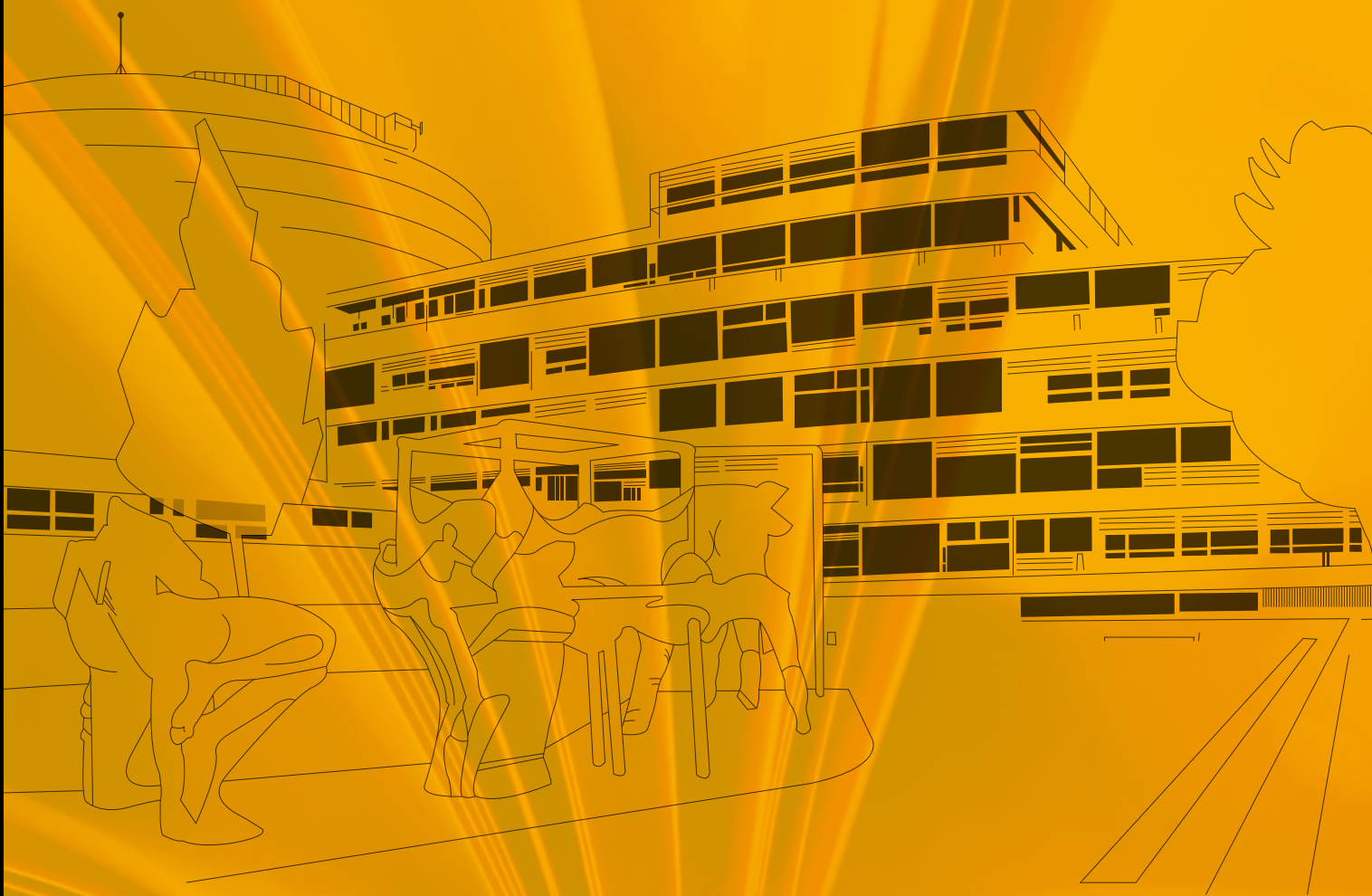




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## PUBLICATIONS

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### Applied Physics, Instrumentation and Techniques

Allemandou N., Almazán H., Sanchez P.D.A., Bernard L., Bernard C., Blanchet A., Bonhomme A., Bosson G., Bourrion O., Bouvier J., Buck C., Caillot V., Chala M., Champion P., Charon P., Collin A., Contrepois P., Coulloux G., Desbrières B., Deleglise G., El Kanawati W., Favier J., Fuard S., Gomes Monteiro I., Gramlich B., Haser J., Hélaine V., Heusch M., Jentschel M., Kandzia F., Konrad G., Köster U., Kox S., Lahonde-Hamdoun C., Lamblin J., Letourneau A., Lhuillier D., Li C., Lindner M., Manzanillas L., Materna T., Méplan O., Minotti A., Monon C., Montanet F., Nunio F., Peltier F., Penichot Y., Pequignot M., Pessard H., Piret Y., Prono G., Quéméner G., Real J.S., Roca C., Salagnac T., Sergeeva V., Schoppmann S., Scola L., Scordilis J.P., Soldner T., Stutz A., Tourres D., Vescovi C., Zsoldos S. The STEREO experiment  
Journal of Instrumentation **13**, P07009-1-P07009-33 (2018)

Appel M., Frick B., Magerl A. A flexible high speed pulse chopper system for an inverted neutron time-of-flight option on backscattering spectrometers  
Scientific Reports **8**, 13580-1-13580-8 (2018)

Bourrion O., Clement B., Tourres D., Pignol G., Xi Y., Rebreyend D., Nesvizhevsky V.V. C2D8: An eight channel CCD readout electronics dedicated to low energy neutron detection  
Nuclear Instruments and Methods in Physics Research A **880**, 28-34 (2018)

Campbell R.A. Recent advances in resolving kinetic and dynamic processes at the air/water interface using specular neutron reflectometry  
Current Opinion in Colloid & Interface Science **37**, 49-60 (2018)

Cubitt R., Segura Ruiz J., Jark W. RAINBOWS: Refractive analysis of the incoming neutron beam over the white spectrum. A new fast neutron reflectometry technique exploiting a focusing prism  
Journal of Applied Crystallography **51**, 257-263 (2018)

Dennison A.J.C., Natali F., Farhi E., Manzin G., Courtois P., Peters J. IN13 Neutron guide and primary spectrometer upgrade  
Nuclear Instruments and Methods in Physics Research A **908**, 182-188 (2018)

Duc F., Tonon X., Billette J., Rollet B., Knafo W., Bourdarot F., Béard J., Mantegazza F., Longuet B., Lorenzo J.E., Lelièvre-Berna E., Frings P., Regnault L.P. 40-Tesla pulsed-field cryomagnet for single crystal neutron diffraction  
Review of Scientific Instruments **89**, 053905-1-053905-7 (2018)

Düsing C., Geltenbort P., Plonka C., Pokatilovski Y.N. Experimental investigation into the low-molecular-weight fluoropolymer for the storage of ultracold neutrons  
Physics of Particles and Nuclei Letters **15**, 541-550 (2018)

Efimov V.B., Likhov A.V., Mezhov-Deglin L.P. A combined cryostat for neutron and optical investigations  
Instruments and Experimental Techniques **61**, 459-466 (2018)

Gerchow L., Braccini S., Carzaniga T.S., Cooke D., Döbeli M., Kirch K., Köster U., Müller A., van der Meulen N.P., Vermeulen C., Rubbia A., Crivelli P. High efficiency cyclotron trap assisted positron moderator  
Instruments **2**, 10-1-10-10 (2018)

Gutfreund P., Saerbeck T., González M.A., Pellegrini E., Laver M., Dewhurst C., Cubitt R. Towards generalized data reduction on a chopper-based time-of-flight neutron reflectometer  
Journal of Applied Crystallography **51**, 606-615 (2018)

Hayward D.W., Chiappisi L., Prévost S., Schweins R., Gradzielski M. A small-angle neutron scattering environment for *in-situ* observation of chemical processes  
Scientific Reports **8**, 7299-1-7299-11 (2018)

Katyba G.M., Zaytsev K.I., Dolganova I.N., Shikunova I.A., Chernomyrdin N.V., Yurchenko S.O., Komandin G.A., Reshetov I.V., Nesvizhevsky V.V., Kurlov V.N. Sapphire shaped crystals for waveguiding, sensing and exposure applications  
Progress in Crystal Growth and Characterization of Materials **64**, 133-151 (2018)

Lakhloufi S., Tailleux E., Guo W., Le Gac F., Marchivie M., Lemée-Cailleau M.H., Chastanet G., Guionneau P. Mosaicity of spin-crossover crystals  
Crystals **8**, 363-1-363-11 (2018)

Magazù S., Mezei F., Migliardo F. Correlation spectrometer for filtering of (quasi) elastic neutron scattering with variable resolution  
AIP Conference Proceedings **1965**, 050006-1-050006-10 (2018)

Mosconi M., Ortega J., Abad E., Martínez R., Guijarrubia V., Van Esch P., Mutti P., Ruiz-Martinez E., Morgano M., Trtik P. Optical identification and quantification of single neutron detection in <sup>6</sup>LiF/<sup>6</sup>ZnS scintillators using a CMOS camera  
Journal of Instrumentation **13**, P10033-1-P10033-13 (2018)

Nagy B., Merkel D.G., Jakob L., Füzi J., Veres T., Botlyán L. Note: 4-bounce neutron polarizer for reflectometry applications  
Review of Scientific Instruments **89**, 056105-1-056105-3 (2018)

Peters J., Golub M., Demé B., Gonthier J., Maurice J., Payre C., Sadykov R., Lelièvre-Berna E. New pressure cells for membrane layers and systems in solutions up to 100°C  
Journal of Neutron Research **20**, 3-12 (2018)

Roshankhah S., Marshall J.P., Tengattini A., Ando E., Rubino V., Rosakis A.J., Viggiani G., Andrade J.E. Neutron imaging: A new possibility for laboratory observation of hydraulic fractures in shale?  
Géotechnique Letters **8**, 316-323 (2018)

Sadykov R., Pappas C., Bannenberg L.J., Dalgliesh R.M., Falus P., Goodway C., Lelièvre-Berna E. 1.5 GPa compact double-wall clamp cell for SANS and NSE studies at low temperatures and high magnetic fields  
Journal of Neutron Research **20**, 25-33 (2018)

Saerbeck T., Cubitt R., Wildes A., Manzin G., Andersen K.H., Gutfreund P. Recent upgrades of the neutron reflectometer D17 at ILL  
Journal of Applied Crystallography **51**, 249-256 (2018)

Sanz A., Hansen H.W., Jakobsen B., Pedersen I.H., Capaccioli S., Adrijanowicz K., Paluch M., Gonthier J., Frick B., Lelièvre-Berna E., Peters J., Niss K. High-pressure cell for simultaneous dielectric and neutron spectroscopy  
Review of Scientific Instruments **89**, 023904-1-023904-9 (2018)

Van Esch P., Mutti P., Ruiz-Martinez E., Abad Garcia E., Mosconi M., Ortega J. Counting neutrons with a commercial S-CMOS camera  
EPJ Web of Conferences **170**, 01018-1-01018-4 (2018)

Weitkamp T., Scheel M., Perrin J., Le Roux V., Joyet V., Chaouchi S., Pais H.G., Giorgetta J.L., Carcy A., Desjardins K., Meneglier C., Zhang S., Engblom C., Cerato M., Abiven Y.M., Cauchon G., Rivard C., Moreno T., Polack F., Thompson A. Progress in microtomography at the ANATOMIX beamline of synchrotron Soleil  
Microscopy and Microanalysis **24**, 246-247 (2018)

Buffet J.C., Clergeau J.F., Cuccaro S., Guérard B., Mandaroux N., Marchal J., Pentenero J., Platz M., Van Esch P. Characterisation of a neutron diffraction detector prototype based on the Trench-MWPC technology  
Journal of Instrumentation **12**, C12009-1-C12009-11 (2017)

Klicpera M., Adroja D.T., Vlášková K., Boehm M., Mutka H., Ouladdiaf B., Guidi T., Javorský P. Magnetic structure and excitations in CeCu<sub>x</sub>Al<sub>4-x</sub> system  
Inorganic Chemistry **56**, 12839-12847 (2017)

Sadykov R.A., Strässle T., Podlesnyak A., Keller L., Fåk B., Mesot J. High-pressure cells for study of condensed matter by diffraction and inelastic neutron scattering at low temperatures and in strong magnetic fields  
Journal of Physics: Conference Series **941**, 012082-1-012082-6 (2017)

### Biology

Abuillan W., Becker A.S., Demé B., Homma T., Isobe H., Harano K., Nakamura E., Tanaka M. Neutron scattering reveals water confined in a watertight bilayer vesicle  
Journal of the American Chemical Society **140**, 11261-11266 (2018)

Alsop R.J., Himbert S., Dhaliwal A., Schmalzl K., Rheinstädter M.C. Aspirin locally disrupts the liquid-ordered phase  
Royal Society Open Science **5**, 171710-1-171710-16 (2018)

Andersson C.D., Martinez N., Zeller D., Allgardsson A., Koza M.M., Frick B., Ekström F., Peters J., Linusson A. Influence of enantiomeric inhibitors on the dynamics of acetylcholinesterase measured by elastic incoherent neutron scattering  
Journal of Physical Chemistry B **122**, 8516-8525 (2018)

Ashkar R., Bilheux H.Z., Bordallo H., Briber R., Callaway D.J.E., Cheng X., Chu X.Q., Curtis J.E., Dadmun M., Fenimore P., Fushman D., Gabel F., Gupta K., Herberle F., Heinrich F., Hong L., Katsaras J., Kelman Z., Kharlampieva E., Kneller G.R., Kovalevsky A., Krueger S., Langan P., Lieberman R., Liu Y., Losche M., Lyman E., Mao Y., Marino J., Mattos C., Meilleur F., Moody P., Nickels J.D., O'Dell W.B., O'Neill H., Perez-Salas U., Peters J., Petridis L., Sokolov A.P., Stanley C., Wagner N., Weinrich M., Weiss K., Wymore T., Zhang Y., Smith J.C. Neutron scattering in the biological sciences: Progress and prospects  
Acta Crystallographica D **74**, 1129-1168 (2018)

Bernadó P., Shimizu N., Zaccari G., Kamikubo H., Sugiyama M. Solution scattering approaches to dynamical ordering in biomolecular systems  
Biochimica et Biophysica Acta **1862**, 253-274 (2018)

Blakeley M.P., Podjarny A.D. Neutron macromolecular crystallography  
Emerging Topics in Life Sciences **2**, ETL20170083-1-ETL20170083-17 (2018)

Bombieri G., Artali R., Mason S.A., McIntyre G.J., Mortillaro A., Aime S. Inner-sphere water and hydrogen bonds in lanthanide DOTAM complexes. A neutron diffraction study  
Inorganica Chimica Acta **470**, 433-438 (2018)

Ciepluch K., Radulescu A., Hoffmann I., Raba A., Allgaier J., Richter D., Biehl R. Influence of PEGylation on domain dynamics of phosphoglycerate kinase: PEG acts like entropic spring for the protein  
Bioconjugate Chemistry **29**, 1950-1960 (2018)

Cinar S., Al-Ayoubi S., Sternemann C., Peters J., Winter R., Czeslik C. A high pressure study of calmodulin-ligand interactions using small-angle X-ray and elastic incoherent neutron scattering  
Physical Chemistry Chemical Physics **20**, 3514-3522 (2018)

## PUBLICATIONS

FIND US ON:   

4-5

Dajnowicz S., Parks J.M., Hu X., Johnston R.C., Kovalevsky A.Y., Mueser T.C. Hyperconjugation promotes catalysis in a pyridoxal 5'-phosphate-dependent enzyme  
ACS Catalysis **8**, 6733-6737 (2018)

Dias Mirandela G., Tamburrino G., Ivanović M.T., Strnad F.M., Byron O., Rasmussen T., Hoskisson P.A., Hub J.S., Zachariae U., Gabel F., Javelle A. Merging in-solution X-ray and neutron scattering data allows fine structural analysis of membrane-protein detergent complexes  
Journal of Physical Chemistry Letters **9**, 3910-3914 (2018)

Forsyth V.T., Moody P. Neutron scattering for the study of biological systems – Major opportunities within a rapidly changing landscape  
Acta Crystallographica D **74**, 1126-1128 (2018)

Freeman S.L., Martel A., Devos J.M., Basran J., Raven E.L., Roberts G.C.K. Solution structure of the cytochrome P450 reductase-cytochrome c complex determined by neutron scattering  
Journal of Biological Chemistry **293**, 5210-5219 (2018)

Galdeano C., Coquelle N., Cieslikiewicz-Bouet M., Bartolini M., Pérez B., Clos M.V., Silman I., Jean L., Colletier J.P., Renard P.Y., Muñoz-Torrero D. Increasing polarity in Tacrine and huprine derivatives: Potent anticholinesterase agents for the treatment of Myasthenia gravis  
Molecules **23**, 634-1-634-19 (2018)

Gerlits O., Campbell J.C., Blakeley M.P., Kim C., Kovalevsky A. Neutron crystallography detects differences in protein dynamics: Structure of the PKG II cyclic nucleotide binding domain in complex with an activator  
Biochemistry **57**, 1833-1837 (2018)

Golub M., Martinez N., Michoud G., Ollivier J., Jebbar M., Oger P., Peters J. The effect of crowding on protein stability, rigidity, and high pressure sensitivity in whole cells  
Langmuir **34**, 10419-10425 (2018)

Guiral M., Neitzel C., Salvador Castell M., Martinez N., Giudici-Orticoni M.T., Peters J. The effect of pH on the dynamics of natural membranes  
European Physical Journal E **41**, 22-1-22-8 (2018)

Heigl R.J., Longo M., Stellbrink J., Radulescu A., Schweins R., Schrader T.E. Crossover from a linear to a branched growth regime in the crystallization of lysozyme  
Crystal Growth & Design **18**, 1483-1494 (2018)

Hirai M., Ajito S., Sugiyama M., Iwase H., Takata S.I., Shimizu N., Igarashi N., Martel A., Porcar L. Direct evidence for the effect of glycerol on protein hydration and thermal structural transition  
Biophysical Journal **115**, 313-327 (2018)

Josts I., Nitsche J., Maric S., Mertens H.D., Moulin M., Haertlein M., Prévost S., Svergun D.I., Busch S., Forsyth V.T., Tidow H. Conformational states of ABC transporter MsbA in a lipid environment investigated by small-angle scattering using stealth carrier nanodiscs  
Structure **26**, 1072-1079 (2018)

Kokotidou C., Jonnalagadda S.V.R., Orr A.A., Seoane-Blanco M., Apostolidou C.P., van Raaij M.J., Kotzabasaki M., Chatzoudis A., Jakubowski J.M., Mossou E., Forsyth V.T., Mitchell E.P., Bowler M.W., Llamas-Saiz A.L., Tamamis P., Mitraki A. A novel amyloid designable scaffold and potential inhibitor inspired by GALLG of amyloid beta and the HIV-1 V3 loop  
FEBS Letters **592**, 1777-1788 (2018)

Kooshapur H., Choudhury N.R., Simon B., Mühlbauer M., Jussupow A., Fernandez N., Jones A.N., Dallmann A., Gabel F., Camilloni C., Michlewski G., Caceres J.F., Sattler M. Structural basis for terminal loop recognition and stimulation of pri-miRNA-18a processing by hnRNP A1  
Nature Communications **9**, 2479-1-2479-17 (2018)

Kovalevsky A., Aggarwal M., Velazquez H., Cuneo M.J., Blakeley M.P., Weiss K.L., Smith J.C., Fisher S.Z., Mckenna R. "To be or not to be" protonated: Atomic details of human carbonic anhydrase-clinical drug complexes by neutron crystallography and simulation  
Structure **26**, 383-390 (2018)

Kwon H., Langan P.S., Coates L., Raven E.L., Moody P.C.E. The rise of neutron cryo-crystallography  
Acta Crystallographica D **74**, 792-799 (2018)

Larnaudie S.C., Sanchis J., Nguyen T.H., Peltier R., Catrouillet S., Brendel J.C., Porter C.J.H., Jolliffe K.A., Perrier S. Cyclic peptide-poly(HPMA) nanotubes as drug delivery vectors: *In vitro* assessment, pharmacokinetics and biodistribution  
Biomaterials **178**, 570-582 (2018)

Lehofer B., Golub M., Kornmueller K., Kriechbaum M., Martinez N., Nagy G., Kohlbrecher J., Amenitsch H., Peters J., Prassl R. High hydrostatic pressure induces a lipid phase transition and molecular rearrangements in low-density lipoprotein nanoparticles  
Particle & Particle Systems Characterization **2018**, 1800149-1-1800149-13 (2018)

Librizzi F., Caliò A., Cupane A. Dynamical properties of myoglobin in an ultraviscous water-glycerol solvent investigated with elastic neutron scattering and FTIR spectroscopy  
Journal of Molecular Liquids **268**, 242-248 (2018)

Librizzi F., Carrotta R., Peters J., Cupane A. The effects of pressure on the energy landscape of proteins  
Scientific Reports **8**, 2037-1-2037-8 (2018)

Mahieu E., Gabel F. Biological small-angle neutron scattering: Recent results and development  
Acta Crystallographica D **74**, 715-726 (2018)

Manzoni F., Wallerstein J., Schrader T.E., Ostermann A., Coates L., Akke M., Blakeley M.P., Oksanen E., Logan D.T. Elucidation of hydrogen bonding patterns in ligand-free, lactose- and glycerol-bound galectin-3C by neutron crystallography to guide drug design  
Journal of Medicinal Chemistry **61**, 4412-4420 (2018)

Matsarskaia O., Roosen-Runge F., Lotze G., Möller J., Mariani A., Zhang F., Schreiber F. Tuning phase transitions of aqueous protein solutions by multivalent cations  
Physical Chemistry Chemical Physics **20**, 27214-27225 (2018)

Midgaard S.R., Darwish T.A., Pedersen M.C., Huda P., Larsen A.H., Jensen G.V., Kynde S.A.R., Skar-Gislinge N., Nielsen A.J.Z., Olesen C., Blaise M., Dorosz J.J., Thorsen T.S., Venskutonyte R., Krintel C., Møller J.V., Frielinghaus H., Gilbert E.P., Martel A., Kastrop J.S., Jensen P.E., Nissen P., Arleth L. Invisible detergents for structure determination of membrane proteins by small-angle neutron scattering  
FEBS Journal **285**, 357-371 (2018)

Montis C., Busatto S., Valle F., Zandrini A., Salvatore A., Gerelli Y., Berti D., Bergese P. Biogenic supported lipid bilayers from nanosized extracellular vesicles  
Advanced Biosystems **2**, 1700200-1-1700200-7 (2018)

Moody P.C.E., Raven E.L. The nature and reactivity of ferryl heme in compounds I and II  
Accounts of Chemical Research **51**, 427-435 (2018)

Moulin M., Strohmeier G.A., Hirz M., Thompson K.C., Rennie A.R., Campbell R.A., Pichler H., Maric S., Forsyth V.T., Haertlein M. Perdeuteration of cholesterol for neutron scattering applications using recombinant *Pichia pastoris*  
Chemistry and Physics of Lipids **212**, 80-87 (2018)

Nicholl I.D., Matsui T., Weiss T.M., Stanley C.B., Heller W.T., Martel A., Farago B., Callaway D.J.E., Bu Z.  $\alpha$ -catenin structure and nanoscale dynamics in solution and in complex with F-actin  
Biophysical Journal **115**, 642-654 (2018)

Nitsche J., Josts I., Heidemann J., Mertens H.D., Maric S., Moulin M., Haertlein M., Busch S., Forsyth V.T., Svergun D.I., Uetrecht C., Tidow H. Structural basis for activation of plasma-membrane Ca<sup>2+</sup>-ATPase by calmodulin  
Communications Biology **1**, 206-1-206-10 (2018)

Nouhi S., Ahrens L., Campos Pereira H., Hughes A.V., Campana M., Guffreund P., Pálsson G.K., Vorobiev A., Hellsing M.S. Interactions of perfluoroalkyl substances with a phospholipid bilayer studied by neutron reflectometry  
Journal of Colloid and Interface Science **511**, 474-481 (2018)

Pace H.P., Hannestad J.K., Armonious A., Adamo M., Agnarsson B., Gunnarsson A., Micciulla S., Sjøvall P., Gerelli Y., Höök F. Structure and composition of native membrane derived polymer-supported lipid bilayers  
Analytical Chemistry **90**, 13065-13072 (2018)

Peters J., Prassl R., Oger P. Probing the structure and dynamics of cells, cell components and endogenous nanoparticles under extreme conditions with neutrons  
In «Biological, Physical and Technical Basics of Cell Engineering» Artmann G.M. Ed. (2018, Springer) pp. 401-420

Piazza I., Cupane A., Barbier E.L., Rome C., Collomb N., Ollivier J., González M.A., Natali F. Dynamical properties of water in living cells  
Frontiers of Physics **13**, 138301-1-138301-7 (2018)

Rodriguez-Loureiro I., Latza V.M., Fragneto G., Schneck E. Conformation of single and interacting lipopolysaccharide surfaces bearing O-side chains  
Biophysical Journal **114**, 1624-1635 (2018)

Romancino D.P., Buffa V., Caruso S., Ferrara I., Raccosta S., Notaro A., Campos Y., Noto R., Martorana V., Cupane A., Giallongo A., d'Azzo A., Manno M., Bongiovanni A. Palmitoylation is a post-translational modification of Alix regulating the membrane organization of exosome-like small extracellular vesicles  
Biochimica et Biophysica Acta **1862**, 2879-2887 (2018)

Rondelli V., Del Favero E., Brocca P., Fragneto G., Trapp M., Mauri L., Ciampa M.G., Romani G., Braun C.J., Winterstein L., Schroeder I., Thiel G., Moroni A., Cantu' L. Directional K<sup>+</sup> channel insertion in a single phospholipid bilayer: Neutron reflectometry and electrophysiology in the joint exploration of a model membrane functional platform  
Biochimica et Biophysica Acta **1862**, 1742-1750 (2018)

Schmitt T., Neubert R.H.H. State of the art in Stratum Corneum research: The biophysical properties of ceramides  
Chemistry and Physics of Lipids **216**, 91-103 (2018)

Stadler A.M. Conformational motions of disordered proteins  
In «Biological, Physical and Technical Basics of Cell Engineering» (2018, Springer) pp. 381-399

Vandavasi V.G., Blakeley M.P., Keen D.A., Hu L.R., Huang Z., Kovalevsky A. Temperature-induced replacement of phosphate proton with metal ion captured in neutron structures of A-DNA  
Structure **26**, 1-6 (2018)

White J., Laux V., Fraser N., Hes D., Haertlein M., Forsyth T. Deuterium effects on human serum albumin in solution  
Physica B: Condensed Matter **551**, 208-211 (2018)

## PUBLICATIONS

FIND US ON:   

6-7

Fisher Z., Jackson A., Kovalevsky A., Oksanen E., Wacklin H. Biological structures  
Experimental Methods in the Physical Sciences **49**, 1-75 (2017)

Katava M., Stirnemann G., Zanatta M., Capaccioli S., Pachetti M., Ngai K.L., Sterpone F., Paciaroni A. Critical structural fluctuations of proteins upon thermal unfolding challenge the Lindemann criterion  
Proceedings of the National Academy of Sciences **114**, 9361-9366 (2017)

Kwon H., Smith O., Raven E.L., Moody P.C.E. Combining X-ray and neutron crystallography with spectroscopy  
Acta Crystallographica D **73**, 141-147 (2017)

Morris C.J., Aljayyousi G., Mansour O., Griffiths P., Gumbleton M. Endocytic uptake, transport and macromolecular interactions of anionic PAMAM dendrimers within lung tissue  
Pharmaceutical Research **34**, 2517-2531 (2017)

Oksanen E., Chen J.C.H., Fisher S.Z. Neutron crystallography for the study of hydrogen bonds in macromolecules  
Molecules **22**, 596-1-596-26 (2017)

## Crystallography and Chemistry

Auer H., Weber S., Hansen T.C., Többsen D.M., Kohlmann H. Reversible hydrogenation of the Zintl phases BaGe and BaSn studied by *in situ* diffraction  
Zeitschrift für Kristallographie **233**, 399-409 (2018)

Bdey S., Bourguiba N.F., Savvin S.N., Falah C., Zid M.F., Núñez P. Synthesis, crystal structure and ionic conduction of the new alluaudite  $\text{Na}_3\text{Bi}_2(\text{AsO}_4)_3$   
Journal of Alloys and Compounds **762**, 806-813 (2018)

Bianchini M., Lalère F., Nguyen H.B.L., Fauth F., David R., Suard E., Croguennec L., Masquelier C.  $\text{Ag}_3\text{V}_2(\text{PO}_4)_2\text{F}_3$ , a new compound obtained by  $\text{Ag}^+/\text{Na}^+$  ion exchange into the  $\text{Na}_3\text{V}_2(\text{PO}_4)_2\text{F}_3$  framework  
Journal of Materials Chemistry A **6**, 10340-10347 (2018)

Black A.P., Suzuki H., Higashi M., Frontera C., Ritter C., De C., Sundaresan A., Abe R., Fuentes A. New rare earth hafnium oxynitride perovskites with photocatalytic activity in water oxidation and reduction  
Chemical Communications **54**, 1525-1528 (2018)

Boyer M., Yang X., Fernández Carrión A.J., Wang Q., Véron E., Genevois C., Hennet L., Matzen G., Suard E., Thiaudière D., Castro C., Pelloquin D., Kong L.B., Kuang X., Allix M. First transparent oxide ion conducting ceramics synthesized by full crystallization from glass  
Journal of Materials Chemistry A **6**, 5276-5289 (2018)

Broux T., Fauth F., Hall N., Chatillon Y., Bianchini M., Bamine T., Leriche J.B., Suard E., Carlier D., Reynier Y., Simonin L., Masquelier C., Croguennec L. High rate performance for carbon-coated  $\text{Na}_3\text{V}_2(\text{PO}_4)_2\text{F}_3$  in Na-ion batteries  
Small Methods **2018**, 1800215-1-1800215-12 (2018)

Browne A.J., Lithgow C., Kimber S.A.J., Attfield J.P. Orbital molecules in the new spinel  $\text{GaV}_2\text{O}_4$   
Inorganic Chemistry **57**, 2815-2822 (2018)

Cabeza S., Müller B.R., Pereyra R., Fernández R., González-Doncel G., Bruno G. Evidence of damage evolution during creep of Al-Mg alloy using synchrotron X-ray refraction  
Journal of Applied Crystallography **51**, 420-427 (2018)

Chin C.M., Battle P.D., Blundell S.J., Hunter E., Lang F., Hendrickx M., Paria Sena R., Hadermann J. Comparative study of the magnetic properties of  $\text{La}_3\text{Ni}_2\text{B}'\text{O}_9$  for  $\text{B}' = \text{Nb, Ta or Sb}$   
Journal of Solid State Chemistry **258**, 825-834 (2018)

Cieslak J., Tobola J., Berent K., Marciszko M. Phase composition of  $\text{Al}_x\text{FeNiCrCo}$  high entropy alloys prepared by sintering and arc-melting methods  
Journal of Alloys and Compounds **740**, 264-272 (2018)

Cockcroft J.K., Rosu-Finsen A., Fitch A.N., Williams J.H. The temperature dependence of C-H...F-C interactions in benzene : Hexafluorobenzene  
CrystEngComm **20**, 6677-6682 (2018)

Dejoie C., Coduri M., Petitdemange S., Giacobbe C., Covacci E., Grimaldi O., Autran P.O., Mogodi M.W., Jung D.S., Fitch A.N. Combining a nine-crystal multi-analyser stage with a two-dimensional detector for high-resolution powder X-ray diffraction  
Journal of Applied Crystallography **51**, 1721-1733 (2018)

Diaz-Lopez M., Freire M., Joly Y., Colin C.V., Fischer H.E., Blanc N., Boudet N., Pralong V., Bordet P. Local structure and lithium diffusion pathways in  $\text{Li}_4\text{Mn}_2\text{O}_5$  high capacity cathode probed by total scattering and XANES  
Chemistry of Materials **30**, 3060-3070 (2018)

Droulias S.A. The effect of nano-confinement on hydrogen uptake in metallic superlattices  
PhD Thesis: Uppsala University, Sweden (2018)

Droulias S.A., Pálsson G.K., Hjörvarsson B., Wolff M. Limitations of the kinematic approximation in neutron reflectivity measurements for the analysis of bilayers  
Journal of Applied Crystallography **51**, 1556-1563 (2018)

Gatta G.D., Guastoni A., Fabelo O., Fernández-Díaz M.T. A single-crystal neutron diffraction study of wardite,  $\text{NaAl}_3(\text{PO}_4)_2(\text{OH})_4 \cdot 2\text{H}_2\text{O}$   
Physics and Chemistry of Minerals **First online**, 1-9 (2018)

Gehlhaar F., Finger R., Zapp N., Bertmer M., Kohlmann H.  $\text{LiSr}_2\text{SiO}_4\text{H}$ , an air-stable hydride as host for Eu(III) luminescence  
Inorganic Chemistry **57**, 11851-11854 (2018)

Gonano B., Bréard Y., Pelloquin D., Caignaert V., Pérez O., Pautrat A., Bazin P., Suard E., Boullay P. Deciphering local complex order by HAADF in a disordered mixed polyanion iron oxide:  $\text{Sr}_4\text{Fe}_2[\text{Fe}_{0.5}(\text{SO}_{4/0.25}(\text{CO}_{3/0.25})\text{O}_{7.25})]$   
Dalton Transactions **47**, 13088-13093 (2018)

Götze A., Hansen T.C., Kohlmann H. The reversible hydrogenation of  $\text{BiPd}_3$  followed by *in situ* methods and the crystal structure of  $\text{PbPd}_3\text{D}_{0.13(1)}$   
Journal of Alloys and Compounds **731**, 1001-1008 (2018)

Götze A., Zapp N., Peretzi A.J., Pomjakushin V., Hansen T.C., Kohlmann H. *In situ* hydrogenation and crystal chemistry studies of  $\text{Co}_2\text{Si}$  type compounds  $\text{MgPd}_2$  and  $\text{Pd}_2\text{Zn}$   
Zeitschrift für Anorganische und Allgemeine Chemie **644**, 367-375 (2018)

Haines C.R.S., Coak M.J., Wildes A.R., Lampronti G.I., Liu C., Nahai-Williamson P., Hamidov H., Daisenberger D., Saxena S.S. Pressure-induced electronic and structural phase evolution in the van der Waals compound  $\text{FePS}_3$   
Physical Review Letters **121**, 266801-1-266801-6 (2018)

Hansch M., Kaub H.P., Deck S., Carl N., Huber K. Reaction enthalpy from the binding of multivalent cations to anionic polyelectrolytes in dilute solutions  
Journal of Chemical Physics **148**, 114906-1-114906-10 (2018)

Hart A.G., Hansen T.C., Kuhs W.F. A Markov theoretic description of stacking-disordered aperiodic crystals including ice and opaline silica  
Acta Crystallographica A **74**, 357-372 (2018)

Heras-Juaristi G., Amador U., Fuentes R.O., Chinelatto A.L., Romero de Paz J., Ritter C., Fagg D.P., Pérez-Coll D., Mather G.C. Thermal evolution of structures and conductivity of Pr-substituted  $\text{BaZr}_{0.7}\text{Ce}_{0.2}\text{Y}_{0.1}\text{O}_{3-\delta}$ : Potential cathode components for protonic ceramic fuel cells  
Journal of Materials Chemistry A **6**, 5324-5334 (2018)

Heras-Juaristi G., Amador U., Romero de Paz J., Fuentes R.O., Chinelatto A.L., Ritter C., Fagg D.P., Pérez-Coll D., Mather G.C. Structures, phase fields, and mixed protonic-electronic conductivity of Ba-deficient, Pr-substituted  $\text{BaZr}_{0.7}\text{Ce}_{0.2}\text{Y}_{0.1}\text{O}_{3-\delta}$   
Inorganic Chemistry **57**, 15023-15033 (2018)

Hernandez O.J., Geneste G., Yajima T., Kobayashi Y., Okura M., Aidzu K., Tassel C., Paofai S., Swain D., Ritter C., Kageyama H. Site selectivity of hydride in early-transition-metal Ruddlesden-Popper oxyhydrides  
Inorganic Chemistry **57**, 11058-11067 (2018)

Klechikov A., Sun J., Vorobiev A., Talyzin A.V. Swelling of thin graphene oxide films studied by *in situ* neutron reflectivity  
Journal of Physical Chemistry C **122**, 13106-13116 (2018)

Kuhs W.F., Hansen T.C., Falenty A. Filling ices with helium and the formation of helium clathrate hydrate  
Journal of Physical Chemistry Letters **9**, 3194-3198 (2018)

Li S., Meng X., Yi Q., Alonso J.A., Fernández-Díaz M.T., Sun C., Wang Z.L. Structural and electrochemical properties of  $\text{LiMn}_{0.6}\text{Fe}_{0.4}\text{PO}_4$  as a cathode material for flexible lithium-ion batteries and self-charging power pack  
Nano Energy **52**, 510-516 (2018)

Li Z., Cho Y., Li X., Aimi A., Inaguma Y., Alonso J.A., Fernández-Díaz M.T., Yan J., Downer M.C., Henkelman G., Goodenough J.B., Zhou J. New mechanism for ferroelectricity in the perovskite  $\text{Ca}_{2x}\text{Mn}_x\text{Ti}_2\text{O}_6$  synthesized by spark plasma sintering  
Journal of the American Chemical Society **140**, 2214-2220 (2018)

Lotti P., Gatta G.D., Demitri N., Guastella G., Rizzato S., Ortenzi M.A., Magrini F., Comboni D., Guastoni A., Fernández-Díaz M.T. Crystal chemistry and temperature behavior of the natural hydrous borate colemanite, a mineral commodity of boron  
Physics and Chemistry of Minerals **45**, 405-422 (2018)

Martinelli A., Bellingeri E., Leveratto A., Leoncino L., Ritter C., Malagoli A. *In situ* X-ray and neutron diffraction investigation of Bi-2212 in multifilamentary wires during thermal treatment  
Physical Review Materials **2**, 084801-1-084801-11 (2018)

Mayer S.F., Falcón H., Fernández-Díaz M.T., Alonso J.A. The crystal structure of defect  $\text{KBB}'\text{O}_6$  pyrochlores ( $\text{B, B}' = \text{Nb, W, Sb, Te}$ ) revisited from neutron diffraction data  
Crystals **8**, 368-1-368-11 (2018)

McCombie K.S., Wildman E.J., Ritter C., Smith R.I., Skakle J.M.S., McLaughlin A.C. Relationship between the crystal structure and electrical properties of oxide ion conducting  $\text{Ba}_3\text{W}_{1.2}\text{Nb}_{0.8}\text{O}_{8.6}$   
Inorganic Chemistry **57**, 11942-11947 (2018)

Mishra S.K., Gupta M.K., Ningthoujam R.S., Singh B., Mittal R., Vatsa R.K., Zbiri M., Sharma K.S., Hansen T., Schober H., Chaplot S.L. Presence of water at elevated temperatures, structural transition, and thermal expansion behavior in  $\text{LaPO}_4:\text{Eu}$   
Physical Review Materials **2**, 126003-1-126003-9 (2018)

## PUBLICATIONS

FIND US ON:   

8-9

Olejniczak A., Szafranski M., Katrusiak A. Pressure-temperature phase diagrams and transition mechanisms of hybrid organic-inorganic NH $\cdots$ N bonded ferroelectrics *Crystal Growth & Design* **18**, 6488-6496 (2018)

Pflug C., Franz A., Kohlmann H. Crystal structure and europium luminescence of NaMgH $_{3-x}$ F $_x$  *Journal of Solid State Chemistry* **258**, 391-396 (2018)

Poienar M., Bourgeois J., Martin C., Hervieu M., Damay F., Garbarino G., Hanfland M., Hansen T., Baudalet F., Bantignies J.L., Hermet P., Haines J., Rouquette J. P-T phase diagram of LuFe $_2$ O $_4$  *Crystals* **8**, 184-1-184-17 (2018)

Sánchez-Marcos J., Mazarío E., Rodríguez-Velamazán J.A., Salas E., Herrasti P., Menéndez N. Cation distribution of cobalt ferrite electrosynthesized nanoparticles. A methodological comparison *Journal of Alloys and Compounds* **739**, 909-917 (2018)

Sanjuán M.L., Orera A., Sobrados I., Fuentes A.F., Sanz J. Structural transition in orthorhombic Li $_{5x}$ H $_x$ La $_3$ Nb $_2$ O $_{12}$  garnets induced by a concerted lithium and proton diffusion mechanism *Journal of Materials Chemistry A* **6**, 2708-2720 (2018)

Sebastiani F., Campbell R.A., Rastogi K., Pfrang C. Nighttime oxidation of surfactants at the air-water interface: Effects of chain length, head group and saturation *Atmospheric Chemistry and Physics* **18**, 3249-3268 (2018)

Semeraro E.F., Devos J.M., Narayanan T. Effective interactions and dynamics of small passive particles in an active bacterial medium *Journal of Chemical Physics* **148**, 204905-1-204905-7 (2018)

Serrano-Sánchez F., Funes M., Nemes N.M., Dura O.J., Martínez J.L., Prado-Gonjal J., Fernández-Díaz M.T., Alonso J.A. Low lattice thermal conductivity in arc-melted GeTe with Ge-deficient crystal structure *Applied Physics Letters* **113**, 083902-1-083902-4 (2018)

Serrano-Sanchez F., Nemes N.M., Martínez J.L., Juan-Dura O., de la Torre M.A., Fernández-Díaz M.T., Alonso J.A. Structural evolution of a Ge-substituted SnSe thermoelectric material with low thermal conductivity *Journal of Applied Crystallography* **51**, 337-343 (2018)

Serrano-Sánchez F., Prado-Gonjal J., Nemes N.M., Biskup N., Varela M., Durá O.J., Martínez J.L., Fernández-Díaz M.T., Fauth F., Alonso J.A. Low thermal conductivity in La-filled cobalt antimonide skutterudites with an inhomogeneous filling factor prepared under high-pressure conditions *Journal of Materials Chemistry A* **6**, 118-126 (2018)

Sikolenko V., Efimova E., Franz A., Ritter C., Troyanchuk I.O., Karpinsky D., Zubavichus Y., Veligzhanin A., Tiutiunnikov S.I., Sazonov A., Efimov V. X-ray absorption spectroscopy and neutron diffraction study of the perovskite-type rare-earth cobaltites *Physica B* **536**, 640-642 (2018)

Werwein A., Auer H., Kuske L., Kohlmann H. From metallic *LnTi* (*Ln* = La, Nd; *Ti* = Si, Ge, Sn) to electron-precise Zintl phase hydrides *LnTiH* *Zeitschrift für Anorganische und Allgemeine Chemie Online first*, (2018)

Wiedemann D., Meutzner F., Fabelo O., Ganschow S. The inverse perovskite BaLiF $_3$ : Single-crystal neutron diffraction and analyses of potential ion pathways *Acta Crystallographica B* **74**, 643-650 (2018)

Wind J., Sharma N., Yaremchenko A.A., Kharton V.V., Blom D.A., Vogt T., Ling C.D. Local structure adaptations and oxide ionic conductivity in the type III stability region of (1-x)Bi $_2$ O $_3$ ·xNb $_2$ O $_5$  *Chemistry of Materials* **30**, 3387-3394 (2018)

Ye J., Barrio M., Céolin R., Qureshi N., Negrier P., Rietveld I.B., Tamarit J.L. An order-disorder phase transition in the van der Waals based solvate of C $_{60}$  and CClBrH $_2$  *CrystEngComm* **20**, 2729-2732 (2018)

Auer H., Schlegel R., Oeckler O., Kohlmann H. Structural and electronic flexibility in hydrides of Zintl phases with tetrel-hydrogen and tetrel-tetrel bonds *Angewandte Chemie International Edition* **56**, 12344-12347 (2017)

Cascos V., Aguadero A., Harrington G., Fernández-Díaz M.T., Alonso J.A. Design of Sr $_{0.7}$ R $_{0.3}$ CoO $_{3.8}$  (R = Tb and Er) perovskites performing as cathode materials in solid oxide fuel cells *Journal of the Electrochemical Society* **164**, F3019-F3027 (2017)

el Hadri A., Gómez-Recio I., del Río E., Hernández-Garrido J.C., Cortés-Gil R., Hernando M., Varela A., Gutiérrez-Alonso Á., Parras M., Delgado J.J., Pérez-Omil J.A., Blanco G., Calvino J.J., González-Calbet J.M. Critical influence of redox pretreatments on the CO oxidation activity of BaFeO $_{3.8}$  perovskites: An in-depth atomic-scale analysis by aberration-corrected and *in situ* diffraction techniques *ACS Catalysis* **7**, 8653-8663 (2017)

Hallas A.M., Gaudet J., Butch N.P., Xu G., Tachibana M., Wiebe C.R., Luke G.M., Gaulin B.D. Phase competition in the Palmer-Chalker XY pyrochlore Er $_2$ Pt $_2$ O $_7$  *Physical Review Letters* **119**, 187201-1-187201-6 (2017)

Lieb A., Weller M.T. Determination of the hydrogen positions in the novel barium boroarsenate Ba[B $_2$ As $_2$ O $_8$ (OH) $_2$ ] by combined single crystal X-ray and powder neutron investigations *Zeitschrift für Anorganische und Allgemeine Chemie* **643**, 1649-1653 (2017)

Mon M., Vallejo J., Pasán J., Fabelo O., Train C., Verdaguer M., Ohkoshi S.I., Tokoro H., Nakagawa K., Pardo E. A novel oxalate-based three-dimensional coordination polymer showing magnetic ordering and high proton conductivity *Dalton Transactions* **46**, 15130-15137 (2017)

Sibille R., Lhotel E., Hatnean M.C., Nilsen G.J., Ehlers G., Cervellino A., Ressouche E., Frontzek M., Zaharko O., Pomjakushin V., Stuhr U., Walker H.C., Adroja D.T., Luetkens H., Baines C., Amato A., Balakrishnan G., Fennell T., Kenzelmann M. Coulomb spin liquid in anion-disordered pyrochlore Tb $_2$ Hf $_2$ O $_7$  *Nature Communications* **8**, 892-1-892-9 (2017)

Widenmeyer M., Hansen T.C., Leineweber A., Weidenkaff A., Niewa R. Nitrogen transfer between solid phases in the system Mn-N detected *via in situ* neutron diffraction *Zeitschrift für Anorganische und Allgemeine Chemie* **643**, 1929-1938 (2017)

## Liquids and Glasses

Beauvois K., Dawidowski J., Fák B., Godfrin H., Krotscheck E., Ollivier J., Sultan A. Microscopic dynamics of superfluid  $^4$ He: A comprehensive study by inelastic neutron scattering *Physical Review B* **97**, 184520-1-184520-14 (2018)

Charpentier T., Okhotnikov K., Novikov A.N., Hennet L., Fischer H.E., Neuville D.R., Florian P. Structure of strontium aluminosilicate glasses from molecular dynamics simulation, neutron diffraction, and nuclear magnetic resonance studies *Journal of Physical Chemistry B* **122**, 9567-9583 (2018)

Dahlborg U., Gasser J.G., Cuello G.J., Mehraban S., Lavery N., Calvo-Dahlborg M. Temperature and time dependent structure of the molten Ni $_{81}$ P $_{19}$  alloy by neutron diffraction *Journal of Non-Crystalline Solids* **500**, 359-365 (2018)

Demmel F., Tani A. Stokes-Einstein relation of the liquid metal rubidium and its relationship to changes in the microscopic dynamics with increasing temperature *Physical Review E* **97**, 062124-1-062124-10 (2018)

Duboué-Dijon E., Mason P.E., Fischer H.E., Jungwirth P. Hydration and ion pairing in aqueous Mg $^{2+}$  and Zn $^{2+}$  solutions: Force-field description aided by neutron scattering experiments and *ab initio* molecular dynamics simulations *Journal of Physical Chemistry B* **122**, 3296-3306 (2018)

Flores-Ruiz H., Micoulaut M., Piarristeguy A., Coulet M.V., Johnson M., Cuello G.J., Pradel A. Structural, vibrational, and dynamic properties of Ge-Ga-Te liquids with increasing connectivity: A combined neutron scattering and molecular dynamics study *Physical Review B* **97**, 214207-1-214207-13 (2018)

Florian P., Novikov A., Drewitt J.W.E., Hennet L., Sarou-Kanian V., Massiot D., Fischer H.E., Neuville D.R. Structure and dynamics of high-temperature strontium aluminosilicate melts *Physical Chemistry Chemical Physics* **20**, 27865-27877 (2018)

González M.A., Aoun B., Price D.L., Izaola Z., Russina M., Ollivier J., Saboungi M.L. Molecular dynamics in 1-alkyl-3-methylimidazolium bromide ionic liquids: A reanalysis of quasielastic neutron scattering results *AIP Conference Proceedings* **1969**, 020002-1-020002-15 (2018)

Hansen H.W., Frick B., Capaccioli S., Sanz A., Niss K. Isochronal superposition and density scaling of the  $\alpha$ -relaxation from pico- to millisecond *Journal of Chemical Physics* **149**, 214503-1-214503-12 (2018)

Hansen H.W., Sanz A., Adrjanowicz K., Frick B., Niss K. Evidence of a one-dimensional thermodynamic phase diagram for simple glass-formers *Nature Communications* **9**, 518-1-518-7 (2018)

Martinek T., Duboué-Dijon E., Timr Š., Mason P.E., Baxová K., Fischer H.E., Schmidt B., Pluhařová E., Jungwirth P. Calcium ions in aqueous solutions: Accurate force field description aided by *ab initio* molecular dynamics and neutron scattering *Journal of Chemical Physics* **148**, 222813-1-222813-9 (2018)

Piarristeguy A., Le Parc R., Ramonda M., Escalier R., Grillo I., Cuello G.J., Cristiglio V., Pradel A. Local vibrational and mechanical characterization of Ag conducting chalcogenide glasses *Journal of Alloys and Compounds* **762**, 906-914 (2018)

Pilgrim W.C., Szubrin D., Demmel F., Orecchini A., Rols S., Laloni A., De Francesco A. New perspectives onto the metal-to-non-metal transition in expanded liquid metals *Europhysics Letters* **122**, 36005-p1-36005-p7 (2018)

Stunault A., Vial S., Julien D., Cuello G.J. D3 at the ILL: Structural studies of hydrogenous liquid and amorphous systems *Physica B* **551**, 373-376 (2018)

Tavagnacco L., Mason P.E., Neilson G.W., Saboungi M.L., Cesàro A., Brady J.W. Molecular dynamics and neutron scattering studies of mixed solutions of caffeine and pyridine in water *Journal of Physical Chemistry B* **122**, 5308-5315 (2018)

## PUBLICATIONS

FIND US ON:   

10-11

Vaney J., Carreaud J., Piarristeguy A., Morin C., Delaizir G., Viennois R., Colas M., Cornette J., Alleno E., Monnier J., Bigot M., Goncalves A.P., Lopes E.B., Cuello G.J., Nassif V., Candolfi C., Lenoir B., Pradel A. Stabilization of metastable thermoelectric crystalline phases by tuning the glass composition in the Cu-As-Te system *Inorganic Chemistry* **57**, 754-767 (2018)

Zeidler A., Salmon P.S., Whittaker D.A.J., Piarristeguy A., Pradel A., Fischer H.E., Benmore C.J., Gulbiten O. Structure of semiconducting versus fast-ion conducting glasses in the Ag-Ge-Se system *Royal Society Open Science* **5**, 171401-1-171401-21 (2018)

Annighöfer B., Polidori A., Zeidler A., Fischer H.E., Salmon P.S. High-pressure neutron diffraction apparatus for investigating the structure of liquids under hydrothermal conditions *High Pressure Research* **37**, 529-544 (2017)

Pierleoni C., Holzmann M., Ceperley D.M. Local structure in dense hydrogen at the liquid-liquid phase transition by coupled electron-ion Monte Carlo *Contributions to Plasma Physics* **58**, 99-106 (2017)

## Magnetic Excitations

Anand V.K., Hillier A.D., Adroja D.T., Khalyavin D.D., Manuel P., André G., Rols S., Koza M.M. Understanding the magnetism in noncentrosymmetric CeIrGe<sub>3</sub>: Muon spin relaxation and neutron scattering studies *Physical Review B* **97**, 184422-1-184422-13 (2018)

Ansbro S., Moreno-Pineda E., Yu W., Ollivier J., Mutka H., Ruben M., Chiesa A. Magnetic properties of transition metal dimers probed by inelastic neutron scattering *Dalton Transactions* **47**, 11953-11959 (2018)

Biniskos N., Schmalzl K., Raymond S., Petit S., Steffens P., Persson J., Brückel T. Spin fluctuations drive the inverse magnetocaloric effect in Mn<sub>5</sub>Si<sub>3</sub> *Physical Review Letters* **120**, 257205-1-257205-6 (2018)

Boldrin D., Fåk B., Canévet E., Ollivier J., Walker H.C., Manuel P., Khalyavin D.D., Wills A.S. Vesignieite: An S = kagome antiferromagnet with dominant third-neighbor exchange *Physical Review Letters* **121**, 107203-1-107203-6 (2018)

Chatterji T., Frick B., Zamponi M., Appel M., Nair H.S., Pradheesh R., Hariprya G.R., Sankaranarayanan V., Sethupathi K. Hyperfine interaction and electronic spin fluctuation study on Sr<sub>2-x</sub>La<sub>x</sub>FeCoO<sub>6</sub> (x = 0, 1, 2) by high-resolution backscattering neutron spectroscopy *Physical Review B* **98**, 094429-1-094429-11 (2018)

Cheng X., Fabbri E., Yamashita Y., Castelli I.E., Kim B., Uchida M., Haumont R., Puente-Orench I., Schmidt T.J. Oxygen evolution reaction on perovskites: A multieffect descriptor study combining experimental and theoretical methods *ACS Catalysis* **8**, 9567-9578 (2018)

Dreier E.S., Holm S.L., Lønbaek K., Hansen U.B., Medarde M., Živkovič I., Babkevich P., Ruminy M., Casati N., Piovano A., Rols S., Nilsen G.J., Boehm M., Skoulatos M., Schefer J., Rønnow H.M., Fennell T., Lefmann K. 24-spin clusters in the mineral boleite KPb<sub>26</sub>Ag<sub>9</sub>Cu<sub>24</sub>Cl<sub>62</sub>(OH)<sub>48</sub> *Physical Review B* **97**, 014416-1-014416-12 (2018)

Faure Q., Takayoshi S., Petit S., Simonet V., Raymond S., Regnault L.P., Boehm M., White J.S., Månsson M., Rüegg C., Lejay P., Canals B., Lorenz T., Furuya S.C., Giamarchi T., Grenier B. Topological quantum phase transition in the Ising-like antiferromagnetic spin chain BaCo<sub>2</sub>V<sub>2</sub>O<sub>8</sub> *Nature Physics* **14**, 716-722 (2018)

Ferreira A.C., Létoublon A., Paofai S., Raymond S., Ecolivet C., Rufflé B., Cordier S., Katan C., Saidaminov M.I., Zhumekenov A.A., Bakr O.M., Even J., Bourges P. Elastic softness of hybrid lead halide perovskites *Physical Review Letters* **121**, 085502-1-085502-6 (2018)

Freeman P.G., Mole R.A., Christensen N.B., Stunault A., Prabhakaran D. Stability of charge-stripe ordered La<sub>2-x</sub>Sr<sub>x</sub>NiO<sub>4+δ</sub> at one third doping *Physica B* **536**, 720-725 (2018)

Gao S., Guratinder K., Stuhr U., White J.S., Månsson M., Roessli B., Fennell T., Tsurkan V., Loidl A., Ciomaga Hatnean M., Balakrishnan G., Raymond S., Chapon L., Garlea V.O., Savici A.T., Cervellino A., Bombardi A., Chernyshov D., Rüegg C., Haraldsen J.T., Zaharko O. Manifolds of magnetic ordered states and excitations in the almost Heisenberg pyrochlore antiferromagnet MgCr<sub>2</sub>O<sub>4</sub> *Physical Review B* **97**, 134430-1-134430-12 (2018)

Gao S., Zaharko O., Tsurkan V., Prodan L., Riordan E., Lago J., Fåk B., Wildes A.R., Koza M.M., Ritter C., Fouquet P., Keller L., Canévet E., Medarde M., Blomgren J., Johansson C., Giblin S.R., Vrtnik S., Luzar J., Loidl A., Rüegg C., Fennell T. Dipolar spin ice states with a fast monopole hopping rate in CdEr<sub>2</sub>X<sub>4</sub> (X = Se, S) *Physical Review Letters* **120**, 137201-1-137201-6 (2018)

Garlatti E., Guidi T., Chiesa A., Ansbro S., Baker M.L., Ollivier J., Mutka H., Timco G.A., Vitorica-Yrezabal I., Pavarini E., Santini P., Amoretti G., Winpenny R.E.P., Carretta S. Anisotropy of Coll transferred to the Cr<sub>7</sub>Co polycyclic cluster via strong exchange interactions *Chemical Science* **9**, 3555-3562 (2018)

Golosovsky I.V., Ovsyanikov A.K., Aristov D.N., Matveeva P.G., Mukhin A.A., Boehm M., Regnault L.P., Bezmaternykh L.N. Spin-wave dynamics and exchange interactions in multiferroic NdFe<sub>3</sub>(BO<sub>3</sub>)<sub>4</sub> explored by inelastic neutron scattering *Journal of Magnetism and Magnetic Materials* **451**, 443-449 (2018)

Guo H., Li Z.W., Zhao L., Hu Z., Chang C.F., Kuo C.Y., Schmidt W., Piovano A., Pi T.W., Sobolev O., Khomskii D.I., Tjeng L.H., Komarek A.C. Antiferromagnetic correlations in the metallic strongly correlated transition metal oxide LaNiO<sub>3</sub> *Nature Communications* **9**, 43-1-43-7 (2018)

Huesges Z., Kliemt K., Krellner C., Sarkar R., Klauß H.H., Geibel C., Rotter M., Novák P., Kuneš J., Stockert O. Analysis of the crystal electric field parameters of YbNi<sub>4</sub>P<sub>2</sub> *New Journal of Physics* **20**, 073021-1-073021-9 (2018)

Ishikado M., Shamoto S.I., Kodama K., Kajimoto R., Nakamura M., Hong T., Mutka H. High-energy spin fluctuation in low-Tc iron-based superconductor LaFePO<sub>0.9</sub> *Scientific Reports* **8**, 16343-1-16343-6 (2018)

Jacobsen H., Gaw S.M., Princep A.J., Hamilton E., Tóth S., Ewings R.A., Enderle M., Hétyóy Wheeler E.M., Prabhakaran D., Boothroyd A.T. Spin dynamics and exchange interactions in CuO measured by neutron scattering *Physical Review B* **97**, 144401-1-144401-14 (2018)

Jacobsen H., Holm S.L., Lacatusu M.E., Romer A.T., Bertelsen M., Boehm M., Toft-Petersen R., Grivel J.C., Emery S.B., Udby L., Wells B.O., Lefmann K. Distinct nature of static and dynamic magnetic stripes in cuprate superconductors *Physical Review Letters* **120**, 037003-1-037003-5 (2018)

Kadowaki H., Wakita M., Fåk B., Ollivier J., Ohira-Kawamura S., Nakajima K., Takatsu H., Tamai M. Continuum excitation and pseudospin wave in quantum spin-liquid and quadrupole ordered states of Tb<sub>2-x</sub>Ti<sub>2x</sub>O<sub>7+y</sub> *Journal of the Physical Society of Japan* **87**, 064704-1-064704-6 (2018)

Klyushina E.S., Islam A.T.M.N., Park J.T., Goremychkin E.A., Wheeler E., Klemke B., Lake B. Hamiltonian of the S = dimerized antiferromagnetic-ferromagnetic quantum spin chain BaCu<sub>2</sub>V<sub>2</sub>O<sub>8</sub> *Physical Review B* **98**, 104413-1-104413-13 (2018)

Lançon D., Ewings R.A., Guidi T., Formisano F., Wildes A.R. Magnetic exchange parameters and anisotropy of the quasi-two-dimensional antiferromagnet NiPS<sub>3</sub> *Physical Review B* **98**, 134414-1-134414-10 (2018)

Lhotel E., Petit S., Ciomaga Hatnean M., Ollivier J., Mutka H., Ressouche E., Lees M.R., Balakrishnan G. Evidence for dynamic kagome ice *Nature Communications* **9**, 3786-1-3786-6 (2018)

Man H., Zhang R., Park J.T., Lu X., Kulda J., Ivanov A., Dai P. Direct observation of spin excitation anisotropy in the paramagnetic orthorhombic state of BaFe<sub>2-x</sub>Ni<sub>x</sub>As<sub>2</sub> *Physical Review B* **97**, 060507-1-060507-6 (2018)

Nair H.S., Ogunbunmi M., Ghosh S.K., Adroja D.T., Koza M.M., Guidi T., Strydom A.M. Absence of a long-range ordered magnetic ground state in Pr<sub>3</sub>Rh<sub>4</sub>Sn<sub>3</sub> studied through specific heat and inelastic neutron scattering *Journal of Physics: Condensed Matter* **30**, 145601-1-145601-9 (2018)

Nikitin S.E., Portnichenko P.Y., Dukhnenko A.V., Shitsevalova N.Y., Filipov V.B., Qiu Y., Rodriguez-Rivera J.A., Ollivier J., Inosov D.S. Doping-induced redistribution of magnetic spectral weight in the substituted hexaborides Ce<sub>1-x</sub>La<sub>x</sub>B<sub>6</sub> and Ce<sub>1-x</sub>Nd<sub>x</sub>B<sub>6</sub> *Physical Review B* **97**, 075116-1-075116-9 (2018)

Park K., Sim H., Leiner J.C., Yoshida Y., Jeong J., Yano S.I., Gardner J., Bourges P., Klicpera M., Sechovský V., Boehm M., Park J.G. Low-energy spin dynamics of orthoferrites AFeO<sub>3</sub> (A = Y, La, Bi) *Journal of Physics: Condensed Matter* **30**, 235802-1-235802-8 (2018)

Pregelj M., Zaharko O., Stuhr U., Zorko A., Berger H., Prokofiev A., Arčon D. Coexisting spinons and magnons in the frustrated zigzag spin-chain compound β-TeVO<sub>4</sub> *Physical Review B* **98**, 094405-1-094405-6 (2018)

Regnault L.P., Boullier C., Lorenzo J.E. Polarized-neutron investigation of magnetic ordering and spin dynamics in BaCo<sub>2</sub>(AsO<sub>4</sub>)<sub>2</sub> frustrated honeycomb-lattice magnet Heliyon **4**, e00507-1-e00507-37 (2018)

Shen Y., Li Y.D., Walker H.C., Steffens P., Boehm M., Zhang X., Shen S., Wo H., Chen G., Zhao J. Fractionalized excitations in the partially magnetized spin liquid candidate YbMgGaO<sub>4</sub> *Nature Communications* **9**, 4138-1-4138-7 (2018)

Sibille R., Gauthier N., Yan H., Ciomaga Hatnean M., Ollivier J., Winn B., Filges U., Balakrishnan G., Kenzelmann M., Shannon N., Fennell T. Experimental signatures of emergent quantum electrodynamics in Pr<sub>2</sub>Hf<sub>2</sub>O<sub>7</sub> *Nature Physics* **14**, 711-715 (2018)

Song Y., Lu X., Regnault L.P., Su Y., Lai H.H., Hu W., Si Q., Dai P. Spin-isotropic continuum of spin excitations in antiferromagnetically ordered Fe<sub>1.07</sub>Te *Physical Review B* **97**, 024519-1-024519-6 (2018)

## Magnetic Structures

Sorensen M.A., Hansen U.B., Perfetti M., Pedersen K.S., Bartolome E., Simeoni G.G., Mutka H., Rols S., Jeong M., Zivkovic I., Retuerto M., Arauzo A., Bartolomé J., Piligkos S., Weihe H., Doerrer L.H., van Slageren J., Rønnow H.M., Lefmann K., Bendix J. Chemical tunnel-splitting-engineering in a dysprosium-based molecular nanomagnet Nature Communications **9**, 1292-1-1292-9 (2018)

Surmach M.A., Chen B.J., Deng Z., Jin C.Q., Glasbrenner J.K., Mazin I.I., Ivanov A., Inosov D.S. Weak doping dependence of the antiferromagnetic coupling between nearest-neighbor Mn<sup>2+</sup> spins in (Ba<sub>1-x</sub>K<sub>x</sub>)[Zn<sub>1-y</sub>Mn<sub>y</sub>]<sub>2</sub>As<sub>2</sub> Physical Review B **97**, 104418-1-104418-7 (2018)

Tanaka Y., Wawrzyńczak R., Le M.D., Guidi T., Okamoto Y., Yajima T., Hiroi Z., Takigawa M., Nilsen G.J. Inelastic neutron scattering study of the spin dynamics in the breathing pyrochlore system LiGa<sub>0.95</sub>In<sub>0.05</sub>Cr<sub>4</sub>O<sub>8</sub> Journal of the Physical Society of Japan **87**, 073710-1-073710-4 (2018)

Xie T., Gong D., Ghosh H., Ghosh A., Soda M., Masuda T., Itoh S., Bourdarot F., Regnault L.P., Danilkin S., Li S., Luo H. Neutron spin resonance in the 112-type iron-based superconductor Physical Review Letters **120**, 137001-1-137001-7 (2018)

Zubáč J., Javorský P., Fák B. Crystal field in NdPd<sub>5</sub>Al<sub>2</sub> investigated by inelastic neutron scattering Journal of Physics: Condensed Matter **30**, 255801-1-255801-8 (2018)

Chatterji T., Demmel F., Jalarvo N., Podlesnyak A., Kumar C.M.N., Xiao Y., Brückel T. Quasielastic and low-energy inelastic neutron scattering study of HoCrO<sub>3</sub> by high resolution time-of-flight neutron spectroscopy Journal of Physics: Condensed Matter **29**, 475802-1-475802-7 (2017)

Hu D., Zhang W., Wei Y., Roessli B., Skoulatos M., Regnault L.P., Chen G., Song Y., Luo H., Li S., Dai P. Spin excitation anisotropy in the optimally isovalent-doped superconductor BaFe<sub>2</sub>(As<sub>0.7</sub>P<sub>0.3</sub>)<sub>2</sub> Physical Review B **96**, 180503-1-180503-6 (2017)

Povarov K.Y., Mannig A., Perren G., Möller J.S., Wulf E., Ollivier J., Zheludev A. Quantum criticality in a three-dimensional spin system at zero field and pressure Physical Review B **96**, 140414-1-140414-5 (2017)

Song Y., Wang W., Zhang C., Gu Y., Lu X., Tan G., Su Y., Bourdarot F., Christianson A.D., Li S., Dai P. Temperature and polarization dependence of low-energy magnetic fluctuations in nearly optimally doped NaFe<sub>0.9785</sub>Co<sub>0.0215</sub>As Physical Review B **96**, 184512-1-184512-8 (2017)

Stock C., Rodriguez E.E., Lee N., Demmel F., Fouquet P., Laver M., Niedermayer C., Su Y., Nemkovski K., Green M.A., Rodriguez-Rivera J.A., Kim J.W., Zhang L., Cheong S.W. Orphan spins in the S = antiferromagnet CaFe<sub>2</sub>O<sub>4</sub> Physical Review Letters **119**, 257204-1-257204-6 (2017)

Arslanov R.K., Arslanov T.R., Fedorchenko I.V., Kilanski L., Chatterji T. Structure-dependent magnetoresistance in the Zn<sub>0.1</sub>Cd<sub>0.9</sub>GeAs<sub>2</sub> + MnAs hybrid nanocomposite JETP Letters **107**, 612-617 (2018)

Bender P., Fock J., Frandsen C., Hansen M.F., Balceris C., Ludwig F., Posth O., Wetterskog E., Bogart L.K., Southern P., Szczerba W., Zeng L., Witte K., Grüttner C., Westphal F., Honecker D., González-Alonso D., Fernández Barquín L., Johansson C. Relating magnetic properties and high hyperthermia performance of iron oxide nanoflowers Journal of Physical Chemistry C **122**, 3068-3077 (2018)

Bender P., Fock J., Hansen M.F., Bogart L.K., Southern P., Ludwig F., Wiekhorst F., Szczerba W., Zeng L.J., Heinke D., Gehrke N., Fernández-Díaz M.T., González-Alonso D., Espeso J.I., Rodríguez Fernández J., Johansson C. Influence of clustering on the magnetic properties and hyperthermia performance of iron oxide nanoparticles Nanotechnology **29**, 425705-1-425705-12 (2018)

Bender P., Wetterskog E., Honecker D., Fock J., Frandsen C., Moerland C., Bogart L.K., Posth O., Szczerba W., Gavilán H., Costo R., Fernández-Díaz M.T., González-Alonso D., Fernández Barquín L., Johansson C. Dipolar-coupled moment correlations in clusters of magnetic nanoparticles Physical Review B **98**, 224420-1-224420-11 (2018)

Bernardo P.L., De Amorim H.S. Neutron diffraction: A tool for the magnetic properties In «Handbook of Materials Characterization» (2018, Springer) pp. 1-35

Bordács S., Farkas D.G., White J.S., Cubitt R., DeBeer-Schmitt L., Ito T., Kézsmárki I. Magnetic field control of cycloidal domains and electric polarization in multiferroic BiFeO<sub>3</sub> Physical Review Letters **120**, 147203-1-147203-5 (2018)

Bourges P., Sidis Y., Mangin-Thro L. Comment on “No evidence for orbital loop currents in charge-ordered YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6+x</sub> from polarized neutron diffraction” Physical Review B **98**, 016501-1-016501-5 (2018)

Brunt D., Balakrishnan G., Mayoh D.A., Lees M.R., Gorbunov D., Qureshi N., Petrenko O.A. Magnetisation process in the rare earth tetraborides, NdB<sub>4</sub> and HoB<sub>4</sub> Scientific Reports **8**, 232-1-232-8 (2018)

Chatterji T., Stunault A., Brown P.J. Polarized single crystal neutron diffraction study of the zero-magnetization ferromagnet Sm<sub>1-x</sub>Gd<sub>x</sub>Al<sub>2</sub> (x = 0.024) Physical Review B **97**, 064417-1-064417-6 (2018)

Croft T.P., Blackburn E., Kulda J., Liang R., Bonn D.A., Hardy W.N., Hayden S.M. Reply to ‘Comment on “No evidence for orbital loop currents in charge-ordered YBa<sub>2</sub>Cu<sub>3</sub>O<sub>6+x</sub> from polarized neutron diffraction”’ Physical Review B **98**, 016502-1-016502-5 (2018)

Cuartero V., Blasco J., Subías G., García J., Rodríguez-Velamazán J.A., Ritter C. Structural, magnetic, and electronic properties of CaBaCo<sub>4-x</sub>M<sub>x</sub>O<sub>7</sub> (M = Fe, Zn) Inorganic Chemistry **57**, 3360-3370 (2018)

Das R.R., Parida P., Bera A.K., Chatterji T., Nanda B.R.K., Santhosh P.N. Giant exchange bias in the single-layered Ruddlesden-Popper perovskite Physical Review B **98**, 184417-1-184417-11 (2018)

Deutsch M., Peng W., Foury-Leylekian P., Balédent V., Chattopadhyay S., Fernández-Díaz M.T., Hansen T.C., Forget A., Colson D., Greenblatt M., Lepetit M.B., Petit S., Mirebeau I. Pressure-induced commensurate order in TbMn<sub>2</sub>O<sub>5</sub> and DyMn<sub>2</sub>O<sub>5</sub>: Influence of rare-earth anisotropy and 3d-4f exchange Physical Review B **98**, 024408-1-024408-8 (2018)

García-Ramos C.A., Larrégola S., Retuerto M., Fernández-Díaz M.T., Krezhov K., Alonso J.A. On the novel double perovskites A<sub>2</sub>Fe(Mn<sub>0.5</sub>W<sub>0.5</sub>)O<sub>6</sub> (A = Ca, Sr, Ba). Structural evolution and magnetism from neutron diffraction data Solid State Sciences **80**, 72-80 (2018)

Gargicevich D., Bonifacich F.G., Lambri O.A., Chiappero P., Cano J.A., Zelada G.I., Pérez-Landazábal J.I., Recarte V., Galván Josa V.M., Blanco M.C., Cuello G.J. Evolution of magnetic response as a function of annealing temperature in Fe-based alloys Matéria **23**, e-12042-1-e-12042-10 (2018)

Glover S.E., Saerbeck T., Kuerbanjiang B., Ghasemi A., Kepapsoglou D., Ramasse Q.M., Yamada S., Hamaya K., Hase T.P.A., Lazarov V.K., Bell G.R. Magnetic and structural depth profiles of Heusler alloy Co<sub>2</sub>FeAl<sub>0.5</sub>Si<sub>0.5</sub> epitaxial films on Si(1 1 1) Journal of Physics: Condensed Matter **30**, 065801-1-065801-7 (2018)

Gómez-Polo C., Recarte V., Cervera L., Beato-López J.J., López-García J., Rodríguez-Velamazán J.A., Ugarte M.D., Mendonça E.C., Duque J.G.S. Tailoring the structural and magnetic properties of Co-Zn nanosized ferrites for hyperthermia applications Journal of Magnetism and Magnetic Materials **465**, 211-219 (2018)

González-Izquierdo P., Fabelo O., Beobide G., Vallcorba O., Sce F., Rodríguez Fernández J., Fernández-Díaz M.T., de Pedro I. Magnetic structure, single-crystal to single-crystal transition, and thermal expansion study of the [Edimim][FeCl<sub>4</sub>] halometalate compound Inorganic Chemistry **57**, 1787-1795 (2018)

Gorbunov D.I., Henriques M.S., Qureshi N., Ouladdiaf B., Mejía C.S., Gronemann J., Andreev A.V., Peříček V., Green E.L., Wosnitza J. Spontaneous and field-induced magnetic phase transitions in Dy<sub>2</sub>Co<sub>3</sub>Al<sub>6</sub> Physical Review Materials **2**, 084406-1-084406-9 (2018)

Goswami S., Bhattacharya D. Magnetic transition at 150K in nanoscale BiFeO<sub>3</sub> Journal of Alloys and Compounds **738**, 277-282 (2018)

Granovsky S., Gaidukova I., Ritter C. Magnetic structures of (Gd<sub>1-x</sub>Y<sub>x</sub>)Mn<sub>2</sub>Ge<sub>2</sub> and (Tb<sub>1-x</sub>Y<sub>x</sub>)Mn<sub>2</sub>Ge<sub>2</sub> studied by neutron powder diffraction EPJ Web of Conferences **185**, 04009-1-04009-4 (2018)

Grigoriev S.V., Altynbaev E.V., Siegfried S.A., Pshenichnyi K.A., Honecker D., Heinemann A., Tsvyashchenko A.V. Spin-wave dynamics in Mn-doped FeGe helimagnet: Small-angle neutron scattering study Journal of Magnetism and Magnetic Materials **459**, 159-164 (2018)

Hembacher J., Badrtdinov D.I., Ding L., Sobczak Z., Ritter C., Mazurenko V.V., Tsirlin A.A. Stripe order and magnetic anisotropy in the S = 1 antiferromagnet BaMoP<sub>2</sub>O<sub>8</sub> Physical Review B **98**, 094406-1-094406-9 (2018)

Henriques M.S., Gorbunov D.I., Andreev A.V., Fabrèges X., Gukasov A., Uhlarz M., Peříček V., Ouladdiaf B., Wosnitza J. Complex magnetic order in the kagome ferromagnet Pr<sub>3</sub>Ru<sub>4</sub>A<sub>12</sub> Physical Review B **97**, 014431-1-014431-10 (2018)

Herkeleth S.J.C., Blandy J.N., Clarke S.J. Magnetic ordering in the layered oxyselenides Sr<sub>2</sub>CoO<sub>2</sub>Ag<sub>2</sub>Se<sub>2</sub> and Ba<sub>2</sub>CoO<sub>2</sub>Ag<sub>2</sub>Se<sub>2</sub> Journal of Solid State Chemistry **264**, 119-123 (2018)

Hneda M.L., Oliveira Neto S.R., da Cunha J.B.M., Gusmão M.A., Isnard O. Quasi-one-dimensional magnetism in Mn<sub>x</sub>Fe<sub>1-x</sub>Nb<sub>2</sub>O<sub>6</sub> compounds: From Heisenberg to Ising chains Journal of Magnetism and Magnetic Materials **456**, 142-149 (2018)

Hong K.H., Arévalo-López A.M., Cumby J., Ritter C., Atfield J.P. Long range electronic phase separation in CaFe<sub>3</sub>O<sub>5</sub> Nature Communications **9**, 2975-1-2975-6 (2018)

Huesges Z., Schmalzl K., Geibel C., Brando M., Steglich F., Stockert O. Robustness of magnons near the quantum critical point in the heavy-fermion superconductor CeCu<sub>2</sub>Si<sub>2</sub> Physical Review B **98**, 134425-1-134425-6 (2018)

Hunter E.C., Battle P.D. Evolution of the crystal structure and magnetic properties of Sr<sub>2-x</sub>Ca<sub>x</sub>CrSbO<sub>6</sub> with composition Journal of Solid State Chemistry **264**, 48-58 (2018)



## PUBLICATIONS

FIND US ON:   

14-15

Ivanov R., Deschamps A., De Geuser F. Clustering kinetics during natural ageing of Al-Cu based alloys with (Mg, Li) additions *Acta Materialia* **157**, 186-195 (2018)

Ji K.L., Solana-Madruga E., Arévalo-López A.M., Manuel P., Ritter C., Senyshyn A., Attfield J.P. Lock-in spin structures and ferrimagnetism in polar  $\text{Ni}_{2x}\text{Co}_x\text{ScSbO}_6$  oxides *Chemical Communications* **54**, 12523-12526 (2018)

Jiao Y.Y., Cui Q., Shahi P., Wang N.N., Su N., Wang B.S., Fernández-Díaz M.T., Alonso J.A., Cheng J.G. High-pressure synthesis and structural, transport, and magnetic properties of rutile-type  $\text{Cr}_2\text{ReO}_6$  and  $\text{CrReO}_4$  *Physical Review B* **97**, 014426-1-014426-11 (2018)

Jiménez-Vázquez A., Falconi R., Takeya H., Ouladdiaf B., ElMassalami M. Evolution of magnetic structure of  $\text{Dy}(\text{Co}_x\text{Ni}_{1-x})_2\text{B}_2\text{C}$  *Journal of Materials Science* **29**, 15411-15415 (2018)

Karube K., White J.S., Morikawa D., Dewhurst C.D., Cubitt R., Kikkawa A., Yu X., Tokunaga Y., Arima T.H., Rønnow H.M., Tokura Y., Taguchi Y. Disordered skyrmion phase stabilized by magnetic frustration in a chiral magnet *Science Advances* **4**, eaar7043-1-eaar7043-9 (2018)

Kimura K., Toyoda M., Babkevich P., Yamauchi K., Sera M., Nassif V., Rønnow H.M., Kimura T. A-cation control of magnetoelectric quadrupole order in  $\text{A}(\text{TiO})\text{Cu}_4(\text{PO}_4)_4$  (A = Ba, Sr, and Pb) *Physical Review B* **97**, 134418-1-134418-6 (2018)

Klotz S. Magnetism in solid oxygen studied by high-pressure neutron diffraction *Journal of Low Temperature Physics* **192**, 1-18 (2018)

Knafo W., Aoki D., Scheerer G.W., Duc F., Bourdarot F., Kuwahara K., Nojiri H., Regnault L.P., Flouquet J.  $\text{URu}_2\text{Si}_2$  under intense magnetic fields: From hidden order to spin-density wave *Physica B* **536**, 457-460 (2018)

Kohlmann H., Hansen T.C., Nassif V. Magnetic structure of  $\text{SmCo}_5$  from 5 K to the Curie temperature *Inorganic Chemistry* **57**, 1702-1704 (2018)

Lahoubi M. Magnetic study of the low temperature anomalies in the magnetodielectric terbium iron garnet *Physica B* **536**, 96-101 (2018)

Lemoine P., Vernière A., Pasturel M., Venturini G., Malaman B. Unexpected magnetic ordering on the Cr substructure in  $\text{UCr}_2\text{Si}_2\text{C}$  and structural relationships in quaternary U-Cr-Si-C compounds *Inorganic Chemistry* **57**, 2546-2557 (2018)

López-Cabrelles J., Mañas-Valero S., Vitórica-Yrezábal I.J., Bereciartua P.J., Rodríguez-Velamazán J.A., Waerenborgh J.C., Vieira B.J.C., Davidovikj D., Steeneken P.G., van der Zant H.S.J., Mínguez Espallargas G., Coronado E. Isorectangular two-dimensional magnetic coordination polymers prepared through pre-synthetic ligand functionalization *Nature Chemistry* **10**, 1001-1007 (2018)

Magnus F., Warnatz T., Pálsson G.K., Devishvili A., Ukleev V., Palisaitis J., Persson P.O.Å., Hjörvarsson B. Sequential magnetic switching in  $\text{Fe}/\text{MgO}(001)$  superlattices *Physical Review B* **97**, 174424-1-174424-9 (2018)

Martinelli A., Giovannini M., Sereni J.G., Ritter C. Suppression of ferromagnetic order by Ag-doping: A neutron scattering investigation on  $\text{Ce}_2(\text{Pd}_{1-x}\text{Ag}_x)_2\text{In}$  (x = 0.20, 0.50) *Journal of Physics: Condensed Matter* **30**, 265601-1-265601-11 (2018)

Mauws C., Hallas A.M., Sala G., Aczel A.A., Sarte P.M., Gaudet J., Ziat D., Quilliam J.A., Lussier J.A., Bieringer M., Zhou H.D., Wildes A., Stone M.B., Abernathy D., Luke G.M., Gaulin B.D., Wiebe C.R. Dipolar-octupolar Ising antiferromagnetism in  $\text{Sm}_2\text{Ti}_2\text{O}_7$ : A moment fragmentation candidate *Physical Review B* **98**, 100401-1-100401-6 (2018)

Mazzone D.G., Yadav R., Bartkowiak M., Gavilano J.L., Raymond S., Ressouche E., Lapertot G., Kenzelmann M. Distinct domain switching in  $\text{Nd}_{0.05}\text{Ce}_{0.95}\text{CoIn}_5$  at low and high fields *Scientific Reports* **8**, 1295-1-1295-6 (2018)

Mirebeau I., Martin N., Deutsch M., Bannenberg L.J., Pappas C., Chaboussant G., Cubitt R., Decorse C., Leonov A.O. Spin textures induced by quenched disorder in a reentrant spin glass: Vortices versus “frustrated” skyrmions *Physical Review B* **98**, 014420-1-014420-11 (2018)

Mukherjee S., Shimamoto K., Windsor Y.W., Ramakrishnan M., Parchenko S., Staub U., Chapon L., Ouladdiaf B., Medarde M., Shang T., Müller E.A., Kenzelmann M., Lippert T., Schneider C.W., Niedermayer C. Multiferroic phase diagram of E-type  $\text{RMnO}_3$  films studied by neutron and X-ray diffraction *Physical Review B* **98**, 174416-1-174416-12 (2018)

Nair H.S., Kumar C.M.N., Adroja D.T., Ritter C., Wills A.S., Kockelmann W.A., Deen P.P., Bhattacharyya A., Strydom A.M. Magnetic structure and field-dependent magnetic phase diagram of  $\text{Ni}_2\text{In}$ -type  $\text{PrCuSi}$  *Journal of Physics: Condensed Matter* **30**, 435803-1-435803-9 (2018)

Orue I., Marcano L., Bender P., García-Prieto A., Valencia S., Mawass M.A., Gil-Cartón D., Alba Venero D., Honecker D., García-Arribas A., Fernández Barquín L., Muela A., Fdez-Gubieda M.L. Configuration of the magnetosome chain: A natural magnetic nanoarchitecture *Nanoscale* **10**, 7407-7419 (2018)

Palacios E., Evangelisti M., Saéz-Puche R., Dos Santos-García A.J., Fernández-Martínez F., Cascales C., Castro M., Burriel R., Fabelo O., Rodríguez-Velamazán J.A. Magnetic structures and magnetocaloric effect in  $\text{RVO}_4$  (R = Gd, Nd) *Physical Review B* **97**, 214401-1-214401-10 (2018)

Pásziak M., Welberry T.R., Kulda J., Leoni S., Hlinka J. Dynamic displacement disorder of cubic  $\text{BaTiO}_3$  *Physical Review Letters* **120**, 167601-1-167601-6 (2018)

Pérido E.A., Titov I., Weber R., Metts D., Peral I., Vallcorba O., Honecker D., Feoktystov A., Michels A. Effect of annealing conditions on the microstructure and magnetic properties of sintered Nd-Fe-B magnets as seen by magnetic small-angle neutron scattering *Materials Research Express* **5**, 036110-1-036110-11 (2018)

Perren G.S., Lorenz W.E.A., Ressouche E., Zheludev A. Field-induced ordering in a random-bond quantum spin ladder compound with weak anisotropy *Physical Review B* **97**, 174431-1-174431-7 (2018)

Perversi G., Arevalo-Lopez A.M., Ritter C., Attfield J.P. Frustration wave order in iron(II) oxide spinels *Communications Physics* **1**, 69-1-69-8 (2018)

Petrillo C., Postorino P., Orecchini A., Sacchetti F. Search for the elusive magnetic state of hexagonal iron: The antiferromagnetic  $\text{Fe}_{-1}\text{Ru}_{29}$  hcp alloy *Journal of Magnetism and Magnetic Materials* **449**, 552-557 (2018)

Qureshi N., Fernández Díaz M.T., Chapon L.C., Senyshyn A., Schweika W., Valldor M. Magnetic structure of the swedenborgite  $\text{CaBa}(\text{Co}_3\text{Fe})\text{O}_7$  derived by unpolarized neutron diffraction and spherical neutron polarimetry *Physical Review B* **97**, 064404-1-064404-9 (2018)

Qureshi N., Ruiz-Martín M.D., Puente-Orench I., Fernández-Díaz M.T., Balbashov A.M., Ivanov V.Y., Skumryev V., Mukhin A.A. Conical magnetic structures in multiferroic  $\text{SrSc}_x\text{Fe}_{12-x}\text{O}_{19}$  hexaferrites derived from powder neutron diffraction *Physical Review B* **98**, 094411-1-094411-10 (2018)

Retuerto M., Skiadopoulou S., Borodavka F., Kadlec C., Kadlec F., Prokleška J., Deng Z., Alonso J.A., Fernández-Díaz M.T., Saouma F.O., Jang J.I., Legut D., Kamba S., Greenblatt M. Structural and spectroscopic properties of the polar antiferromagnet  $\text{Ni}_2\text{MnTeO}_6$  *Physical Review B* **97**, 144418-1-144418-9 (2018)

Roca A.G., Golosovsky I.V., Winkler E., López-Ortega A., Estrader M., Zysler R.D., Baró M.D., Nogués J. Unravelling the elusive antiferromagnetic order in wurtzite and zinc blende  $\text{CoO}$  polymorph nanoparticles *Small* **14**, 1703963-1-1703963-12 (2018)

Rodríguez-Velamazán J.A., Fabelo O., Campo J., Rodríguez-Carvajal J., Qureshi N., Chapon L.C. Switching of the chiral magnetic domains in the hybrid molecular/inorganic multiferroic  $(\text{ND}_4)_2[\text{FeCl}_3(\text{D}_2\text{O})]$  *Scientific Reports* **8**, 10665-1-10665-7 (2018)

Ryu G., Guo H., Zhao L., Fernández-Díaz M.T., Drees Y., Li Z.W., Hu Z., Komarek A.C. Single crystal growth and magnetic properties of high oxidation state material  $\text{Ba}_2\text{CoO}_4$  *Physica Status Solidi-Rapid Research Letters* **2018**, 1800537-1-1800537-5 (2018)

Salazar D., Martín-Cid A., Garitaonandia J.S., Hansen T.C., Barandiarán J.M., Hadjipanayis G.C. Role of Ce substitution in the magneto-crystalline anisotropy of tetragonal  $\text{ZrFe}_{10}\text{Si}_2$  *Journal of Alloys and Compounds* **766**, 291-296 (2018)

Shang T., Canévet E., Morin M., Sheptyakov D., Fernández-Díaz M.T., Pomjakushina E., Medarde M. Design of magnetic spirals in layered perovskites: Extending the stability range far beyond room temperature *Science Advances* **4**, eaau6386-1-eaau6386-11 (2018)

Shi K., Sun Y., Colin C.V., Wang L., Yan J., Deng S., Lu H., Zhao W., Kazunari Y., Bordet P., Wang C. Investigation of the spin-lattice coupling in  $\text{Mn}_3\text{Ga}_{1-x}\text{Sn}_x\text{N}$  antiperovskites *Physical Review B* **97**, 054110-1-054110-9 (2018)

Smylie M.P., Claus H., Kwok W.K., Loudon E.R., Eskildsen M.R., Sefat A.S., Zhong R. D., Schneeloch J., Gu G.D., Bokari E., Niraula P.M., Kayani A., Dewhurst C.D., Snezhko A., Welp U. Superconductivity, pairing symmetry, and disorder in the doped topological insulator  $\text{Sn}_{1-x}\text{In}_x\text{Te}$  for  $x \geq 0.10$  *Physical Review B* **97**, 024511-1-024511-6 (2018)

Solana-Madruga E., Arévalo-López A.M., Dos Santos-García A.J., Ritter C., Cascales C., Saéz-Puche R., Attfield J.P. Anisotropic magnetic structures of the  $\text{MnRMnSbO}_6$  high-pressure doubly ordered perovskites (R = La, Pr, and Nd) *Physical Review B* **97**, 134408-1-134408-6 (2018)

Sukhanov A.S., Singh S., Caron L., Hansen T., Hoser A., Kumar V., Borrmann H., Fitch A., Devi P., Manna K., Felser C., Inosov D.S. Gradual pressure-induced change in the magnetic structure of the noncollinear antiferromagnet  $\text{Mn}_3\text{Ge}$  *Physical Review B* **97**, 214402-1-214402-7 (2018)

## PUBLICATIONS

FIND US ON:   

16-17

Suturin S.M., Korovin A.M., Bursian V.E., Lutsev L.V., Bourobina V., Yakovlev N.L., Montecchi M., Pasquali L., Ukleev V., Vorobiev A., Devishvili A., Sokolov N.S. Role of gallium diffusion in the formation of a magnetically dead layer at the  $\text{Y}_3\text{Fe}_5\text{O}_{12}/\text{Gd}_3\text{Ga}_5\text{O}_{12}$  epitaxial interface  
Physical Review Materials **2**, 104404-1-104404-9 (2018)

Takagi R., White J.S., Hayami S., Arita R., Honecker D., Rønnow H.M., Tokura Y., Seki S. Multiple-q noncollinear magnetism in an itinerant hexagonal magnet  
Science Advances **4**, eaau3402-1-eaau3402-6 (2018)

Tang Y., Mangin-Thro L., Wildes A., Chan M.K., Dorow C.J., Jeong J., Sidis Y., Greven M., Bourges P. Orientation of the intra-unit-cell magnetic moment in the high- $T_c$  superconductor  $\text{HgBa}_2\text{CuO}_{4+\delta}$   
Physical Review B **98**, 214418-1-214418-8 (2018)

Terada N., Qureshi N., Chapon L.C., Osakabe T. Spherical neutron polarimetry under high pressure for a multiferroic delafossite ferrite  
Nature Communications **9**, 4368-1-4368-9 (2018)

Troyanchuk I., Bushinsky M., Tereshko N., Ritter C., Sikolenko V., Silibin M. Spin state of cobalt ions and the magnetic properties of heavily Ba-substituted cobaltites with perovskite structure  
Physica Status Solidi (b), 1800315-1-1800315-6 (2018)

Troyanchuk I.O., Bushinskii M.V., Tereshko N.V., Sikolenko V., Ritter C., Schorr S. Magnetic phase diagrams of  $\text{R}_{1-x}\text{Sr}_x(\text{Mn}_{1-x/2}\text{Sb}_{x/2})\text{O}_3$  (R = La, Pr, Nd, Sm, Eu) with trivalent manganese ions  
Physics of the Solid State **60**, 1762-1767 (2018)

Troyanchuk I.O., Bushinsky M.V., Lanovsky R.A., Sikolenko V.V., Ritter C. Magnetic properties of a layered cobaltite  $\text{Sr}_{1-x}\text{Y}_x\text{CoO}_{3-\delta}$  (x = 0.1)  
Physics of the Solid State **60**, 1999-2005 (2018)

Troyanchuk I.O., Bushinsky M.V., Tereshko N.V., Sirenko V.A., Sikolenko V., Schorr S., Ritter C., Franz A. Ferromagnetic ordering, magnetic and magnetotransport properties of  $\text{R}_{1-x}\text{Sr}_x(\text{Mn}_{1-x/2}\text{Sb}_{x/2})\text{O}_3$  (R = La, Pr, Nd, Sm, Eu) manganites  
Materials Research Express **5**, 066101-1-066101-10 (2018)

Tustain K., Nilsen G.J., Ritter C., da Silva I., Clark I. Nuclear and magnetic structures of the frustrated quantum antiferromagnet barlowite,  $\text{Cu}_4(\text{OH})_6\text{FBr}$   
Physical Review Materials **2**, 111405-1-111405-6 (2018)

Ukleev V., Suturin S., Nakajima T., Arima T.H., Saerbeck T., Hanashima T., Sitnikova A., Kirilenko D., Yakovlev N., Sokolov N. Unveiling structural, chemical and magnetic interfacial peculiarities in  $\epsilon\text{-Fe}_2\text{O}_3/\text{GaN}$  (0001) epitaxial films  
Scientific Reports **8**, 8741-1-8741-8 (2018)

Unzueta I., López-García J., Sánchez-Alarcos V., Recarte V., Pérez-Landazábal J.I., Rodríguez-Velamazán J.A., Garitaonandia J.S., García J.A., Plazaola F.  $^{119}\text{Sn}$  Mössbauer spectroscopy in the study of metamagnetic shape memory alloys  
Hyperfine Interactions **239**, 34-1-34-15 (2018)

Urcelay-Olabarria I., Ressouche E., Ivanov V.Y., Skumryev V., Wang Z., Skourski Y., Balbashov A.M., Popov Y.F., Vorob'ev G.P., Qureshi N., García-Muñoz J.L., Mukhin A.A. Influence of the magnetic field on the stability of the multiferroic conical spin arrangement of  $\text{Mn}_{0.80}\text{Co}_{0.20}\text{WVO}_4$   
Physical Review B **98**, 134430-1-134430-10 (2018)

Vališka M., Klicpera M., Doležal P., Fabelo O., Stunault A., Divis M., Sechovský V. Effect of lattice distortion on uranium magnetic moments in  $\text{U}_4\text{Ru}_7\text{Ge}_8$  studied by polarized neutron diffraction  
Physical Review B **97**, 125128-1-125128-9 (2018)

White J.S., Butykai Á., Cubitt R., Honecker D., Dewhurst C.D., Kiss L.F., Tsurkan V., Bordács S. Direct evidence for cycloidal modulations in the thermal-fluctuation-stabilized spin spiral and skyrmion states of  $\text{GaV}_4\text{S}_8$   
Physical Review B **97**, 020401-1-020401-5 (2018)

Yano S.I., Lançon D., Rønnow H.M., Hansen T.C., Ressouche E., Qureshi N., Ouladdiaf B., Gardner J.S. Suppression of magnetic order before the superconducting dome in MnP  
Journal of the Physical Society of Japan **87**, 023703-1-023703-4 (2018)

Zákutná D., Vlček J., Fitl P., Nemkovski K., Honecker D., Nižňanský D., Disch S. Noncollinear magnetism in nanosized cobalt chromite  
Physical Review B **98**, 064407-1-064407-7 (2018)

Blasco J., Subías G., García J., Stankiewicz J., Rodríguez-Velamazán J.A., Ritter C., García-Muñoz J.L. Origin of the multiferroic-like properties of  $\text{Er}_2\text{CoMnO}_6$   
Solid State Phenomena **257**, 95-98 (2017)

Cai Y.Q., Jiao Y.Y., Cui Q., Cai J.W., Li Y., Wang B.S., Fernández-Díaz M.T., McGuire M.A., Yan J.Q., Alonso J.A., Cheng J.G. Giant reversible magnetocaloric effect in the pyrochlore  $\text{Er}_2\text{Mn}_2\text{O}_7$  due to a cooperative two-sublattice ferromagnetic order  
Physical Review Materials **1**, 064408-1-064408-8 (2017)

Chattopadhyay S., Petit S., Ressouche E., Raymond S., Balédent V., Yahia G., Peng W., Robert J., Lepetit M.B., Greenblatt M., Foury-Leylekian P.  $3d-4f$  coupling and multiferroicity in frustrated Cairo pentagonal oxide  $\text{DyMn}_2\text{O}_5$   
Scientific Reports **7**, 14506-1-14506-10 (2017)

Chubova N.M., Moskvina E.V., Dyad'kin V.A., Dewhurst C., Maleev S.V., Grigor'ev S.V. Role of critical fluctuations in the formation of a skyrmion lattice in MnSi  
Journal of Experimental and Theoretical Physics **125**, 789-797 (2017)

Eichenberger L., Malterre D., Malaman B., Mazet T. Yb magnetic instability in  $\text{YbMn}_6\text{Ge}_6\text{Sn}_x$   
Physical Review B **96**, 155129-1-155129-5 (2017)

Frandsen B.A., Ross K.A., Krizan J.W., Nilsen G.J., Wildes A.R., Cava R.J., Birgeneau R.J., Billinge S.J.L. Real-space investigation of short-range magnetic correlations in fluoride pyrochlores  $\text{NaCaCo}_2\text{F}_7$  and  $\text{NaSrCo}_2\text{F}_7$  with magnetic pair distribution function analysis  
Physical Review Materials **1**, 074412-1-074412-9 (2017)

García-Muñoz J.L., Romaguera A., Fauth F., Nogués J., Gich M. Unveiling a new high-temperature ordered magnetic phase in  $\epsilon\text{-Fe}_2\text{O}_3$   
Chemistry of Materials **29**, 9705-9713 (2017)

Gilbert D.A., Ramirez J.G., Saerbeck T., Trastoy J., Schuller I.K., Liu K., de la Venta J. Growth-induced in-plane uniaxial anisotropy in  $\text{V}_2\text{O}_3/\text{Ni}$  films  
Scientific Reports **7**, 13471-1-13471-9 (2017)

Jang D., Portnichenko P.Y., Cameron A.S., Friemel G., Dukhnenko A.V., Shitsevalova N.Y., Filipov V.B., Schneidewind A., Ivanov A., Inosov D.S., Brando M. Large positive correlation between the effective electron mass and the multipolar fluctuation in the heavy-fermion metal  $\text{Ce}_{1-x}\text{La}_x\text{B}_6$   
npj Quantum Materials **2**, 62-1-62-8 (2017)

Kanazawa N., White J.S., Rønnow H.M., Dewhurst C.D., Morikawa D., Shibata K., Arima T., Kagawa F., Tsukazaki A., Kozuka Y., Ichikawa M., Kawasaki M., Tokura Y. Topological spin-hedgehog crystals of a chiral magnet as engineered with magnetic anisotropy  
Physical Review B **96**, 220414-1-220414-6 (2017)

Kriegner D., Reichlova H., Grenzer J., Schmidt W., Ressouche E., Godinho J., Wagner T., Martin S.Y., Shick A.B., Volobuev V.V., Springholz G., Holý V., Wunderlich J., Jungwirth T., Výborný K. Magnetic anisotropy in antiferromagnetic hexagonal MnTe  
Physical Review B **96**, 214418-1-214418-8 (2017)

Kunkemoller S., Bruning D., Stunault A., Nugroho A.A., Lorenz T., Braden M. Magnetic shape-memory effect in  $\text{SrRuO}_3$   
Physical Review B **96**, 220406-1-220406-5 (2017)

Martin N., Bonville P., Lhotel E., Guitteny S., Wildes A., Decorse C., Ciomaga Hatnean M., Balakrishnan G., Mirebeau I., Petit S. Disorder and quantum spin ice  
Physical Review X **7**, 041028-1-041028-10 (2017)

Pyatkov Y.V., Kamanin D.V., Alexandrov A.A., Alexandrova I.A., Goryainova Z.I., Malaza V., Mkaza N., Kuznetsova E.A., Strekalovsky A.O., Strekalovsky O.V., Zhuchko V.E. Examination of evidence for collinear cluster tri-partition  
Physical Review C **96**, 064606-1-064606-16 (2017)

Saha R., Dhanya R., Bellin C., Béneut K., Bhattacharyya A., Shukla A., Narayana C., Suard E., Rodríguez-Carvajal J., Sundaresan A. Magnetostructural coupling and magnetodielectric effects in the A-site cation-ordered spinel  $\text{LiFeCr}_4\text{O}_8$   
Physical Review B **96**, 214439-1-214439-9 (2017)

Wildes A.R., Simonet V., Ressouche E., Ballou R., McIntyre G.J. The magnetic properties and structure of the quasi-two-dimensional antiferromagnet  $\text{CoPS}_3$   
Journal of Physics: Condensed Matter **29**, 455801-1-455801-9 (2017)

## Materials Science and Engineering

Ahn J., He E., Chen L., Pirling T., Dear J.P., Davies C.M. Determination of residual stresses in fibre laser welded AA2024-T3 T-joints by numerical simulation and neutron diffraction  
Materials Science and Engineering A **712**, 685-703 (2018)

Balakrishnan J., Vasileiou A.N., Francis J.A., Smith M.C., Roy M.J., Callaghan M.D., Irvine N.M. Residual stress distributions in arc, laser and electron-beam welds in 30 mm thick SA508 steel: A cross-process comparison  
International Journal of Pressure Vessels and Piping **162**, 59-70 (2018)

Bourgès C., Bouyrie Y., Supka A.R., Al Orabi R.A.R., Lemoine P., Lebedev O.I., Ohta M., Suekuni K., Nassif V., Hardy V., Daou R., Miyazaki Y., Fornari M., Guilmeau E. High-performance thermoelectric bulk colusite by process controlled structural disordering  
Journal of the American Chemical Society **140**, 2186-2195 (2018)

Cappelletti R.L., Udovic T.J., Li H., Paul R.L. Glassy carbon, NIST Standard Reference Material (SRM 3600): Hydrogen content, neutron vibrational density of states and heat capacity  
Journal of Applied Crystallography **51**, 1-6 (2018)

Chubova N.M., Dyadkin V.A., Grigoriev S.V. Estimating the enantiomeric excess in polycrystalline metal samples with a B20-type structure  
Journal of Surface Investigation **12**, 933-938 (2018)

Coules H.E., Horne G.C.M., Abburi Venkata K., Pirling T. The effects of residual stress on elastic-plastic fracture propagation and stability  
Materials & Design **143**, 131-140 (2018)

Dahlborg U., Calvo-Dahlborg M., Eskin D.G., Popel P.S. Thermal melt processing of metallic alloys  
Springer Series in Materials Science **273**, 277-315 (2018)

## PUBLICATIONS

FIND US ON:   

18-19

Dauti D., Tengattini A., Dal Pont S., Toropovs N., Briffaut M., Weber B. Analysis of moisture migration in concrete at high temperature through *in-situ* neutron tomography  
Cement and Concrete Research **111**, 41-55 (2018)

Desgranges L., Ma Y., García P., Baldinozzi G., Siméone D., Fischer H.E. Understanding local structure versus long-range structure: The case of  $\text{UO}_2$   
Chemistry – A European Journal **24**, 2085-2088 (2018)

Dhiman I., Kimber S.A.J., Mehta A., Chatterji T. A neutron tomography study: Probing the spontaneous crystallization of randomly packed granular assemblies  
Scientific Reports **8**, 17637-1-17637-11 (2018)

Doubell P., Newby M., Hattingh D., Steuwer A., James M.N. Neutron diffraction investigation of residual stresses in nickel based austenitic weldments on creep resistant Cr-Mo-V material  
Materials Research Proceedings **4**, 103-108 (2018)

Fernández R., Cabeza S., Mishurova T., Fernández-Castrillo P., González-Doncel G., Bruno G. Residual stress and yield strength evolution with annealing treatments in an age-hardenable aluminum alloy matrix composite  
Materials Science and Engineering A **731**, 344-350 (2018)

Ferrage E., Hubert F., Baronnet A., Grauby O., Tertre E., Delville A., Bihannic I., Prêt D., Michot L.J., Levitz P. Influence of crystal structure defects on the small-angle neutron scattering/diffraction patterns of clay-rich porous media  
Journal of Applied Crystallography **51**, 1311-1322 (2018)

Freire M., Diaz-Lopez M., Bordet P., Colin C.V., Lebedev O.I., Kosova N.V., Jordy C., Chateigner D., Chuvilin A.L., Maignan A., Pralong V. Investigation of the exceptional charge performance of the  $^{0.93}\text{Li}_{4-x}\text{Mn}_2\text{O}_5\text{-}^{0.07}\text{Li}_2\text{O}$  composite cathode for Li-ion batteries  
Journal of Materials Chemistry A **6**, 5156-5165 (2018)

Garcés G., Cabeza S., Barea R., Pérez P., Adeva P. Maintaining high strength in Mg-LPSO alloys with low yttrium content using severe plastic deformation  
Materials **11**, 733-1-733-10 (2018)

Hai X., Porcher F., Mayer C., Miraglia S. Structural effects in the interstitial solid solution system  $(\text{La,Ce})[\text{Fe,Si}]_3\text{C}_x\text{-H}$ : Correlation with hydrogenation kinetics  
Journal of Applied Physics **123**, 085115-1-085115-7 (2018)

Hyde J.M., Boothby R.M., Swan H., Riddle N., Wilford K., Burke M.G., Efsing P. A sensitivity study using maximum entropy to interpret SANS data from the Ringhals Unit 3 NPP  
Journal of Nuclear Materials **509**, 417-424 (2018)

Jacquet Q., Rouse G., Iadecola A., Saubanère M., Doublet M.L., Tarascon J.M. Electrostatic interactions versus second order Jahn-Teller distortion as the source of structural diversity in  $\text{Li}_3\text{MO}_4$  compounds (M = Ru, Nb, Sb and Ta)  
Chemistry of Materials **30**, 392-402 (2018)

Karlsson D., Ek G., Cedervall J., Zlotea C., Møller K.T., Hansen T.C., Bednarčík J., Paskevicius M., Sørby M.H., Jensen T.R., Jansson U., Sahlberg M. Structure and hydrogenation properties of a HfNbTiVZr high-entropy alloy  
Inorganic Chemistry **57**, 2103-2110 (2018)

López-García J., Unzueta I., Sánchez-Alarcos V., Recarte V., Pérez-Landazábal J.I., Rodríguez-Velamazán J.A., García J.A., Plazaola F. Correlation between defects and magneto-structural properties in Ni-Mn-Sn metamagnetic shape memory alloys  
Intermetallics **94**, 133-137 (2018)

Lu Y., López C.A., Wang J., Alonso J.A., Sun C. Insight into the structure and functional application of Mg-doped  $\text{Na}_{0.5}\text{Bi}_{0.5}\text{TiO}_3$  electrolyte for solid oxide fuel cells  
Journal of Alloys and Compounds **752**, 213-219 (2018)

Ma Y., García P., Léchelle J., Miard A., Desgranges L., Baldinozzi G., Simeone D., Fischer H.E. Characterization of oxygen defect clusters in  $\text{UO}_{2+x}$  using neutron scattering and PDF analysis  
Inorganic Chemistry **57**, 7064-7076 (2018)

Martinez N., Morin A., Berrod Q., Frick B., Ollivier J., Porcar L., Gebel G., Lyonnard S. Multiscale water dynamics in a fuel cell by operando quasi elastic neutron scattering  
Journal of Physical Chemistry C **122**, 1103-1108 (2018)

Mishurova T., Cabeza S., Thiede T., Nadammal N., Kromm A., Klaus M., Genzel C., Haberland C., Bruno G. The influence of the support structure on residual stress and distortion in SLM inconel 718 parts  
Metallurgical and Materials Transactions A **49**, 3038-3046 (2018)

Nguyen H.D., Kim G.T., Shi J., Paillard E., Judeinstein P., Lyonnard S., Bresser D., Iojoiu C. Nanostructured multi-block copolymer single-ion conductors for safer high-performance lithium batteries  
Energy & Environmental Science **11**, 3298-3309 (2018)

Pilkington G.A., Harris K., Bergendal E., Reddy A.B., Pálsson G.K., Vorobiev A., Antzutkin O.N., Glavatskih S., Rutland M.W. Electro-responsivity of ionic liquid boundary layers in a polar solvent revealed by neutron reflectance  
Journal of Chemical Physics **148**, 193806-1-193806-9 (2018)

Pulvermacher S., Gibmeier J., Saroun J., Kornmeier J.R., Vollert F., Pirling T. Neutron strain scanning of duplex steel subjected to 4-point-bending with particular regard to the strain free lattice parameter  $D_0$   
Materials Research Proceedings **6**, 15-20 (2018)

Schlipf J., Bießmann L., Oesinghaus L., Berger E., Metwalli E., Lercher J.A., Porcar L., Müller-Buschbaum P. *In situ* monitoring the uptake of moisture into hybrid perovskite thin films  
Journal of Physical Chemistry Letters **9**, 2015-2021 (2018)

Schönhals A., Frick B., Zorn R. The scaling of the molecular dynamics of liquid crystals as revealed by broadband dielectric, specific heat, and neutron spectroscopy  
In «The Scaling of Relaxation Processes» Kremer F., Loidl A. Eds. (2018, Springer) pp. 279-306

Serga V., Maiorov M., Cvetkovs A., Krumina A., Popov A.I. Fabrication and characterization of magnetic FePt nanoparticles prepared by extraction-pyrolysis method  
Chemija **29**, 107-111 (2018)

Seydel T., Edkins R.M., Jones C.D., Foster J.A., Bewley R., Aguilar J.A., Edkins K. Increased rate of solvent diffusion in a prototypical supramolecular gel measured on the picosecond timescale  
Chemical Communications **54**, 6340-6343 (2018)

Singh B., Gupta M.K., Mittal R., Zbiri M., Hodgson Sarah A., Goodwin A.L., Schober H., Chaplot S.L. Anomalous lattice dynamics in  $\text{AgC}_4\text{N}_{m144}$ : Insights from inelastic neutron scattering and density functional calculations  
Frontiers in Chemistry **6**, 544-1-544-9 (2018)

Stamati O., Roubin E., Andò E., Malecot Y. Phase segmentation of concrete X-ray tomographic images at meso-scale: Validation with neutron tomography  
Cement and Concrete Composites **88**, 8-16 (2018)

Stavropoulou E., Andò E., Tengattini A., Briffaut M., Dufour F., Atkins D., Armand G. Liquid water uptake in unconfined Callovo Oxfordian clay-rock studied with neutron and X-ray imaging  
Acta Geotechnica **14**, 19-33 (2018)

Thiede T., Cabeza S., Mishurova T., Nadammal N., Kromm A., Bode J., Haberland C., Bruno G. Residual stress in selective laser melted Inconel 718: Influence of the removal from base plate and deposition hatch length  
Materials Performance and Characterization **7**, 20170119-1-20170119-19 (2018)

Toft-Petersen R., Abrahamsen A.B., Balog S., Porcar L., Laver M. Decomposing the Bragg glass and the peak effect in a Type-II superconductor  
Nature Communications **9**, 901-1-901-12 (2018)

Troyanchuk I.O., Bushinsky M.V., Karpinsky D.V., Sikolenko V.V., Gavrilov S.A., Silibin M.V., Franz A., Ritter C. Magnetic and magnetotransport properties of  $\text{La}_{1-x}\text{Sr}_x\text{Mn}_{0.5}\text{Co}_{0.5}\text{O}_3$  perovskites  
Ceramics International **44**, 1432-1437 (2018)

Venkata K.A., Truman C.E., Wimpory R.C., Pirling T. Numerical simulation of a three-pass TIG welding using finite element method with validation from measurements  
International Journal of Pressure Vessels and Piping **164**, 68-79 (2018)

Vollert F., Gibmeier J., Rebelo-Kornmeier J., Dixneit J., Pirling T. Two-dimensional residual stress mapping of multilayer LTT weld joints using the contour method  
Materials Performance and Characterization **7**, 545-558 (2018)

Willis T.J., Porter D.G., Voneshen D.J., Uthayakumar S., Demmel F., Gutmann M.J., Roger M., Refson K., Goff J.P. Diffusion mechanism in the sodium-ion battery material sodium cobaltate  
Scientific Reports **8**, 3210-1-3210-10 (2018)

Xu P., Harjo S., Ojima M., Suzuki H., Ito T., Gong W., Vogel S.C., Inoue J., Tomota Y., Aizawa K., Akita K. High stereographic resolution texture and residual stress evaluation using time-of-flight neutron diffraction  
Journal of Applied Crystallography **51**, 746-760 (2018)

Yehya M., Andò E., Dufour F., Tengattini A. Fluid-flow measurements in low permeability media with high pressure gradients using neutron imaging: Application to concrete  
Nuclear Instruments and Methods in Physics Research A **890**, 35-42 (2018)

Dawson H. Friction stir welding of ODS steels for future generation nuclear reactors  
PhD Thesis: School of Materials (2017)

Fabbri E., Nachtegaal M., Binnering T., Cheng X., Kim B.J., Durst J., Bozza F., Graule T., Schäublin R., Wiles L., Pertoso M., Danilovic N., Ayers K.E., Schmidt T.J. Dynamic surface self-reconstruction is the key of highly active perovskite nano-electrocatalysts for water splitting  
Nature Materials **16**, 925-931 (2017)

James M.N., Hattingh D.G., Asquith D., Newby M., Doubell P. Residual stresses in condition monitoring and repair of thermal power generation components  
Theoretical and Applied Fracture Mechanics **92**, 289-297 (2017)

Kuhn S.J., Morgenlander W., Loudon E.R., Rastovski C., Gannon W.J., Takatsu H., Peets D.C., Maeno Y., Dewhurst C.D., Gavilano J., Eskildsen M.R. Anisotropy and multiband superconductivity in  $\text{Sr}_2\text{RuO}_4$  determined by small-angle neutron scattering studies of the vortex lattice  
Physical Review B **96**, 174507-1-174507-13 (2017)

Mathew J., Moat R.J., Paddea S., Fitzpatrick M.E., Bouchard P.J. Prediction of residual stresses in girth welded pipes using an artificial neural network approach  
International Journal of Pressure Vessels and Piping **150**, 89-95 (2017)

## Nuclear and Particle Physics

Mathew J., Moat R.J., Paddea S., Francis J.A., Fitzpatrick M.E., Bouchard P.J. Through-thickness residual stress profiles in austenitic stainless steel welds: A combined experimental and prediction study *Metallurgical and Materials Transactions A* **48**, 6178-6191 (2017)

Taglieri G., Daniele V., Mondelli C. MgO nanoparticles synthesized starting from an innovative one-step process *Journal of the American Ceramic Society* **101**, 1780-1789 (2017)

Wagner J.A., Patil S.P., Greving I., Lämmel M., Gkagkas K., Seydel T., Müller M., Markert B., Gräter F. Stress-induced long-range ordering in spider silk *Scientific Reports* **7**, 15273-1-15273-6 (2017)

## Medicine

Arroyo-Crespo J.J., Deladriere C., Nebot V.J., Charbonnier D., Masiá E., Paul A., James C., Armiñán A., Vicent M.J. Anticancer activity driven by drug linker modification in a polyglutamic acid-based combination-drug conjugate *Advanced Functional Materials* **28**, 1800931-1-1800931-13 (2018)

Berg M.C., Benetti A.R., Telling M.T.F., Seydel T., Yu D., Daemen L.L., Bordallo H.N. Nanoscale mobility of aqueous polyacrylic acid in dental restorative cements *ACS Applied Materials & Interfaces* **10**, 9904-9915 (2018)

de la Fuente A., Radchenko V., Tsotakos T., Tsoukalas C., Paravatou-Petsotas M., Harris A.L., Köster U., Rösch F., Bouziotis P. Conjugation, labelling and *in vitro/in vivo* assessment of an anti-VEGF monoclonal antibody labelled with niobium isotopes *Journal of Radioanalytical and Nuclear Chemistry* **318**, 1991-1997 (2018)

Fragneto G. I neutroni al servizio della medicina *Sapere* **4**, 24-28 (2018)

Alexa P., Ramdhane M., Thiamova G., Simpson G.S., Faust H.R., Genevey J., Köster U., Materna T., Orlandi R., Pinston J.A., Scherillo A., Hons Z. Quasiparticle phonon model description of low-energy states in <sup>152</sup>Pr *Physical Review C* **97**, 034327-1-034327-6 (2018)

Almazán H., Sanchez P.D.A., Bernard L., Blanchet A., Bonhomme A., Buck C., Favier J., Haser J., Hélaine V., Kandzia F., Kox S., Lamblin J., Letourneau A., Lhuillier D., Lindner M., Manzanillas L., Materna T., Minotti A., Montanet F., Pessard H., Real J.S., Roca C., Salagnac T., Schoppmann S., Sergeyeva V., Soldner T., Stutz A., Zsoldos S. Sterile neutrino constraints from the STEREO experiment with 66 days of reactor-on data *Physical Review Letters* **121**, 161801-1-161801-5 (2018)

Ansari S., Régis J.M., Jolie J., Saed-Samii N., Warr N., Korten W., Zielińska M., Salsac M.D., Blanc A., Jentschel M., Köster U., Mutti P., Soldner T., Simpson G.S., Drouet F., Vancraeynest A., de France G., Clément E., Stezowski O., Ur C.A., Urban W., Regan P.H., Podolyák Z., Larijani C., Townsley C., Carroll R., Wilson E., Mach H., Fraile L.M., Pazyi V., Olaizola B., Vedia V., Bruce A.M., Roberts O.J., Smith J.F., Scheck M., Kröll T., Hartig A.L., Ignatov A., Ilieva S., Lalkovski S., Märginean N., Otsuka T., Shimizu N., Togashi T., Tsunoda Y. Lifetime measurement in neutron-rich A~100 nuclei *EPJ Web of Conferences* **193**, 05003-1-05003-9 (2018)

Aprahamian A., De Haan R.C., Lesher S.R., Casarella C., Stratman A., Börner H.G., Lehmann H., Jentschel M., Bruce A.M. Lifetime measurements in <sup>156</sup>Gd *Physical Review C* **98**, 034303-1-034303-11 (2018)

Aprahamian A., Lesher S.R. Low lying oscillations of deformed nuclei *EPJ Web of Conferences* **178**, 02009-1-02009-5 (2018)

Baym G., Beck D.H., Geltenbort P., Shelton J. Testing dark decays of baryons in neutron stars *Physical Review Letters* **121**, 061801-1-061801-5 (2018)

Berezhiani Z., Biondi R., Geltenbort P., Krasnoshchekova I.A., Varlamov V.E., Vassiljev A.V., Zherebtsov O.M. New experimental limits on neutron – Mirror neutron oscillations in the presence of mirror magnetic field *European Physical Journal C* **78**, 717-1-717-12 (2018)

Bonhomme A. Anomalie des antineutrinos de réacteurs : recherche d'un état stérile avec l'expérience STEREO *PhD Thesis: Université Paris-Saclay, France* (2018)

Bottoni S., Cieplicka-Orynczak N., Bocchi G., Leoni S., Fornal B., Colò G., Bortignon P.F., Benzoni G., Blanc A., Bracco A., Crespi F.C.L., Jentschel M., Köster U., Michelagnoli C., Million B., Mutti P., Soldner T., Türler A., Ur C.A., Urban W. (*n,γ*) reactions on rare Ca isotopes: Valence-hole - core-excitation couplings in <sup>47</sup>Ca *EPJ Web of Conferences* **193**, 05001-1-05001-6 (2018)

Brax P., Pitschmann M. Exact solutions to nonlinear symmetron theory: One- and two-mirror systems *Physical Review D* **97**, 064015-1-064015-14 (2018)

Brown M.A.P., Dees E.B., Adamek E., Allgeier B., Blatnik M., Bowles T.J., Broussard L.J., Carr R., Clayton S., Cude-Woods C., Currie S., Ding X., Filippone B.W., García A., Geltenbort P., Hasan S., Hickerson K.P., Hoagland J., Hong R., Hogan G.E., Holley A.T., Ito T.M., Knecht A., Liu C.Y., Liu J., Makela M., Martin J.W., Melconian D., Mendenhall M.P., Moore S.D., Morris C.L., Nepal S., Nouri N., Pattie R.W., Pérez Galván A., Phillips D.G., Picker R., Pitt M.L., Plaster B., Ramsey J.C., Rios R., Salvat D.J., Saunders A., Sondheim W., Seestrom S.J., Sjøe S., Slutsky S., Sun X., Swank C., Swift G., Tatar E., Vogelaar R.B., VornDick B., Wang Z., Wexler J., Womack T., Wrede C., Young A.R., Zeck B.A. New result for the neutron β-asymmetry parameter *A*<sub>0</sub> from UCNA *Physical Review C* **97**, 035505-1-035505-9 (2018)

Casanovas A., Domingo-Pardo C., Guerrero C., Leredegui-Marco J., Calviño F., Tarifeño-Saldivia A., Dressler R., Heinitz S., Kivel N., Quesada J. M., Schumann D., Aberle O., Alcayne V., Andrzejewski J., Audouin L., Bécarea V., Bacak M., Barbagallo M., Bečvář F., Bellia G., Berthoumieux E., Billowes J., Bosnar D., Brown A., Busso M., Caamaño M., Caballero-Ontanaya L., Calviani M., Cano-Ott D., Cerutti F., Chen Y.H., Chiaveri E., Colonna N., Cortés G., Cortés-Giraldo M.A., Cosentino L., Cristallo S., Damone L.A., Diakaki M., Dietz M., Dupont E., Durán I., Eleme Z., Fernández-Domínguez B., Ferrari A., Ferreira P., Finocchiaro P., Furman V., Göbel K., Gawlik A., Gilardoni S., Glodariu T., Gonçalves I.F., González-Romero E., Gunsing F., Heys J., Jenkins D.G., Käppeler F., Kadi Y., Katabuchi T., Kimura A., Kokkoris M., Kopatch Y., Krička M., Kurtulgil D., Ladarescu I., Lederer-Woods C., Lo Meo S., Lonsdale S. J., Macina D., Martínez T., Masi A., Massimi C., Mastinu P., Mastromarco M., Matteucci F., Mauger E.A., Mazzone A., Mendoza E., Mengoni A., Michalopoulou V., Milazzo P.M., Mingrone F., Musumarra A., Negret A., Nolte R., Ogállar F., Oprea A., Patronis N., Pavlik A., Perkowski J., Persanti L., Porras I., Praena J., Radeck D., Ramos D., Rauscher T., Reifarth R., Rochman D., Sabaté-Gilarte M., Saxena A., Schillebeeckx P., Simone S., Smith A.G., Sosnin N.V., Stamatopoulos A., Tagliente G., Tain J.L., Talip T., Tassan-Got L., Tsinganis A., Ulrich J., Valenta S., Vannini G., Variale V., Vaz P., Ventura A., Vlachoudis V., Vlastou R., Wallner A., Woods P.J., Wright T., Žugec P., Köster U. Measurement of the radiative capture cross section of the *s*-process *branching points* <sup>204</sup>Tl and <sup>171</sup>Tm at the n\_TOF facility (CERN) *EPJ Web of Conferences* **178**, 03004-1-03004-5 (2018)

Cieplicka-Orynczak N., Leoni S., Fornal B., Bazzacco D., Blanc A., Benzoni G., Bottoni S., Bracco A., Crespi F.C.L., de France G., Iskra Ł.W., Jentschel M., Köster U., Michelagnoli C., Mutti P., Pietralla N., Simpson G., Soldner T., Ur C., Urban W., Werner V. The γ-ray spectroscopy studies of low-spin structures in <sup>210</sup>Bi and <sup>206</sup>Tl using cold neutron capture reactions *EPJ Web of Conferences* **193**, 05007-1-05007-7 (2018)

Cieplicka-Orynczak N., Michelagnoli C., Leoni S., Fornal B., Benzoni G., Blanc A., Bottoni S., Crespi F.C.L., Iskra Ł.W., Jentschel M., Köster U., Mutti P., Pietralla N., Ruiz-Martinez E., Werner V. The low-spin structure of <sup>206</sup>Tl Studied by γ-ray spectroscopy from thermal neutron capture reaction *Acta Physica Polonica B* **49**, 561-566 (2018)

Crespi F.C.L. Analysis of nuclear lifetimes using the gamma-ray induced doppler shift attenuation method *Journal of Physics: Conference Series* **1023**, 012005-1-012005-5 (2018)

Cronenberg G., Brax P., Filter H., Geltenbort P., Jenke T., Pignol G., Pitschmann M., Thalhammer M., Abele H. Acoustic Rabi oscillations between gravitational quantum states and impact on symmetron dark energy *Nature Physics* **14**, 1022-1026 (2018)

Cubiss J.G., Barzakh A.E., Andreyev A.N., Al Monthery M., Althubiti N., Andel B., Antalic S., Atanasov D., Blaum K., Cocolios T.E., Day Goodacre T., de Groot R.P., de Roubin A., Farooq-Smith G.J., Fedorov D.V., Fedosseev V.N., Ferrer R., Fink D.A., Gaffney L.P., Ghys L., Gredley A., Harding R.D., Herfurth F., Huysse M., Imai N., Joss D.T., Köster U., Kreim S., Liberati V., Lunney D., Lynch K.M., Manea V., Marsh B.A., Martinez Palenzuela Y., Molkanov P.L., Mosat P., Neidherr D., O'Neill G.G., Page R.D., Procter T.J., Rapisarda E., Rosenbusch M., Rothe S., Sandhu K., Schweikhard L., Seliverstov M.D., Sels S., Spagnoletti P., Truesdale V.L., Van Beveren C., Van Duppen P., Veinhard M., Venhart M., Veselský M., Wearing F., Welker A., Wienholtz F., Wolf R.N., Zemlyanov S.G., Zuber K. Change in structure between the *I* = 1/2 states in <sup>181</sup>Tl and <sup>177,179</sup>Au *Physics Letters B* **786**, 355-363 (2018)

Cubiss J.G., Barzakh A.E., Seliverstov M.D., Andreyev A.N., Andel B., Antalic S., Ascher P., Atanasov D., Beck D., Bierón J., Blaum K., Borgmann C., Breitenfeldt M., Capponi L., Cocolios T.E., Day Goodacre T., Derx X., De Witte H., Elseviers J., Fedorov D.V., Fedosseev V.N., Fritzsche S., Gaffney L.P., George S., Ghys L., Hessberger F.P., Huysse M., Imai N., Kalaninová Z., Kislner D., Köster U., Kowalska M., Kreim S., Lane J.F.W., Liberati V., Lunney D., Lynch K.M., Manea V., Marsh B.A., Mitsuoka S., Molkanov P.L., Nagame Y., Neidherr D., Nishio K., Ota S., Pauwels D., Popescu L., Radulov D., Rapisarda E., Revill J.P., Rosenbusch M., Rossel R.E., Rothe S., Sandhu K., Schweikhard L., Sels S., Truesdale V.L., Van Beveren C., Van den Bergh P., Wakabayashi Y., Van Duppen P., Wendt K.D.A., Wienholtz F., Whitmore B.W., Wilson G.L., Wolf R.N., Zuber K. Charge radii and electromagnetic moments of <sup>195,211</sup>At *Physical Review C* **97**, 054327-1-054327-19 (2018)

## PUBLICATIONS

FIND US ON:   

22-23

Dadisman J.R. Magnetic field design to reduce systematic effects in neutron electric dipole moment measurements  
PhD Thesis: University of Kentucky, USA (2018)

Damone L., Barbagallo M., Mastromarco M., Mengoni A., Cosentino L., Maugeri E., Heinitz S., Schumann D., Dressler R., Käppeler F., Colonna N., Finocchiaro P., Andrzejewski J., Perkowski J., Gawlik A., Aberle O., Altstadt S., Ayrano M., Audouin L., Bacak M., Balibrea-Correa J., Ballof J., Bécares V., Bečvář F., Beinrucker C., Bellia G., Bernardes A.P., Berthoumieux E., Billowes J., Borge M.J.G., Bosnar D., Brown A., Brügger M., Busso M., Caamaño M., Calviño F., Calviani M., Cano-Ott D., Cardella R., Casanovas A., Castelluccio D.M., Catherall R., Cerutti F., Chen Y. H., Chiaveri E., Correia J.G.M., Cortés G., Cortés-Giraldo M. A., Cristallo S., Diakaki M., Dietz M., Domingo-Pardo C., Dorsival A., Dupont E., Duran I., Fernandez-Dominguez B., Ferrari A., Ferreira P., Furman W., Ganesan S., García-Rios A., Gilardoni S., Glodariu T., Göbel K., Gonçalves I.F., Gonzalez-Romero E., Goodacre T.D., Griesmayer E., Guerrero C., Günsing F., Harada H., Heftrich T., Heyse J., Jenkins D.G., Jericha E., Johnston K., Kadi Y., Kalamara A., Katabuchi T., Kavragin P., Kimura A., Kivel N., Köster U., Kokkoris M., Krtička M., Kurtulgil D., Leal-Cidoncha E., Lederer-Woods C., Leeb H., Leredegui-Marco J., Lo Meo S., Lonsdale S. J., Losito R., Macina D., Marganiec J., Marsh B., Martínez T., Masi A., Massimi C., Mastinu P., Matteucci F., Mazzone A., Mendoza E., Milazzo P.M., Mingrone F., Mirea M., Musumarra A., Negret A., Nolte R., Oprea A., Patronis N., Pavlik A., Piersanti L., Piscopo M., Plompen A., Porras I., Praena J., Quesada J.M., Radeck D., Rajeev K., Rauscher T., Reifarth R., Riego-Perez A., Rothe S., Rout P., Rubbia C., Ryan J., Sabate-Gilarte M., Saxena A., Schell J., Schillebeeckx P., Schmidt S., Sedyshev P., Seiffert C., Smith A.G., Sosnin N.V., Stamatopoulos A., Stora T., Tagliente G., Tain J.L., Tarifeno-Saldivia A., Tassan-Got L., Tsinganis A., Valenta S., Vannini G., Variale V., Vaz P., Ventura A., Vlachoudis V., Vlastou R., Wallner A., Warren S., Weigand M., Weiss C., Wolf C., Woods P.J., Wright T., Zugec P.  ${}^7\text{Be}(n,p){}^7\text{Li}$  reaction and the cosmological lithium problem: Measurement of the cross section in a wide energy range at n\_TOF at CERN  
Physical Review Letters **121**, 042701-1-042701-7 (2018)

de France G., Blanc A., Drouet F., Jentschel M., Köster U., Mutti P., Régis J.M., Simpson G., Soldner T., Stezowski O., Ur C.A., Urban W., Vancraynest A. EXOGAM at the ILL: The EXILL campaign  
Journal of Physics: Conference Series **966**, 012012-1-012012-6 (2018)

Desgranges L., Esclaine J.M., Bienvenu P., Roure I., Gosset D., Boffy R., Köster U. A new methodology for studying neutron absorber materials: First results with boron carbide  
Nuclear Instruments and Methods in Physics Research B **432**, 42-47 (2018)

Döge S., Hingerl J. A hydrogen leak-tight, transparent cryogenic sample container for ultracold-neutron transmission measurements  
Review of Scientific Instruments **89**, 033903-1-033903-8 (2018)

Dorrer H., Chrysalidis K., Goodacre T.D., Düllmann C.E., Eberhardt K., Enss C., Gastaldo L., Haas R., Harding J., Hassel C., Johnston K., Kieck T., Köster U., Marsh B., Mokry C., Rothe S., Runke J., Schneider F., Stora T., Türler A., Wendt K. Production, isolation and characterization of radiochemically pure  ${}^{163}\text{Ho}$  samples for the ECHO-project  
Radiochimica Acta **106**, 535-547 (2018)

Dubey S., Echler A., Egelhof P., Grabitz P., Mutterer M., Lauterfeld W., Stolte S., Blanc A., Köster U., Kraft-Bermuth S., Scholz P., Bishop S., Gomez J., Gönnerwein F. Application of calorimetric low-temperature detectors for the investigation of Zyield distributions of fission fragments  
Journal of Low Temperature Physics **193**, 1257-1262 (2018)

Dubey S., Echler A., Egelhof P., Grabitz P., Mutterer M., Lauterfeld W., Stolte S., Blanc A., Köster U., Kraft-Bermuth S., Scholz P., Bishop S., Gomez J., Gönnerwein F. Application of calorimetric low-temperature detectors for the investigation of Zyield distributions of fission fragments  
EPJ Web of Conferences **193**, 04002-1-04002-9 (2018)

Ezhov V.F., Andreev A.Z., Ban G., Bazarov B.A., Geltenbort P., Glushkov A.G., Knyazkov V.A., Kovrizhnykh N.A., Krygin G.B., Naviliat-Cuncic O., Ryabov V.L. Measurement of the neutron lifetime with ultracold neutrons stored in a magneto-gravitational trap  
JETP Letters **107**, 671-675 (2018)

Fomin A.K., Serebrov A.P., Zhrebtsov O.M., Chaikovskii M.E., Murashkin A.N., Leonova E.N., Fedorova O.P., Ivochkin V.G., Lyamkin V.A., Prudnikov D.V., Chechkin A.V. Project of NNbar experiment at the WWRM reactor  
KnE Energy **3**, 109-114 (2018)

Geppert-Kleinrath H., Denkmayr T., Sponar S., Lemmel H., Jenke T., Hasegawa Y. Multifold paths of neutrons in the three-beam interferometer detected by a tiny energy kick  
Physical Review A **97**, 052111-1-052111-7 (2018)

Gratchev I.N., Thiamova G., Alexa P., Simpson G.S., Ramdhane M. Theoretical interpretation of the nuclear structure of  ${}^{88}\text{Se}$  within the ACM and the QPM models  
Journal of Physics: Conference Series **966**, 012034-1-012034-6 (2018)

Günther M.M., Volotka A.V., Jentschel M., Fritzsche S., Stöhlker T., Thirolf P.G., Zepf M. Dispersive refraction of different light to heavy materials at MeV  $\gamma$ -ray energies  
Physical Review A **97**, 063843-1-063843-8 (2018)

Heinitz S., Kivel N., Schumann D., Köster U., Balata M., Biasotti M., Ceriale V., De Gerone M., Faverzani M., Ferri E., Gallucci G., Gatti F., Giachero A., Nisi S., Nucciotti A., Orlando A., Pessina G., Puiu A., Ragazzi S. Production and separation of  ${}^{163}\text{Ho}$  for nuclear physics experiments  
PloS One **13**, e0200910-1-e0200910-12 (2018)

Imajo S., Iwashita Y., Mishima K., Kitaguchi M., Shimizu H.M., Ino T., Yamashita S., Hirota K., Goto F., Fuwa Y., Katayama R. Ultracold neutron time focusing experiment with an improved UCN rebuncher at J-PRAC/MLF  
JPS Conference Proceedings **22**, 011038-1-011038-8 (2018)

Ito T.M., Adamek E.R., Callahan N.B., Choi J.H., Clayton S.M., Cude-Woods C., Currie S., Ding X., Fellers D.E., Geltenbort P., Lamoreaux S.K., Liu C.Y., MacDonald S., Makela M., Morris C.L., Pattie R.W., Ramsey J.C., Salvat D.J., Saunders A., Sharapov E.I., Sjøe S., Sprow A.P., Tang Z., Weaver H.L., Wei W., Young A.R. Performance of the upgraded ultracold neutron source at Los Alamos National Laboratory and its implication for a possible neutron electric dipole moment experiment  
Physical Review C **97**, 012501-1-012501-6 (2018)

Jentschel M., Blaum K. Balancing energy and mass with neutrons  
Nature Physics **14**, 524 (2018)

Julien-Laferrrière S., Kessedjian G., Serot O., Chebboubi A., Bernard D., Blanc A., Köster U., Litaize O., Materna T., Méplan O., Rapala M., Sage C. Isotopic distribution and dependency to fission product kinetic energy for  ${}^{241}\text{Pu}$  thermal neutron-induced fission  
EPJ Web of Conferences **193**, 02002-1-02002-6 (2018)

Julien-Laferrrière S., Kessedjian G., Serot O., Chebboubi A., Bernard D., Blanc A., Köster U., Litaize O., Materna T., Méplan O., Rapala M., Sage C. New measurements on isobaric fission product yields and mean kinetic energy for  ${}^{241}\text{Pu}$  thermal neutron-induced fission  
EPJ Web of Conferences **169**, 00008-1-00008-8 (2018)

Kaya L., Vogt A., Reiter P., Müller-Gatermann C., Siciliano M., Coraggio L., Itaco N., Gargano A., Arnsward K., Bazzacco D., Birkenbach B., Blazhev A., Bracco A., Bruyneel B., Corradi L., Crespi F.C.L., de Angelis G., Droste M., Eberth J., Farnea E., Fioretto E., Fransen C., Gadea A., Giaz A., Görden A., Gottardo A., Hadyńska-Klek K., Hess H., Hetzenegger R., Hirsch R., John P.R., Jolie J., Jungclaus A., Korten W., Leoni S., Lewandowski L., Lunardi S., Menegazzo R., Mengoni D., Michelagnoli C., Mijatović T., Montagnoli G., Montanari D., Napoli D., Podolyák Z., Pollaro G., Recchia F., Rosiak D., Saed-Samii N., Sahin E., Scarlassara F., Seidlitz M., Söderström P.A., Stefanini A.M., Stezowski O., Szilner S., Szpak B., Ur C., Valiente-Dobón J.J., Weinert M., Wolf K., Zell K.O. Millisecond  $23/2^+$  isomers in the  $N = 79$  isotones  ${}^{133}\text{Xe}$  and  ${}^{135}\text{Ba}$   
Physical Review C **98**, 054312-1-054312-16 (2018)

Koseoglou P., Werner V., Pietralla N., Ilieva S., Thürauf M., Bernards C., Blanc A., Bruce A.M., Cakirli R.B., Cooper N., Fraile L.M., de France G., Jentschel M., Jolie J., Köster U., Korten W., Kröll T., Lalkovski S., Mach H., Märginean N., Mutti P., Patel Z., Paziy V., Podolyák Z., Regan P.H., Régis J.M., Roberts O.J., Saed-Samii N., Simpson G.S., Soldner T., Ur C.A., Urban W., Wilmsen D., Wilson E. The boundary of the  $N = 90$  shape phase transition:  ${}^{148}\text{Ce}$   
Journal of Physics: Conference Series **1023**, 012022-1-012022-7 (2018)

Leredegui-Marco J., Guerrero C., Domingo-Pardo C., Casanovas A., Dressler R., Halfon S., Heinitz S., Kivel N., Köster U., Paul M., Schumann D., Tessler M. Measuring neutron capture rates on ILL-produced unstable isotopes ( ${}^{147}\text{Pm}$ ,  ${}^{171}\text{Tm}$  and  ${}^{204}\text{Tl}$ ), and plans for  ${}^{79}\text{Se}$  and  ${}^{163}\text{Ho}$  for nucleosynthesis studies  
EPJ Web of Conferences **193**, 04007-1-04007-9 (2018)

Licá R., Benzoni G., Rodríguez T.R., Borge M.J.G., Fraile L.M., Mach H., Morales A.I., Madurga M., Sotty C.O., Vedia V., De Witte H., Benito J., Bernard R.N., Berry T., Bracco A., Camera F., Ceruti S., Charviakova V., Cieplicka-Oryńczak N., Costache C., Crespi F.C.L., Creswell J., Fernandez-Martínez G., Fynbo H., Greenless P.T., Homm I., Huysse M., Jolie J., Karayonchev V., Köster U., Konki J., Kröll T., Kurcewicz J., Kurtukian-Nieto T., Lazarus I., Lund M.V., Märginean N., Märginean R., Mihai C., Mihai R.E., Negret A., Orduz A., Patyk Z., Pascu S., Pucknell V., Rakhila P., Rapisarda E., Régis J.M., Robledo L.M., Rotaru F., Saed-Samii N., Sánchez-Tembleque V., Stanoiu M., Tengblad O., Thürauf M., Turturica A., Van Duppen P., Warr N. Evolution of deformation in neutron-rich Ba isotopes up to  $A = 150$   
Physical Review C **97**, 024305-1-024305-12 (2018)

Lozeva R., Li X., Blanc A., Daugas J.M., Didierjean F., Duchêne G., Köster U., Kurtukian-Nieto T., Le Blanc F., Mutti P., Ramdhane M., Soldner T., Urban W. New nuclear structure data after fission: The g.s. of  ${}^{136}\text{Sb}$   
EPJ Web of Conferences **193**, 05005-1-05005-6 (2018)

Lozeva R., Stefanova E.A., Naidja H., Nowacki F., Rząca-Urban T., Wisniewski J., Urban W., Ahmad I., Blanc A., de France G., Didierjean F., Duchêne G., Faust H., Greene J.P., Köster U., Mutti P., Simpson G., Smith A.G., Soldner T., Ur C.A. New yrast and non-yrast states in  ${}^{136}\text{I}$  and medium-spin structure of  ${}^{136}\text{I}$  and  ${}^{136}\text{Xe}$ : Roles of the proton  $d_{5/2}$  and the neutron  $h_{9/2}$  orbitals beyond  ${}^{132}\text{Sn}$   
Physical Review C **98**, 024323-1-024323-22 (2018)

Makii H., Nishio K., Hirose K., Orlandi R., Léguillon R., Ogawa T., Soldner T., Hamsch F.J., Aiche M., Astier A., Czajkowski S., Frost R., Guo S., Köster U., Mathieu L., Ohtsuki T., Petrache C.M., Pollitt A., Sekimoto S., Takamiya K., Tsekhanovich I. A new detector system for the measurement of high-energy prompt  $\gamma$ -rays for low-energy neutron induced fission  
Nuclear Instruments and Methods in Physics Research A **906**, 88-96 (2018)

Maugeri E.A., Heinitz S., Dressler R., Barbagallo M., Ulrich J., Schumann D., Colonna N., Köster U., Ayrano M., Vontobel P., Mastromarco M., Schell J., Martins Correia J., Stora T. Preparation and characterization of three  ${}^7\text{Be}$  targets for the measurement of the  ${}^7\text{Be}(n, p){}^7\text{Li}$  and  ${}^7\text{Be}(n, \alpha){}^7\text{Li}$  reaction cross sections  
Nuclear Instruments and Methods in Physics Research A **889**, 138-144 (2018)

## PUBLICATIONS

FIND US ON:   

24-25

Michelagnoli C., Blanc A., Ruiz-Martinez E., Chebboubi A., Faust H., Froidefond E., Kessedjian G., Jentschel M., Köster U., Mutti P., Simpson G. FIPPS (Fission Product Prompt  $\gamma$ -ray Spectrometer) and its first experimental campaign  
EPJ Web of Conferences **193**, 04009-1-04009-7 (2018)

Mosconi M., Ortega J., Abad E., Mutti P., Van Esch P., Ruiz-Martinez E. Optical observation of single neutron detection  
Journal of Physics: Conference Series **1021**, 012022-1-012022-4 (2018)

Mutti P., Blanc A., Jentschel M., Köster U., Michelagnoli C., Ruiz-Martinez E. FIPPS: Fission product prompt gamma-ray spectrometer, a new high efficiency HPGe array for nuclear spectroscopy  
EPJ Web of Conferences **170**, 01013-1-01013-2 (2018)

Nesvizhevsky V.V., Dubois M., Gutfreund P., Lychagin E.V., Nezvanov A.Y., Zhernenkov K.N. Effect of nanodiamond fluorination on the efficiency of quasispecular reflection of cold neutrons  
Physical Review A **97**, 023629-1-023629-8 (2018)

Nesvizhevsky V.V., Gudkov V., Protasov K.V., Snow W.M., Voronin A.Y. A new operating mode in experiments searching for free neutron-antineutron oscillations based on coherent neutron and antineutron mirror reflections  
EPJ Web of Conferences **191**, 01005-1-01005-14 (2018)

Nesvizhevsky V.V., Köster U., Dubois M., Batisse N., Frezet L., Bosak A., Gines L., Williams O. Fluorinated nanodiamonds as unique neutron reflector  
Carbon **130**, 799-805 (2018)

Nesvizhevsky V.V., Voronin A.Y., Lambrecht A., Reynaud S., Lychagin E.V., Muzychka A.Y., Nekhaev G.V., Strelkov A.V. The method of UCN "small heating" measurement in the big gravitational spectrometer (BGS) and studies of this effect on Fomblin oil YHVAC 18/8  
Review of Scientific Instruments **89**, 023501-1-023501-13 (2018)

Nucciotti A., Alpert B., Balata M., Becker D., Bennett D., Bevilacqua A., Biasotti M., Ceriale V., Ceruti G., Corsini D., De Gerone M., Dressler R., Faverzani M., Ferri E., Fowler J., Gallucci G., Gard J., Gatti F., Giachero A., Hays-Wehle J., Heinitz S., Hilton G., Köster U., Lusignoli M., Mates J., Nisi S., Orlando A., Parodi L., Pessina G., Puiu A., Ragazzi S., Reintsema C., Ribeiro-Gomez M., Schmidt D., Schuman D., Siccardi F., Swetz D., Ullom J., Vale L. Status of the HOLMES experiment to directly measure the neutrino mass  
Journal of Low Temperature Physics **193**, 1137-1145 (2018)

Nucciotti A., Alpert B., Balata M., Becker D., Bennett D., Bevilacqua A., Biasotti M., Ceriale V., Ceruti G., Corsini D., De Gerone M., Dressler R., Faverzani M., Ferri E., Fowler J., Gard J., Gatti F., Giachero A., Hays-Wehle J., Heinitz S., Hilton G., Köster U., Lusignoli M., Mates J., Nisi S., Orlando A., Parodi L., Pessina G., Puiu A., Ragazzi S., Reintsema C., Ribeiro-Gomez M., Schmidt D., Schuman D., Siccardi F., Swetz D., Ullom J., Vale L. Direct neutrino mass measurement by the HOLMES experiment  
Journal of Physics: Conference Series **1056**, 012039-1-012039-6 (2018)

Pattie R.W., Callahan N.B., Cude-Woods C., Adamek E.R., Broussard L.J., Clayton S.M., Currie S.A., Dees E.B., Ding X., Engel E.M., Fellers D.E., Fox W., Geltenbort P., Hickerson K.P., Hoffbauer M.A., Holley A.T., Komives A., Liu C.Y., MacDonald S.W.T., Makela M., Morris C.L., Ortiz J.D., Ramsey J., Salvat D.J., Saunders A., Seestrom S.J., Sharapov E.I., Sjøe S.K., Tang Z., Vanderwerp J., Vogelaar B., Walstrom P.L., Wang Z., Wei W., Weaver H.L., Wexler J.W., Womack T.L., Young A.R., Zeck B.A. Measurement of the neutron lifetime using a magneto-gravitational trap and *in situ* detection  
Science **360**, 627-632 (2018)

Rakopoulos V., Lantz M., Solders A., Al-Adili A., Mattera A., Canete L., Eronen T., Gorelov D., Jokinen A., Kankainen A., Kolhinen V.S., Moore I.D., Nesterenko D.A., Penttilä H., Pohjalainen I., Rinta-Antila S., Simutkin V., Vilén M., Voss A., Pomp S. First isomeric yield ratio measurements by direct ion counting and implications for the angular momentum of the primary fission fragments  
Physical Review C **98**, 024612-1-024612-14 (2018)

Régis J.M., Simpson G.S., Mach H., Blanc A., Jentschel M., Köster U., Mutti P., Soldner T., de France G., Ur C.A., Urban W., Jolie J., Saed-Samii N., Warr N., Fraile L.M., Pazyi V., Regan P.H., Podolyák Z., Lalkovski S., Bruce A.M., Kröll T., Korten W., Märginean N. The  $\gamma$ - $\gamma$  fast-timing technique and the EXILL&FATIMA campaign  
EPJ Web of Conferences **193**, 04008-1-04008-10 (2018)

Rzqca-Urban T., Urban W., Czerwiński M., Wiśniewski J., Blanc A., Faust H., Jentschel M., Mutti P., Köster U., Soldner T., de France G., Simpson G.S., Ur C.A. Low-spin excitations in  $^{97}\text{Zr}$   
Physical Review C **98**, 064315-1-064315-16 (2018)

Serebrov A.P., Kolomensky E.A., Fomin A.K., Krasnoschekova I.A., Vassiljev A.V., Prudnikov D.M., Shoka I.V., Chechkin A.V., Chaikovskiy M.E., Varlamov V.E., Ivanov S.N., Pirozhkov A.N., Geltenbort P., Zimmer O., Jenke T., van der Grinten M., Tucker M. New neutron lifetime measurements with the big gravitational trap and review of neutron lifetime data  
KnE Energy **3**, 121-128 (2018)

Serebrov A.P., Kolomensky E.A., Fomin A.K., Krasnoschekova I.A., Vassiljev A.V., Prudnikov D.M., Shoka I.V., Chechkin A.V., Chaikovskiy M.E., Varlamov V.E., Ivanov S.N., Pirozhkov A.N., Geltenbort P., Zimmer O., Jenke T., van der Grinten M., Tucker M. Neutron lifetime measurements with a large gravitational trap for ultracold neutrons  
Physical Review C **97**, 055503-1-055503-15 (2018)

Shimizu Y., Kubo T., Fukuda N., Inabe N., Kameda D., Sato H., Suzuki H., Takeda H., Yoshida K., Lorusso G., Watanabe H., Simpson G.S., Jungclaus A., Baba H., Browne F., Doornenbal P., Gey G., Isobe T., Li Z., Nishimura S., Söderström P.A., Sumikama T., Taprogge J., Vajta Z., Wu J., Xu Z., Odahara A., Yagi A., Nishibata H., Lozeva R., Moon C., Jung H. Observation of new neutron-rich isotopes among fission fragments from in-flight fission of  $^{345}\text{MeV/nucleon }^{238}\text{U}$ : Search for new isotopes conducted concurrently with decay measurement campaigns  
Journal of the Physical Society of Japan **87**, 014203-1-014203-10 (2018)

Siemensen C., Düsing C., Geltenbort P., Giebel C., Reich T., Plonka C. Search for an electric charge of the neutron  
Physical Review D **97**, 052004-1-052004-9 (2018)

Simpson G., Grachev I., Thiamova G., Ramdhane M., Sieja K., Blanc A., Jentschel M., Köster U., Mutti P., Soldner T., de France G., Ur C.A., Urban W. Excited states and collectivity in  $^{88}\text{Se}$   
EPJ Web of Conferences **193**, 05002-1-05002-7 (2018)

Stryczyk M., Tsunoda Y., Darby I.G., De Witte H., Diriken J., Fedorov D.V., Fedosseev V.N., Fraile L.M., Huyse M., Köster U., Marsh B.A., Otsuka T., Pauwels D., Popescu L., Radulov D., Seliverstov M.D., Sjödin A.M., Van den Bergh P., Van Duppen P., Venhart M., Walters W.B., Wimmer K.  $\beta^-$  decay study of the  $^{66}\text{M}^{66}\text{Fe}^{66}\text{Co}^{66}\text{Ni}$  decay chain  
Physical Review C **98**, 064326-1-064326-21 (2018)

Sun X., Adamek E., Allgeier B., Blatnik M., Bowles T.J., Broussard L.J., Brown M.A.P., Carr R., Clayton S., Cude-Woods C., Currie S., Dees E.B., Ding X., Filippone B.W., Garcia A., Geltenbort P., Hasan S., Hickerson K.P., Hoagland J., Hong R., Hogan G.E., Holley A.T., Ito T.M., Knecht A., Liu C.Y., Liu J., Makela M., Mammei R., Martin J.W., Melconian D., Mendenhall M.P., Moore S.D., Morris C.L., Nepal S., Nouri N., Pattie R.W., Pérez Galván A., Phillips D.G., Picker R., Pitt M.L., Plaster B., Ramsey J.C., Rios R., Salvat D.J., Saunders A., Sondheim W., Sjøe S., Slutsky S., Swank C., Swift G., Tatar E., Vogelaar R.B., VornDick B., Wang Z., Wei W., Wexler J., Womack T., Wrede C., Young A.R., Zeck B.A. Search for dark matter decay of the free neutron from the UCNA experiment:  $n \rightarrow x + e^+e^-$   
Physical Review C **97**, 052501-1-052501-5 (2018)

Tang Z., Blatnik M., Broussard L.J., Choi J.H., Clayton S.M., Cude-Woods C., Currie S., Fellers D.E., Fries E.M., Geltenbort P., Gonzalez F., Hickerson K.P., Ito T.M., Liu C.Y., MacDonald S.W.T., Makela M., Morris C.L., O'Shaughnessy C.M., Pattie R.W., Plaster B., Salvat D.J., Saunders A., Wang Z., Young A.R., Zeck B.A. Search for the neutron decay  $n \rightarrow X + \gamma$ , where  $X$  is a dark matter particle  
Physical Review Letters **121**, 022505-1-022505-5 (2018)

Weulersse C., Houssany S., Guibbaud N., Segura-Ruiz J., Beaucour J., Miller F., Mazurek M. Contribution of thermal neutrons to soft error rate  
IEEE Transactions on Nuclear Science **65**, 1851-1857 (2018)

Wiśniewski J., Urban W., Rzqca-Urban T., Köster U., Michelagnoli C., Jentschel M., Mutti P. Evolution of  $\gamma$  collectivity –  $(n,\gamma)$  spectroscopy of  $^{98}\text{Mo}$  with FIPPS  
Acta Physica Polonica B **49**, 547-553 (2018)

Zakharov M., Frank A., Kulin G., Goryunov S. New test of the dynamic theory of neutron diffraction by a moving grating  
EPJ Web of Conferences **177**, 03005-1-03005-5 (2018)

Zaz G., Le Clezio E., Dekious A., Alaoui M., Calzavara Y., Despau G. *In-situ* high-resolution measurement of HFR nuclear fuel plates' spacing  
IEEE Transactions on Nuclear Science **65**, 2776-2783 (2018)

Aprahamian A., Leshner S.R., Stratman A. First excited  $O^+$  states in deformed nuclei  
Bulgarian Journal of Physics **44**, 372-379 (2017)

Crépin P.P., Kupriyanova E.A., Guérout R., Lambrecht A., Nesvizhevsky V.V., Reynaud S., Vasiliev S., Voronin A.Y. Quantum reflection of antihydrogen from a liquid helium film  
Europhysics Letters **119**, 33001-p1-33001-p6 (2017)

Heinitz S., Maugeri E.A., Schumann D., Dressler R., Kivel N., Guerrero C., Köster U., Tessler M., Paul M., Halfon S. Production, separation and target preparation of  $^{171}\text{Tm}$  and  $^{147}\text{Pm}$  for neutron cross section measurements  
Radiochimica Acta **105**, 801-811 (2017)

Lee B.Q. A numerical model of atomic relaxation and its applications  
PhD Thesis: Australian National University, Australia (2017)

Serebrov A.P., Kolomensky E.A., Fomin A.K., Krasnoschokova I.A., Vassiljev A.V., Prudnikov D.M., Shoka I.V., Chechkin A.V., Chaikovskiy M.E., Varlamov V.E., Ivanov S.N., Pirozhkov A.N., Geltenbort P., Zimmer O., Jenke T., van der Grinten M., Tucker M. New measurement of the neutron lifetime with a large gravitational trap  
JETP Letters **106**, 623-629 (2017)

Štefánik D., Dvornický R., Šimkovic F. Reactor antineutrino spectra and forbidden beta decays  
AIP Conference Proceedings **1892**, 020022-1-020022-5 (2017)

Waegell M., Denkmayr T., Geppert H., Ebner D., Jenke T., Hasegawa Y., Sponar S., Dressel J., Tollaksen J. Confined contextuality in neutron interferometry: Observing the quantum pigeonhole effect  
Physical Review A **96**, 052131-1-052131-8 (2017)

Wilmsen D. Nuclear structure studies with neutron-induced reactions: Fission fragments in the  $N = 50$ -60 region, a fission event tagger for FIPPS, and production of the isomer  $\text{Pt-195m}$   
PhD Thesis: Université de Caen, France (2017)

Wilson J.N., Lebois M., Qi L., Amador-Celdran P., Bleuel D., Briz J.A., Carroll R., Catford W., De Witte H., Doherty D.T., Eloirdi R., Georgiev G., Gottardo A., Goasduff A., Hadýnska-Klęk K., Hauschild K., Hess H., Ingeberg V., Konstantinopoulos T., Ljungvall J., Lopez-Martens A., Lorusso G., Lozeva R., Lutter R., Marini P., Matea I., Materna T., Mathieu L., Oberstedt A., Oberstedt S., Panebianco S., Podolýak Z., Porta A., Regan P.H., Reiter P., Rezykina K., Rose S.J., Sahin E., Seidlitz M., Serot O., Shearman R., Siebeck B., Siem S., Smith A.G., Tventen G.M., Verney D., Warr N., Zeiser F., Zielińska M. Anomalies in the charge yields of fission fragments from the  $^{238}\text{U}(n,f)$  reaction  
Physical Review Letters **118**, 222501-1-222501-6 (2017)

## Soft Matter

Adamo M., Poulos A.S., Lopez C.G., Martel A., Porcar L., Cabral J.T. Droplet microfluidic SANS  
Soft Matter **14**, 1759-1770 (2018)

Al-Baradi A.M., Rimmer S., Carter S.R., De Silva J.P., King S.M., Maccarini M., Farago B., Noirez L., Geoghegan M. Temperature-dependent structure and dynamics of highly-branched poly(*N*-isopropylacrylamide) in aqueous solution  
Soft Matter **14**, 1482-1491 (2018)

Ameseder F., Radulescu A., Holderer O., Falus P., Richter D., Stadler A.M. Relevance of internal friction and structural constraints for the dynamics of denatured bovine serum albumin  
Journal of Physical Chemistry Letters **9**, 2469-2473 (2018)

Baccile N., Van Renterghem L., Le Griel P., Ducouret G., Brennich M., Cristiglio V., Roelants S.L.K.W., Soetaert W. Bio-based glyco-bolaamphiphile forms a temperature-responsive hydrogel with tunable elastic properties  
Soft Matter **14**, 7859-7872 (2018)

Beck C., Grimaldo M., Roosen-Runge F., Braun M.K., Zhang F., Schreiber F., Seydel T. Nanosecond tracer diffusion as a probe of the solution structure and molecular mobility of protein assemblies: The case of ovalbumin  
Journal of Physical Chemistry B **122**, 8343-8350 (2018)

Berrod Q., Lagrené K., Ollivier J., Zanotti J.M. Inelastic and quasi-elastic neutron scattering. Application to soft-matter  
EPJ Web of Conferences **188**, 05001-1-05001-36 (2018)

Bleibel J., Habiger M., Lütje M., Hirschmann F., Roosen-Runge F., Seydel T., Zhang F., Schreiber F., Oettel M. Two time scales for self and collective diffusion near the critical point in a simple patchy model for proteins with floating bonds  
Soft Matter **14**, 8006-8016 (2018)

Browning K.L., Lind T.K., Maric S., Barker R.D., Cárdenas M., Malmsten M. Effect of bilayer charge on lipoprotein lipid exchange  
Colloids and Surfaces B **168**, 117-125 (2018)

Cabry C.P., D'Andrea L., Shimizu K., Grillo I., Li P., Rogers S., Bruce D.W., Canongia Lopes J.N., Slattery J.M. Exploring the bulk-phase structure of ionic liquid mixtures using small-angle neutron scattering  
Faraday Discussions **206**, 265-289 (2018)

Calabrese M.A., Wagner N.J. Detecting branching in wormlike micelles via dynamic scattering methods  
ACS Macro Letters **7**, 614-618 (2018)

Campbell R.A., Saaka Y., Shao Y., Gerelli Y., Cubitt R., Nazarek E., Matyszewska D., Lawrence M.J. Structure of surfactant and phospholipid monolayers at the air/water interface modeled from neutron reflectivity data  
Journal of Colloid and Interface Science **531**, 98-108 (2018)

Campbell R.A., Tummino A., Varga I., Milyaeva O.Y., Krycki M.M., Lin S.Y., Laux V., Haertlein M., Forsyth V.T., Noskov B.A. Adsorption of denatured lysozyme at the air-water interface: Structure and morphology  
Langmuir **34**, 5020-5029 (2018)

Cavallaro G., Chiappisi L., Pasbakhsh P., Gradzielski M., Lazzara G. A structural comparison of halloysite nanotubes of different origin by Small-Angle Neutron Scattering (SANS) and Electric Birefringence  
Applied Clay Science **160**, 71-80 (2018)

Chiappisi L., Grillo I. Looking into Limoncello: The structure of the Italian liquor revealed by small-angle neutron scattering  
ACS Omega **3**, 15407-15415 (2018)

Cross E.R., Sproules S., Schweins R., Draper E.R., Adams D.J. Controlled tuning of the properties in optoelectronic self-sorted gels  
Journal of the American Chemical Society **140**, 8667-8670 (2018)

D'Angelo G., Nibali V.C., Wanderlingh U., Branca C., De Francesco A., Sacchetti F., Petrillo C., Paciaroni A. Multiple interacting collective modes and phonon gap in phospholipid membranes  
Journal of Physical Chemistry Letters **9**, 4367-4372 (2018)

Draper E.R., Archibald I.J., Nolan M.C., Schweins R., Zwijnenburg M.A., Sproules S., Adams D.J. Controlling photoconductivity in PBI films by supramolecular assembly  
Chemistry – A European Journal **24**, 4006-4010 (2018)

Draper E.R., Wallace M., Honecker D., Adams D.J. Aligning self-assembled perylene bisimides in a magnetic field  
Chemical Communications **54**, 10977-10980 (2018)

Ederth T., Ekblad T. Swelling of thin poly(ethylene glycol)-containing hydrogel films in water vapor-A neutron reflectivity study  
Langmuir **34**, 5517-5526 (2018)

Evenou P., Rossignol J., Pembouong G., Gothland A., Colesnic D., Barbeyron R., Rudiuk S., Marcelin A.G., Ménand M., Baigl D., Calvez V., Bouteiller L., Sollogoub M. Bridging  $\beta$ -cyclodextrin prevents self-inclusion, promotes supramolecular polymerization, and promotes cooperative interaction with nucleic acids  
Angewandte Chemie International Edition **57**, 7753-7758 (2018)

Evenou P., Rossignol J., Pembouong G., Gothland A., Colesnic D., Barbeyron R., Rudiuk S., Marcelin A.G., Ménand M., Baigl D., Calvez V., Bouteiller L., Sollogoub M. Bridging  $\beta$ -cyclodextrin prevents self-inclusion, promotes supramolecular polymerization, and promotes cooperative interaction with nucleic acids  
Angewandte Chemie **130**, 7879-7884 (2018)

Fragneto G., Delhom R., Joly L., Scoppola E. Neutrons and model membranes: Moving towards complexity  
Current Opinion in Colloid & Interface Science **38**, 108-121 (2018)

García N.A., Barrat J.L. Entanglement reduction induced by geometrical confinement in polymer thin films  
Macromolecules **51**, 9850-9860 (2018)

Godfrin P.D., Falus P., Porcar L., Hong K., Hudson S.D., Wagner N.J., Liu Y. Dynamic properties of different liquid states in systems with competing interactions studied with lysozyme solutions  
Soft Matter **14**, 8570-8579 (2018)

González A., Wildes A., Marty-Roda M., Cuesta-López S., Mossou E., Studer A., Demé B., Moiroux G., Garden J.L., Theodorakopoulos N., Peyrard M. Melting transition of oriented DNA fibers submerged in poly(ethylene glycol) solutions studied by neutron scattering and calorimetry  
Journal of Physical Chemistry B **122**, 2504-2515 (2018)

Gonzalez L., Liu C., Dietrich B., Su H., Sproules S., Cui H., Honecker D., Adams D.J., Draper E.R. Transparent-to-dark photo- and electrochromic gels  
Communications Chemistry **1**, 77-1-77-8 (2018)

Götze A., Möllmer J., Kohlmann H. From the laves phase  $\text{CaRh}_2$  to the perovskite  $\text{CaRhH}_3$  – *In situ* investigation of hydrogenation intermediates  $\text{CaRh}_2\text{H}_x$   
Inorganic Chemistry **57**, 10925-10934 (2018)

Gradzielski M., Hoffmann I. Polyelectrolyte-surfactant complexes (PESCs) composed of oppositely charged components  
Current Opinion in Colloid & Interface Science **35**, 124-141 (2018)

Grillo I., Morfin I., Prévost S. Structural characterization of pluronic micelles swollen with perfume molecules  
Langmuir **34**, 13395-13408 (2018)

Gvaramia M., Mangiapia G., Falus P., Ohl M., Holderer O., Frielinghaus H. Capillary condensation and gelling of microemulsions with clay additives  
Journal of Colloid and Interface Science **525**, 161-165 (2018)

Hansch M., Hamisch B., Schweins R., Prévost S., Huber K. Liquid-liquid phase separation in dilute solutions of poly(styrene sulfonate) with multivalent cations: Phase diagrams, chain morphology, and impact of temperature  
Journal of Chemical Physics **148**, 014901-1-014901-12 (2018)

Hedegaard S.F., Derbas M.S., Lind T.K., Kasimova M.R., Christensen M.V., Michaelsen M.H., Campbell R.A., Jorgensen L., Franzyk H., Cárdenas M., Nielsen H.M. Fluorophore labeling of a cell-penetrating peptide significantly alters the mode and degree of biomembrane interaction  
Scientific Reports **8**, 6327-1-6327-14 (2018)

Hill C., Czajka A., Hazell G., Grillo I., Rogers S.E., Skoda M.W.A., Joslin N., Payne J., Eastoe J. Surface and bulk properties of surfactants used in fire-fighting  
Journal of Colloid and Interface Science **530**, 686-694 (2018)

Hoffmann I., Hoffmann C., Farago B., Prévost S., Gradzielski M. Dynamics of small unilamellar vesicles  
Journal of Chemical Physics **148**, 104901-1-104901-8 (2018)

Hollamby M.J., Smith C.F., Britton M.M., Danks A.E., Schnepf Z., Grillo I., Pauw B.R., Kishimura A., Nakanishi T. The aggregation of an alkyl- $\text{C}_{60}$  derivative as a function of concentration, temperature and solvent type  
Physical Chemistry Chemical Physics **20**, 3373-3380 (2018)

Holler S., Moreno A.J., Zamponi M., Bačová P., Willner L., Iatrou H., Falus P., Richter D. The role of the functionality in the branch point motion in symmetric star polymers: A combined study by simulations and neutron spin echo spectroscopy  
Macromolecules **51**, 242-253 (2018)

Kitiri E.N., Varnava C.K., Patrickios C.S., Voutouri C., Stylianopoulos T., Gradzielski M., Hoffmann I. Double-networks based on interconnected amphiphilic "in-out" star first polymer conetworks prepared by RAFT polymerization  
Journal of Polymer Science A **56**, 2161-2174 (2018)

## PUBLICATIONS

FIND US ON:   

28-29

Korolkovas A., Gutfreund P., Chennevière A., Ankner J.F., Adlmann F.A., Wolff M., Barrat J.L. Shear deformation of low-density polymer brushes in a good solvent  
*Physical Review E* **98**, 032501-1-032501-8 (2018)

Korolkovas A., Gutfreund P., Wolff M. Dynamical structure of entangled polymers simulated under shear flow  
*Journal of Chemical Physics* **149**, 074901-1-074901-9 (2018)

Kutz A., Mariani G., Schweins R., Streb C., Gröhn F. Self-assembled polyoxometalate-dendrimer structures for selective photocatalysis  
*Nanoscale* **10**, 914-920 (2018)

Landman J., Ouhajji S., Prévost S., Narayanan T., Groenewold J., Philipse A.P., Kegel W.K., Petukhov A.V. Inward growth by nucleation: Multiscale self-assembly of ordered membranes  
*Science Advances* **4**, eaat1817-1-eaat1817-8 (2018)

Latza V.M., Rodriguez-Loureiro I., Fragneto G., Schneck E. End point versus backbone specificity governs characteristics of antibody binding to poly(ethylene glycol) brushes  
*Langmuir* **34**, 13946-13955 (2018)

Li R., Li Z., Pambou E., Gutfreund P., Waigh T.A., Webster J.R.P., Lu J.R. Determination of PMMA residues on a chemical-vapor-deposited monolayer of graphene by neutron reflection and atomic force microscopy  
*Langmuir* **34**, 1827-1833 (2018)

Llamas S., Fernández-Peña L., Akanno A., Guzmán E., Ortega V., Ortega F., Csaky A.G., Campbell S.A., Rubio R.G. Towards understanding the behavior of polyelectrolyte-surfactant mixtures at the water/vapor interface closer to technologically-relevant conditions  
*Physical Chemistry Chemical Physics* **20**, 1395-1407 (2018)

Llamas S., Guzmán E., Akanno A., Fernández-Peña L., Ortega F., Campbell R.A., Miller R., Rubio R.G. Study of the liquid/vapor interfacial properties of concentrated polyelectrolyte-surfactant mixtures using surface tensiometry and neutron reflectometry: Equilibrium, adsorption kinetics and dilational rheology  
*Journal of Physical Chemistry C* **122**, 4419-4427 (2018)

Lopez C.G., Watanabe T., Adamo M., Martel A., Porcar L., Cabral J.T. Microfluidic devices for small-angle neutron scattering  
*Journal of Applied Crystallography* **51**, 570-583 (2018)

Luchini A., D'Errico G., Leone S., Vaezi Z., Bortolotti A., Stella L., Vitiello G., Paduano L. Structural organization of lipid-functionalized-Au nanoparticles  
*Colloids and Surfaces B* **168**, 2-9 (2018)

Luchini A., Delhom R., Demé B., Laux V., Moulin M., Haertlein M., Pichler H., Strohmeier G.A., Wacklin H., Fragneto G. The impact of deuteration on natural and synthetic lipids: A neutron diffraction study  
*Colloids and Surfaces B* **168**, 126-133 (2018)

Mansfield E.D.H., Hartlieb M., Catrouillet S., Rho J.Y., Lamaudie S.C., Rogers S.E., Sanchis J., Brendel J.C., Perrier S. Systematic study of the structural parameters affecting the self-assembly of cyclic peptide-poly(ethylene glycol) conjugates  
*Soft Matter* **14**, 6320-6326 (2018)

Mariani G., Krieger A., Moldenhauer D., Schweins R., Gröhn F. Light-responsive shape: From micrometer-long nanocylinders to compact particles in electrostatic self-assembly  
*Macromolecular Rapid Communications* **2018**, 1700860-1-1700860-5 (2018)

McCoy T.M., De Campo L., Sokolova A.V., Grillo I., Izgorodina E.I., Tabor R.F. Bulk properties of aqueous graphene oxide and reduced graphene oxide with surfactants and polymers: Adsorption and stability  
*Physical Chemistry Chemical Physics* **20**, 16801-16816 (2018)

Micciulla S., Gerelli Y., Campbell R.A., Schneck E. A versatile method for the distance-dependent structural characterization of interacting soft interfaces by neutron reflectometry  
*Langmuir* **34**, 789-800 (2018)

Mizuta R., Devos J.M., Webster J., Ling W.L., Narayanan T., Round A., Munnur D., Mossou E., Farahat A.A., Boykin D.W., Wilson W.D., Neidle S., Schweins R., Rannou P., Haertlein M., Forsyth V.T., Mitchell E.P. Dynamic self-assembly of DNA minor groove-binding ligand DB921 into nanotubes triggered by an alkali halide  
*Nanoscale* **10**, 5550-5558 (2018)

Möhl G.E., Metwalli E., Bouchet R., Phan T.N.T., Cubitt R., Müller-Buschbaum P. In operando small-angle neutron scattering study of single-ion copolymer electrolyte for Li-metal batteries  
*ACS Energy Letters* **3**, 1-6 (2018)

Nagata Y., Nishikawa T., Sugimoto M., Sato S., Sugiyama M., Porcar L., Martel A., Inoue R., Sato N. Elucidating the solvent effect on the switch of the helicity of poly(quininoxaline-2,3-diyl)s: A conformational analysis by small-angle neutron scattering  
*Journal of the American Chemical Society* **140**, 2722-2726 (2018)

Nguyen H.D., Jestin J., Porcar L., Iojoiu C., Lyonard S. Aromatic copolymer/nafion blends outperforming the corresponding pristine ionomers  
*ACS Applied Energy Materials* **1**, 355-367 (2018)

Nguyen R., Jouvault N., Zanirati S., Rawiso M., Allouche L., Buhler E., Giuseppone N. Autopoietic behavior of dynamic covalent amphiphiles  
*Chemistry – A European Journal* **24**, 17125-17137 (2018)

Niebuur B.J., Chiappisi L., Zhang X., Jung F., Schulte A., Papadakis C.M. Formation and growth of mesoglobules in aqueous poly(N-isopropylacrylamide) solutions revealed with kinetic small-angle neutron scattering and fast pressure jumps  
*ACS Macro Letters* **7**, 1155-1160 (2018)

Niga P., Hansson-Mille P.M., Swerin A., Claesson P.M., Schoelkopf J., Gane P.A.C., Bergendal E., Tummino A., Campbell R.A., Johnson C.M. Interactions between model cell membranes and the neuroactive drug propofol  
*Journal of Colloid and Interface Science* **526**, 230-243 (2018)

Nojd S., Holmqvist P., Boon N., Obiols-Rabasa M., Mohanty P.S., Schweins R., Schurtenberger P. Deswelling behaviour of ionic microgel particles from low to ultra-high densities  
*Soft Matter* **14**, 4150-4159 (2018)

Penttilä P.A., Imai T., Capron M., Mizuno M., Amano Y., Schweins R., Sugiyama J. Multimethod approach to understand the assembly of cellulose fibrils in the biosynthesis of bacterial cellulose  
*Cellulose* **25**, 2771-2783 (2018)

Penttilä P.A., Imai T., Sugiyama J., Schweins R. Biomimetic composites of deuterated bacterial cellulose and hemicelluloses studied with small-angle neutron scattering  
*European Polymer Journal* **104**, 177-183 (2018)

Pont S., Foglia F., Higgins A.M., Durrant J.R., Cabral J.T. Stability of polymer: PCBM thin films under competitive illumination and thermal stress  
*Advanced Functional Materials* **2018**, 1802520-1-1802520-8 (2018)

Protat M., Bodin-Thomazo N., Malloggi F., Daillant J., Campbell R.A., Fragneto G., Watkins E.B., Perrin P., Pantoustier N., Guenoun P. Neutron reflectivity measurements at the oil/water interface for the study of stimuli-responsive emulsions  
*European Physical Journal E* **41**, 85-1-85-9 (2018)

Qi Z., Chiappisi L., Gong H., Pan R., Cui N., Ge Y., Böttcher C., Dong S. Ion selectivity in nonpolymeric thermosensitive systems induced by water-attenuated supramolecular recognition  
*Chemistry – A European Journal* **24**, 3854-3861 (2018)

Rauh A., Carl N., Schweins R., Karg M. Role of absorbing nanocrystal cores in soft photonic crystals: A spectroscopy and SANS study  
*Langmuir* **34**, 854-867 (2018)

Riest J., Nägele G., Liu Y., Wagner N.J., Godfrin P.D. Short-time dynamics of lysozyme solutions with competing short-range attraction and long-range repulsion: Experiment and theory  
*Journal of Chemical Physics* **148**, 065101-1-065101-12 (2018)

Ristori S., Grillo I., Lusa S., Thamm J., Valentino G., Campani V., Caraglia M., Steiniger F., Luciani P., De Rosa G. Structural characterization of self-assembling hybrid nanoparticles for bisphosphonate delivery in tumors  
*Molecular Pharmaceutics* **15**, 1258-1265 (2018)

Robbes A., Cousin F., Meneau F., Jestin J. Melt chain conformation in nanoparticles/polymer nanocomposites elucidated by the SANS extrapolation method: Evidence of the filler contribution  
*Macromolecules* **51**, 2216-2226 (2018)

Saaka Y., Allen D.T., Luangwitchajaroen Y., Shao Y., Campbell R.A., Lorenz C.D., Lawrence M.J. Towards optimised drug delivery: Structure and composition of testosterone enanthate in sodium dodecyl sulfate monolayers  
*Soft Matter* **14**, 3135-3150 (2018)

Schindler T., González A., Boopathi R., Roda M.M., Romero-Santacru L., Wildes A., Porcar L., Martel A., Theodorakopoulos N., Cuesta-López S., Angelov D., Unruh T., Peyrard M. Kinky DNA in solution: Small-angle-scattering study of a nucleosome positioning sequence  
*Physical Review E* **98**, 042417-1-042417-10 (2018)

Schindler T., Lin W., Schmutzler T., Lindner P., Peukert W., Segets D., Unruh T. Evolution of the ligand shell around small ZnO nanoparticles during the exchange of acetate by catechol: A small angle scattering study  
*ChemNanoMat* **5**, 116-123 (2018)

Schmutzler T., Schindler T., Goetz K., Appavou M.S., Lindner P., Prévost S., Unruh T. Concentration dependent morphology and composition of *n*-alcohol modified cetyltrimethylammonium bromide micelles  
*Journal of Physics: Condensed Matter* **30**, 495001-1-495001-12 (2018)

Schwarze M., Schaefer L., Chiappisi L., Gradzielski M. Micellar enhanced ultrafiltration (MEUF) of methylene blue with carboxylate surfactants  
*Separation and Purification Technology* **199**, 20-26 (2018)

Skalski T.J.G., Adamski M., Britton B., Schibli E.M., Peckham T.J., Weissbach T., Moshisuki T., Lyonard S., Frisken B.J., Holdcroft S. Sulfophenylated terphenylene copolymer membranes and ionomers  
*ChemSusChem* **11**, 4033-4043 (2018)

Sokolowski M., Bartsch C., Spiering V.J., Prévost S., Appavou M.S., Schweins R., Gradzielski M. Preparation of polymer brush grafted anionic or cationic silica nanoparticles: Systematic variation of the polymer shell  
*Macromolecules* **51**, 6936-6948 (2018)

Tsitsilianis C., Serras G., Ko C.H., Jung F., Papadakis C.M., Rikkou-Kalourkoti M., Patrickios C.S., Schweins R., Chassenieux C. Thermoresponsive hydrogels based on telechelic polyelectrolytes: From dynamic to "frozen" networks  
*Macromolecules* **51**, 2169-2179 (2018)



Tummino A., Toscano J., Sebastiani F., Noskov B.A., Varga I., Campbell R.A. Effects of aggregate charge and subphase ionic strength on the properties of spread polyelectrolyte/surfactant films at the air/water interface under static and dynamic conditions *Langmuir* **34**, 2312-2323 (2018)

Urbano L., Clifton L., Ku H.K., Kendall-Troughton H., Vandera K.K.A., Matarese B.F.E., Abelha T., Li P., Desai T., Dreiss C.A., Barker R.D., Green M.A., Dailey L.A., Harvey R.D. Influence of the surfactant structure on photoluminescent  $\pi$ -conjugated polymer nanoparticles: Interfacial properties and protein binding *Langmuir* **34**, 6125-6137 (2018)

Urbanski A., Hansch M., Lopez C.G., Schweins R., Hertle Y., Hellweg T., Polzer F., Huber K. Polyacrylates in the presence of an extraordinary monovalent cation-Solution behavior and metal nanoparticle formation *Journal of Chemical Physics* **149**, 163318-1-163318-11 (2018)

Waldie S., Lind T.K., Browning K., Moulin M., Haertlein M., Forsyth V.T., Luchini A., Strohmeier G.A., Pichler H., Maric S., Cárdenas M. Localization of cholesterol within supported lipid bilayers made of a natural extract of tailor-deuterated phosphatidylcholine *Langmuir* **34**, 472-479 (2018)

Wrede O., Reimann Y., Iulsdorf S., Emmrich D., Schneider K., Schmid A.J., Zausser D., Hannappel Y., Beyer A., Schweins R., Goltzhauser A., Hellweg T., Sottmann T. Volume phase transition kinetics of smart N-n-propylacrylamide microgels studied by time-resolved pressure jump small angle neutron scattering *Scientific Reports* **8**, 13781-1-13781-13 (2018)

Yalcinkaya H., Bressel K., Lindner P., Gradzielski M. Controlled formation of vesicles with added styrene and their fixation by polymerization *Journal of Colloid and Interface Science* **531**, 672-680 (2018)

Zanatta M., Tavagnacco L., Buratti E., Bertoldo M., Natali F., Chiessi E., Orecchini A., Zaccarelli E. Evidence of a low-temperature dynamical transition in concentrated microgels *Science Advances* **4**, eaat5895-1-eaat5895-8 (2018)

Zhong Q., Mi L., Metwalli E., Bießmann L., Philipp M., Miasnikova A., Laschewsky A., Papadakis C.M., Cubitt R., Schwartzkopf M., Roth S.V., Wang J., Müller-Buschbaum P. Effect of chain architecture on the swelling and thermal response of star-shaped thermo-responsive (poly(methoxy diethylene glycol acrylate)-block-polystyrene)<sub>3</sub> block copolymer films *Soft Matter* **14**, 6582-6594 (2018)

Zhu R., Regeni I., Holstein J.J., Dittrich B., Simon M., Prévost S., Gradzielski M., Clever G.H. Catenation and aggregation of multi-cavity coordination cages *Angewandte Chemie International Edition* **57**, 13652-13656 (2018)

Zielbauer B.I., Jackson A.J., Maurer S., Waschatko G., Ghebremedhin M., Rogers S.E., Heenan R.K., Porcar L., Vilgis T.A. Soybean oleosomes studied by small angle neutron scattering (SANS) *Journal of Colloid and Interface Science* **529**, 197-204 (2018)

Chiappisi L. Polyoxyethylene alkyl ether carboxylic acids: An overview of a neglected class of surfactants with multiresponsive properties *Advances in Colloid and Interface Science* **250**, 79-94 (2017)

Chiappisi L., Leach S.D., Gradzielski M. Precipitating polyelectrolyte-surfactant systems by admixing a nonionic surfactant – A case of cononsurfactancy *Soft Matter* **13**, 4988-4996 (2017)

Dong S., Leng J., Feng Y., Liu M., Stackhouse C.J., Schönhalz A., Chiappisi L., Gao L., Chen W., Shang J., Jin L., Qi Z., Schalley C.A. Structural water as an essential comonomer in supramolecular polymerization *Science Advances* **3**, eaao0900-1-eaao0900-9 (2017)

Liley J.R., Thomas R.K., Penfold J., Tucker I.M., Petkov J.T., Stevenson P.S., Banat I.M., Marchant R., Rudden M., Webster J.P.R. Adsorption at the air-water interface in biosurfactant-surfactant mixtures: Quantitative analysis of adsorption in a five-component mixture *Langmuir* **33**, 13027-13039 (2017)

Szabó M., Berke B., László K., Osváth Z., Domján A. Non-covalent interactions between poly(N-isopropylacrylamide) and small aromatic probe molecules studied by NMR spectroscopy *European Polymer Journal* **93**, 750-760 (2017)

## Spectroscopy in Solid State Physics and Chemistry

Bloodworth S., Gräsvik J., Alom S., Kouřil K., Elliott S.J., Wells N.J., Horsewill A.J., Mamone S., Jiménez-Ruiz M., Rols S., Nagel U., Rööm T., Leviitt M.H., Whitby R.J. Synthesis and properties of open fullerenes encapsulating ammonia and methane *ChemPhysChem* **19**, 266-276 (2018)

Bounoua D., Saint-Martin R., Petit S., Bourdarot F., Pinsard-Gaudart L. Finite size effect on the magnetic excitations spectra, phonons and heat conduction of the quasi- one-dimensional spin chains system SrCuO<sub>2</sub> *Physica B* **536**, 323-326 (2018)

Burankova T., Mora Cardozo J.F., Rauber D., Wildes A., Embs J.P. Linking structure to dynamics in protic ionic liquids: A neutron scattering study of correlated and single-particle motions *Scientific Reports* **8**, 16400-1-16400-10 (2018)

Carosso M., Lazzarini A., Piovano A., Pellegrini R., Morandi S., Manzoli M., Vitillo J.G., Jiménez-Ruiz M., Lamberti C., Groppo E. Looking for the active hydrogen species in a 5 wt% Pt/C catalyst: A challenge for Inelastic Neutron Scattering *Faraday Discussions* **208**, 227-242 (2018)

Chatterji T., Wdowik U.D., Jagło G., Rols S., Wagner F.R. Soft-phonon dynamics of the thermoelectric  $\beta$ -SnSe at high temperatures *Physics Letters A* **382**, 1937-1941 (2018)

Fang W., Romani Y., Wei Y., Jiménez-Ruiz M., Jobic H., Paul S., Jalowiecki-Duhamel L. Steam reforming and oxidative steam reforming for hydrogen production from bioethanol over Mg<sub>2</sub>AlNi<sub>x</sub>H<sub>2</sub>O<sub>y</sub> nano-oxyhydride catalysts *International Journal of Hydrogen Energy* **43**, 17643-17655 (2018)

Kinyanjui M.K., Koester J., Boucher F., Wildes A., Kaiser U. Spectroscopic properties of a freestanding MnPS<sub>3</sub> single layer *Physical Review B* **98**, 035417-1-035417-9 (2018)

Koishi A., Fernández-Martínez A., Ruta B., Jiménez-Ruiz M., Poloni R., Di Tommaso D., Zontone F., Waychunas G.A., Montes-Hernandez G. Role of impurities in the kinetic persistence of amorphous calcium carbonate: A nanoscopic dynamics view *Journal of Physical Chemistry C* **122**, 16983-16991 (2018)

Lambri O.A., Giordano E.D.V., Bonifacich F.G., Jiménez-Ruiz M., Lambri M.A., Sanchez F.A., Pérez-Landazábal J.I., García J.A., Boschetti C.E., Recarte V., Plazaola F., Salvatori P.E. Changes in the crystalline degree in neutron irradiated EPDM viewed through infrared spectroscopy and inelastic neutron scattering *Matéria* **23**, e-12079-1-e-12079-10 (2018)

Lefevr J., Cervini L., Griffin J.M., Blanchard D. Lithium conductivity and ions dynamics in LiBH<sub>4</sub>/SiO<sub>2</sub> solid electrolytes studied by solid-state NMR and quasi-elastic neutron scattering and applied in lithium-sulfur batteries *Journal of Physical Chemistry C* **122**, 15264-15275 (2018)

Lemishko T., Jiménez-Ruiz M., Rey F., Valencia S., Blasco T., Vidal Moya A., Sastre G. Inelastic neutron scattering study of the aluminum and Brønsted site location in aluminosilicate LTA zeolites *Journal of Physical Chemistry C* **122**, 11450-11454 (2018)

Li J., Bouchard M., Reiss P., Aldakov D., Pouget S., Demadrille R., Aumaitre C., Frick B., Djurado D., Rossi M., Rinke P. Activation energy of organic cation rotation in CH<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub> and CD<sub>3</sub>NH<sub>3</sub>PbI<sub>3</sub>: Quasi-elastic neutron scattering measurements and first-principles analysis including nuclear quantum effects *Journal of Physical Chemistry Letters* **9**, 3969-3977 (2018)

Lorne T., Jiménez-Ruiz M., Rols S., Payrastra C., Escudier J.M., Rubio-Zuazo J., Zbiri M., Galibert A.M., Soula B., Flahaut E. Investigation of the grafting of fluorophores onto double-walled carbon nanotubes: The influence of the geometry of the molecules *Applied Surface Science* **457**, 1181-1191 (2018)

Maestro A., Santini E., Guzmán E. Physico-chemical foundations of particle-laden fluid interfaces *European Physical Journal E* **41**, 97-1-97-21 (2018)

Mittal R., Gupta M.K., Chaplot S.L. Phonons and anomalous thermal expansion behaviour in crystalline solids *Progress in Materials Science* **92**, 360-445 (2018)

Noferini D., Frick B., Koza M.M., Karlsson M. Proton jump diffusion dynamics in hydrated barium zirconates studied by high-resolution neutron backscattering spectroscopy *Journal of Materials Chemistry A* **6**, 7538-7546 (2018)

Noferini D., Koza M.M., Nilsen G.J., Karlsson M. Study of the hydration level in proton conducting oxides using neutron diffraction with polarization analysis *Solid State Ionics* **324**, 163-167 (2018)

Noferini D., Koza M.M., Rahman S.M.H., Evenson Z., Nilsen G.J., Eriksson S., Wildes A.R., Karlsson M. Role of the doping level in localized proton motions in acceptor-doped barium zirconate proton conductors *Physical Chemistry Chemical Physics* **20**, 13697-13704 (2018)

Pajzderska A., Druzbecki K., González M.A., Jencyk J., Mielcarek J., Wąsicki J. Diversity of methyl group dynamics in felodipine: A DFT supported NMR and QENS study *CrystEngComm* **20**, 7371-7385 (2018)

## Theory

Pajzderska A., González M.A., Wąsicki J. Molecular dynamics simulations of nimodipine confined in an ordered mesoporous silica matrix  
Journal of Physical Chemistry C **122**, 9552-9561 (2018)

Peet J.R., Chambers M.S., Piovano A., Johnson M.R., Evans I.R. Dynamics in Bi(III)-containing apatite-type oxide ion conductors: A combined computational and experimental study  
Journal of Materials Chemistry A **6**, 5129-5135 (2018)

Sassi S., Candolfi C., Dauscher A., Lenoir B., Koza M.M. Inelastic neutron scattering study of the lattice dynamics of the homologous compounds  $(\text{PbSe})_3(\text{Bi}_2\text{Se}_3)_{3m}$  ( $m = 1, 2$  and  $3$ )  
Physical Chemistry Chemical Physics **20**, 14597-14607 (2018)

Songvilay M., Bari M., Ye Z.G., Xu G., Gehring P.M., Ratcliff W.D., Schmalzl K., Bourdarot F., Roessli B., Stock C. Lifetime-shortened acoustic phonons and static order at the Brillouin zone boundary in the organic-inorganic perovskite  $\text{CH}_3\text{NH}_3\text{PbCl}_3$   
Physical Review Materials **2**, 123601-1-0123601-8 (2018)

Stock C., Rodriguez-Rivera J.A., Schmalzl K., Demmel F., Singh D.K., Ronning F., Thompson J.D., Bauer E.D. From Ising resonant fluctuations to static uniaxial order in antiferromagnetic and weakly superconducting  $\text{CeCo}(\text{In}_x\text{Hg}_{1-x})_5$  ( $x = 0.01$ )  
Physical Review Letters **121**, 037003-1-037003-7 (2018)

Tamtögl A., Sacchi M., Calvo-Almazán I., Zbiri M., Koza M.M., Ernst W.E., Fouquet P. Ultrafast molecular transport on carbon surfaces: The diffusion of ammonia on graphite  
Carbon **126**, 23-30 (2018)

Desmedt A., Bedouret L., Ollivier J., Petuya C. Neutron scattering of clathrate and semi-clathrate hydrates  
In «Gas Hydrates 1: Fundamentals, Characterization and Modeling» Broseta D. *et al.* Eds. (2017, Wiley) pp. 1-61

Nicoud S., Huvé M., Hernandez O., Pautrat A., Duttine M., Wattiaux A., Colin C., Kabbour H., Mentré O. Comprehensive study of oxygen storage in  $\text{YbFe}_2\text{O}_{4+x}$  ( $x \leq 0.5$ ): Unprecedented coexistence of  $\text{FeO}_n$  polyhedra in one single phase  
Journal of the American Chemical Society **139**, 17031-17043 (2017)

Weber T., Roessli B., Stock C., Keller T., Schmalzl K., Bourdarot F., Georgii R., Ewings R.A., Perry R.S., Böni P. Transverse acoustic phonon anomalies at intermediate wave vectors in  $\text{MgV}_2\text{O}_4$   
Physical Review B **96**, 184301-1-184301-9 (2017)

Bosson-Rieutort D., de Gaudemaris R., Bicoût D.J. The spectroscopy of occupational health problems  
PLoS One **13**, e0190196-1-e0190196-14 (2018)

Cemal E., Enderle M., Kremer R.K., Fåk B., Ressouche E., Goff J.P., Gvozdkova M.V., Zhitomirsky M.E., Ziman T. Field-induced states and excitations in the quasicritical spin-1/2 chain linarite  
Physical Review Letters **120**, 067203-1-067203-6 (2018)

Fomin A.K., Serebrov A.P. Monte Carlo model of the experiment on measuring the neutron lifetime  
Mathematical Models and Computer Simulations **10**, 741-747 (2018)

Galéra R.M., Opagiste C., Amara M., Toussaint J.C., Lepetit M.B., Rols S. Analysis of the magnetic properties of  $\text{Ce}_3\text{Pt}_{23}\text{Si}_{11}$ : Orthorhombic crystal field and mean-field approximation  
Journal of Physics: Condensed Matter **30**, 285802-1-285802-8 (2018)

Gómez L.R., García N.A., Vega D.A., Lorenzana J. Thermal properties of vortices on curved surfaces  
Physical Review E **97**, 012117-1-012117-9 (2018)

Korolkovas A. 5D entanglement in star polymer dynamics  
Advanced Theory and Simulations **1**, 1800078-1-1800078-6 (2018)

Pierleoni C., Rillo G., Ceperley D.M., Holzmann M. Electron localization properties in high pressure hydrogen at the liquid-liquid phase transition by Coupled Electron-Ion Monte Carlo  
Journal of Physics: Conference Series **1136**, 012005-1-012005-10 (2018)

Rebolini E., Teale A.M., Helgaker T., Savin A., Toulouse J. Excitation energies from Görling-Levy perturbation theory along the range-separated adiabatic connection  
Molecular Physics **116**, 1443-1451 (2018)

Ruggeri M., Moroni S., Holzmann M. Nonlinear network description for many-body quantum systems in continuous space  
Physical Review Letters **120**, 205302-1-205302-6 (2018)

Vural D., Smith J.C., Glyde H.R. Determination of dynamical heterogeneity from dynamic neutron scattering of proteins  
Biophysical Journal **114**, 2397-2407 (2018)

Yahia G., Damay F., Chattopadhyay S., Balédent V., Peng W., Kim S.W., Greenblatt M., Lepetit M.B., Foury-Leykian P. Experimental evidence for the microscopic mechanism of the unusual spin-induced electric polarization in  $\text{GdMn}_2\text{O}_5$   
Physical Review B **97**, 085128-1-085128-7 (2018)

## Other

Denkmayr T., Dressel J., Geppert-Kleinrath H., Hasegawa Y., Sponar S. Weak values from strong interactions in neutron interferometry  
Physica B: Condensed Matter **551**, 339-346 (2018)

Doyle T.B., Mergel D., Schröter W., Wagner R. Line defects in crystals and flux pinning in superconductors – Scientific work of Reiner Labusch (1935 – 2016)  
Materials Today: Proceedings **5**, 14662-14692 (2018)

Radlinski A.P., Mastalerz M. Neutron scattering study of vitrinite: Insights into sub-micrometer inclusions in North American Carboniferous coals of bituminous rank  
International Journal of Coal Geology **186**, 145-154 (2018)

Yokoyama R., Ideguchi E., Simpson G.S., Tanaka M., Nishimura S., Doornenbal P., Lorusso G., Söderström P.A., Sumikama T., Wu J., Xu Z.Y., Aoi N., Baba H., Bello Garrote F.L., Benzoni G., Browne F., Daido R., Fang Y., Fukuda N., Gottardo A., Gey G., Go S., Inabe N., Isobe T., Kameda D., Kobayashi K., Kobayashi M., Kojouharov I., Komatsubara T., Kubo T., Kurz N., Kuti I., Li Z., Matsushita M., Michimasa S., Moon C.B., Nishibata H., Nishizuka I., Odahara A., Patel Z., Rice S., Sahin E., Sakurai H., Schaffner H., Sinclair L., Suzuki H., Takeda H., Taprogge J., Vajta Z., Watanabe H., Yagi A., Inakura T. Beta-gamma spectroscopy of the neutron-rich  $^{150}\text{Ba}$   
Progress of Theoretical and Experimental Physics **2018**, 041D02-1-041D02-8 (2018)

Zeller D., Telling M.T.F., Zamponi M., García Sakai V., Peters J. Analysis of elastic incoherent neutron scattering data beyond the Gaussian approximation  
Journal of Chemical Physics **149**, 234908-1-234908-17 (2018)

Hervy J., Bicoût D.J. Correcting binding parameters for interacting ligand-lattice systems  
Physical Review E **96**, 012417-1-012417-6 (2017)

Kawasaki E., Holzmann M. Finite-temperature phases of two-dimensional spin-orbit-coupled bosons  
Physical Review A **95**, 051601-1-051601-5 (2017)

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