing, Yang Yujie, Lyu Binghai, Zhu Te, Zhang Peng, Cao Xingzhong, Xu Qiu, Hang Wei

Applied Surface Science 720 (PartA) (2026) 165117 (doi)10.1016/j.apsusc.2025.165117

Effect of P₂O₅ addition on the structure of Na₂O–Y₂O₃–SiO₂ glasses and glass-ceramics

Maekawa Ryuichi, Kawada Koji, Yazawa Koji, Deguchi Kenzo, Ohki Shinobu, Yamashita Kimihiro, Hashimoto Hideki, Niitsu Kodai, Onodera Yohei, Okura Toshinori

Ceramics International 51(30) PartA (2025) 62626-62634 (doi)10.1016/j.ceramint.2025.10.421

Confined water distribution in the ionomer within the catalyst layers of polymer electrolyte fuel cells: A small-angle neutron scattering study

Iwase Hiroki, Arima-Osonoi Hiroshi, Harada Masashi, Kumada Takayuki

Chemical Engineering Journal 510 (2025) 161321 (doi)10.1016/j.cej.2025.161321

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

Y. Umemoto, K. Ohishi, D. Igarashi, R. Tatara, C. C. Lin, K. Nakamoto, Y. Kawamura, K. Hiroi, S. Takata, Y. Nambu, Y. Tateyama, S. Komaba

Chemical Science 15(17) (2026) 7466-7474 (doi)10.1039/D5SC09600F

Refining hydrogen positions in α -FeOOH through combined neutron diffraction and computational techniques

Yusuke Nambu, Akihide Kuwabara, Masahiro Kawamata, Seira Mori, Megumi Okazaki and Kazuhiko Maeda

Dalton Transactions 55 (2026) 5780-5787 (doi)10.1039/D5DT00217F

Effect of soft X-rays on vacancy-type defects in highly hydrogenated DLC films

Kanda Kazuhiro, Niwa Daisuke, Mishima Tomohiro, Hori Fuminobu, Yabuuchi Atsushi, Kinomura Atsushi

Diamond and Related Materials 154 (2025) 112136 (doi)10.1016/j.diamond.2025.112136

Defect structure evolution in early-stage neutron irradiated F82H and its model alloys at 363 K and 563K

Wang Pinyao, Huang Shaosong, Sato Koichi, Xu Qiu, Yoshiie Toshimasa

Fusion Engineering and Design 222 (2025) 115470 (doi)10.1016/j.fusengdes.2025.115470

Experimental investigation of tritium release from LiAlO₂ and absorption into Zr
Kobayashi Seiyo, Katayama Kazunari, Isogawa Hiroki, Matsuura Hideaki, Akashi Kenta, Inuma Yuto
Fusion Engineering and Design 222 (2026) 115471 (doi)10.1016/j.fusengdes.2025.115471

Investigation of the high-temperature tensile properties and helium ion irradiation resistance of W-La₂O₃ composites prepared by hot rolling
Xu Dang, Fu Kaichao, Sang Changcheng, Chen Ruizhi, Chen Pengqi, Lu Yingwei, Zhu Dahuan, Xu Qiu, Cheng Jigui
Fusion Engineering and Design 218 (2025) 115199 (doi)10.1016/j.fusengdes.2025.115199

The effect of La₂O₃ on the irradiation resistance of tungsten under low energy and high flux helium plasma irradiation
Fu Kaichao, Xu Dang, Sang Changcheng, Chen Ruizhi, Chen Pengqi, Zhu Dahuan, Xu Qiu, Cheng Jigui
Fusion Engineering and Design 222 (2026) 115531 (doi)10.1016/j.fusengdes.2025.115531

Tritium transfer from neutron-irradiated lithium to yttrium and gas phase
Mori Yuuka, Katayama Kazunari, Haruta Junnosuke, Kuniyoshi Mario, Katayama Shota, Fukada Satoshi, Akashi Kenta, Takeishi Toshiharu, Oyaidzu Makoto, Inuma Yuto
Fusion Engineering and Design 219 (2025) 115265 (doi)10.1016/j.fusengdes.2025.115265

A Sr–Ga Oxy-Hydroxide with High Thermal Stability: Unraveling Its Characteristic Hydrogen-Bond Network
Asai Yusuke, Nishihara Yuto, Kokubo Yoko, Arai Kenji, Ohishi Kosaku, Ogawa Satoshi, Saito Miwa, Nambu Yusuke, Avdeev Maxim, Kimoto Koji, Goo Zi Lang, Sugimoto Kunihisa, Inada Miki, Hayashi Katsuro, Motohashi Teruki
Inorganic Chemistry 64(36) (2025) 18294-18303 (doi)10.1021/acs.inorgchem.5c02586

Debye temperatures of Au nanoparticles supported on TiO₂ and SiO₂ estimated from ¹⁹⁷Au Mössbauer spectroscopy
Kobayashi Yasuhiro, Ohashi Hironori, Seto Makoto
Interactions 247(1) (2026) 19 (doi)10.1007/s10751-026-02366-4

Enhancing comprehensive properties of W/Cu joints through surface grinding and spark plasma sintering
Sang Changcheng, Fu Kaichao, Xu Dang, Chen Ruizhi, Chen Pengqi, Lu Yingwei, Xia Yonghong, Xu Qiu, Cheng Jigui
International Journal of Refractory Metals and Hard Materials 130 (2025) 10716 (doi)10.1016/j.ijrmhm.2025.107160

Gamma ray ionizing dosimeter with a high radiation resistant CIGS solar cell
Okuno Yasuki, Kamikawa Yukiko, Imaizumi Mitsuru, Okamoto Tamotsu, Kobayashi Tomohiro, Makino Takahiro, Ryuta Kasada, Jimba Yuki, Usui Kazuya, Gotoh Yasuhito, Akiyoshi Masafumi, Sato Nobuhiro, Nakamura Tetsuya, Otake Yoshie
Japanese Journal of Applied Physics 65(4) (2026) 041003 (doi)10.35848/1347-4065/ae3f6c

Effect of L1₂ precipitates on hydrogen-induced defects and hydrogen embrittlement behavior in CoCrFeNi-based high-entropy alloys
Ye Fengjiao, Chen Wei, Wu Haibiao, Zhu Te, Zhang Peng, Xu Qiu, Cao Xingzhong
Journal of Alloys and Compounds 1040 (2025) 183490 (doi)10.1016/j.jallcom.2025.183490

Characterization of Precipitates in Cu–Ni–Si Alloys with Different Si Contents by SAXS, SANS, and APT
Hirokazu Sasaki, Yojiro Oba, Kosuke Hiroi, Masato Onuma, Jun Uzuhashi, Tadakatsu Ohkubo
Journal of Japan Institute of Copper 64(1) (2025) 59-64 (inJapanese) (doi)10.34562/jic.64.1_59

Effects of cold work on hydrogen embrittlement resistance of medium- and high-entropy alloys in the FeNiCrCoMn system
Xu Q., Ren X. L., Zhong Z. H., Sato K., Zhu T.
Journal of Materials Science 60(46) (2025) 23891-23908 (doi)10.1007/s10853025-11726-4

Investigation of interfacial reliability and thermal shock resistance of W/CuCrZr joints using a W–Cu functionally graded material interlayer
Sang Changcheng, Fu Kaichao, Xu Dang, Chen Ruizhi, Chen Pengqi, Lu Yingwei, Xu Qiu, Cheng Jigui
Journal of Materials Science 60(41) (2025) 20032-20047 (doi)10.1007/s10853025-11587-x

Enhanced mechanical properties of a copper nanoparticle-reinforced low-activation high-entropy alloy and its implications for irradiation resistance

Zhu Te, Xia Yuanhang, Wang Qianqian, Fan Ping, Zhang Qiaoli, Ma Hailiang, Yuan Daqing, Wang Baoyi, Xu Qiu, Cao Xingzhong

Journal of Nuclear Materials 623 (2026) 156472 (doi)10.1016/j.jnucmat.2026.156472

Enhanced thermal stability and irradiation resistance of ODS-W/CuCrZr joints by interlayer employ and interface improvement

Xu Dang, Sang Changcheng, Fu Kaichao, Chen Ruizhi, Chen Pengqi, Lu Yingwei, Zhu Dahuan, Xu Qiu, Cheng Jigui

Journal of Nuclear Materials 611 (2025) 155818 (doi)10.1016/j.jnucmat.2025.155818

Changes in defect structure in mechanically polished A533B steels by ion irradiation using slow positron beam techniques

Sato Koichi, Yabuuchi Atsushi, Kinomura Atsushi, Xu Qiu, Tsuchida Hidetsugu

Journal of Physics: Conference Series 3149 (2025) 012013 (doi)10.1088/1742-6596/3149/1/012013

Charged particle pulse irradiation and damage evolution in metals

Yoshie T., Kinomura A., Nishimura T., Hori F.

Journal of Physics: Conference Series 3149 (2025) 012012 (doi)10.1088/1742-6596/3149/1/012012

In-situ measurement of stress relaxation process in hydrogenated bulk Fe by gamma-ray induced positron annihilation spectroscopy

Hori F., Araki S., Xu Q., Taira Y.

Journal of Physics: Conference Series 3149 (2025) 012018 (doi)10.1088/1742-6596/3149/1/012018

Local structure analyses of oxygen impurities and vacancy-type defects in oxygen doped CrN epitaxial films

Kitaura Mamoru, Michishio Koji, Kinomura Atsushi, Masai Hirokazu, Hashimoto Yusuke, Yamamoto Yuta, Matsushita Tomohiro, Watanabe Shinta, Happo Naohisa, Kimura Koji, Hayashi Koichi, Ishizaki Manabu, Suzuki Tsuneo

Journal of Physics: Conference Series 3029 (2025) 012018 (doi)10.1088/1742-6596/3029/1/012018

Nanostructural Evolution in Stainless Steel fabricated by Laser-based Powder Bed Fusion: A Combined SEM/EDX and Positron Lifetime Study

Kobayashi Keita, Kumagai Kazuhiro, Kasashima Haruka, Morishita Kazuyuki, Yasokawa Yukie, Yabuuchi Atsushi, Ito Kenji

Journal of Physics: Conference Series 3149 (2025) 012014 (doi)10.1088/1742-6596/3149/1/012014

Structural evolution during sintering of additively manufactured stainless-steel objects through electron microscopy and positron annihilation lifetime measurements

Kobayashi Keita, Kumagai Kazuhiro, Yasokawa Yukie, Yabuuchi Atsushi, Ito Kenji

Journal of Physics: Conference Series 3029 (2025) 012020 (doi)10.1088/1742-6596/3029/1/012020

Dendritic crystals of α -MoO₃

Yang Ying, Nanko Makoto, Chu Ngo Minh, Do Thi Mai Dung, Nakayama Tadachika, Niihara Koichi, Suematsu Hisayuki

Journal of the American Ceramic Society 108(7) (2025) e20515 (doi)10.1111/jace.20515

Effect of Zn doping on p-type conduction of γ -CuI studied by X-ray fluorescence holography and positron annihilation spectroscopy Kitaura Mamoru, Kimura Koji, Sekhar Halubai, Hayashi Koichi, Michishio Koji, Ishizaki Manabu, Hayasaka Takahiro, Kinomura Atsushi, Watanabe Shinta

Journal of the Ceramic Society of Japan 133(9) (2025) 515-520 (doi)10.2109/jcersj2.25054

Temperature variation of the magnetic properties of mechanochemically synthesized (Fe₂O₃)_{1-x}(Al₂O₃)_x solid solutions through the Mössbauer spectroscopy

Luo Dong, Nakaishi Hayato, Yabutsuka Takeshi, Kitao Shinji, Seto Makoto, Takai Shigeomi

Journal of the Ceramic Society of Japan 133(9) (2025) 535-541 (doi)10.2109/jcersj2.25053

Exploration for the physical origin and impact of chemical short-range order in high-entropy alloys: Machine learning-assisted study

Shi Panhua, Xie Zhen, Si Jiaxuan, Yu Jianqiao, Wu Xiaoyong, Li Yaojun, Xu Qiu, Wang Yuexia

Materials & Design 253 (2025) 113892 (doi)10.1016/j.matdes.2025.113892

Engineering Fe(II) spin-crossover/2D reduced graphene oxide heterostructures for tunable cooperativity, magnetic coupling, and conductance switching

Bhattacharya Shatabda, Moulick Shubhadip, Das Chinmoy, Karmakar Shiladitya, Tada Hirokazu, Saha-Dasgupta Tanusri, Ohto Tatsuhiko, Kitao Shinji, Seto Makoto, Chakraborty Pradip, Pal Atindra Nath
Nanotechnology 36(45) (2025) 455702 (doi)10.1088/1361-6528/ae1593

Precipitate-enhanced deuterium retention and desorption resistance in a $W_{10}Ta_{20}Ti_{30}V_{35}C_5$ refractory high-entropy alloy
Zhang Jingsai, Chen Shunhua, Pan Xiongqiyue, Sun Fei, Xu Qiu, Wu Yucheng

Nuclear Engineering and Technology 58(1) (2026) 103924 (doi)10.1016/j.net.2025.103924

Transmission-type brightness-enhancement system for reactor-based slow positron beamline

Kuzuya Yoshihiro, Oshima Nagayasu, Yabuuchi Atsushi, Kinomura Atsushi

Nuclear Instruments and Methods in Physics Research Section B: Beam Interactions with Materials and Atoms 570 (2026) 165946 (doi)10.1016/j.nimb.2025.165946

Symmetry-breaking physics in ilmenite-type MnGe O₃: A comprehensive single-crystal study

Aoki Ippo, Matsumura Takao, Suzuki Michi-To, Horii Tatsuya, Asai Shinichiro, Liu Zheyuan, Nambu Yusuke, Kida Takanori, Narumi Yasuo, Hagiwara Masayuki, Sekine Daiki, Nishio-Hamane Daisuke, Masuda Takatsugu, Matsubara Masakazu, Kimura Kenta

Physical Review Materials 10(1) (2026) 014406 (doi)10.1103/myy3-8mx9

Thermodynamic signatures of diagonal nematicity in RbFe₂As₂ superconductor

Mizukami Yuta, Tanaka Ohei, Ishida Kousuke, Onishi Asato, Kageyama Yoichi, Tsujii Masaya, Ohno Ryotaro, Kimura Noriaki, Mitsui Takaya, Kitao Shinji, Kurokuzu Masayuki, Seto Makoto, Ishida Shigeyuki, Iyo Akira, Eisaki Hiroshi, Hashimoto Kenichiro, Shibauchi Takasada

PNAS Nexus 4(4) (2025) pgaf060 (doi)10.1093/pnasnexus/pgaf060

Phase diagram of the polystyrene/near-critical water system

Shibata Motoki, Takenaka Mikihito, Motokawa Ryuhei, Kumada Takayuki, Ueda Yuki, Miyazaki Tsukasa, Nakanishi Yohei, Abe Jun, Iwase Hiroki, Shibayama Mitsuhiro, Arima-Osonoi Hiroshi, Takata Shin-ichi, Yamamoto Katsuhiro

Polymer 340 (2025) 129203 (doi)10.1016/j.polymer.2025.129203

Temperature and time dependence on extraction of Molybdenum-99 hot atoms from neutron-irradiated β -molybdenum trioxide particles into water

Yang Ying, Ngo Minh Chu, Kitagawa Taiga, Fujita Yoshitaka, Takahashi Yukiko, Suzuki Tatsuya, Nakayama Tadachika, Dung Do Thi Mai, Niihara Koichi, Suematsu Hisayuki

RSC Advances 15(22) (2026) 17222-17229 (doi)10.1039/d5ra01952d

Remodelling hierarchical NiCo₂O₄@ZnS nanorods with multi-walled carbon nanotubes as a counter electrode for dye-sensitized solar cell applications

Nukunudompanich Methawee, Nachaithong Theeranuch, Phumuen Phatcharin, Wannabut Wassana, Kunbuala Neeraphat, Nijpanich Supinya, Pattarith Kongsak, Areerob Yonrapach

Scientific Reports 16(1) (2026) 6869 (doi)10.1038/s41598-026-38255-7

Development of Slow Positron Beamline Using 30-MeV L-Band LINAC

Kinomura Atsushi, Kawakami Yuichiro, Yabuuchi Atsushi, Xu Qiu

Solid State Phenomena 374 (2025) 37-43 (doi)10.4028/p-6pnUcQ

Fortran 90/95 Code for Computing the $G(E)$ Function

Ohkubo Yoshitaka, Tanigaki Minoru, Tsuda Shuichi

Transactions of the Atomic Energy Society of Japan 24(4) (2025) 99-104 (in Japanese) (doi)10.3327/taesj.J24.013

Proceedings

Evaluation of Neutron Shielding Capability of New Ceramic Materials

Hiroaki Terato, Midori Isobe, Naoyuki Osada, Yoshinori Sakurai

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 27 (in Japanese)

Gas- and Liquid-phase Chemical Approaches for Superheavy Elements

Tetsuya K. Sato

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 28 (in Japanese)

Books

Eric Diffenderfer, Satoshi Nakamura, Akihiko Masuda & Hiroki Tanaka
Neutron Detectors and Measuring Methods
Springer Nature Switzerland (2026) (doi)10.1007/978-3032-10159-4_19

第4章第4項陽電子消滅分光法
木野村淳
DLC膜ハンドブック 第2版
斎藤英俊, 赤坂大樹
株式会社エヌ・ティー・エス (2026) (in Japanese)

Others

Neutron emission following nuclear muon capture on palladium isotopes
Saito T.Y., Niikura M., Matsuzaki T., Abe S., Ishida K., Kawase S., Kawashima Y., Koiwai T., Matsui K., Momiyama S., Nambu A., Otsu H., Sakurai H., Sato A., Sun X., Taniguchi A., Tomono D., Wang H., Watanabe Y., Wimmer K.
Arxiv (2025) (doi)10.48550/arXiv:2508.00377

5. Geochemistry and Environmental Science

Papers

Atomistic Mechanism of Al Substitution Effects on the Ferroelastic Post-stishovite Transition by High-Pressure Single-Crystal X-Ray Diffraction
Zhang Yanyao, Chariton Stella, Prakapenka Vitali B., Okuchi Takuo, Lin Jung-Fu
American Mineralogist 110(6) (2025) 856- 865 (doi)10.2138/am-2023-9257

Geochemical systematics of spreading ridge-arc collision – Philippine Sea CBF rift and the Izu-Bonin arc
Ishizuka Osamu, Taylor Rex N., Sato Taichi, Shimoda Gen, Harigane Yumiko, Umino Susumu, Sakamoto Izumi, Yokoyama Yuka, Mori Koki, Tani Kenichiro, Ohara Yasuhiko, Conway Chris E.
Chemical Geology 703 (2026) 123232 (doi)10.1016/j.chemgeo.2026.123232

Decomposed SH-, SV-, and P-wavefields and their visualizations for interpretation of reproduced synthetic waves in the Osaka sedimentary basin, Japan, due to a Mw 5.6 earthquake beneath its edge
Uebayashi Hiroto, Sekiguchi Haruko
Earth, Planets and Space 77(1) (2025) 165 (doi)10.1186/s40623025-02299-2

An I-Xe age 8 Myr after solar system formation in a Hayabusa2 sample records alteration on the parent planetesimal of asteroid Ryugu
Crowther S.A., Cowpe J.S., Fawcett L., Gilmour J.D., Okazaki R., Kitajima F., Yada T., Tachibana S., Yogata K., Sakamoto K., Yurimoto H., Nakamura T., Noguchi T., Naraoka H., Yabuta H., Watanabe S., Tsuda Y., Nishimura M., Nakato A., Miyazaki A., Abe M., Okada T., Usui T., Yoshikawa M., Saiki T., Tanaka S., Terui F., Nakazawa S., Busemann H., Hashizume K., Marty B., Meshik A., Riebe M.E.I., Krietsch D., Maden C., Ishida A., Clay P., Lawton T., Broadley M.W., Byrne D.J., Füri E., Zimmermann L., Pravdivtseva O., Miura Y.N., Park J., Bajo K., Takano Y., Yamada K., Kawagucci S., Matsui Y., Yamamoto M., Richter K., Sakai S., Iwata N., Shirai N., Inagaki M., Ebihara M., Nishiizumi K., Nagao K., Lee J.I., Kano A., Caffee M.W., Uemura R.
Geochimica et Cosmochimica Acta 413 (2026) 218-232 (doi)10.1016/j.gca.2025.12.008

Shock Metamorphic Effects in Feldspar in Martian Regolith Breccia: Measurement, Quantification, and Implications
Cao Fengke, Flemming Roberta L., Izawa Matthew R. M., Loiseau Liane, Di Cecco Veronica E., Tait Kimberly T., Moriguti Takuya, Houde Victoria L., Okuchi Takuo, Hyde Brendt C., Moser Desmond E., Osinski Gordon R., Agee Carl B., Irving Anthony
J. Journal of Geophysical Research: Planets 131(3) (2026) e2025JE009228 (doi)10.1029/2025JE009228

Time-dependent changes in the origin of aqueous fluids in the shallow mantle wedge: Evidence from noble gas and halogen compositions of the Kamabuseyama serpentinite, Kanto Mnts., Japan
Aida Koki, Wallis Simon Richard, Sumino Hirochika, Yokota Mari
Lithos 524-525 (2026) 108400 (doi)10.1016/j.lithos.2026.108400

Cosmic ray exposure and gas retention ages of the shocked angrite Northwest Africa 7203: Implications for a collisional history of angrites' parent body

Takenouchi Atsushi, Sumino Hirochika, Hayashi Hideyuki, Mikouchi Takashi, Bizzarro Martin

Meteoritics & Planetary Science 60(11) (2025) 2560-2573 (doi)10.1111/maps.70055

Terminal pleistocene organic carbon anomaly in Lake Biwa sediments linked to potential anthropogenic fires: Implications for early human impact on large lake systems

Inoue Jun, Tanaka Toko, Ikegami Maiko

Palaeogeography, Palaeoclimatology, Palaeoecology 676 (2025) 113159 (doi)10.1016/j.palaeo.2025.113159

In situ observation of shock-induced structural evolution of calcite

Umeda Yuhei, Ozaki Norimasa, Sekine Toshimori, Hironaka Yoichiro, Inubushi Yuichi, Katagiri Kento, Kodama Ryosuke, Miyanishi Kohei, Nakamura Hiroataka, Sato Tomoko, Seto Yusuke, Sueda Keiichi, Togashi Tadashi, Tomioka Naotaka, Yabuuchi Toshinori, Yabashi Makina, Okuchi Takuo

Physics and Chemistry of Minerals 52(2) (2025) 20 (doi)10.1007/s00269-025-01320-0

Nanosecond structural evolution in shocked coesite

Feng Xiaokang, Pan Shuning, Katagiri Kento, Shi Jiuyang, Qu Jia, Nonaka Keita, Liu Cong, Sun Liang, Zhu Pinwen, Ozaki Norimasa, Sano Takayoshi, Inubushi Yuichi, Miyanishi Kohei, Sueda Keiichi, Togashi Tadashi, Yabashi Makina, Yabuuchi Toshinori, Nakamura Hiroataka, Hironaka Yoichiro, Umeda Yuhei, Seto Yusuke, Okuchi Takuo, Sun Jian, Sekine Toshimori, Yang Wenge

Science Advances 11(17) (2025) eads3139 (doi)10.1126/sciadv.ads3139

Proceedings

Radiation-Induced Fe²⁺-Dependent Oxidative Membrane Damage and Pedagogical Framework in Environmental Dynamics (Faculty of Agriculture)

Shinya Kato

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 66 (in Japanese)

Search for nuclear fallout particles containing fissile material

Koichi Takamiya, Naoyuki Osada, Maiko Ikegami, Yasuhito Igarashi

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 24 (in Japanese)

Size distribution of elements in the atmospheric aerosols observed at Skai, Osaka.

Norio Ito, Hisao Yosinaga

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 26 (in Japanese)

Others

Unprecedented flow strength in shock-compressed nano-polycrystalline diamond

Hari, Anirudh, Katagiri, Kento, Li, Wanghui, Luccioni, Dorian P., Lin, Rayen, Parsons, Sophie E., Hari, Rohit, Reddy, Tharun, Cubit II, Ernest W., Amouretti, Alexis, Eggert, Jon H., Inubushi, Yuichi, Irifune, Tetsuo, Irvine, Sara J., Kodama, Ryosuke, Koenig, Michel, Madril, Laura, Matsuoka, Takeshi, Miyanishi, Kohei, Nakamura, Hiroataka, Nishiyama, Norimasa, Okuchi, Takuo, Ota, Masato, Sekine, Toshimori, Seto, Yusuke, Shinmei, Toru, Sueda, Keiichi, Tange, Yoshinori, Takagi, Sota, Togashi, Tadashi, Umeda, Yuhei, Wang, Yifan, Yabashi, Makina, Yabuuchi, Toshinori, Ozaki, Norimasa, Dresselhaus-Marais, Leora E.

Arxiv (2025) (doi)10.48550/arXiv:2208.03416

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

ACS Chemical Neuroscience 16(18) (2025) 3623-3630 (doi)10.1021/acchemneuro.5c00562

Flexible Fitting to Infer Atomistic-Precision Models of Large-Amplitude Conformational Dynamics in Biomolecules from High-Speed Atomic Force Microscopy Imaging

R. Amyot, O. Miyashita, X. Wu, K. Takeda, N. Kodera, H. Konno, F. Tama, H. Flechsig

ACS Nano 19(38) (2025) 34065-34079 10.1021/acsnano.5c10073

Amorphous alumina: an ideal material for advancing pentacoordinated aluminum chemistry and verifying its catalytic properties

Okuno Rei, Kinjo Tetsuya, Maeno Zen, Kajiwara Hirooki, Ishi Ayaka, Kuwamura Naoto, Onodera Yohei, Kohara Shinji, Yazawa Koji, Deguchi Kenzo, Ohki Shinobu, Shimizu Shunsuke, Seki Toshimasa, Nagai Hiroki, Okawara Yuto, Maekawa Ryuichi, Yoshii Takeharu, Nakahara Kiyoshi, Okura Toshinori, Hashimoto Hideki
Applied Materials Today 44 (2025) 102710 (doi)10.1016/j.apmt.2025.102710

Identification of the binding site and immunoreactivity of anti-A β antibody 11A1: Comparison with the toxic conformation-specific TxCo-1 antibody

Fukui Rara, Hafizal Uswah, Kageyama Yusuke, Irie Yumi, Matsushima Yuka, Hosoi Katsuma, Nakayama Takahisa, Kaneda Daita, Hashizume Yoshio, Miki Kunio, Kita Akiko, Mukaisho Ken-ichi, Kushima Ryoji, Tooyama Ikuo, Irie Kazuhiro
Biochemical and Biophysical Research Communications 758 (2025) 151655 (doi)10.1016/j.bbrc.2025.151655

Lipid-binding ability of Prx2 regulates the structural and functional properties of exosomes from SW480 cells
TN. Trang, R. Yamada, K. Umeda, S. Yawata, R. Sasaki, T. Uchihashi, DK. Iklptikawati, N. Kodera, T. Ando, M. Hazawa, H. Konno

Biochemical and Biophysical Research Communications 790 (2025) 152878 (doi)10.1016/j.bbrc.2025.152878

Structural and functional characterization of sHsp from the marine cyanobacterium Picosynechococcus sp. NKBG15041c

Ogawa Mima, Naka Wakaba, Morishima Ken, Inoue Rintaro, Sugiyama Masaaki, Yamada Akiyo, Yohda Masafumi
Biochemistry and Biophysics Reports 45 (2026) 102500 (doi)10.1016/j.bbrep.2026.102500

Effects of perturbation of the hydrophobic coiled-coil core on the thermal transition process of α -helical self-assembling peptides with α - β conformational transition capability

Kurokawa Minami, Nakagawa Shota, Tamura Atsuo
Biophysical Chemistry 323 (2025) 107456 (doi)10.1016/j.bpc.2025.107456

From benchmarking alignment of genome assemblies to IMGT annotation: the paradigm of the bovine *Bos taurus* T cell receptor (TRG) locus

Zhou Hao, Jiko Chimari, Gerle Christoph, Lefranc Marie-Paule, Katoh Kazutaka, Standley Daron M.
BMC Genomics 26(1) (2025) 809 (doi)10.1186/s12864-025-12081-z

A Long-Wavelength Fluorescent Probe for Efficient Dual-Color Imaging of Boronic-Acid-Containing Agents in Living Cells

Takada Shinya, Du Honghuo, Kondo Naoya, Miyazaki Anna, Hara Fumiko, Horiyama Shizuyo, Temma Takashi, Hagimori Masayori
Chemosensors 13(8) (2025) 283 (doi)10.3390/chemosensors13080283

Crystal Structures of a Thermophilic Cutinase from *Chaetomium thermophilum* Reveal Conformational Dynamics of the Catalytic Lid Loop

Nojima Ryohei, Chen Lirong, Kurokawa Minami, Ito Sho, Nishino Tatsuya
Crystals 16(4) (2026) 217 (doi)10.3390/cryst16040217

A Study on the Temperature-Dependent Behavior of Small Heat Shock Proteins from Methanogens

Kurokawa Nina, Ogawa Mima, Midorikawa Rio, Kanno Arisa, Naka Wakaba, Noguchi Keiichi, Morishima Ken, Inoue Rintaro, Sugiyama Masaaki, Yohda Masafumi
International Journal of Molecular Sciences 26(12) (2025) 5748 (doi)10.3390/ijms26125748

Acquired Radioresistance Through Adaptive Evolution with Gamma Radiation as Selection Pressure: Increased Expression and Induction of Anti-Stress Genes

Saito Takeshi, Terato Hiroaki
International Journal of Molecular Sciences 26(15) (2025) 7275 (doi)10.3390/ijms26157275

Poly (vinyl alcohol) enhancing therapeutic effects of 4-I-boronophenylalanine on thoracic tumors in neutron capture therapy

Konarita Kakeru, Suzuki Minoru, Tokura Daiki, Sunahara Megumi, Sudani Aya, Ishino Yuko, Nakashima Hideki, Hayashi Toshimitsu, Uehara Koki, Nishiyama Nobuhiro, Nomoto Takahiro
International Journal of Pharmaceutics 682 (2025) 125955 (doi)10.1016/j.ijpharm.2025.125955

Conventional Fractionated Elective Nodal Irradiation Preserves Early Antitumor Immunity and Efficacy Compared With Hypofractionated Protocols
Sato Genki Edward, Watanabe Tsubasa, Yoshimura Michio, Tanaka Hiroki, Suzuki Minoru, Mizowaki Takashi
International Journal of Radiation Oncology* Biology* Physics 123(5) (2025) 1337-1349
(doi)10.1016/j.ijrobp.2025.06.3845

Improving interfacial bonding and properties of W/W-Cu FGM/CuCrZr joints by sandblasting combined with spark plasma sintering
Sang Changcheng, Fu Kaichao, Xu Dang, Chen Ruizhi, Chen Pengqi, Lu Yingwei, Xu Qiu, Cheng Jigui
International Journal of Refractory Metals and Hard Materials 135 (2026) 107544
(doi)10.1016/j.ijrmhm.2025.107544

Size-exclusion chromatography–small-angle neutron scattering system optimized for an instrument with medium neutron flux
Morishima Ken, Inoue Rintaro, Nakagawa Tatsuo, Shimizu Masahiro, Sakamoto Ritsuki, Oda Tatsuro, Mayumi Koichi, Sugiyama Masaaki
Journal of Applied Crystallography 58(2) (2025) 595-602 (doi)10.1107/S1600576725000779

Alanine-serine-cysteine transporter-targeted small-molecule boron carriers for neutron capture therapy of L-4-boronophenylalanine-refractory tumors
Miura Kazuki, Araki Tomoyuki, Morita Taiki, Nishimura Kai, Okada Satoshi, Suzuki Minoru, Nakamura Hiroyuki
Journal of Controlled Release 390 (2026) 114566 (doi)10.1016/j.jconrel.2025.114566

Monomer Isolation from Oligomeric Proteins within Coordination Cages to Study Interface Ligand Binding
Ebihara Risa, Nakama Takahiro, Morishima Ken, Yagi-Utsumi Maho, Sugiyama Masaaki, Fujita Makoto
Journal of the American Chemical Society 148(1) (2026) 1872-1880 (doi)10.1021/jacs.5c19487

Nature of the Reactive Biferric Peroxy Intermediate P' in the Arylamine Oxygenases and Related Binuclear Fe Enzymes
Böttger Lars H., DeWeese Dory E., Iyer Shyam R., Komor Anna J., Rogers Melanie S., Sutherlin Kyle, Jacobs Ari B., Yoda Yoshitaka, Kitao Shinji, Kobayashi Yasuhiro, Zhao Jiyong, Alp Esen Ercan, Saito Makina, Seto Makoto, Que Lawrence, Lipscomb John D., Solomon Edward I.
Journal of the American Chemical Society 147(14) (2025) 11707-11725 (doi)10.1021/jacs.4c11712

Zinc finger domains bind low-complexity domain polymers
Iguchi Naohiko, Isozumi Noriyoshi, Hattori Yoshikazu, Imamura Tomohiro, Yokoyama Takeshi, So Masatomo, Nanaura Hitoki, Kiriyama Takao, Eura Nobuyuki, Yamaoka Minako, Iwasa Naoki, Shiota Tomo, Nakanishi Mari, Konishi Nanako, Ito Haruka, Takeuchi Akihito, Mori Masashi, Ohki Shinya, Kumeta Hiroyuki, Koga Hironori, Watabe Mai, Mabuchi Takuya, Kanemura Shingo, Okumura Masaki, Tanaka Yoshikazu, Morishima Ken, Sugiyama Masaaki, Ide Fumika, Matsumura Hiroyoshi, Yoshizawa Takuya, Ota Ichiro, Suzuki Naoki, Aoki Masashi, Yamashiro Yoshito, Saio Tomohide, Sugie Kazuma, Mori Eiichiro
Nature Communications 16(1) (2025) 8922 (doi)10.1038/s41467-025-64382-2

Phosphate Monoester Hydrolysis by Supramolecular Phosphatases Functionalized with Lewis Acidic Moieties in Two-Phase Solvent Systems
Okamoto Hirokazu, Nomoto Ayane, Liman Dahiru Umar, Rahman Akib Bin, Tojo Toshifumi, Aoki Shin
Organics 7(1) (2026) 9 (doi)10.3390/org7010009

Dosimetric performance of cone beam CT-guided adaptive carbon-ion radiotherapy with daily replanning for pancreatic cancer
Klassen Lukas Fabrizio, Hirashima Hideaki, Iramina Hiraku, Iwai Takahiro, Yoshimura Michio, Tanaka Hiroki, Mizowaki Takashi, Nakamura Mitsuhiko
Physica Medica 134 (2025) 104991 (doi)10.1016/j.ejmp.2025.104991

Sodium orthovanadate alleviates lethal effect of total-body irradiation in mice without impairing recovery of male reproductive function

Nishiyama Yuichi, Sonoyama Yuichiro, Wang Bing, Ghosh Sharmila, Krishnan P.V. Sharath, Sasatani Megumi, Shimokawa Takashi, Aoki Shin, Morita Akinori

Radiation and Environmental Biophysics 64(4) (2025) 657-667 (doi)10.1007/s00411-025-01146-y

Preparation of ¹⁰B-enriched nitroimidazole derivative by click reaction as a functional drug for hypoxia-targeting boron-neutron capture therapy

Ozasa Tatsuya, Mizutani Miu, Nishihara Tatsuya, Suzuki Minoru, Tanabe Kazuhito

Results in Chemistry 15 (2025) 102245 (doi)10.1016/j.rechem.2025.102245

Design and Synthesis of Chiral Macrocycles Consisting of Azobenzene Units That Undergo Asymmetric Photochemical and Thermal Isomerization

Otaki Shotaro, Shibauchi Ryota, Yamada Tatsuya, Yamada Yasuyuki, Tojo Toshifumi, Yoshimura Shungo, Yuasa Junpei, Kageyama Yoshiyuki, Aoki Shin

The Journal of Organic Chemistry 91(8) (2026) 3150-3169 (doi)10.1021/acs.joc.5c02813

Zinc-dependent prothrombin activator from *Rhabdophis tigrinus* venom with extended substrate specificity

Inoue Noboru, Sakurai Yoshihiko, Hasuwa Kyoko, Yuui Katsuya, Kudo Risa, Takeda Tomohiro, Takata Takumi, Sasaki Daisuke, Matsumoto Masanori, Fujimura Yoshihiro, Kasuda Shogo

Toxicon 275 (2026) 109041 (doi)10.1016/j.toxicon.2026.109041

Base Pair Contributions to DNA Duplex Thermodynamics

Minami Kurokawa, Masayuki Oda

Netsu Sokutei 52(3) (2025) 88-92

Proceedings

Association-dissociation behavior of clock protein complexes in solution

Ken Morishima, Rintaro Inoue, Masaaki Sugiyama

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 25 (in Japanese)

Conformational dynamics of plant R-SNARE proteins revealed by small-angle X-ray scattering and analytical ultracentrifugation

Hirokazu Yagi, Shunsuke Asai, Maho Yagi, Ken Morishima, Rintaro Inoue, Masaaki Sugiyama, Koichi Kato

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 44 (in Japanese)

Elucidation of the As(III)-specific aggregation process of the novel As(III)-aggregating protein GatB

Shigeko Kawai-Noma, Chiho Goto, Koji Ootsuka, Tatsuya Niwa, Yu-ki Tanaka, Takuho Saito, Natsuki Suda, Ken Morishima, Masahiro Shimizu, Atsuyuki Ito, Satoshi Ogasawara, Takeshi Murata, Masaaki Sugiyama, Katsumasa Kamiya, Shiki Yagai, Yasumitsu Ogura, Hideki Taguchi

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 36 (in Japanese)

Elucidation of the self-organization of ATP synthase using human iPS cell-derived cardiomyocytes

Chimari Jiko, Shunsuke Funakoshi, Kazutoshi Tani, Genji Kuris, Yoshinori Yoshida

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 55 (in Japanese)

Interaction between Mint3 and FIH1 involved in hypoxia

Masaru Hoshino, Ken Morishima, Masahiro Shimizu, Rintaro Inoue and Masaaki Sugiyama

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 21 (in Japanese)

Interpretation of small-angle scattering profiles by multilayer perceptrons

Masahiro Shimizu

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 38 (in Japanese)

Molecular imaging studies for the analysis of biological functions and theranostics

Takashi Temma

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 60-62 (in Japanese)

Observation of phase synchronization in the circadian Kai-clock system using small-angle neutron and X-ray scatterings

Yuki Katsuno, Ken Morishima, Masahiro Shimizu, Rintaro Inoue, Masaaki Sugiyama

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

Research on methods for evaluating actively or non-actively proliferating cells
Yu Sanada, Takushi Takata, Yoshinori Sakurai, Hiroki Tanaka, Takashi Temma
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 47 (in Japanese)

Structural analysis of nacrein, a shell matrix protein in *Pinctada fucata*, using SAXS/SANS
Yuto Namikawa, Ken Morishima, Rintaro Inoue, Masaaki Sugiyama, Michio Suzuki
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 43 (in Japanese)

Transport Problems/Translational Insights into Eggshell Membrane: ^3H Pharmacokinetics and IBD Microbiota Modulation
Miho Shimizu, Wataru Sugai, Eri Ohto-Fujita, Aya Atomi, Norio Nogawa, Koichi Takamiya, Hisao Yoshinaga, Yoshihide Asano, Takashi Yamashita, Atsushi Enomoto, Yukio Hasebe, Toshiyuki Watanabe, Yoriko Atomi
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 40 (in Japanese)

Verification of enhanced BNCT antitumor effect through phenylalanine restriction in tumor-bearing mice.
Yuki Tamari, Rie Saba, Minoru Suzuki, Hideya Yamazaki
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 32 (in Japanese)

X-ray crystal structure analysis of bacterial/eukaryotic dephospho-CoA kinase homologous protein from the hyperthermophilic archaeon
Akiko Kita, Yuna Ishida, Takahiro Shimosaka, Yuta Michimori, Kira Makarova, Eugene Koonin, Haruyuki Atomi, Kunio Miki
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 37 (in Japanese)

Reviews

令和6年(2024年)度日本結晶学会年会報告:シンポジウム「構造生物学の次の一手」開催報告
佐藤文菜, 喜田昭子
日本結晶学会誌 67 (2025) 144-145 (doi)10.5940/jcrsj.67.139 (in Japanese)

Others

Manifold-based transformation of probability distributions: application to the inverse problem of reconstructing distributions from experimental data
Oroguchi Tomotaka, Inoue Rintaro, Sugiyama Masaaki
Arxiv (2025) (doi)10.48550/arXiv:24(doi)10.01499

A planar dimer of bovine ATP synthase
Chimari Jiko, Atsuki Nakano, Yosuke Teshirogi, Eiki Yamashita, Genji Kurisu, Daron M Standley, Tohru Terada, Kaoru Mitsuoka, Ken Yokoyama, Christoph Gerle
bioRxiv (2025) (doi)10.1101/2025.07.21.665874

L-Phenylalanine restriction amplifies boron neutron capture therapy efficacy through increased L-boronophenylalanine uptake and induces activating transcription factor 4 stress response in tumor cell lines
Tamari Yuki, Saba Rie, Takata Takushi, Kimura Hiroyuki, Takita Mao, Yashiro Kenta, Suzuki Minoru, Yamazaki Hideya, Yamada Kei
bioRxiv (2025) (doi)10.1101/2025.11.27.690635

Monomer Isolation from Oligomeric Proteins within Coordination Cages to Study Interface Ligand Binding
Ebihara Risa, Nakama Takahiro, Morishima Ken, Yagi-Utsumi Maho, Sugiyama Masaaki, Fujita Makoto
chemRxiv (2025) (doi)10.26434/chemrxiv-2025-8wpvx

7. Neutron Capture Therapy

Papers

Dual-Functional Nanoliposome with High BPA Loading for Targeted MRI-Guided BNCT of Glioblastoma
Qin Yaxin, Sun Xiaoyan, Zhang Zhicheng, Yang Yufan, Dai Qi, Tan Xin, Jiang Ruolin, Bao Xiaoyan, Wu Linjie, Geng Changran, Liu Yuanhao, Sun Xiaoping, Liu Xingyan, Suzuki Minoru, Wei Qinchun, Han Min
ACS Applied Materials & Interfaces 17(37) (2025) 52474-52487 (doi)10.1021/acsmi.5c11509

l-Boronophenylalanine (l-BPA) Dipeptide Prodrugs Enhance Boron Delivery to Tumors, Facilitate Tumor Eradication and Induce Tumor Vaccine Effect in Mice Following Neutron Irradiation
Torgov Michael, Raitano Arthur, Quintana Jason Cole, Martin Tioga, Kulenovic Leila, Dlamini Samkeliso, Zhang Chunying, Malinao Maria-Christina, Ikeura Maki, Capo Linnette, Morrison Karen, Matsumoto Kotaro, Komatsu Aoi, Higashi Yuya, Takushi Takata, Sakurai Yoshinori, Dorn Robert, Suzuki Minoru, Tamanoi Fuyuhiko, Morrison Kendall

ACS Pharmacology & Translational Science 9(4) (2026) 888-901 (doi)10.1021/acspsci.5c00613

Boron neutron capture therapy (BNCT) for left axillary lymph node metastasis of recurrent breast cancer
Fujimoto Takuya, Maekawa Yoko, Hori Shinichi, Oguro Atsushi, Hori Atsushi, Fujita Ikuo, Sakurai Yoshinori, Tanaka Hiroki, Ito Tatsuya, Yahiro Shunsuke, Sakuma Toshiko, Suzuki Minoru

Applied Radiation and Isotopes 219 (2025) 111715 (doi)10.1016/j.apradiso.2025.111715

Boron neutron capture therapy with pteroyl-closo-dodecaborate-conjugated 4-(p-iodophenyl) butyric acid (PBC-IP) for a head and neck squamous cell carcinoma (SAS) model mice

Miura Kazuki, Nishimura Kai, Suzuki Minoru, Nakamura Hiroyuki

Applied Radiation and Isotopes 221 (2025) 111837 (doi)10.1016/j.apradiso.2025.111837

Characteristic comparison between two different neutron spectrometers for boron neutron capture therapy irradiation field developed at Heavy Water Neutron Irradiation Facility of Kyoto University Research Reactor
Prateepkaew Jakkrit, Matsubayashi Nishiki, Takata Takushi, Tanaka Hiroki, Sakurai Yoshinori

Applied Radiation and Isotopes 219 (2025) 111717 (doi)10.1016/j.apradiso.2025.111717

Comparative efficacy of reactor vs. accelerator-based boron neutron capture therapy in U87MG glioblastoma models
Nishimura Kai, Miura Kazuki, Tanaka Hiroki, Suzuki Minoru, Nakamura Hiroyuki

Applied Radiation and Isotopes 222 (2025) 111833 (doi)10.1016/j.apradiso.2025.111833

Evaluation of Boron Neutron Capture Therapy for treating canine oral malignant melanoma

Niimi Akira, Yoshihashi Sachiko, Kawai Noritaka, Yamazaki Atsushi, Uritani Akira, Iwasaki Ryota, Sakurai Yoshinori, Suzuki Minoru

Applied Radiation and Isotopes 225 (2025) 112081 (doi)10.1016/j.apradiso.2025.112081

Extended follow-up of recurrent glioblastoma patients treated with boron neutron capture therapy (BNCT): Long-term survival from a Phase II trial (JG002) using Cyclotron Neutron Source and Boronophenylalanine
Kawabata Shinji, Goto Hiromi, Narita Yoshitaka, Furuse Motomasa, Nonoguchi Naosuke, Shidoh-Kazuki Rina, Eza Kenichiro, Hirose Katsumi, Ohno Makoto, Kondo Natsuko, Suzuki Minoru, Tanaka Hiroki, Ono Koji, Nihei Keiji, Wanibuchi Masahiko, Miyatake Shin-Ichi

Applied Radiation and Isotopes 226 (2025) 112118 (doi)10.1016/j.apradiso.2025.112118

Potential of boron neutron capture therapy (BNCT) for epithelioid sarcoma

Fujimoto Takuya, Andoh Tooru, Sudo Tamotsu, Sakuma Toshiko, Fujita Ikuo, Sakurai Yoshinori, Takata Takushi, Tanaka Hiroki, Kawamoto Teruya, Yahiro Shunsuke, Hara Hitomi, Fukase Naomasa, Akisue Toshihiro, Ichikawa Hideki, Kuroda Ryosuke, Suzuki Minoru

Applied Radiation and Isotopes 222 (2025) 111846 (doi)10.1016/j.apradiso.2025.111846

Preliminary study of 3D dose distribution evaluation in neutron capture therapy using a PVA-GTA-I radiochromic gel dosimeter

Hayashi S., Narita R., Sakurai Y., Fujino K., Kurihara R., Ikeda S., Ono K., Wakabayashi G.

Applied Radiation and Isotopes 225 (2025) 112008 (doi)10.1016/j.apradiso.2025.112008

Real-time estimation of boron concentration using an improved gamma-ray telescope system for boron neutron capture therapy

Sakurai Yoshinori, Fu Da, Takata Takushi, Tanaka Hiroki, Suzuki Minoru

Applied Radiation and Isotopes 226 (2025) 112231 (doi)10.1016/j.apradiso.2025.112231

Study of dose component discrimination method using micelle gel dosimeters for quality assurance in boron neutron capture therapy

Narita Ryosuke, Hayashi Shin-ichiro, Sakurai Yoshinori

Applied Radiation and Isotopes 225 (2025) 112007 (doi)10.1016/j.apradiso.2025.112007

Transcriptome analysis of human oral squamous cancer SAS cells as an early response after boron neutron capture therapy

Imamichi Shoji, Ito Tasuku, Tong Ying, Gao Zhongming, Arai Yasuhito, Fujimori Hiroaki, Chen Lichao, Sanada Yu, Nakamura Satoshi, Murakami Yasufumi, Ishiai Masamichi, Suzuki Minoru, Itami Jun, Igaki Hiroshi, Masunaga Shinichiro, Masutani Mitsuko
Applied Radiation and Isotopes 218 (2025) 111648 (doi)10.1016/j.apradiso.2024.111648

Simple Cytosolic and Nuclear Introduction of Boron Compounds Using Cationic Lipids to Enhance Cancer Cell-Killing Activity in Boron Neutron Capture Therapy
S Hirase, Y Araki, Y Hattori, A Aoki, D Fujiwara, M Michigami, T. Nakase, I. Fujii, S. Futaki, M. Kirihata, I. Nakase
Biological and Pharmaceutical Bulletin 48 (4) (2025) 344-354 (doi)10.1248/bpb.b24-00651

Development of a microdosimetry-based method to derive cell survival rates for evaluating the biological effects of BNCT
Yamazaki Ryusuke, Hu Naonori, Takata Takushi, Nojiri Mai, Zhao Liang, Tanaka Hiroki
Biomedical Physics & Engineering Express 12(2) (2026) 025014 (doi)10.1088/2057-1976/ae44a2

Design and evaluation of a supramolecular boron compound using a cyclodextrin-based polyrotaxane for boron neutron capture therapy
Matsumoto Yoshitaka, Arase Haruki, Ishiki Honatsu, Takeuchi Haru, Sugawara Yu, Taharabaru Toru, Onodera Risako, Suzuki Minoru, Nakaie Ami, Sakurai Hideyuki, Motoyama Keiichi, Higashi Taishi
Carbohydrate Polymers 354 (2025) 123343 (doi)10.1016/j.carbpol.2025.123343

Accumulation of Small-Size, Highly Dispersive Mesoporous Silica Nanoparticles in a Tumor in Both Chorioallantoic Membrane and Mouse Models
Komatsu Aoi, Higashi Yuya, Lin Cong-Kai, Chen Yi-Ping, Wu Si-Han, Suzuki Minoru, Matsumoto Kotaro, Tamanoi Fuyuhiko
Cells 14(10) (2025) 734 (doi)10.3390/cells14100734

Synthesis and Cancer Cell Targeting of a Boron-Modified Heat-Stable Enterotoxin Analog for Boron Neutron Capture Therapy (BNCT)
Okazaki Sota, Hattori Yoshihide, Sakata Nana, Goto Masaya, Kitayama Sarino, Ikeda Hiroko, Takei Toshiki, Shimamoto Shigeru, Hidaka Yuji
Chemistry 7(4) (2025) 111 (doi)10.3390/chemistry7040111

Engineering Hybrid Polymeric Gd₂O₃ Nanoparticles for Tumor-Targeted Neutron Capture Therapy
Chen Xiwen, Chen Pengwen, Tachihara Yoshihiro, Qin Changyuan, Hou Xuan, Khan Thahomina, Nitta Nobuhiro, Yanagawa Masashi, Sakurai Yuriko, Suzuki Minoru, Masunaga Shin-Ichiro, Tanaka Hiroki, Sakurai Yoshinori, Takahashi Hiroyuki, Aoki Ichio, Yanagie Hironobu, Cabral Horacio
ChemNanoMat 12(4) (2026) e202500673 (doi)10.1002/cnma.202500673

A LAT1-selective PET tracer, 5-[¹⁸F]F- α Me-3BPA, as a companion to its structurally matched ¹⁰B analog in boron neutron capture therapy
Kondo Naoya, Hirano Fuko, Kanai Yasukazu, Suzuki Kensuke, Miyazaki Anna, Temma Takashi
European Journal of Nuclear Medicine and Molecular Imaging 53(4) (2026) 2566-2577 (doi)10.1007/s00259-025-07668-3

Clinical outcomes of boron neutron capture therapy for unresectable oral cancer: a retrospective analysis
Yoshino Yuki, Takeno Satoshi, Aihara Teruhito, Hu Naonori, Sasaki Akinori, Akita Kazuhiko, Kanai Yasukazu, Nojiri Mai, Jinnin Tsuyoshi, Terada Tetsuya, Haginomori Shinichi, Nihei Keiji, Ono Koji
Frontiers in Oncology 16 (2026) 1735487 (doi)10.3389/fonc.2026.1735487

Evaluating boron neutron capture therapy as a potential treatment for unresectable gastrointestinal stromal tumors
Hagihara Seita, Arima Jun, Ueda Yasuhiko, Inomata Yosuke, Shima Takafumi, Suzuki Minoru, Lee Sang-Woong, Taniguchi Kohei
Gastric Cancer 28(5) (2025) 924-934 (doi)10.1007/s10120-025-01633-7

First Experiences of Pilot Clinical Studies on Boron Neutron Capture Therapy for Recurrent Gastrointestinal Cancers Using an Intravenous Injection of ¹⁰BPA
Yanagie Hironobu, Maruyama Syoji, Oyama Kazuyuki, Ono Yasuo, Kuroyama Shinichi, Nonaka Yasumasa, Hatae Ryo, Furuya Yoshitaka, Suzuki Minoru, Masunaga SHIN-Ichiro, Sakurai Yoshinori, Kondo Natsuko, Tanaka Hiroki, Maruhashi Akira, Ono Koji, Sugihara Takumichi, Takahashi Hiroyuki
In Vivo 39(3) (2025) 1470-1491 (doi)10.21873/invivo.13948

Exploratory Rat Toxicology and Efficacy of the Boron Neutron Capture Therapy Drug Boronotyrosine in a Mouse Model of Head and Neck Cancer

Raitano Arthur, Kilby Warren, Morrison Karen, Capo Linnette, Ikeura Maki, Torgov Michael, Martin Tioga J., Malinao Maria-Christina, Lee Chad, Matsumoto Kotaro, Komatsu Aoi, Higashi Yuya, Suzuki Minoru, Tamanoi Fuyuhiko, Morrison Kendall

International Journal of Radiation Oncology*Biology*Physics 123(5) (2025) 1395-1400
(doi)10.1016/j.ijrobp.2025.07.1432

Development of fiber-insertable ionization chamber for BNCT

Matsubayashi Nishiki, Takata Takushi, Hu Naonori, Nojiri Mai, Mukawa Tetsuya, Suga Keita, Tanaka Hiroki
Japanese Journal of Applied Physics 64(11) (2025) 116501 (doi)10.35848/1347-4065/ae0f6b

Study on the optimization of an ambient dose detector in an accelerator-based BNCT irradiation field

Zhao Liang, Matsubayashi Nishiki, Nojiri Mai, Hu Naonori, Takata Takushi, Kawabata Shinji, Kurosawa Shunsuke, Masuda Akihiko, Tanaka Hiroki

Japanese Journal of Applied Physics 64(6) (2025) 066502

Enhancement of dose distribution using tissue compensators in boron neutron capture therapy

Sasaki Akinori, Hu Naonori, Nojiri Mai, Akita Kazuhiko, Yoshikawa Syuushi, Kohigashi Yasushi, Nihei Keiji, Aihara Teruhito, Takeno Satoshi, Yoshino Yuki, Tanaka Hiroki, Ono Koji

Journal of Applied Clinical Medical Physics 26(12) (2025) e70392 (doi)10.1002/acm2.70392

Implementation of a real-time neutron monitor system for use in routine quality assurance of an accelerator-based neutron system for clinical boron neutron capture therapy

Hu Naonori, Nakamura Taiki, Kataura Ryusuke, Suga Keita, Mukawa Tetsuya, Akita Kazuhiko, Kakino Ryo, Sasaki Akinori, Nojiri Mai, Matsubayashi Nishiki, Takata Takushi, Tanaka Hiroki, Nihei Keiji, Ono Koji

Journal of Applied Clinical Medical Physics 26(8) (2025) e70190 (doi)10.1002/acm2.70190

Investigation on the efficacy of a tissue equivalent material bolus for BNCT

Sasaki Akinori, Hu Naonori, Kakino Ryo, Nojiri Mai, Nihei Keiji, Aihara Teruhito, Takeno Satoshi, Yoshino Yuki, Tanaka Hiroki, Ono Koji

Journal of Applied Clinical Medical Physics 26(10) (2025) e70287 (doi)10.1002/acm2.70287

Manganese-enriched nanoboron agent amplifies BNCT efficacy via pyroptosis-mediated immune activation and STING pathway synergy

Zhang Zhicheng, Sun Xiaoyan, Qin Yaxin, Yang Yufan, Dai Qi, Bao Xiaoyan, Suzuki Minoru, Wang Sheng, Yang Zai, Li Zhifeng, Han Min, Xu Donghang, Wei Qichun

Journal of Nanobiotechnology 24(1) (2025) 75 (doi)10.1186/s12951-025-03916-8

Recurrent meningioma treated with boron neutron capture therapy: a feasibility study with dosimetric and clinical correlates

Lan Tien-Li, Lin Chun-Fu, Lee Yi-Yen, Chang Feng-Chi, Lin Shih-Chieh, Chou Fong-In, Peir Jinn-Jer, Pan Po-Shen, Chen Jen-Kun, Lai Lu-Han, Tanaka Hiroki, Hsu Shih-Ming, Chen Yi-Wei

Journal of Neuro-Oncology 175(2) (2025) 879-886 (doi)10.1007/s11060-025-05184-w

Development of Linear Interpolation System for SMK Model Parameters Evaluated from Cellular-Scale Simulation (LISMEC) and its application to BNCT dosimetry

Shigehira Takafumi, Watanabe Tubasa, Suzuki Minoru, Hirata Yuho, Ogawa Tatsuhiko, Fujimu Atsushi, Sakurai Yoshinori, Sato Tatsuhiko

Journal of Radiation Research 67(2) (2026) 170-181 (doi)10.1093/jrr/rraf075

Tumor marker-guided precision BNCT for CA19-9-positive cancers: a new paradigm in molecularly targeted chemoradiation therapy

Kanehira Noriyuki, Teraishi Fuminori, Tajima Tomoyuki, Osone Tatsunori, Gotoh Kazuyoshi, Fujimoto Takuya, Sakurai Yoshinori, Kondo Natsuko, Nagahisa Narikazu, Kamei Kaoru, Fujita Taiga, Morihara Akira, Takaguchi Yutaka, Kitamatsu Mizuki, Takarada Takeshi, Shigeyasu Kunitoshi, Suzuki Minoru, Fujiwara Toshiyoshi, Michiue Hiroyuki

Journal of Translational Medicine 23(1) (2025) 1387 (doi)10.1186/s12967-025-07349-7

Development of a Supramolecular Nanocomplex Comprising Ferritin and Tannic Acid as a Ferroptosis Inducer for Cancer Therapy

Miura Yamato, Kawasaki Riku, Yamana Keita, Tarutani Naoki, Katagiri Kiyofumi, Inumaru Kei, Nagasaki Takeshi, Ikeda Atsushi
Langmuir 41(45) (2025) 30072-30079 (doi)10.1021/acs.langmuir.5c02064

Development and dosimetric evaluation of a freely deformable ⁶Li-based neutron shield for boron neutron capture therapy
Hu Naonori, Kakino Ryo, Sasaki Akinori, Nojiri Mai, Akita Kazuhiko, Yoshikawa Syuushi, Kohigashi Yasushi, Yoshino Yuki, Takeno Satoshi, Aihara Teruhito, Takata Takushi, Tanaka Hiroki, Nihei Keiji, Ono Koji
Medical Physics 53(2) (2026) e70319 (doi)10.1002/mp.70319

Quality assurance validation of remote neutron spectrometer for boron neutron capture therapy
Prateepkaew Jakkrit, Matsubayashi Nishiki, Takata Takushi, Tanaka Hiroki, Sakurai Yoshinori
Medical Physics 52(8) (2025) e18029 (doi)10.1002/mp.18029

Development of a Theranostic Agent for Bone Metastases: Integration of Nuclear Medicine Imaging and Boron Neutron Capture Therapy (BNCT)
Tamamura Kisa, Akita Yuito, Mishiro Kenji, Munekane Masayuki, Fuchigami Takeshi, Fujikawa Yoshiki, Wakabayashi Hiroshi, Ikoma Fuko, Hu Xiaojun, Kawabata Shinji, Kinuya Seigo, Suzuki Minoru, Ogawa Kazuma
Molecular Pharmaceutics 22(9) (2025) 5546-5554 (doi)10.1021/acs.molpharmaceut.5c00572

RBIO-06. Transcriptomic change of human induced pluripotent stem cells (iPSCs)-derived neuronal cells after particle beam irradiation
Kondo Natsuko, Sakurai Yoshinori, Takata Takushi, Fukusumi Hayato, Maeda Munetoshi, Shofuda Tomoko, Kanemura Yonehiro, Kume Kyo
Neuro-Oncology 27(Supplement_5) (2025) v391 (doi)10.1093/neuonc/noaf201.1546

Boron neutron capture therapy (BNCT) induces DNA damage on human cholangiocarcinoma cell line
Kartini Dea Aulia, Malad Yuwadee, Karoon Pharewa, Kondo Natsuko, Sakurai Yoshinori, Talabnin Krajang, Talabnin Chutima, Kobdaj Chinorat
Physica Medica 142 (2026) 105728 (doi)10.1016/j.ejmp.2026.105728

Applicability of a narrow glass tube for optical dosimetry with boron-added liquid scintillator using a digital camera in boron neutron capture therapy
Maeda Hideya, Nohtomi Akihiro, Moriguchi Aoto, Hu Naonori, Akita Kazuhiko, Ono Koji
Radiation Measurements 183 (2025) 107411 (doi)10.1016/j.radmeas.2025.107411

Quantitative imaging of 478-keV prompt gamma rays from Boron neutron capture reactions
Mizumoto Tetsuya, Komura Shotaro, Takada Atsushi, Sakurai Yoshinori, Tanimori Toru
Scientific Reports 15(1) (2025) 29310 (doi)10.1038/s41598-025-14212-8

Feasibility Study of Thallium Bromide Detectors for Boron Neutron Capture Therapy Applications
Hitomi Keitaro, Nogami Mitsuhiro, Watanabe Kenichi, Matsubayashi Nishiki, Tanaka Hiroki
Sensors and Materials 37(5) (2025) 2005-2011 (doi)10.18494/SAM5613

Proceedings

Advanced Radiation Detectors for Accelerator-Based BNCT Applications
Hiroki Tanaka, Kiyomitsu Shinsho, Isao Murata, Akihiro Nohtommi, Sachiko Yoshihashi, Masayori Ishikawa, Shinichiro Kuroki, Shunsuke Kurosawa, Akihiko Masuda, Takushi Takata, Naonori Hu, Nishiki Matsubayashi, Yoshinori Sakurai
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 57-59 (in Japanese)

Development of a Gd-Thiacalixarene Nanomedicine for MRI-Guided Neutron Capture Therapy
Shu Hayakawa, Ryota Sawamura, Ryunosuke Karashimada, Gao Shan, Yoshikazu Ozawa, Kensuke Osada, Ichio Aoki, Minoru Suzuki, Nobuhiko Iki
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 53 (in Japanese)

Development of a Real-time Dose Rate Monitor for BNCT and application to the Decommissioning of Fukushima Daiichi
Shunsuke Kurosawa, Yusuke Urano, Chihaya Fujiwara, Akihiro Yamaji, Takushi Takada, Nishiki Matsubayashi, Hiroki Tanaka
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 31 (in Japanese)

Estimation for 3D distribution of biological and chemical doses for BNCT

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

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 9-12 (in Japanese)

Neutron Measurements at a HWNIF Using an Organic–Inorganic Hybrid Perovskite Sensor

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

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 17 (in Japanese)

Reviews

Current Status and Future Potential of Boron Neutron Capture Therapy (BNCT)

Natsuko KONDO, Yoshinori SAKURAI

Farumashia 61(5) (2025) 402-406 (doi)10.14894/faruawpsj.61.5_402 (in Japanese)

Neutron standards of NMIJ/AIST and related ISOs

Akihiko MASUDA, Hideki HARANO, Tetsuro MATSUMOTO, Seiya MANABE

Ionizing Radiation 49(3) (2025) 75-80 (doi)10.11470/houshasen.49.3_75 (in Japanese)

Development of drug delivery systems to expand the indications for photodynamic therapy and boron neutron capture therapy. 17th Young Scientist Award, Japan Society of DDS

Takahiro Nomoto

Drug Delivery System 40(5) (2025) 407-412 (doi)10.2745/dds.40.407 (in Japanese)

機能性高分子を基盤としたホウ素中性子捕捉療法用ドラッグデリバリーシステムの開発

Takahiro Nomoto

Journal of Japanese Society for Biomaterials (Seitai Zairyou) 44(1) (2026) 21-22 (in Japanese)

Books

Cyclotron-Based Neutron Source, Sumitomo BNCT System, “NeuCure”(P79-87)

Tanaka Hiroki, Baba Tatsuo

Neutron Capture Therapy Principles and Applications

Editors: Wolfgang A. G. Sauerwein, Andrea Wittig, Raymond L. Moss, Yoshinobu Nakagawa, Koji Ono

Springer Nature Switzerland (2025) (doi)10.1007/978-3031-82591-0_6 5

Boron Compounds: New Candidates for Boron Carriers in BNCT (P259-293)

Yoshihide Hattori, Hiroyuki Nakamura, Martin Kellert, Evamarie Hey-Hawkins

Neutron Capture Therapy Principles and Applications

Editors: Wolfgang A. G. Sauerwein, Andrea Wittig, Raymond L. Moss, Yoshinobu Nakagawa, Koji Ono

Springer Nature Switzerland (2025) (doi)10.1007/978-3031-82591-0 5

The Clinical Commissioning of Beams for Neutron Capture Therapy (P439-448)

Munck af Rosenschöld Per, Kumada Hiroaki, Sakurai Yoshinori

Neutron Capture Therapy Principles and Applications

Editors: Wolfgang A. G. Sauerwein, Andrea Wittig, Raymond L. Moss, Yoshinobu Nakagawa, Koji Ono

Springer Nature Switzerland (2025) (doi)10.1007/978-3031-82591-0_26 5

BNCT for Malignant Pleural Mesothelioma (P667-673)

Ono Koji, Suzuki Minoru Neutron Capture Therapy Principles and Applications

Editors: Wolfgang A. G. Sauerwein, Andrea Wittig, Raymond L. Moss, Yoshinobu Nakagawa, Koji Ono

Springer Nature Switzerland (2025) (doi)10.1007/978-3031-82591-0_42 5

BNCT for Multiple or Disseminated Pleural Tumors (P675-680)

Suzuki Minoru, Sakurai Yoshinori, Ono Koji

Neutron Capture Therapy Principles and Applications

Editors: Wolfgang A. G. Sauerwein, Andrea Wittig, Raymond L. Moss, Yoshinobu Nakagawa, Koji Ono

Springer Nature Switzerland (2025) (doi)10.1007/978-3031-82591-0_43 5

BNCT for Multiple Liver Metastases (P681-688)
Suzuki Minoru, Sakurai Yoshinori, Ono Koji Neutron Capture Therapy Principles and Applications
Editors: Wolfgang A. G. Sauerwein, Andrea Wittig, Raymond L. Moss, Yoshinobu Nakagawa, Koji Ono
Springer Nature Switzerland (2025) (doi)10.1007/978-3031-82591-0_44 5

Training Workshop on Advances in Boron Neutron Capture Therapy -textbook 2025-
IAEA, Japan's Okayama University to Work Together on Advancing Boron Neutron Capture Therapy to Help Fight Cancer/岡山大学 IAEA 協働センター (2025)

三浦大和, 河崎陸
界面制御による革新的生体適合性材料開発
高井まどか, 三浦佳子 (監修)
NTS (2025) (in Japanese) 12

Others

Quantitative imaging of 478-keV prompt gamma rays from boron neutron capture reactions
Mizumoto Tetsuya, Komura Shotaro, Takada Atsushi, Sakurai Yoshinori, Tanimori Toru
Arxiv (2025) (doi)10.48550/arXiv:2509.00435

Boosting Antitumour Efficacy and Immunity by Boron Neutron Capture Therapy with Size-Controlled Nanoparticles
Huang Weian, Kang Heon Gyu, Han Xu, Yu Jie, Chen Xiaoxiao, Takata Takushi, Sakurai Yoshinori, Suzuki Minoru, Komatsu Naoki
bioRxiv (2025) (doi)10.1101/2025.04.02.646946

8. Neutron Radiography and Radiation Application

Papers

RAPTOR-AI: An open-source AI powered radiation protection toolkit for radioisotopes
Watabe Hiroshi, Yu Peter K.N., Krstic Dragana, Nikezic Dragoslav, Kim Kyeong Min, Yamaya Taiga, Kawachi Naoki, Tanaka Hiroki, Jovanovic Zoran, Haque A.K.F., Islam M. Rafiqul, Tse Gary, Lee Quinncy, Beni Mehrdad Shahmohammadi
Applied Radiation and Isotopes 221 (2025) 111797 (doi)10.1016/j.apradiso.2025.111797

Experimental investigation of axial and radial void fraction profiles in subcooled downward flow using neutron radiography
Ami Takeyuki, Akiyama Keiko, Umekawa Hisashi, Ito Daisuke, Saito Yasushi
International Journal of Heat and Fluid Flow 116 (2025) 109972 (doi)10.1016/j.ijheatfluidflow.2025.109972

Proposal and demonstration of a novel SPECT for high-precision gamma-ray imaging
Koshikawa N., Kikuchi Y., Uno S., Tanaka K.S., Murakami M., Kadonaga Y., Toyoshima A., Takamiya K., Kataoka J.
Journal of Instrumentation 20(7) (2025) C07057 (doi)10.1088/1748-0221/20/07/C07057

Development and response characterization of new Bonner sphere spectrometer using lithium-glass scintillators coupled with current-integrating photomultiplier tubes
Masuda Akihiko, Matsumoto Tetsuro, Manabe Seiya, Harano Hideki, Tanaka Hiroki, Sakurai Yoshinori, Ito Daisuke, Takata Takushi, Kumada Hiroaki
Radiation Measurements 189 (2025) 107512 (doi)10.1016/j.radmeas.2025.107512

Study on Explosive Spalling Phenomenon of High-Strength Concrete with Different
K. IWAMURA, Y. NISHIO, J. KIM, D. ITO and M. KANEMATSU
アップグレードシンポジウム論文集 2025 (2025) 145-150

Proceedings

Evaluation of flow behavior, rotational torque, and local heat transfer in Taylor-Couette flows with microbubbles
Y. Tsuji, H. Murakawa, K. Sugimoto, H. Asano
The 13th Int. Symposium on Measurement Techniques for Multiphase Flows Dalian, China (Oct. 25-27, 2025)

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

The Proceedings of the National Symposium on Power and Energy Systems, Kanazawa, Japan (Jun. 5-6, 2025) C112 (doi)10.1299/jsmepes.2025.29.C112 (in Japanese)

Advanced Development and Applications of Neutron Imaging

Yasushi Saito

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 1-3 (in Japanese)

Complementary approach to fossil imaging using neutrons and X-ray Daisuke Ito, Naoya Odaira, Yasushi Saito, Isao Harayama, Keisuke Kurita, Takenao Shinohara, Yoshiaki Kiyonagi

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 20 (in Japanese)

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)

Visualization of lithium-ion migration in a solid electrolyte through the neutron radiography technique

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

International Journal of Molecular Sciences 26(18) (2025) 9102 (doi)10.3390/ijms26189102

Interpretation of dissolution behavior at the surface of uranium-zirconium oxide solid solutions

Tonna Ryutaro, Sasaki Takayuki, Okamoto Yoshihiro, Kobayashi Taishi

Journal of Nuclear Materials 612 (2025) 155820 (doi)10.1016/j.jnucmat.2025.155820

Development of a non-destructive elemental analysis method for sub-percent components using muon-induced gamma-rays

Inagaki Makoto, Ninomiya Kazuhiko, Yoshida Go, Kubo Michael Kenya, Yakushi Kosei, Watanabe Eisuke, Nakada Hiroki, Umegaki Izumi

Journal of Radioanalytical and Nuclear Chemistry 335(1) (2025) 617-623 (doi)10.1007/s10967-025-10668-0

Radium-228 target fabrication after separation from thorium-232 by polyvinylpyrrolidone for radiopharmaceutical actinium-225 production

Yin Feng, Yamamura Tomoo, Suzuki Tatsuya

Journal of Radioanalytical and Nuclear Chemistry 334(12) (2025) 9271-9278 (doi)10.1007/s10967-025-10406-6

Validating Vacuum Chromatography with Subsecond Radioisotopes of Hg for Superheavy Element Chemistry

Tiebel Georg, Kirkland Amelia S., Bukowski Anna M., Cook Titeana L. M., Dressler Rugar, Dutheil Paul, Eichler Robert, Folden III Charles M., Garcia Jenna R., Haynes Isaac W., Herrmann Dominik, Hofstetter Michael, Ito Yuta, Mildon Jordan A., Sato Tetsuya K., Tereshatov Evgeny E., Vögele Alexander, Zakusilova Vira, Steinegger Patrick

The Journal of Physical Chemistry C 130(8) (2026) 3058-3073 (doi)10.1021/acs.jpcc.5c06930

Proceedings

Analytical Strategy for Evaluating High-Specific-Activity Lu-177 in Theranostic Radiopharmaceutical Production Miki Harigai, Kazumi Nakano, Kenji Shirasaki, Hiroyuki Kimura, Tomoo Yamamura

7th Asia-Pacific Symposium on Radiochemistry 2025 (APSORC25) Matsue, Shimane Japan (Sep. 14-19, 2025)

Development of synthetic method for partially oxidized phthalocyanine complexes extensible to minor actinides
Takumi Saito, Miki Harigai, Hisao Yoshinaga, Takashi Shimada, Tomoo Yamamura
7th Asia-Pacific Symposium on Radiochemistry 2025 (APSORC25) Matsue, Shimane Japan (Sep. 14-19, 2025)

Establishment of a multi-element ICP-MS/MS quantitative method for quality assurance of high-specific-activity Lu-177 preparations
Miki Harigai, Kazumi Nakano, Kenji Shirasaki, Hiroyuki Kimura, Tomoo Yamamura
7th Asia-Pacific Symposium on Radiochemistry 2025 (APSORC25) Matsue, Shimane Japan (Sep. 14-19, 2025)

On-line monitoring of ¹⁷⁷Lu separation by extraction chromatography
Kenji Shirasaki, Kohshin Washiyama, Tomoo Yamamura
7th Asia-Pacific Symposium on Radiochemistry 2025 (APSORC25) Matsue, Shimane Japan (Sep. 14-19, 2025)

Synthesis and adsorptivity of novel bifunctional monoamide-diamide resin for selective separation of actinyl Ions
Masanobu Nogami, Keigo Uchida, Shion Matsumoto, Chikage Abe, Tomoo Yamamura
7th Asia-Pacific Symposium on Radiochemistry 2025 (APSORC25) Matsue, Shimane Japan (Sep. 14-19, 2025)

Adsorption Behavior of Group 1 Elements by Ferrocyanide Salt for Chemical Studies of Francium
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
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 29 (in Japanese)

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, Kunihiko Tsuchiya, Go Yoshida, Nobuhiro Sato
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 46 (in Japanese)

Solubility and solid phase of coprecipitated Zr and Ce hydroxides
Naoki Harada, Taishi Kobayashi, Daiju Matsumura, Atsushi Ikeda-Ohno, Takayuki Sasaki
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 33 (in Japanese)

Structural Stability of Radio-activated Gold Compounds via Neutron Irradiation
Kazuki Kajiyama, Masashi Murakami, Akina Mitsukai, Yoshifumi Shirakami, Yuichiro Kadonaga, Nanase Koshikawa, Koichi Takamiya, Jun Kataoka, Atsushi Toyoshima
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 18 (in Japanese)

Study of Isotope Separation via Chemical Exchange Reaction
Shu Hayakawa, Ryota Sawamura, Ryunosuke Karashimada, Gao Shan, Yoshikazu Ozawa, Kensuke Osada, Ichio Aoki, Minoru Suzuki, Nobuhiko Iki
Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 54 (in Japanese)

Others

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
SSRN (2026) (doi)10.2139/ssrn.6378499

10. Health Physics and Waste Management

Papers

National investigation of sewage sludge characteristics for recycling strategies in Taiwan
Chen Minhsuan, Chang Yuchen, Oshita Kazuyuki

Journal of Hazardous Materials 501 (2026) 140724 (doi)10.1016/j.jhazmat.2025.140724

The systematic thermal conductive calculation for concentrated emplacement disposal of high-level radioactive wastes Nakase Masahiko, Harigai Miki, Sakuragi Tomofumi, Asano Hidekazu

Journal of Nuclear Science and Technology 63(3) (2026) 267-276 (doi)10.1080/00223131.2025.2532067

Proceedings

Identification and Analysis of Organic Plastic Additives in Building Materials Using Pyrolysis-GC/MS

Demetrio Antonio ROMERO HERNÁNDEZ, Yuki YAMASHITA, Kazuyuki OSHITA

9th International Symposium of the Kyoto Biomolecular Mass Spectrometry Society Kyoto, Japan (Dec. 12, 2025)

Field Survey on Composition of Construction waste plastics and Its Potential for Effective Utilization in New Construction Projects

Yuki Yamashita, Kazuyuki Oshita, Antonio Romero, Satoshi Kawajiri, Ryo Hayakawa, Toshiaki Yoshioka

The 12th 3R International Scientific Conference on Material Cycles and Waste Management (3RINCs, 2026) Bangkok, Thailand (Mar. 9-11, 2026) 18C-3

Reviews

Issues and Discussion at “Study Group on Radiation Protection Measures for X-ray Equipment” in the Ministry of Health, Labour and Welfare, for Revision of Regulation on Prevention of Ionizing Radiation Hazards Concerning X-ray Equipment Management

Takeshi IIMOTO

Japanese Journal of Health Physics 60(3) (2025) 236-245 (doi)10.5453/jhps.60.236

The Issue of Radiation Worker Certification in the Introduction of Business Responsibility

Tomokazu SUZUKI, Shogo HIGAKI, Takeshi IIMOTO

Japanese Journal of Radiation Safety Management 24(2) (2025) 96-101 (doi)10.11269/jjrsm.24.96 (in Japanese)

11. Accelerator Physics

Papers

Field of the higher order in the single cell cavity for high intensity beam acceleration

Sako T., Ishi Y., Uesugi T., Mori Y., Kuriyama Y., Tsumori K., Ando A., Yonemura Y.

Journal of Instrumentation 20(7) (2025) P07017 (doi)10.1088/1748-0221/20/07/P07017

Protoacoustic range verification by direct comparison with beam range measurements using a tissue-equivalent polymer gel

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

Physica Medica 137 (2025) 105099 (doi)10.1016/j.ejmp.2025.105099

Wide frequency-range acceleration using second-harmonic rf buckets in fixed-field accelerators

Uesugi T., Ishi Y., Mori Y.

Physical Review Accelerators and Beams 29(3) (2026) 031303 (doi)10.1103/nch5-p3rk

Others

Design of a Storage Ring based on a Fixed Field Alternating Gradient Configuration with an Internal Target for Heavy-Ion Beams with Stochastic Charge State Conversions

Ishi Yoshihiro, Uesugi Tomonori, Mori Yoshiharu, Nishio Katsuhisa

Arxiv (2025) (doi)10.48550/arXiv:2504.14909

12. Other

Papers

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

Furukawa R., Yamada T., Yashima H., Harano H., Sato Y., Matsumoto T., Shimizu M., Omori Y., Soeta Y., Nagata R., Murata H., Otsuka S., Ichikawa R., Manabe S., Shimodan C., Smith R., Tokonami S.
Applied Radiation and Isotopes 226 (2025) 112211 (doi)10.1016/j.apradiso.2025.112211

Quantitative Determination of Total Fluorine in Separation Materials and Consumer Products by Instrumental Neutron Activation Analysis
FURUSHO Yoshiaki, TAKAYANAGI Manabu, MIURA Tsutomu
BUNSEKI KAGAKU 75(1.2) (2026) 75-80 (in Japanese) (doi)10.2116/bunsekikagaku.75.75

Syntheses, crystal structures, and photochemical reactions of tris(di-2-pyridylamine)Ru(II) complex and its photoproducts cis/trans-bis(acetonitrile)bis(di-2-pyridylamine)Ru(II) complexes
Toyama Mari, Suganoya Ryuji, Nagao Noriharu
Coordination Chemistry Research 2 (2025) 100018 (doi)10.1016/j.cocr.2025.100018

Photoinduced Etherification of Ru(II)-Coordinated Chloromethyl-Modified 2,2'-Bipyridine Complex and Structural Characterization of Its Photoproducts
Toyama Mari, Asano Yuki
European Journal of Inorganic Chemistry 28(15) (2025) e202400810 (doi)10.1002/ejic.202400810

Efficiency of Photodissociation of Carbonyl Ligand in Ruthenium Monocarbonyl Bipyridine Complexes: Effect of Isomeric Structures and Ligands
Kuramochi Yusuke, Itabashi Jun, Toyama Mari, Tanaka Seiichi, Nagao Noriharu, Onda Ken, Ishida Hitoshi
Inorganic Chemistry 64(27) (2025) 13647-13660 (doi)10.1021/acs.inorgchem.5c00466

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.
Journal of Applied Physics 137(14) (2025) 144401 (doi)10.1063/5.0252358

Effect of organic modification on the structure and properties of silicates synthesized by a titanium-catalyzed sol-gel method
Arima-Osonoi Hiroshi, Akutsu-Suyama Kazuhiro, Iwamiya Yoko, Hiroi Zenji, Shibayama Mitsuhiro
Journal of Materials Science 60(40) (2025) 18734-18743 (doi)10.1007/s10853025-11438-9

Long-term annual proficiency testing in Fukushima for quality control of activity measurement using gamma-ray spectrometry
Furukawa Rio, Miura Tsutomu, Hachinohe Mayumi, Matsuzaki Satoru, Murakoshi Motoharu, Yuki Masahiro, Hamamatsu Shioka, Tokonami Shinji, Harano Hideki
Journal of Radioanalytical and Nuclear Chemistry 335(3) (2026) 2217-2227 (doi)10.1007/s10967-025-10674-2

Purity determination of high-purity Ti metal by the mass-balance approach for the development of a primary Ti standard solution
Miura Tsutomu, Ohata Masaki, Wada Ayaka, Narukawa Tomohiro
Journal of Radioanalytical and Nuclear Chemistry 334(11) (2025) 8005-8013 (doi)10.1007/s10967-025-10459-7

Nondestructive 3D elemental imaging of Edo's archaeological artifacts via muonic X-ray measurements
Chiu I-Huan, Osawa Takahito, Ninomiya Kazuhiko, Takeda Shin'ichiro, Takahashi Tadayuki, Katsuragawa Miho, Watanabe Shin, Kubo Kenya, Saito Tsutomu, Mizumoto Kazumi, Taniguchi Akihiro, Umegaki Izumi, Shimomura Koichiro
npj Heritage Science 13(1) (2025) 154 (doi)10.1038/s40494-025-01741-8

Corrigendum to "Dynamics of polybutadiene reinforced with unsaturated carboxylate studied by muon spin relaxation (μ SR)" [Polymer 105 (2016) 18856]
Mashita Ryo, Kishimoto Hiroyuki, Inoue Rintaro, Koda Akihiro, Kadono Ryosuke, Kanaya Toshiji
Polymer 241 (2025) 129357 (doi)10.1016/j.polymer.2025.129357

Development of LLM-assisted data curation tools for the Starrydata materials science database
Katsura Yukari, Mato Tomoya, Takada Yu, Koyama Eiji, Yana Dewi, Tanaka Atsumi, Kumagai Masaya
Science and Technology of Advanced Materials: Methods 5(1) (2025) 2590811 (doi)10.1080/27660400.2025.2590811

Starrydata: from published plots to shared materials data

Katsura Yukari, Kumagai Masaya, Mato Tomoya, Takada Yu, Ando Yuki, Fujita Erina, Hosono Fumikazu, Koyama Eiji, Mudasar Farhan, Phuong Ton Nu Thanh, Saito Naoto, Sakamoto Yoshihiro, Tanaka Atsumi, Yana Dewi, Kimura Kaoru, Tsuda Koji, Demura Masahiko

Science and Technology of Advanced Materials: Methods 5(1) (2025) 2506976
(doi)10.1080/27660400.2025.2506976

Total fluorine analysis in solid samples by instrumental neutron activation analysis coupled with the internal standard method

Tsutomu Miura

Talanta Open 11 (2025) 100409 (doi)10.1016/j.talo.2025.100409

Encapsulation of lubricant additives – Enhanced lubrication performance through micellar solubilization of poorly soluble additives by surfactants

Gu Haiyang, Hirayama Tomoko Tribology

International 210 (2025) 110786 (doi)10.1016/j.triboint.2025.110786

Proceedings

MoMoTarO-ISS feasibility studies of neutron measurements

Nakayama Kazuya, Enoto Teruaki, Tsuji Naoki, Nagaoka Hiroshi, Tsurumi Miwa, Maeda Ryota, Osumi Yuya, Kusano Hiroki, Taniguchi Kentaro, Wakabayashi Yasuo, Takanashi Takaoki, Otake Yoshie, Kato Yo, Tamagawa Toru, Hareyama Makoto, Kobayashi Taizo, Ikenaga Taichi, Nakano Yuuki, Tsukamoto Yushi, Hoshino Takeshi, Ueno Munetaka, Ozaki Naoya, Nakamura Kazuhiro, Takahashi Hiromitsu, Kisaka Shota, Hotokezaka Kenta

39th International Cosmic Ray Conference (ICRC2025) Geneva, Switzerland (Jul. 15-24, 2025) 1342
(doi)10.22323/1.501.1342

Performance evaluation of the MoMoTarO detector as a moisture meter for lunar and ground operation

Omata Yuya, Enoto Teruaki, Tsuji Naoki, Nagaoka Hiroshi, Tsurumi Miwa, Maeda Ryota, Nakayama Kazuya, Kusano Hiroki, Taniguchi Kentaro, Wakabayashi Yasuo, Takanashi Takaoki, Otake Yoshie, Kato Yo, Tamagawa Toru, Hareyama Makoto, Kobayashi Taizo, Ikenaga Taichi, Nakano Yuuki, Tsukamoto Yushi, Hoshino Takeshi, Ueno Munetaka, Ozaki Naoya, Nakazawa Kazuhiro, Takahashi Hiromitsu, Kisaka Shota, Hotokezaka Kenta

39th International Cosmic Ray Conference (ICRC2025) Geneva, Switzerland (Jul. 15-24, 2025) 909
(doi)10.22323/1.501.0909

Neutron instruments study for the new research reactor at the “Monju” site Nobuhiro Sato, Makoto Inagaki, Daisuke Ito, Yusuke Nambu, Yuji Kawabata, Koichi Takamiya, Masahiro Hino, Masaaki Sugiyama

Proceedings of the 60th KURNS Scientific Meeting, Kumatori, Japan/Online (Jan. 29-30, 2026) 42 (in Japanese)

Analysis of simulated detector response from photonuclear interrogation signals induced from nuclear material by bremsstrahlung photon source

Krittana Kiatkongkaew, Hiroshi Sagara, Kosuke Tanabe, Tatsuya Katabuchi, Kazushi Terada, Jun-ichi Hori, Yoshiyuki Takahashi

Proceedings, 46th Annual Meeting of Institute of Nuclear Material Management Japan Chapter Tokyo, Japan (Dec. 2-3, 2025) 4656

Development of a non-destructive assay technique for nuclear material detection and U enrichment measurement by photonuclear reaction induced by bremsstrahlung X-ray (1) Grand plan

Hiroshi Sagara, Kosuke Tanabe, Tatsuya Katabuchi, Kazushi Terada, Yoshiyuki Takahashi, Jun-ichi Hori

Proceedings, 46th Annual Meeting of Institute of Nuclear Material Management Japan Chapter, Tokyo, Japan (Dec. 2-3, 2025) 4604 (in Japanese)

Reviews

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Tosshiharu Takahashi

Journal of the Particle Accelerator Society of Japan 22(1) (2025) 88-89 (doi)10.50868/pasj.22.1_88 (in Japanese)

Philosophy, Promotion Structure, Study Tasks, and Goals for the Construction of Test Research Reactor at Tsuruga

Masaaki Sugiyama

RADIOISOTOPES 74(2) (2025) 221-225 (doi)10.3769/radioisotopes.740210 (in Japanese)

Neutron Instruments for the New Research Reactor at the “Monju” Site

Nobuhiro Sato

RADIOISOTOPES 74(2) (2025) 239-243 (doi)10.3769/radioisotopes.740213 (in Japanese)

Plan for the Neutron Irradiation Experimental Instruments

Inagaki Makoto, Takamiya Koichi

RADIOISOTOPES 74(2) (2025) 245-250 (doi)10.3769/radioisotopes.740214 (in Japanese)

特集 具現化する省エネ・脱炭素技術:脱炭素化技術としての原子力エネルギーの役割と課題

宇根崎博信

月刊省エネルギー 78(1) (2026) 55-57 (in Japanese)

Development of National Standards for Dosimetry and Radioactivity at AIST-Ensuring Traceability and Reliability of Measurements- Tadahiro KUROSAWA, Yasushi SATO and Tsutomu MIURA

Eurozoru Kenkyu 41(1) (2026) 34-40 (doi)10.11203/jar.41.34 (in Japanese)

Books

Boron Compounds: New Candidates for Boron Carriers in BNCT (P259-293)

放射能を生きた村—福島県飯舘村における帰還・生活・復興の人類誌—

Mao Takagaki

Louis Pasteur Center for Medical Research (2026) (in Japanese)

Cyclotron-Based Neutron Source, Sumitomo BNCT System, “NeuCure”(P79-87)

葉袋佳孝, 久保謙哉, 榎本和義, 三浦勉

分析化学実技シリーズ応用分析編9

日本分析化学会 編 共立出版 (2025) (in Japanese)