

Peer-Reviewed Papers

- (1) New excited 2^+ and 3^- two-proton states in $^{210}_{84}\text{Po}_{126}$ populated by two-proton transfer
E. Dupont, A. Astier, C. M. Petrache, B.F. Lv, I. Deloncle, J. Kiener, R. Orlandi, H. Makii, K. Nishio, K. Hirose, M. Asai, T. K. Sato, K. Tsukada, Y. Ito, K. R. Kean, R. Yanagihara, G. Scamps
Phys. Rev. C **101**, 014309 (2020).
- (2) In-source laser spectroscopy of dysprosium isotopes at the ISOLD-RILIS,
K. Chrysalidis, A.E. Barzakh, R. Ahmed, A.N. Andreyev, J. Ballof, J. G. Cubiss, D. V. Fedorov, V. N. Fedosseev, L. M. Fraile, R. D. Harding, U. Köster, B. A. Marsh, C. Raison, J. P. Ramos, R. E. Rossel, S. Rothe, K. Wendt, S.G. Wilkins,
Nucl. Instrum. Methods Phys. Res. B. **463**, 472 (2020).
- (3) Anomalous Radioisotope Production for ^{68}ZnO in a shield Material with Accelerator Neutrons
Kazuaki Tsukada, Yasuki Nagai, Shintaro Hashimoto, Futoshi Minato, Masako Kawabata, Yuichi Hatsukawa, Kazuyuki Hashimoto, Satoshi Watanabe, Hideya Saeki, and Shoji Motoishi
J. Phys. Soc. Jpn. **89**, 034201 (2020).
- (4) Fine structure in the α decay of ^{223}U
M.D. Sun, Z. Liu, T.H. Huang, W.Q. Zhang, A.N. Andreyev, B. Ding, J.G. Wang, X.Y. Liu, H.Y. Lu, D.S. Hou, Z.G. Gan, L. Ma, H.B. Yang, Z.Y. Zhang, L. Yu, J. Jiang, K.L. Wang, Y.S. Wang, M.L. Liu, Z.H. Li, J. Li, X. Wang, A.H. Feng, C.J. Lin, L.J. Sun, N.R. Ma, W. Zuo, H.S. Xu, X.H. Zhou, G.Q. Xiao, C. Qi, F.S. Zhang
Phys. Lett. B **800**, 135096 (2020).
- (5) Study of Quasielastic Barrier Distributions as a Step towards the Synthesis of Superheavy Elements with Hot Fusion Reactions
T. Tanaka, K. Morita, K. Morimoto, D. Kaji, H. Haba, R. A. Boll, N. T. Brewer, S. Van Cleve, D. J. Dean, S. Ishizawa, Y. Ito, Y. Komori, K. Nishio, T. Niwase, B. C. Rasco, J. B. Roberto, K. P. Rykaczewski, H. Sakai, D. W. Stracener, and K. Hagino
Phys. Rev. Lett. **124**, 052502 (2020).
- (6) α -decay branching ratio of ^{180}Pt
J. G. Cubiss, R. D. Harding, A. N. Andreyev, N. Althubiti, B. Andel, S. Antalic, A. E. Barzakh, T. E. Cocolios, T. Day Goodacre, G. J. Farooq-Smith, D. V. Fedorov, V. N. Fedosseev, L. P. Gaffney, L. Ghys, M. Huyse, K. M. Lynch, B. A. Marsh, Y. Martinez Palenzuela, P. L. Molkanov, R. E. Rosse, S. Rothe, M. D. Seliverstov, S. Sels, P. Spagnoletti, C. Van Beveren, P. Van Duppen, M. Veinhard, E. Verstraelen, and A. Zadvornaya
Phys. Rev. C **101**, 014314 (2020).
- (7) Hyperfine anomaly in gold and magnetic moments of $I^\pi = 11/2^-$ gold isomers
A. E. Barzakh, D. Atanasov, A. N. Andreyev, M. Al Monthery, N. A. Althubiti, B. Andel, S. Antalic, K. Blaum, T. E. Cocolios, J. G. Cubiss, P. Van Duppen, T. Day Goodacre, A. de Roubin, Yu. A. Demidov, G. J. Farooq-Smith, D. V. Fedorov, V. N. Fedosseev, D. A. Fink, L. P. Gaffney, L. Ghys, R. D. Harding, D. T. Joss, F. Herfurth, M. Huyse, N. Imai, M. G. Kozlov, S. Kreim, D. Lunney, K.

M. Lynch, V. Manea, B. A. Marsh, Y. Martinez Palenzuela, P. L. Molkanov, D. Neidherr, R. D. Page, M. Rosenbusch, R. E. Rosse, S. Rothe, L. Schweikhard, M. D. Seliverstov, S. Sels, C. Van Beveren, E. Verstraelen, A. Welker, F. Wienholtz, R. N. Wolf, and K. Zuber
Phys. Rev. C **101**, 034308 (2020).

(8) Shape coexistence in ^{187}Au studied by laser spectroscopy

A. E. Barzakh, D. Atanasov, A. N. Andreyev, M. Al Monthery, N. A. Althubiti, B. Andel, S. Antalic, K. Blaum, T. E. Cocolios, J. G. Cubiss, P. Van Duppen, T. Day Goodacre, A. de Roubin, G. J. Farooq-Smith, D. V. Fedorov, V. N. Fedosseev, D. A. Fink, L. P. Gaffney, L. Ghys, R. D. Harding, M. Huyse, N. Imai, S. Kreim, D. Lunney, K. M. Lynch, V. Manea, B. A. Marsh, Y. Martinez Palenzuela, P. L. Molkanov, D. Neidherr, M. Rosenbusch, R. E. Rossel, S. Rothe, L. Schweikhard, M. D. Seliverstov, S. Sels, C. Van Beveren, E. Verstraelen, A. Welker, F. Wienholtz, R. N. Wolf, and K. Zuber
Phys. Rev. C **101**, 064321 (2020).

(9) Population of a low-spin positive-parity band from high-spin intruder states in ^{177}Au : The two-state mixing effect

M. Venhart, M. Balogh, A. Herzán, J.L. Wood, F.A. Ali, D.T. Joss, A.N. Andreyev, K. Auranen, R.J. Carroll, M.C. Drummond, J.L. Easton, P.T. Greenlees, T. Grahn, A. Gredley, J. Henderson, U. Jakobsson, R. Julin, S. Juutinen, J. Konki, E.A. Lawrie, M. Leino, V. Matoušek, C.G. McPeake, D. O'Donnell, R.D. Page, J. Pakarinen, P. Papadakis, J. Partanen, P. Peura, P. Rahkila, P. Ruotsalainen, M. Sandzelius, J. Sarén, B. Saygi, M. Sedlák, C. Scholey, J. Sorri, S. Stolze, A. Thornthwaite, R. Urban, J. Uusitalo, M. Veselský, F.P. Wearing
Phys. Lett. B **806**, 135488 (2020).

(10) Sequential Nature of (p, 3p) Two-Proton Knockout from Neutron-Rich Nuclei

A.Frotscher, M.Gomez-Ramos, A.Obertelli, P.Doornenbal, G.Authelet, H.Baba, D.Calvet, F.Chateau, S.Chen, A.Corsi, A.Delbart, J.-M.Gheller, A.Giganon, A.Gillibert, T.Isobe, V.Lapoux, M.Matsushita, S.Momiyama, T.Motobayashi, M.Niikura, H.Otsu, N.Paul, C.Peron, A.Peyaud, E.C.Pollacco, J.-Y.Rousse, H.Sakurai, C.Santamaria, M.Sasano, Y.Shiga, N.Shimizu, D.Steppenbeck, S.Takeuchi, R.Taniuchi, T.Uesaka, H.Wang, K.Yoneda, T.Ando, T.Arici, A.Blazhev, F.Browne, A.M.Bruce, R.Carroll, L.X.Chung, M.L.Cortes, M.Dewald, B.Ding, Zs.Dombradi, F.Flavigny, S.Franchoo, F.Giacoppo, M.Gorska, A.Gottardo, K.Hadynska-Klek, Z.Korkulu, S.Koyama, Y.Kubota, A.Jungclaus, J.Lee, M.Lettmann, B.D.Linh, J.Liu, Z.Liu, C.Lizarazo, C.Louchart, R.Lozeva, K.Matsui, T.Miyazaki, K.Moschner, S.Nagamine, N.Nakatsuka, C.Nita, S.Nishimura, C.R.Nobs, L.Olivier, S.Ota, Z.Patel, Zs.Podolyak, M.Rudigier, E.Sahin, T.Y.Saito, C.Shand, P.-A.Soderstrom, I.G.Stefan, T.Sumikama, D.Suzuki, R.Orlandi, V.Vaquero, Zs.Vajta, V.Werner, K.Wimmer, J.Wu, Z.Xu
Phys. Rev. Lett. **125**, 012501 (2020).

(11) β -delayed fission of isomers in ^{188}Bi

B. Andel, A. N. Andreyev, S. Antalic, M. Al Monthery, A. Barzakh, M. L. Bissell, K. Chrysalidis, T.

E. Cocolios, J. G. Cubiss, T. Day Goodacre, N. Dubray, G. J. Farooq-Smith, D. V. Fedorov, V. N. Fedosseev, L. P. Gaffney, R. F. Garcia Ruiz, S. Goriely, C. Granados, R. D. Harding, R. Heinke, S. Hilaire, M. Huyse, J.-F. Lemaître, K. M. Lynch, B. A. Marsh, P. Molkanov, P. Mosat, S. Péru, C. Raison, S. Rothe, C. Seiffert, M. D. Seliverstov, S. Sels, D. Studer, J. Sundberg, P. Van Duppen
Phys. Rev. C **102**, 014319 (2020).

(12) Transition strengths in the neutron-rich $^{73, 74, 75}\text{Ni}$ isotopes

A. Gottardo, G. de Angelis, P. Doornenbal, L. Coraggio, A. Gargano, N. Itaco, K. Kaneko, P. Van Isacker, T. Furumoto, G. Benzoni, J. Lee, H. Liu, M. Matsushita, D. Mengoni, V. Modamio-Hoybjor, S. Momiyama, T. Motobayashi, D. R. Napoli, M. Niikura, E. Sahin, Y. Shiga, H. Sakurai, R. Taniuchi, S. Takeuchi, H. Wang, J. J. Valiente-Dobon, R. Avigo, H. Baba, N. Blasi, F. L. Bello Garrote, F. Browne, F. C. L. Crespi, S. Ceruti, R. Daido, M.-C. Delattre, D. Fang, Zs. Dombradi, T. Isobe, I. Kuti, G. Lorusso, K. Matsui, B. Melon, T. Miyazaki, S. Nishimura, R. Orlandi, Z. Patel, S. Rice, L. Sinclair, P. A. Soderstrom, D. Sohler, T. Sumikama, J. Taprogge, Zs. Vajta, H. Watanabe, O. Wieland, J. Wu, Z. Y. Xu, M. Yalcinkaya, R. Yokoyama
Phys. Rev. C **102**, 014323 (2020).

(13) Detailed spectroscopy of doubly magic ^{132}Sn

J. Benito, L. M. Fraile, A. Korgul, M. Piersa, E. Adamska, A. N. Andreyev, R. Álvarez-Rodríguez, A. E. Barzakh, G. Benzoni, T. Berry, M. J. G. Borge, M. Carmona, K. Chrysalidis, C. Costache, J. G. Cubiss, T. Day Goodacre, H. De Witte, D. V. Fedorov, V. N. Fedosseev, G. Fernández-Martínez, A. Fijałkowska, M. Fila, H. Fynbo, D. Galaviz, P. Galve, M. García-Díez, P. T. Greenlees, R. Grzywacz, L. J. Harkness-Brennan, C. Henrich, M. Huyse, P. Ibáñez, A. Illana, Z. Janas, J. Jolie, D. S. Judson, V. Karayonchev, M. Kicińska-Habior, J. Konki, J. Kurcewicz, I. Lazarus, R. Lică, A. López-Montes, M. Lund, H. Mach, M. Madurga, I. Marroquín, B. Marsh, M. C. Martínez, C. Mazzocchi, N. Mărginean, R. Mărginean, K. Miernik, C. Mihai, R. E. Mihai, E. Nácher, A. Negret, B. Olaizola, R. D. Page, S. V. Paulauskas, S. Pascu, A. Perea, V. Pucknell, P. Rahkila, C. Raison, E. Rapisarda, J.-M. Régis, K. Rezykina, F. Rotaru, S. Rothe, D. Sánchez-Parcerisa, V. Sánchez-Tembleque, K. Schomacker, G. S. Simpson, Ch. Sotty, L. Stan, M. Stănoiu, M. Stryczyk, O. Tengblad, A. Turturica, J. M. Udías, P. Van Duppen, V. Vedia, A. Villa-Abaunza, S. Viñals, W. B. Walters, R. Wadsworth, and N. Warr
Phys. Rev. C **102**, 014328 (2020).

(14) Laser-assisted decay spectroscopy for the ground states of $^{180, 182}\text{Au}$

R. D. Harding, A. N. Andreyev, A. E. Barzakh, D. Atanasov, J. G. Cubiss, P. Van Duppen, M. Al Monthery, N. A. Althubiti, B. Andel, S. Antalic, K. Blaum, T. E. Cocolios, T. Day Goodacre, A. de Roubin, G. J. Farooq-Smith, D. V. Fedorov, V. N. Fedosseev, D. A. Fink, L. P. Gaffney, L. Ghys, D. T. Joss, F. Herfurth, M. Huyse, N. Imai, S. Kreim, D. Lunney, K. M. Lynch, V. Manea, B. A. Marsh, Y. Martinez Palenzuela, P. L. Molkanov, D. Neidherr, R. D. Page, A. Pastore, M. Rosenbusch, R. E. Rossel, S. Rothe, L. Schweikhard, M. D. Seliverstov, S. Sels, C. Van Beveren, E. Verstraelen, A. Welker, F. Wienholtz, R. N. Wolf, and K. Zuber

Phys. Rev. C **102**, 024312 (2020).

(15) Decay studies of the long-lived states in ^{186}Tl

M. Stryczyk, B. Andel, A. N. Andreyev, J. Cubiss, J. Pakarinen, K. Rezyunkina, P. Van Duppen, S. Antalic, T. Berry, M. J. G. Borge, C. Clisu, D. M. Cox, H. De Witte, L. M. Fraile, H. O. U. Fynbo, L. P. Gaffney, L. J. Harkness-Brennan, M. Huysse, A. Illana, D. S. Judson, J. Konki, J. Kurcewicz, I. Lazarus, R. Lica, M. Madurga, N. Marginean, R. Marginean, C. Mihai, P. Mosat, E. Nacher, A. Negret, J. Ojala, J. D. Ovejas, R. D. Page, P. Papadakis, S. Pascu, A. Perea, Zs. Podolyák, V. Pucknell, E. Rapisarda, F. Rotaru, C. Sotty, O. Tengblad, V. Vedia, S. Viñals, R. Wadsworth, N. Warr, and K. Wrzosek-Lipska

Phys. Rev. C **102**, 024322 (2020).

(16) Study of charged particle activation analysis (II): Determination of boron concentration in human blood samples

Y. Ikebe, M. Oshima, S. Bamba, M. Asai, K. Tsukada, T.K. Sato, A. Toyoshima, C. Bi, H. Seto, H. Amano, H. Kumada, and T. Morimoto

Appl. Radiat. Isot. **164**, 109106 (2020).

(17) Production of ^{266}Bh in the $^{248}\text{Cm}(^{23}\text{Na},5n)^{266}\text{Bh}$ reaction and its decay properties

H. Haba, F. Fan, D. Kaji, Y. Kasamatsu, H. Kikunaga, Y. Komori, N. Kondo, H. Kudo, K. Morimoto, K. Morita, M. Murakami, K. Nishio, J. P. Omtvedt, K. Ooe, Z. Qin, D. Sato, N. Sato, T. K. Sato, Y. Shigekawa, A. Shinohara, M. Takeyama, T. Tanaka, A. Toyoshima, K. Tsukada, Y. Wakabayashi, Y. Wang, S. Wulff, S. Yamaki, S. Yano, Y. Yasuda, and T. Yokokita

Phys. Rev. C **102**, 024625 (2020).

(18) True Coincidence Summing Correction for Cylindrical Volume Samples in γ -ray Spectrometry

Takashi YAMADA, Masato Asai, Chushiro YONEZAWA, Kazutoshi KAKITA, and Shoji HIRAI
RADIOISOTOPE **69**, 287 (2020). (in Japanese)

(19) First online operation of TRIGA-TRAP

J. Grund, M. Asai, K. Blaum, M. Block, S. Chenmarev, Ch.E. Düllmann, K. Eberhardt, S. Lohse, Y. Nagame, Sz. Nagy, P. Naubereit, J.J.W. van de Laar, F. Schneider, T.K. Sato, N. Sato, D. Simonovski, K. Tsukada, K. Wendt

Nucl. Instrum. Methods Phys. Res. A **972**, 164013 (2020).

(20) Simultaneous Determination of Neutron-Induced Fission and Radiative Capture Cross Sections from Decay Probabilities Obtained with a Surrogate Reaction

R. Pérez Sánchez, B. Jurado, V. Méot, O. Roig, M. Dupuis, O. Bouland, D. Denis-Petit, P. Marini, L. Mathieu, I. Tsekhanovich, M. Aiche, L. Audouin, C. Cannes, S. Czajkowski, S. Delpech, A. Görgen, M. Guttormsen, A. Henriques, G. Kessedjian, K. Nishio, D. Ramos, S. Siem, and F. Zeiser

Phys. Rev. Lett. **125**, 122502 (2020).

(21) β -decay of ^{75}Ni and the systematics of the low-lying level structure of neutron-rich odd-A Cu isotopes

F.L.Bello Garrote, E.Sahin, Y.Tsunoda, T.Otsuka, A.Gorgen, M.Niikura, S.Nishimura, G.de Angelis, G.Benzoni, A.I.Morales, V.Modamio, Z.Y.Xu, H.Baba, F.Browne, A.M.Bruce, S.Ceruti, F.C.L.Crespi, R.Daido, M.-C.Delattre, P.Doornenbal, Zs.Dombradi, Y.Fang, S.Franchoo, G.Gey, A.Gottardo, K.Hadynska-Klek, T.Isobe, P.R.John, H.S.Jung, I.Kojouharov, T.Kubo, N.Kurz, I.Kuti, Z.Li, G.Lorusso, I.Matea, K.Matsui, D.Mengoni, T.Miyazaki, S.Momiyama, P.Morfouace, D.R.Napoli, F.Naqvi, H.Nishibata, A.Odahara, R.Orlandi, Z.Patel, S.Rice, H.Sakurai, H.Schaffner, L.Sinclair, P.-A.Soderstrom, D.Sohler, I.G.Stefan, T.Sumikama, D.Suzuki, R.Taniuchi, J.Taprogge, Zs.Vajta, J.J.Valiente-Dobon, H.Watanabe, V.Werner, J.Wu, A.Yagi, M.Yalcinkaya, R.Yokoyama, K.Yoshinaga

Phys. Rev. C **102**, 034314 (2020).

(22) Evolution of proton single-particle states in neutron-rich Sb isotopes beyond N=82

A.Jungclaus, J.M.Keatings, G.S.Simpson, H.Naidja, A.Gargano, S.Nishimura, P.Doornenbal, G.Gey, G.Lorusso, P.-A.Soderstrom, T.Sumikama, J.Taprogge, Z.Y.Xu, H.Baba, F.Browne, N.Fukuda, N.Inabe, T.Isobe, H.S.Jung, D.Kameda, G.D.Kim, Y.-K.Kim, I.Kojouharov, T.Kubo, N.Kurz, Y.K.Kwon, Z.Li, H.Sakurai, H.Schaffner, Y.Shimizu, H.Suzuki, H.Takeda, Z.Vajta, H.Watanabe, J.Wu, A.Yagi, K.Yoshinaga, S.Bonig, J.-M.Daugas, R.Gernhauser, S.Ilieva, T.Kroll, A.Montaner-Piza, K.Moschner, D.Mucher, H.Nishibata, A.Odahara, R.Orlandi, M.Scheck, K.Steiger, A.Wendt

Phys. Rev. C **102**, 034324 (2020).

(23) α decay of $^{243}\text{Fm}_{143}$ and $^{245}\text{Fm}_{145}$ and of their daughter nuclei

J. Khuyagbaatar, F. P. Heßberger, S. Hofmann, D. Ackermann, H. G. Burkhard, S. Heinz, B. Kindler, I. Kojouharov, B. Lommel, R. Mann, J. Maurer, and K. Nishio

Phys. Rev. C **102**, 044312 (2020).

(24) Laser-assisted decay spectroscopy and mass spectrometry of ^{178}Au

J. G. Cubiss, A. N. Andreyev, E. Barzakh, V. Manea, M. Al Monthery, N. A. Althubiti, B. Andel, S. Antalic, D. Atanasov, K. Blaum, T. E. Cocolios, T. Day Goodacre, A. de Roubin, G. J. Farooq-Smith, D. V. Fedorov, V. N. Fedosseev, D. A. Fink, L. P. Gaffney, L. Ghys, R. D. Harding, F. Herfurth, M. Huysse, N. Imai, D. T. Joss, S. Kreim, D. Lunney, K. M. Lynch, B. A. Marsh, Y. Martinez Palenzuela, P. L. Molkanov, D. Neidherr, G. G. O'Neill, R. D. Page, M. Rosenbusch, R. E. Rossel, S. Rothe, L. Schweikhard, M. D. Seliverstov, S. Sels, A. Stott, C. Van Beveren, P. Van Duppen, E. Verstraelen, A. Welker, F. Wienholtz, R. N. Wolf, K. Zuber

Phys. Rev. C **102**, 044332 (2020).

(25) Nonresonant p-wave direct capture and interference effect observed in the $^{16}\text{O}(n,\gamma)^{17}\text{O}$ reaction

Y. Nagai, M. Kinoshita, M. Igashira, Y. Nobuhara, H. Makii, K. Mishima, T. Shima, and A. Mengoni

Phys. Rev. C **102**, 044616 (2020).

(26) Measurement of fission-fragment mass distributions in the multinucleon transfer channels of the $^{18}\text{O} + ^{237}\text{Np}$ reaction

- M. J. Vermeulen, K. Nishio, K. Hirose, K. R. Kean, H. Makii, R. Orlandi, K. Tsukada, I. Tsekhanovich, A. N. Andreyev, S. Ishizaki, M. Okubayashi, S. Tanaka, and Y. Aritomo
Phys. Rev. C **102**, 054610 (2020).
- (271) Competition between Allowed and First-Forbidden β Decay: The Case of $^{208}\text{Hg} \rightarrow ^{208}\text{Tl}$
R. J. Carroll, Zs. Podolyák, T. Berry, H. Grawe, T. Alexander, A. N. Andreyev, S. Ansari, M. J. G. Borge, M. Brunet, J. R. Creswell, L. M. Fraile, C. Fahlander, H. O. U. Fynbo, E. R. Gamba, W. Gelletly, R.-B. Gerst, M. Górska, A. Gredley, P. T. Greenlees, L. J. Harkness-Brennan, M. Huyse, S. M. Judge, D. S. Judson, J. Konki, J. Kurcewicz, I. Kuti, S. Lalkovski, I. H. Lazarus, R. Lică, M. Lund, M. Madurga, N. Marginean, R. Marginean, I. Marroquin, C. Mihai, R. E. Mihai, E. Nácher, A. Negret, C. Nita, S. Pascu, R. D. Page, Z. Patel, A. Perea, J. Phrompao, M. Piersa, V. Pucknell, P. Rahkila, E. Rapisarda, P. H. Regan, F. Rotaru, M. Rudigier, M. Shand, R. Shearman, S. Stegemann, T. Stora, Ch. Sotty, O. Tengblad, P. Van Duppen, V. Vedia, R. Wadsworth, P. M. Walker, N. Warr, F. Wearing, H. De Witte
Phys. Rev. Lett. **125**, 192501 (2020).
- (28) Measurement of double-differential thick-target neutron yields of the $C(d,n)$ reaction at 12, 20, and 30 MeV
Md Kawchar Ahmed Patwary, Tadahiro Kin, Katsumi Aoki, Kosuke Yoshinami, Masaya Yamaguchi, Yukinobu Watanabe, Kasuki Tsukada, Nozomi Sato, Masato Asai, Testsuya K. Sato, Yuichi Hatsukawa, and Shinsuke Nakayama
J. Nucl. Sci. Technol. **58**, 252 (2021).
- (29) Experimental study of the Γ_{p1}/Γ_{p0} ratios of resonance states in ^8Be for deducing the $^7\text{Be}(n,p_1)^7\text{Li}^*$ reaction rate relevant to the cosmological lithium problem
N. Iwasa, S. Ishikawa, S. Kubono, T. Sakakibara, K. Kominato, K. Nishio, M. Matsuda, K. Hirose, H. Makii, R. Orlandi, K. Asada, D. Guru, S. Nishimura, S. Hayakawa, and T. Kawabata
Phys. Rev. C **103**, 015801 (2021).
- (30) Actinides and Transactinides
Y. Nagame, T. K. Sato, J. V. Kratz,
In Kirk-Othmer Encyclopedia of Chemical Technology, (Ed.).
<https://doi.org/10.1002/0471238961.0103200919050102.a01.pub3>
- (31) Beta decay of the axially asymmetric ground state of ^{192}Re
H. Watanabe, Y.X. Watanabe, Y. Hirayama, A.N. Andreyev, T. Hashimoto, F.G. Kondev, G.J. Lane, Yu.A. Litvinov, J.J. Liu, H. Miyatake, J.Y. Moon, A.I. Morales, M. Mukai, S. Nishimura, T. Niwase, M. Rosenbusch, P. Schury, Y. Shi, M. Wada, P.M. Walker
Phys. Lett. B **814**, 136088 (2021).
- (32) Laser Spectroscopy of Neutron-Rich $^{207,208}\text{Hg}$ Isotopes: Illuminating the Kink and Odd-Even Staggering in Charge Radii across the $N=126$ Shell Closure
T. Day Goodacre, A.V. Afanasjev, A.E. Barzakh, B.A. Marsh, S. Sels, P. Ring, H. Nakada, A.N. Andreyev, P. Van Duppen, N.A. Althubiti, B. Andel., D. Atanasov, J. Billowes, K. Blaum, T.E.

Cocolios, J.G. Cubiss, G.J. Farooq-Smith, D.V. Fedorov, V.N. Felosseev, K.T. Flanagan, L.P. Gaffney, L. Ghys, M. Huyse, S. Kreim, D. Lunney, K.M. Lynch, V. Manea, Y. Martinez Palenzuela, P.L. Molkanov, M. Rosenbusch, R.E. Rossel, S. Rothe, L. Schweikhard, M.D. Seliverstov, P. Spagnoletti, C. Van Beveren, M. Veinhard, E. Verstraelen, A. Welker, K. Wendt, F. Wienholtz, R.N. Wolf, A. Zadvornaya, and K. Zuber
Phys. Rev. Lett. **126**, 032502 (2021).

(33) Gas phase synthesis of 4d transition metal carbonyl complexes with thermalized fission fragments in single-atom reactions

M. Götz, S. Götz, J. V. Kratz, J. Ballof, Ch. E. Düllmann, K. Eberhardt, C. Mokry, D. Renisch, J. Runke, T. K. Sato, P. Thörle-Pospiech, N. Trautmann, A. Yakushev
Radiochim. Acta 109, 153 (2021).

Invited Talks at International Conferences

(1) New opportunities for fission studies with radioactive ion beams,

A. N. Andreyev,

NUSTAR Annual Meeting 2020, Mar. 2-6, 2020, Berlin, Germany

(2) Experimental fission studies at the JAEA tandem accelerator facility

K. Nishio,

NSCL/FRIB Summer Virtual Seminar, 9th July 2020.

https://wikihost.nsl.msui.edu/nssc/doku.php?id=public:current_schedule

(3) Nuclear Chemistry of super heavy elements I & II

T. K. Sato,

The 19th CNS International Summer School (CNSSS20), Aug.17-Aug.21, 2020, Center for Nuclear Study, the University of Tokyo (online)

<https://indico2.cns.s.u-tokyo.ac.jp/event/102/>

(4) Gamma-ray spectroscopy and the structure of neutron-rich actinides at the JAEA Tandem accelerator: recent results and future perspectives

R. Orlandi,

UK Lockdown and distancing nuclear seminars, Liverpool (online), 2020 November 16

(5) Experimental fission study using ²⁵⁴Es at the JAEA tandem facility

K. Hirose,

Symposium of nuclear data 2020, RIKEN Wako Campus, 26-27 Nov. 2020.

(6) Fission study using multinucleon transfer reaction

K. Nishio,

KEK IPNS Invited Seminar, 11th December 2020.

<https://kds.kek.jp/event/34274/>

(7) Current Status of Atomic/Chemical Studies of Heavy and Trans- Actinide Elements at JAEA

T. K. Sato,

57th Annual Convention of Chemists 2020 & International Conference on Recent Trends in Chemical Sciences (RTCS), December 26-29, 2020

Books and Scientific Articles

(1) フェルミウム原子核で起きるユニークな核分裂

Origin of the dramatic change of fission mode in fermium isotopes investigated using Langevin equations

Y. Aritomo, Y. Miyamoto, K. Nishio

日本物理学会誌 Vol.75, No.10, 631 (2020) (in Japanese).

(2) 第一イオン化エネルギー測定によるアクチノイド系列の確立ならびに超重元素領域における核化学研究の開拓

Establishment of actinide series by the first ionization potential measurement and development of nuclear chemistry research in the superheavy element region

T. K. Sato,

Radiochemistry, 41 (2020) 19-28

Patents

None

Awards

(1) 2020 年理事長表彰・研究開発功績賞, JAEA President Award 2020

多核子移行反応による中性子過剰原子核の核分裂測定技術開発

Developing a fission measurement of neutron-rich nuclei using multinucleon transfer reactions.

K. Nishio, A.N. Andreyev, K. Hirose

Press Release