

Veröffentlichungen und Vorträge der Mitarbeiter der berichterstattenden Arbeitsgruppen

Veröffentlichungen

M. Blaickner, J.V. Kratz, S. Minouchehr, G. Otto, H. Schmidberger, C. Schütz, L. Vogtländer, B. Wortmann, G. Hampel
Dosimetric feasibility study for an extracorporeal BNCT application on liver metastases at the TRIGA Mainz
Applied Radiation and Isotopes 70, 139 (2012)

B. Cheal, J. Billowes, M. L. Bissell, K. Blaum, F. C. Charlwood, K. T. Flanagan, D. H. Forest, Ch. Geppert, M. Kowalska, K. Kreim, A. Krieger, J. Krämer, K. M. Lynch, E. Mané, I. D. Moore, R. Neugart, G. Neyens, W. Nörtershäuser, J. Papuga, T. J. Procter, M. M. Rajabali, H. H. Stroke, P. Vingerhoets, D. T. Yordanov and M. Žáková
Laser spectroscopy of gallium isotopes beyond N = 50
J. Phys. Conf. Ser. 381, 012071 (2012)

D. Brose, P. Geltenbort, C. Plonka-Spehr and Th. Reichert.
Absorber materials for low-energy neutrons-theoretical and experimental studies.
NIM A 664, 353, (2012)

Ch.E. Düllmann
Superheavy element research at GSI: a broad research program with element 114 in the focus of physics and chemistry.
Radiochim. Acta 100, 67 (2012)

J. Even, A. Yakushev, Ch. E. Düllmann, J. Dvorak, R. Eichler, O. Gothe, D. Hild, E. Jäger, J. Khuyagbaatar, J.V. Kratz, J. Krier, L. Niewisch, H. Nitsche I. Pysmenetska, M. Schädel, B. Schausten, A. Türler, N. Wiehl, D. Wittwer
In-situ synthesis of single transition metal carbonyl complexes at ambient conditions.
Inorg. Chem. 51, 6431 (2012)

U. Forsberg, P. Golubev, L.G. Sarmiento, J. Jeppson, D. Rudolph, L.-L. Andersson, D. Ackermann, M. Asai, M. Block, K. Eberhardt, J. Even, Ch.E. Düllmann, J. Dvorak, J. M. Gates, K.E. Gregorich, R-D. Herzberg, F. P. Hessberger, E. Jäger, J. Krier, J. Khuyagbaatar, J.V. Kratz, I. Kojouharov, N., Kurz, S. Lahiri, B. Lommel, M. Maiti, E. Merchàn, J.P. Omtvedt, E. Parr, J. Runke, H. Schaffner, M. Schädel, A. Yakushev
First experiment at TASCA towards X-ray fingerprinting of element 115 decay chains.
Acta Phys. Pol. B 43, 305 (2012)

D.R. Fröhlich, S. Amayri, J. Drebert, T. Reich
Influence of temperature and background electrolyte on the sorption of neptunium(V) on Opalinus Clay
Appl. Clay Sci. 69, 43 (2012)

D.R. Fröhlich, S. Amayri, J. Drebert, D. Grolimund, J. Huth, U. Kaplan, J. Krause, T. Reich
Speciation of Np(V) uptake by Opalinus Clay using synchrotron microbeam techniques
Anal. Bioanal. Chem. 404, 2151 (2012)

D.R. Fröhlich, S. Amayri, J. Drebert, T. Reich
Migration of Np(V) in natural clay at elevated temperatures
Proceedings of the International Workshops ABC-Salt (II) and HiTAC 2011, Report-Nr. KIT-SR 7625, 159 (2012)

M. Grieser, Yu. A. Litvinov, R. Raabe, K. Blaum, Y. Blumenfeld, P.A. Butler, F. Wenander, P.J. Woods, M. Aliotta, A. Andreyev, A. Artemyev, D. Atanasov, T. Aumann, D. Balabanski, A. Barzakh, L. Batist, A-P. Bernardes, D. Bernhardt, J. Billowes, S. Bishop, M. Borge, I. Borzov, F. Bosch, A.J. Boston, C. Brandau, W. Catford, R. Catherall, J. Cederkäll, D. Cullen, T. Davinson, I. Dillmann, C. Dimopoulou, G. Dracoulis, Ch.E. Düllmann, P. Egelhof, A. Estrade, D. Fischer, Flanagan, K., Fraile, L., M.A. Fraser, S. J. Freeman, H. Geissel, J. Gerl, P. Greenlees, R. E. Grisenti, D. Habs, R. von Hahn, S. Hagmann, M. Hausmann, J. J. He, M. Heil, M. Huyse, D. Jenkins, A. Jokinen, B. Jonson, D.T. Joss, Y. Kadi, N. Kalantar-Nayestanaki, B.P. Kay, O. Kiselev, H.-J. Kluge, M. Kowalska, C. Kozuharov, S. Kreim, T. Kröll, J. Kurcewicz, M. Labiche, R.C.Lemmon, M. Lestinsky, G. Lotay, X.W. Ma, M. Marta, J. Meng, D. Mücher, I. Mukha, A. Müller, A St J. Murphy, G. Neyens, T. Nilsson, C. Nociforo, W. Nörtershäuser, R.D. Page, M. Pasini, N. Petridis, N. Pietralla, M. Pfützner, Z. Podolyák, P. Regan, M.W. Reed, R. Reifarth,, P. Reiter, R. Repnow, K. Riisager, B. Rubio, M.S. Sanjari, D.W. Savin, C. Scheidenberger, S. Schippers, D. Schneider, R. Schuch, D. Schwalm, L. Schweikhard, D. Shubina, E. Siesling, H. Simon, J. Simpson, J. Smith, K. Sonnabend, M. Steck, T. Stora, T. Stöhlker, B. Sun, A. Surzhikov, F. Suzuki, O. Tarasov, S. Trotsenko, X.L. Tu, P. Van Duppen, C. Volpe, D. Voulot, P.M. Walker, E. Wildner, N. Winckler, D.F.A. Winters, A. Wolf,

H.S. Xu, A. Yakushev, T. Yamaguchi, Y.J. Yuan, Y.H. Zhang, K. Zuber,
Storage ring at HIE-ISOLDE – Technical Design Report.
Eur. Phys. J. Special Topics 207, 1 (2012)

S. Hofmann, S. Heinz, R. Mann, J. Maurer, J. Khuyagbaatar, D. Ackermann, S. Antalic, W. Barth, M. Block, H.G. Burkhard, V. F. Comas, L. Dahl, K. Eberhardt, J. Gostic, R.A. Henderson, J.A. Heredia, F.P. Heßberger, J.M. Kenneally, B. Kindler, I. Kojouharov, J.V. Kratz, R. Lang, M. Leino, B. Lommel, K.J. Moody, G. Münzenberg, S.L. Nelson, K. Nishio, A.G. Popeko, J. Runke, S. Saro, D.A. Shaughnessy, M.A. Stoyer, P. Thörle-Pospiech, K. Tinschert, N. Trautmann, J. Uusitalo, P.A. Wilk, and A.V. Yeremin
The reaction $^{48}\text{Ca} + ^{248}\text{Cm} \rightarrow 296\text{116}$ studied at the GSI-SHIP
Eur. Phys. J. A48, 62 (2012)

R. Jöhren, R. Berendes, W. Buglak, D. Hampf, V. Hannen, J. Mader, W. Nörtershäuser, R. Sanchez, and C. Weinheimer
APDs as single-photon detectors for visible and near-infrared wavelengths down to Hz rates
J. Instrum. 7, P02015 (2012)

J. Khuyagbaatar,, D. Ackermann, L-L. Andersson, J. Ballof, W. Brüchle, Ch.E. Düllmann, J. Dvorak, K. Eberhardt, J. Even, A. Gorshkov, R. Graeger, F.-P. Heßberger, D. Hild, R. Hoischen, E. Jäger, B. Kindler, J.V. Kratz, J., S. Lahiri, B. Lommel, B. M. Maiti, E. Merchan, D. Rudolph, M. Schädel, H. Schaffner, B. Schausten, E. Schimpf, A. Semchenkov, A. Serov, A. Türler, A. Yakushev
Study of average charges of $^{252,254}\text{No}$ ions at the gas-filled separator TASCA
Nucl. Instrum. Meth. A 689, 40 (2012)

A. Klose, K. Minamisono, Ch. Geppert, N. Frömmgen, M. Hammen, J. Krämer, A. Krieger, C. D. P. Levy, P. F. Mantica, W. Nörtershäuser, S. Vinnikova
Test of atomic charge-exchange cells for collinear laser spectroscopy
Nucl. Instr. Meth. A 678, 114 (2012)

S.D. Krämer, L. Mu, A. Müller, C. Keller, O.F. Kuznetsova, C. Schweinsberg, D. Franck, C. Müller, T.L. Ross, R. Schibli, S.M. Ametamey.
5-(2-[^{18}F]Fluoroethoxy)-L-Tryptophan (L-FEHTP) as a Substrate of System L Transport for Tumor Imaging by Positron Emission Tomography (PET)
Journal of Nuclear Medicine 53, 434, (2012)

J.V. Kratz
The impact of the properties of the heaviest elements on the chemical and physical sciences
Radiochim. Acta 100, 569 (2012)

A. Krieger, K. Blaum, M. L. Bissell, N. Frömmgen, Ch. Geppert, M. Hammen, K. Kreim, M. Kowalska, J. Krämer, T. Neff, R. Neugart, G. Neyens, W. Nörtershäuser, Ch. Novotny, R. Sánchez, and D. T. Yordanov
Nuclear Charge Radius of ^{12}Be
Phys. Rev. Lett. 108, 142501 (2012)

Z.J. Li, A. Toyoshima, M. Asai, K. Tsukada, T.K. Sato, N. Sato, T. Kikuchi, Y. Nagame, M. Schädel, V. Pershina, X.H. Liang, Y. Kasamatsu, Y. Komori, K. Ooe, A. Shinohara, S. Goto, H. Murayama, M. Murakami, H. Kudo, H. Haba, Y. Takeda, M. Nishikawa, A. Yokoyama, S. Ikarashi, K. Sueki, K. Akiyama, J.V. Kratz
Sulfate complexation of element 104, Rf, in $\text{H}_2\text{SO}_4/\text{HNO}_3$ mixed solution
Radiochim. Acta 100, 157 (2012)

J. Marganiec, F. Aksouh, Y. Aksyutina, H. Alvarez Pol, T. Aumann, S. Beceiro, C. Bertulani, K. Boretzky, M.J. Borge, M. Chartier, A. Chatillon, L. Chulkov, D. Cortina-Gil, I. Egorova, H. Emling, O. Ershova, C. Forssén, L.M. Fraile, H. Fynbo, D. Galaviz, H. Geissel, L. Grigorenko, M. Heil, D.H.H. Hoffmann, J. Hoffmann, H. Johansson, B. Jonson, C. Karagiannis, O. Kiselev, J.V. Kratz, R. Kulessa, N. Kurz, C. Langer, M. Lantz, K. Larsson, T. Le Bleis, R. Lemmon, A. Lindahl, Yu. A. Litvinov, K. Mahata, C. Müntz, T. Nilsson, C. Nociforo, G. Nyman, W. Ott, V. Panin, Yu. Parfenova, S. Paschalidis, A. Perea, R. Plag, R. Reifarth, A. Richter, C. Rodríguez Tajes, D. Rossi, G. Schrieder, N. Shulgina, H. Simon, J. Stroth, K. Sümerer, J. Taylor, O. Tengblad, E. Tengborn, F. Wamers, H. Weick, C. Wimmer, M. Zhukov
Coulomb breakup of ^{17}Ne from the viewpoint of nuclear astrophysics
XII Int. Symp. on Nuclei in the Cosmos, August 5 – 12, 2012, Cairns, Australia, Proceedings of Science (2012)

E. Minaya Ramirez, D. Ackermann, K. Blaum, M. Block, C. Droese, Ch.E. Düllmann, M. Dworschak, M. Eibach, S. Eliseev, E. Haettner, F. Herfurth, F.P. Heßberger, S. Hofmann, J. Ketelaer, G. Marx, M. Mazzocco, D. Nesterenko, Yu N Novikov, W.R. Plaß, D. Rodríguez, C. Scheidenberger, L. Schweikhard, P.G. Thirolf, C. Weber
Direct mapping of shell effects in the heaviest elements.
Science 337, 1207 (2012)

U. Müller, M. Martić, T. Gazivoda-Kraljević, S. Krištafor, T.L. Ross, C. Ranadheera, A. Müller, M. Born, S.D. Krämer, S. Raić-Malić, S.M. Ametamey; Synthesis and evaluation of a C-6 alkylated pyrimidine derivative for the in vivo imaging of HSV1-TK gene expression.
Nuc. Med.Bio. 39, 235 (2012)

T. Procter, J. Billowes, M. Bissell, K. Blaum, F. Charlwood, B. Cheal, K. Flanagan, D. Forest, S.

- Fritzsche, C. Geppert, H. Heylen, M. Kowalska, K. Kreim, A. Krieger, J. Krämer, K. Lynch, E. Mané, I. Moore, R. Neugart, G. Neyens, W. Nörtershäuser, J. Papuga, M. Rajabali, H. Stroke, P. Vingerhoets, D. Yordanov, and M. Žáková
Nuclear mean-square charge radii of 63,64,66,68 ^{82}Ga nuclei: No anomalous behavior at $N = 32$
Phys. Rev. C **86**, 034329 (2012)
- S. Raeder, A. Hakimi, N. Stöbener, N. Trautmann, K. Wendt
Detection of plutonium isotopes at lowest quantities using in-source resonance ionization mass spectrometry
Anal. Bioanal. Chem. **404**, 2163 (2012)
- D. Renisch, T. Beyer, K. Blaum, M. Block, Ch.E. Düllmann, K. Eberhardt, M. Eibach, F. Herfurth, Sz. Nagy, D. Neidherr, W. Nörtershäuser, C. Smorra
Targets on superhydrophobic surfaces for laser ablation ion sources
Nucl. Instrum. Meth. A **676**, 84 (2012)
- J. Roßnagel, S. Raeder, A. Hakimi, R. Ferrer, N. Tratumann, K. Wendt
Determination of the First Ionization Potential of Actinium
Phys. Rev. A **85**, 012525 (2012)
- H. Schieferstein, C. Müller, T.L. Ross.
Fluorine-18 click-labeling and evaluation of a folic acid derivative with enhanced polarity
Nuklearmedizin, **A 29**, 51 (2012)
- C.L. Schütz, C. Brochhausen, G. Hampel, D. Iffland, B. Kuczewski, G. Otto, T. Schmitz, C. Sieghorst, J.V. Kratz
Intercomparison of inductively coupled plasma mass spectrometry, quantitative neutron capture radiography, and prompt gamma activation analysis for the determination of boron in biological samples
Anal. Bioanal. Chem. **404**, 1887 (2012)
- C. Smorra, T.R. Rodríguez, T. Beyer, K. Blaum, M. Block, Ch.E. Düllmann, K. Eberhardt, M. Eibach, S. Eliseev, K. Langanke, G. Martínez-Pinedo, Sz. Nagy, W. Nörtershäuser, D. Renisch, V.M. Shabaev, I. Tupitsyn, N.A. Zubova
Q value and half-life of double-electron capture in ^{184}Os
Phys. Rev. C **86**, 044604 (2012)
- C. Smorra, T. Beyer, K. Blaum, M. Block, Ch.E. Düllmann, K. Eberhardt, M. Eibach, S. Eliseev, Sz Nagy, W. Nörtershäuser, D. Renisch
Direct mass measurements of cadmium and palladium isotopes and their double- β transition Q-values
Phys. Rev. C **85**, 027601 (2012)
- N. Stöbener, S. Amayri, A. Gehl, U. Kaplan, K. Malecha, T. Reich
Sensitive redox speciation of neptunium with CE-ICP-MS
Anal. Bioanal. Chem. **404**, 2143 (2012)
- M. Takeda, A. Nishikawa, S. Yokoyama, K. Ikarashi, K. Sueki, K. Akiyama, J.V. Kratz
Sulfate complexation of element 104, Rf, in $\text{H}_2\text{SO}_4/\text{HNO}_3$ mixed solution
Radiochim. Acta **100**, 157 (2012)
- N. Trautmann, K. Wendt
Fast Chemical Separations and Laser Mass Spectrometry – Tools for Nuclear Research
Radiochim. Acta **100**, 675 (2012)
- A. Vascon, S. Santi, A.A. Isse, T. Reich, J. Drebert, H. Christ, Ch.E. Düllmann, K. Eberhardt
Elucidation of constant current density molecular plating.
Nucl. Instrum. Meth. A **696**, 180 (2012)
- V. Vincente Vilas, J.V. Kratz
Sorption of Np(V) onto Hybrid Clay-Based Materials: Montmorillonite-Melanoidin
Radiochemistry **54**, 64 (2012)
- D. Viertl, F. Perillo-Adamer, P.A. André, S.M. Ametamey, T.L. Ross, M. Kosinski, Y.M. Dupertuis, A. Bischof Delaloye, F. Buchegger
Studies of $[^{18}\text{F}]$ FLT and $[^{125}\text{I}]$ IdUrd uptake in human tumor cell lines modulated by the thymidylate synthase inhibitor FdUrd.
Nuklearmedizin, **163**, 51 (2012)
- K. Wendt, C. Geppert, C. Mattolat, G. Passler, S. Raeder, F. Schwellnus, K. Wies, N. Trautmann
Progress of Ultra Trace Determination of Technetium Using Laser Resonance Ionization Mass Spectrometry
Anal. Bioanal. Chem. **404**, 2173 (2012)
- D. T. Yordanov, M. L. Bissell, K. Blaum, M. De Rydt, Ch. Geppert, M. Kowalska, J. Krämer, K. Kreim, A. Krieger, P. Lievens, T. Neff, R. Neugart, G. Neyens, W. Nörtershäuser, R. Sánchez, and P. Vingerhoets
Nuclear Charge Radii of $^{21-32}\text{Mg}$
Phys. Rev. Lett. **108**, 042504 (2012)

