



OTTO VON GUERICKE  
UNIVERSITÄT  
MAGDEBURG

**NAT**

FAKULTÄT FÜR  
NATURWISSENSCHAFTEN

# Publikationsbericht 2024

Institut für Physik

# INSTITUT FÜR PHYSIK

## 1. LEITUNG

Prof. Dr. rer. nat. habil. André Strittmatter (Leiter)  
Prof. Dr. rer. nat. habil. Jan Wiersig (stellv. Leiter)  
Prof. Dr. rer. nat. habil. Jürgen Christen  
Vertr.-Prof. Dr. rer. nat. habil. Alexei Eremin  
Prof. Dr. rer. nat. habil. Rüdiger Goldhahn  
Prof. Dr. rer. nat. Andreas Menzel  
Prof. Dr. rer. nat. Claus-Dieter Ohl  
Prof. Dr. rer. nat. habil. Oliver Speck  
Jun.-Prof.in Dr. phil. Bianca Watzka (bis 30. 09. 2024)  
Dr. rer. nat. Gordon Schmidt

## 2. VERÖFFENTLICHUNGEN

### BEGUTACHTETE ZEITSCHRIFTENAUFsätze

**Anikeeva, Mariia; Sangal, Maitreyi; Speck, Oliver; Norquay, Graham; Zuhayra, Maaz; Lützen, Ulf; Peters, Josh; Jansen, Olav; Hövener, Jan-Bernd**

Nichtinvasive funktionelle Lungenbildgebung mit hyperpolarisiertem Xenon - Noninvasive functional lung imaging with hyperpolarized xenon

Die Radiologie - [Berlin]: Springer Medizin Verlag GmbH, Bd. 62 (2022), Heft 6, S. 475-485  
[Imp.fact.: 0.803]

**Basurto, Eduardo; Gurin, Peter; Specht, Eckard; Odriozola, Gerardo**

Searching for the maximal packing fraction of hard disks confined by a circular cavity through replica exchange/event-chain Monte Carlo

The journal of chemical physics - Melville, NY : American Institute of Physics, Bd. 161 (2024), Heft 4, insges. 9 S.  
[Imp.fact.: 3.1]

**Binkowski, Felix; Kullig, Julius; Betz, Fridtjof; Zschiedrich, Lin; Walther, Andrea; Wiersig, Jan; Burger, Sven**

Computing eigenfrequency sensitivities near exceptional points

Physical review research - College Park, MD : APS, Bd. 6 (2024), Heft 2, Artikel 023148, insges. 8 S.

**Chatterjee, Soumick; Saad, Fatima; Sarasaen, Chompunuch; Ghosh, Suhita; Krug, Valerie; Khatun, Rupali; Mishra, Rahul; Desai, Nirja; Radeva, Petia; Rose, Georg; Stober, Sebastian; Speck, Oliver; Nürnberger, Andreas**

Exploration of interpretability techniques for deep COVID-19 classification using chest X-ray images

Journal of imaging - Basel : MDPI, Bd. 10 (2024), Heft 2, Artikel 45, insges. 22 S.  
[Imp.fact.: 3.2]

**Chatterjee, Soumick; Sarasaen, Chompunuch; Rose, Georg; Nürnberger, Andreas; Speck, Oliver**

DDoS-UNet - incorporating temporal information using dynamic dual-channel UNet for enhancing super-resolution of dynamic MRI

IEEE access / Institute of Electrical and Electronics Engineers - New York, NY : IEEE, Bd. 12 (2024), S. 99122-99136  
[Imp.fact.: 3.4]

**Chatterjee, Soumick; Sciarra, Alessandro; Dünwald, Max; Ashoka, Anitha Bhat Talagini; Vasudeva, Mayura Gurjar Cheepinahalli; Saravanan, Shudarsan; Sambandham, Venkatesh Thirugnana; Tummala, Pavan; Oeltze-Jafra, Steffen; Speck, Oliver; Nürnberger, Andreas**

Beyond Nyquist - a comparative analysis of 3D deep learning models enhancing MRI resolution

Journal of imaging - Basel : MDPI, Bd. 10 (2024), Heft 9, Artikel 207, insges. 34 S.

[Imp.fact.: 2.7]

**Daddi-Moussa-Ider, Abdallah; Tjhung, Elsen; Richter, Thomas; Menzel, Andreas M.**

Hydrodynamics of a disk in a thin film of weakly nematic fluid subject to linear friction

Journal of physics. Condensed matter - Bristol : IOP Publ., Bd. 36 (2024), Heft 44, Artikel 445101, insges. 19 S.

[Imp.fact.: 2.3]

**Danyeli, Lena; Şen, Zümriit Duygu; Colic, Lejla; Opel, Nils; Refisch, Alexander; Blekic, Nikolai; Macharadze, Tamar; Kretzschmar, Moritz Andreas; Munk, Matthias Hans Joachim; Gaser, Christian; Speck, Oliver; Walter, Martin; Li, Meng**

Cortical thickness of the posterior cingulate cortex is associated with the ketamine-induced altered sense of self - an ultra-high field MRI study

Journal of psychiatric research - Amsterdam [u.a.]: Elsevier Science, Bd. 172 (2024), S. 136-143

[Imp.fact.: 3.7]

**Dular, Matevž; Montalvo, Guillermo Enrique Barragan; Hočevár, Marko; Novak, Lovrenc; Ohl, Claus Dieter; Petkovsek, Martin**

Questioning the ASTM G32-16 (stationary specimen) standard cavitation erosion test

Ultrasonics sonochemistry - Amsterdam [u.a.]: Elsevier Science, Bd. 107 (2024), Artikel 106930, insges. 10 S.

[Imp.fact.: 8.7]

**Dörner, Marc; Seebach, Katharina; Heneka, Michael Thomas; Menze, Inga; Känel, Roland; Euler, Sebastian; Schreiber, Frank; Arndt, Philipp; Neumann, Katja; Hildebrand, Annkatrin; John, Anna-Charlotte; Tyndall, Anthony; Kirchebner, Johannes; Tacik, Pawel; Jansen, Robin Alexander; Grimm, Alexander; Henneicke, Solveig; Perosa, Valentina; Meuth, Sven; Peters, Oliver Hubertus; Hellmann-Regen, Julian; Preis, Lukas; Priller, Josef; Spruth, Eike Jakob; Schneider, Anja; Fliessbach, Klaus; Wiltfang, Jens; Jessen, Frank; Rostamzadeh, Ayda; Glanz, Wenzel; Schulze, Jan Ben; Schiebler, Sarah Lavinia Florence; Buerger, Katharina; Janowitz, Daniel; Perneczky, Robert; Rauchmann, Boris-Stephan; Teipel, Stefan; Kilimann, Ingo; Laske, Christoph; Munk, Matthias Hans Joachim; Spottke, Annika; Roy-Kluth, Nina; Wagner, Michael; Frommann, Ingo; Lüsebrink-Rindsland, Jann Falk Silvester; Dechent, Peter; Hetzer, Stefan; Scheffler, Klaus; Kleineidam, Luca; Stark, Melina; Schmid, Matthias; Ersözlü, Ersin; Brosseron, Frederic; Ewers, Michael; Schott, Björn H.; Düzel, Emrah; Ziegler, Gabriel; Mattern, Hendrik; Schreiber, Stefanie; Bernal, Jose**

Inferior frontal sulcal hyperintensities on brain MRI are associated with amyloid positivity beyond age - results from the multicentre observational DELCODE study

Diagnostics - Basel : MDPI, Bd. 14 (2024), Heft 9, Artikel 940, insges. 11 S.

[Imp.fact.: 3.0]

**Dörner, Marc; Tyndall, Anthony; Hainc, Nicolin; Känel, Roland; Neumann, Katja; Euler, Sebastian; Schreiber, Frank; Arndt, Philipp; Fuchs, Erelle; Garz, Cornelia; Glanz, Wenzel; Butryn, Michaela; Schulze, Jan Ben; Schiebler, Sarah Lavinia Florence; John, Anna-Charlotte; Hildebrand, Annkatrin; Hofmann, Andreas B.; Machetanz, Lena; Kirchebner, Johannes; Tacik, Pawel; Grimm, Alexander; Jansen, Robin Alexander; Pawlitzki, Marc; Henneicke, Solveig; Bernal, Jose; Perosa, Valentina; Düzel, Emrah; Meuth, Sven; Vielhaber, Stefan; Mattern, Hendrik; Schreiber, Stefanie**

Neuropsychiatric symptoms and lifelong mental activities in cerebral amyloid angiopathy - a cross-sectional study Alzheimer's research & therapy - London : BioMed Central, Bd. 16 (2024), Artikel 196, insges. 11 S.

[Imp.fact.: 7.9]

**Fan, Yuzhe; Bußmann, Alexander; Reuter, Fabian; Bao, Hengzhu; Adami, Stefan; Gordillo, José M.; Adams, Nikolaus; Ohl, Claus-Dieter**

Amplification of supersonic microjets by resonant inertial cavitation-bubble pair

Physical review letters - College Park, Md. : APS, Bd. 132 (2024), Heft 10, insges. 6 S.

[Imp.fact.: 8.6]

**Fang, Rong; Düring, Marco; Bode, Felix J.; Stösser, Sebastian; Meißner, Julius Nicolai; Hermann, Peter; Liman, Thomas; Nolte, Christian H.; Kerti, Lucia; Ikenberg, Benno; Bernkopf, Kathleen; Glanz, Wenzel; Janowitz, Daniel; Wagner, Michael; Neumann, Katja; Speck, Oliver; Düzel, Emrah; Gesierich, Benno; Dewenter, Anna; Spottke, Annika; Waegemann, Karin; Görtler, Michael; Wunderlich, Silke; Zerr, Inga; Petzold, Gabor; Endres, Matthias; Georgakis, Marios K.; Dichgans, Martin**

Risk factors and clinical significance of post-stroke incident ischemic lesions

Alzheimer's and dementia - Hoboken, NJ : Wiley, Bd. 20 (2024), Heft 12, S. 8412-8428

[Imp.fact.: 13.1]

**Fink, Maximillian C.; Pankow, Nora; Watzka, Bianca; Spallek, Markus; Ertl, Bernhard; Schaum, Christian**

Virtuell auf die Kläranlage mit erKlär-VR

KA - Hennef : GFA, Gesellschaft zur Förderung der Abwassertechnik, Bd. 71 (2024), Heft 8, S. 643-649

**Fischer, Lukas; Menzel, Andreas M.**

Magnetic elastomers as specific soft actuators - predicting particular modes of deformation from selected configurations of magnetizable inclusions

Journal of magnetism and magnetic materials - Amsterdam : North-Holland Publ. Co., Bd. 591 (2024), Artikel 171695, insges. 13 S.

[Imp.fact.: 2.5]

**Fischer, Lukas; Menzel, Andreas M.**

Maximized response by structural optimization of soft elastic composite systems

PNAS nexus - Oxford : Oxford University Press, Bd. 3 (2024), Heft 9, insges. 7 S.

[Imp.fact.: 3.0]

**Freiin von Rennenberg, Regina; Nolte, Christian H.; Liman, Thomas; Hellwig, Simon; Riegler, Christoph Paul; Scheitz, Jan Friedrich; Georgakis, Marios K.; Fang, Rong; Bode, Felix J.; Petzold, Gabor; Hermann, Peter; Zerr, Inga; Görtler, Michael; Bernkopf, Kathleen; Wunderlich, Silke; Dichgans, Martin; Endres, Matthias; Speck, Oliver**

High-sensitivity cardiac troponin T and cognitive function over 12 months after stroke - results of the DEMDAS study

Journal of the American Heart Association - New York, NY : Association, Bd. 13 (2024), Heft 6, Artikel e033439, insges. 16 S.

[Imp.fact.: 5.0]

**Gonzalez-Avila, Silvestre Roberto; Zeng, Qingyun; Ohl, Claus-Dieter**

Pressure and wall shear stress from high-speed droplet impact

International journal of multiphase flow - Oxford : Pergamon Press, Bd. 181 (2024), Artikel 104981, insges. 16 S.

[Imp.fact.: 3.6]

**Grümbel, Jona; Goldhahn, Rüdiger; Feneberg, Martin; Oshima, Yuichi; Dubroka, Adam; Ramsteiner, Manfred**

Band gaps and phonons of quasi-bulk rocksalt ScN

Physical review materials - College Park, MD : APS, Bd. 8 (2024), Heft 7, Artikel L071601, insges. 8 S.

[Imp.fact.: 3.1]

**Hagedorn, Sylvia; Kolbe, Tim; Schmidt, Gordon; Bertram, Frank; Netzel, Carsten; Knauer, Arne; Veit, Peter; Christen, Jürgen; Weyers, Markus**

Origin of the parasitic luminescence of 235 nm UVC LEDs grown on different AlN templates

Applied physics letters - Melville, NY : American Inst. of Physics, Bd. 124 (2024), Heft 6, Artikel 063506, insges. 8 S.

[Imp.fact.: 3.7]

**Heidary, Zeinab; Fan, Y.; Mojra, A.; Ohl, Claus-Dieter**

Robust cavitation-based pumping into a capillary

Physics of fluids - [Erscheinungsort nicht ermittelbar]: American Institute of Physics, Bd. 36 (2024), Heft 12, Artikel 123335, insges. 8 S.

[Imp.fact.: 4.1]

**Heidary, Zeinab; Ohl, Claus-Dieter; Mojra, Afsaneh**

Numerical analysis of ultrasound-mediated microbubble interactions in vascular systems - effects on shear stress and  
Physics of fluids - [Erscheinungsort nicht ermittelbar]: American Institute of Physics, Bd. 36 (2024), Heft 8, Artikel 081903, insges. 24 S.  
[Imp.fact.: 4.1]

**Jarosik, Alexander; Nádasi, Hajnalka; Schwidder, Michael; Manabe, Atsutaka; Bremer, Matthias; Klasen-Memmer, Melanie; Eremin, Alexey**

Fluid fibers in true 3D ferroelectric liquids  
Proceedings of the National Academy of Sciences of the United States of America - Washington, DC : National Acad. of Sciences, Bd. 121 (2024), Heft 13, Artikel e2313629121, insges. 8 S.

**Kluth, Elias; Nagashima, Yo; Osawa, Shohei; Hirose, Yasushi; Bläsing, Jürgen; Strittmatter, André; Goldhahn, Rüdiger; Feneberg, Martin**

Blue shift of the absorption onset and bandgap bowing in rutile  $GexSn_{1-x}O_2$   
Applied physics letters - Melville, NY : American Inst. of Physics, Bd. 125 (2024), Heft 12, Artikel 122102, insges. 6 S.

**Knoll, Christoph; Doehler, Juliane; Northall, Alicia; Schreiber, Stefanie; Rotta, Johanna; Mattern, Hendrik; Kühn, Esther**

Age-related differences in human cortical microstructure depend on the distance to the nearest vein  
Brain communications - [Oxford]: Oxford University Press, Bd. 6 (2024), Heft 5, S. 1-17, Artikel fcae321  
[Imp.fact.: 4.1]

**Kowal, Robert; Knull, Lucas; Vogt, Ivan; Hubmann, Max Joris; Düx, Daniel; Hensen, Bennet; Wacker, Frank; Speck, Oliver; Maune, Holger**

Impact of unit cell density on grid and stripe metasurfaces for MRI receive enhancement  
IEEE journal of electromagnetics, RF and microwaves in medicine and biology - New York, NY : IEEE . - 2024, insges. 8 S. ;  
[Online first]  
[Imp.fact.: 3.0]

**Ladd, Mark E.; Quick, Harald H.; Scheffler, Klaus; Speck, Oliver**

Design requirements for human UHF magnets from the perspective of MRI scientists  
Superconductor science and technology - Bristol : IOP Publ., Bd. 37 (2024), Heft 11, insges. 18 S.  
[Imp.fact.: 3.7]

**Ludwig, Mareike; Yi, Yeo-Jin; Lüsebrink-Rindsland, Jann Falk Silvester; Callaghan, Martina F.; Betts, Matthew J.; Yakupov, Renat; Weiskopf, Nikolaus; Dolan, Raymond J.; Düzel, Emrah; Hämmerer, Dorothea**

Functional locus coeruleus imaging to investigate an ageing noradrenergic system  
Communications biology - London : Springer Nature, Bd. 7 (2024), Artikel 777, insges. 13 S.  
[Imp.fact.: 5.2]

**Lutz, Tyler; Menzel, Andreas M.; Daddi-Mossa-Ider, Abdallah**

Internal sites of actuation and activation in thin elastic films and membranes of finite thickness  
Physical review - Woodbury, NY : Inst., Bd. 109 (2024), Heft 5, Artikel 054802, insges. 11 S.  
[Imp.fact.: 2.2]

**Mertens, Stephan**

Domination polynomial of the rook graph  
Journal of integer sequences - [Erscheinungsort nicht ermittelbar]: AT&T, Bd. 27 (2024), Heft 3, Artikel 24.3.7, insges. 10 S.

**Mertens, Stephan**

Domination polynomials of the grid, the cylinder, the torus, and the king graph  
Journal of integer sequences - [Erscheinungsort nicht ermittelbar]: AT&T, Bd. 27 (2024), Heft 7, Artikel 24.7.6, insges. 29 S.

**Mnich, Dominik; Reuter, Fabian; Denner, Fabian; Ohl, Claus-Dieter**

Single cavitation bubble dynamics in a stagnation flow

Journal of fluid mechanics - Cambridge [u.a.]: Cambridge Univ. Press, Bd. 979 (2024), Artikel A18, insges. 24 S.

[Imp.fact.: 4.0]

**Mudzakir, Ahmad; Liebing, Phil; Haak, Edgar; Fischer, Axel; Hilfert, Liane; Goldhahn, Rüdiger; Edelmann, Frank T.**

An unusual phosphide addition reaction of 1,3-dimethyl-1,2,3-benzotriazolium iodide

Inorganic chemistry communications - Amsterdam [u.a.]: Elsevier Science, Bd. 161 (2024), Artikel 111924

[Imp.fact.: 3.8]

**Mur, Jaka; Reuter, Fabian; Agrež, Vid; Petkovšek, Rok; Ohl, Claus-Dieter**

Optic generation and perpetuation of acoustic bubble clusters

Ultrasonics sonochemistry - Amsterdam [u.a.]: Elsevier Science, Bd. 109 (2024), Artikel 107023, insges. 9 S.

[Imp.fact.: 8.7]

**Murad, Ahmad; Baron, Elias; Feneberg, Martin; Baumann, Maximilian; Lehmann, Matthias; Eremin, Alexey**

Polarity in liquid crystals formed by self-assembled umbrella-shaped subphthalocyanine mesogens

ACS applied materials & interfaces / American Chemical Society - Washington, DC : Soc., Bd. 16 (2024), Heft 19, S. 25025-25032

[Imp.fact.: 9.6]

**Müller, Josephin Elisabeth; Zähringer, Tatjana; Watzka, Bianca**

Der zauberhafte x-Würfel - ein Mystery mit Experimenten zur geometrischen Optik und Wellenoptik

Naturwissenschaften im Unterricht. Physik - Seelze : Friedrich Verlag GmbH, Bd. 35 (2024), Heft 199, S. 39-43

**Müller, Patrick; Herzog, Maximilian; Duderstadt, Yves; Kunz, Matthias; Lechner, Katharina; Meyer, Frank; Schmeißer, Alexander; Meißler, Saskia; Ahrens, Dörte; Neumann, Katja; Mattern, Hendrik; Speck, Oliver; Behme, Daniel; Dunay, Ildikò Rita; Seeland, Ute; Schreiber, Stefanie; Braun-Dullaes, Rüdiger**

Kardiovaskuläre Prävention in Sachsen-Anhalt - Notwendigkeit und neue Perspektiven - Cardiovascular prevention in Saxony-Anhalt - necessity and new perspectives

Die Innere Medizin - Berlin : Springer Medizin, Bd. 65 (2024), Heft 11, S. 1137-1146

[Imp.fact.: 0.6]

**Ohl, Siew-Wan; Reese, Hendrik; Ohl, Claus-Dieter**

Cavitation bubble collapse near a rigid wall with an oil layer

International journal of multiphase flow - Oxford : Pergamon Press, Bd. 174 (2024), Artikel 104761, insges. 9 S.

[Imp.fact.: 3.8]

**Ohl, Siew-Wan; Rosselló, Juan Manuel; Fuster, Daniel; Ohl, Claus-Dieter**

Finite amplitude wave propagation through bubbly fluids

International journal of multiphase flow - Oxford : Pergamon Press, Bd. 176 (2024), Artikel 104826, insges. 9 S.

**Oltmer, Jan; Mattern, Hendrik; Beck, Julia; Yakupov, Renat; Greenberg, Steven M.; Zwanenburg, Jaco J. M.; Arts, Tine; Düzel, Emrah; Veluw, Susanne J. van; Schreiber, Stefanie; Perosa, Valentina**

Enlarged perivascular spaces in the basal ganglia are associated with arteries not veins

Journal of cerebral blood flow & metabolism - Thousand Oaks, Calif. : Sage, Bd. 44 (2024), Heft 11, S. 1362-1377

[Imp.fact.: 4.9]

**Petzold, Johannes; Schmitter, Sebastian; Silemek, Berk; Winter, Lukas; Speck, Oliver; Ittermann, Bernd; Seifert, Frank**

Investigation of alternative RF power limit control methods for 0.5T, 1.5T, and 3T parallel transmission cardiac imaging - a simulation study

Magnetic resonance in medicine - New York, NY [u.a.]: Wiley-Liss, Bd. 91 (2024), insges. 17 S. ;

[Online first]

[Imp.fact.: 3.3]

**Pinto, Joana; McGee, Allison; Mattern, Hendrik; Markenroth Bloch, Karin; Haast, Roy A. M.; Küstner, Thomas; Vannesjo, S. Johanna**

ESMRMB 2024 focus topic "MR beyond structures: The dynamic body at different scales"

Magnetic resonance materials in physics, biology and medicine - Heidelberg : Springer, Bd. 37 (2024), Heft 3, S. 319-319

[Imp.fact.: 2.0]

**Puzyrev, Dmitry; Trittel, Torsten; Harth, Kirsten; Stannarius, Ralf**

Cooling of a granular gas mixture in microgravity

npj microgravity - [New York, NY]: Nature Publ. Group, Bd. 10 (2024), Artikel 36, insges. 9 S.

[Imp.fact.: 4.4]

**Reese, Hendrik; Ohl, Claus-Dieter; Rosselló, Juan Manuel**

Cavitation and jetting from shock wave refocusing near convex liquid surfaces

International journal of multiphase flow - Oxford : Pergamon Press, Bd. 175 (2024), Artikel 104822, insges. 5 S.

**Reingruber, Adrien; Caci, Nils; Wessel, Stefan; Richter, Johannes**

Thermodynamics of the spin-12 Heisenberg antiferromagnet on the star lattice

Physical review - Woodbury, NY : Inst., Bd. 109 (2024), Heft 12, Artikel 125120, insges. 13 S.

[Imp.fact.: 3.7]

**Reinken, Henning; Menzel, Andreas M.**

Pattern formation in non-Newtonian active suspensions

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel DY 11.6 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Reinken, Henning; Menzel, Andreas M.**

Vortex pattern stabilization in thin films resulting from shear thickening of active suspensions

Physical review letters - College Park, Md. : APS, Bd. 132 (2024), Heft 13, Artikel 138301, insges. 7 S.

[Imp.fact.: 8.6]

**Ren, Zibo; Xu, Peng; Han, Huan; Ohl, Claus-Dieter; Zuo, Zhigang; Liu, Shuhong**

Removal of surface-attached micro- and nanobubbles by ultrasonic cavitation in microfluidics

Ultrasonics sonochemistry - Amsterdam [u.a.]: Elsevier Science, Bd. 109 (2024), Artikel 107011, insges. 12 S.

[Imp.fact.: 8.7]

**Reuter, Fabian; Mur, Jaka; Petelin, Jaka; Petkovsek, Rok; Ohl, Claus-Dieter**

Shockwave velocimetry using wave-based image processing to measure anisotropic shock emission

Physics of fluids - [Erscheinungsort nicht ermittelbar]: American Institute of Physics, Bd. 36 (2024), Heft 1, Artikel 017127, insges. 10 S.

[Imp.fact.: 4.4]

**Rosselló, Juan Manuel; Izak Ghasemian, Saber; Ohl, Claus-Dieter**

High-speed ultrasound imaging of bubbly flows and shear waves in soft matter

Soft matter - London : Royal Soc. of Chemistry, Bd. 20 (2024), Heft 4, S. 823-836

**Rüling, Florian; Hirankittiwong, Pemika; Alova, Anna; Nádasi, Hajnalka; Chattham, Nattaporn; Bulychev, Alexander; Eremin, Alexey**

Probing cytoplasmic streaming using liquid crystal droplets

Liquid crystals - London [u.a.]: Taylor and Francis . - 2024, insges. 7 S. ;

[Online first]

[Imp.fact.: 2.4]

**Schmidt, Heinz-Jürgen; Richter, Johannes**

Exotic magnetization curves in classical square-kagomé spin lattices

Journal of physics. A, Mathematical and theoretical - Bristol : IOP Publ., Bd. 57 (2024), Heft 18, Artikel 185001, insges. 22 S.

**Schote, David; Winter, Lukas; Kolbitsch, Christoph; Rose, Georg; Speck, Oliver; Kofler, Andreas**

Joint B0 and image reconstruction in low-field MRI by physics-informed deep-learning

IEEE transactions on biomedical engineering / Institute of Electrical and Electronics Engineers - New York, NY : IEEE, Bd. 71 (2024), Heft 10, S. 2842-2853

[Imp.fact.: 4.4]

**Schote, David; Winter, Lukas; Kolbitsch, Christoph; Rose, Georg; Speck, Oliver; Kofler, Andreas**

Joint B0 and image reconstruction in low-field MRI by physics-informed deep-learning

IEEE transactions on biomedical engineering / Institute of Electrical and Electronics Engineers - New York, NY : IEEE, Bd. 71 (2024), Heft 10, S. 2842-2853

[Imp.fact.: 4.4]

**Schreiber, Stefanie; Arndt, Philipp; Morton, Lorena; Garza, Alejandra P.; Müller, Patrick; Neumann, Katja; Mattern, Hendrik; Dörner, Marc; Bernal, Jose; Vielhaber, Stefan; Meuth, Sven; Dunay, Ildikò Rita; Dityatev, Alexander; Henneicke, Solveig**

Immune system activation and cognitive impairment in arterial hypertension

American journal of physiology. Cell physiology - Bethesda, Md. : American Physiological Society, Bd. 327 (2024), Heft 6, S. C1577-C1590

[Imp.fact.: 5.0]

**Schröer, Simon; Düx, Daniel; Löning Caballero, Josef Joaquin; Glandorf, Julian; Gerlach, Thomas; Horstmann, Dominik; Belker, Othmar; Gutt, Moritz; Wacker, Frank; Speck, Oliver; Hensen, Bennet; Gutberlet, Marcel**

Reducing electromagnetic interference in MR thermometry - A comparison of setup configurations for MR-guided microwave ablations

Zeitschrift für medizinische Physik - Amsterdam [u.a.]: Elsevier . - 2024, insges. 10 S.

[Imp.fact.: 2.4]

**Schürmann, Hannes; Bertram, Frank; Schmidt, Gordon; Veit, Peter; August, Olga; Berger, Christoph; Dadgar, Armin; Strittmatter, André; Kullig, Julius; Wiersig, Jan; Gao, Kang; Holmes, Mark; Arakawa, Yasuhiko; Christen, Jürgen**

GaN quantum dots in resonant cavity nanopillars as deep-UV single-photon sources

Physica status solidi. Rapid research letters - Weinheim : Wiley-VCH . - 2024, insges. 8 S. ;

[Online first]

[Imp.fact.: 2.5]

**Sharma, Yatha; Ohl, Claus-Dieter; Rosselló, Juan Manuel**

Nanobubble nucleation by pulsed laser illumination of colloidal gold nanoparticles

Scientific reports - [London]: Springer Nature, Bd. 14 (2024), Artikel 30491, insges. 12 S.

[Imp.fact.: 3.8]

**Sprenger, Alexander; Reinken, Henning; Richter, Thomas; Menzel, Andreas**

Thin elastic films and membranes under rectangular confinement

epl - Les Ulis : EDP Sciences, Bd. 147 (2024), Heft 1\$e17002, insges. 8 S.

[Imp.fact.: 1.8]

**Tan, Beng Hau; Ohl, Claus-Dieter; An, Hongjie**

Atomic wetting of oil droplets into hexagons and stripes

Colloids and surfaces. A, Physicochemical and engineering aspects - Amsterdam [u.a.]: Elsevier Science, Bd. 694 (2024), Artikel 134151, insges. 6 S.

[Imp.fact.: 4.9]

**Trittel, Torsten; Puzyrev, Dmitry; Harth, Kirsten; Stannarius, Ralf**

Rotational and translational motions in a homogeneously cooling granular gas

npj microgravity - [New York, NY]: Nature Publ. Group, Bd. 10 (2024), Artikel 81, insges. 6 S.

[Imp.fact.: 4.4]



**Trittel, Torsten; Puzyrev, Dmitry; Stannarius, Ralf**

Platonic solids bouncing on a vibrating plate

Physical review - Woodbury, NY : Inst., Bd. 109 (2024), Heft 3, Artikel 034903, insges. 12 S.

[Imp.fact.: 2.2]

**Wu, Hao; Jin, Yongzhen; Li, Yuanyuan; Zheng, Hao; Lai, Xiaochen; Ma, Jiaming; Ohl, Claus-Dieter; Yu, Haixia; Li, Dachao**

Exploring viscosity influence mechanisms on coating removal - insights from single cavitation bubble behaviours in low-frequency ultrasonic settings

Ultrasonics sonochemistry - Amsterdam [u.a.]: Elsevier Science, Bd. 104 (2024), Artikel 106810, insges. 10 S.

[Imp.fact.: 8.4]

**Xu, Marshall; Ribeiro, Fernanda L.; Barth, Markus; Bernier, Michaël; Bollmann, Steffen; Chatterjee, Soumick; Cognolato, Francesco; Gulban, Omer F.; Itkyl, Vaibhavi; Liu, Siyu; Mattern, Hendrik; Polimeni, Jonathan R.; Shaw, Thomas B.; Speck, Oliver; Bollmann, Saskia**

VesselBoost - a python toolbox for small blood vessel segmentation in human magnetic resonance angiography data

Aperture Neuro - Organization for Human Brain Mapping . - 2024, Heft 4, insges. 13 S.

**Xu, Marshall; Ribeiro, Fernanda L.; Liu, Siyu; Shaw, Thomas B.; Mattern, Hendrik; Chatterjee, Soumick; Speck, Oliver; Gulban, Omer Faruk; Hartung, Grant; Polimeni, Jonathan R.; Barth, Markus**

Abstract Book 5 - OHBM 2024 Annual Meeting

Aperture Neuro - Organization for Human Brain Mapping, Bd. 4 (2024), Heft Issue Suppl 1, S. 3160-3798

**Yadav, Gaurav; Nirmalkar, Neelkanth; Ohl, Claus-Dieter**

Electrochemically reactive colloidal nanobubbles by water splitting

Journal of colloid and interface science - Amsterdam [u.a.]: Elsevier, Bd. 663 (2024), S. 518-531

[Imp.fact.: 9.9]

**Zeng, Qingyun; Zhang, A-Man; Tan, Beng Hau; An, Hongjie; Ohl, Claus-Dieter**

Jetting enhancement from wall-proximal cavitation bubbles by a distant wall

Journal of fluid mechanics - Cambridge [u.a.]: Cambridge Univ. Press, Bd. 987 (2024), insges. 11 S.

[Imp.fact.: 3.7]

**Zevnik, Jure; Patfoort, Julien; Rosselló, Juan Manuel; Ohl, Claus-Dieter; Dular, Matevž**

Dynamics of a cavitation bubble confined in a thin liquid layer at null Kelvin impulse

Physics of fluids - [Erscheinungsort nicht ermittelbar]: American Institute of Physics, Bd. 36 (2024), Heft 6, Artikel 063340, insges. 21 S.

[Imp.fact.: 4.1]

## NICHT BEGUTACHTETE ZEITSCHRIFTENAUFsätze

**Eremin, Alexey; Nádasi, Hajnalka**

Fascinating world of vector-symmetry nematics - liquid magnets and fluid 3D ferroelectrics

Bunsen-Magazin - Frankfurt am Main : Vorstand der Deutschen Bunsen-Gesellschaft, Bd. 6 (2024), S. 173-174

**Herrmann, Luisa; Ade, Johanna; Kühnel, Anne; Widmann, Annina; Demenescu, Liliana Ramona; Li, Meng; Opel, Nils; Speck, Oliver; Walter, Martin; Colic, Lejla**

Corrigendum to "Cross-sectional study of retrospective self-reported childhood emotional neglect and inhibitory neurometabolite levels in the pregenual anterior cingulate cortex in adult humans" [Neurobiol. Stress, 25 (July 2023), 100556]

Neurobiology of Stress - Amsterdam [u.a.]: Elsevier, Bd. 30 (2024), Artikel 100630, insges. 1 S.

[Imp.fact.: 4.3]

## ARTIKEL IN ZEITSCHRIFT

**Murad, Ahmad; Alaasar, Mohamed; Darweesh, Ahmed F.; Eremin, Alexey B.**

Effect of fullerene doping on electronic and photovoltaic properties of the cubic bicontinuous phase  
Materials advances - Cambridge : Royal Society of Chemistry, Bd. 5 (2024), Heft 15, S. 6205-6209

**Watzka, Bianca; Rabe, Thorid**

Mit Mysterys physikalische Zusammenhänge entdecken - Informationen und Tipps zur Vorbereitung und Durchführung der Mystery-Methode  
Naturwissenschaften im Unterricht. Physik - Seelze : Friedrich Verlag GmbH, Bd. 35 (2024), Heft 199, S. 2-7

## BEGUTACHTETE BUCHBEITRÄGE

**Eremin, Alexey; Jarosik, Alexander; Nádasi, Hajnalka**

Mechanics and fibre formation in ferroelectric nematics  
Proceedings of SPIE - Bellingham, Wash. : SPIE, Bd. 13016 (2024) - (Proceedings of SPIE; volume 13016) ;  
[Konferenz: Liquid Crystals Optics and Photonic Devices, Strasbourg, France, 8-11 April 2024]

**Grom, Daniel; Kullig, Julius; Röntgen, Malte; Klembt, Sebastian; Wiersig, Jan**

Waveguide-coupled microcavities at higher-order non-hermitian degeneracies  
2024 Conference on Lasers and Electro-Optics Pacific Rim (CLEO-PR) - Piscataway, NJ : IEEE, insges. 2 S. ;  
[Konferenz: 2024 Conference on Lasers and Electro-Optics Pacific Rim, CLEO-PR, Incheon, Korea, 04-09 August 2024]

**Kowal, Robert; Hubmann, Max Joris; Knoll, Lucas; Vogt, Ivan; Düx, Daniel; Gutberlet, Marcel; Hensen, Bennet; Wacker, Frank; Speck, Oliver; Maune, Holger**

MRI metasurface enhancements at different clinical field strengths  
2024 IEEE MTT-S International Microwave Biomedical Conference (IMBioC) , 2024 - [Piscataway, NJ]: IEEE, S. 125-127 ;  
[Konferenz: 2024 IEEE MTT-S International Microwave Biomedical Conference, IMBioC, Montreal, QC, Canada, 11-13 June 2024]

**Nádasi, Hajnalka; Eremin, Alexey; Lisjak, Darja; Boštjancic, Patricija; Ludwig, Frank; Küster, Melvin**

Dynamic behaviour in suspensions of magnetic nanoplatelets and their liquid crystalline hybrids  
Proceedings of SPIE - Bellingham, Wash. : SPIE, Bd. 13016 (2024) - (Proceedings of SPIE; volume 13016) ;  
[Konferenz: Liquid Crystals Optics and Photonic Devices, Strasbourg, France, 8-11 April 2024]

**Wiersig, Jan; Kullig, Julius; Grom, Daniel; Klembt, Sebastian**

Unidirectionally coupled microcavities - intuitive and robust construction of high-order exceptional points  
Active Photonic Platforms (APP) 2024 - Bellingham, Washington, USA : SPIE ; Subramania, Ganapathi S.,  
Artikel 1311008 - (Proceedings of SPIE; volume 13110) ;  
[Konferenz: Nanoscience + Engineering, 2024, San Diego, California, United States, 18-23 AUGUST 2024]

## HERAUSGEBERSCHAFTEN

**Watzka, Bianca [HerausgeberIn]; Rabe, Thorid [HerausgeberIn]**

Mysterys

Hannover: Friedrich, 2024, 1 elektronische Ressource (56 Seiten) - (Naturwissenschaften im Unterricht; Physik; Heft 199 = 35. Jahrgang, 2 (2024); Materialien & Methoden)

## NICHT BEGUTACHTETE BUCHBEITRÄGE

### **Fehlinger, Paula; Omarbakiyeva, Yultuz; Krumphals, Ingrid; Watzka, Bianca**

Blickbewegungen beim Identifizieren von Graphen in p-V-Diagrammen

Frühe naturwissenschaftliche Bildung - Gesellschaft für Didaktik der Chemie und Physik : Gesellschaft für Didaktik der Chemie und Physik ; Vorst, Helena, Bd. 44 (2024), S. 742-745 ;

[Tagung: 50. Jahrestagung der Gesellschaft für Didaktik der Chemie und Physik, Hamburg, September 2023]

### **Krumphals, Ingrid; Schwarz, Maria; Plotz, Thomas; Omarbakiyeva, Yultuz; Watzka, Bianca**

Lernendenvorstellungen zu Wind von Primar- bis Oberstufe

Frühe naturwissenschaftliche Bildung - Essen : Gesellschaft für Didaktik der Chemie und Physik ; Vorst, Helena, Bd. 44 (2024), S. 478-481 ;

[Tagung: 50. Jahrestagung der Gesellschaft für Didaktik der Chemie und Physik, Hamburg, September 2023]

### **Watzka, Bianca; Omarbakiyeva, Yultuz; Schwarz, Maria; Krumphals, Ingrid**

Winddarstellungen verstehen im Primarbereich - eine Eye-Tracking-Studie

Frühe naturwissenschaftliche Bildung - Essen : Gesellschaft für Didaktik der Chemie und Physik ; Vorst, Helena, Bd. 44 (2024), S. 482-485 ;

[Tagung: 50. Jahrestagung der Gesellschaft für Didaktik der Chemie und Physik, Hamburg, September 2023]

## ABSTRACTS

### **Akrasirakul, Sorravit; Setakornnukul, Jiraporn; Puangragsa, Utumporn; Sathitwatthanawiro, Chanida; Mattern, Hendrik; Speck, Oliver; Yarach, Uten**

Tikhonov regularization with high signal-to-noise ratio 3 dimensions priors on highly accelerated 4 dimensions body magnetic resonance imaging

Magnetic resonance materials in physics, biology and medicine - Heidelberg : Springer, Bd. 31 (2024), Heft Supplement 1, S. S210-S211, Artikel 125 ;

[Meeting: 2024 ESMRMB 40th Annual Scientific Meeting, Barcelona, 2 - 5 October 2024]

[Imp.fact.: 2.0]

### **Baron, Elias; Goldhahn, Rüdiger; Deppe, Michael; As, Donat J.; Espinoza, Shirly; Zahradnik, Martin; Feneberg, Martin**

Femtosecond pump-probe ellipsometry of degenerately doped cubic GaN

International Workshop on Nitride Semiconductors - O'ahu, Hawai . - 2024 ;

[Workshop: International Workshop on Nitride Semiconductors, IWN 2024, O'ahu, Hawai'i, November 3-8, 2024]

### **Baron, Elias; Goldhahn, Rüdiger; Deppe, Michael; As, Donat J.; Espinoza, Shirly; Zahradník, Martin; Feneberg, Martin**

Time-resolved ellipsometry on degenerately doped cubic GaN

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel HL 1.1 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

### **Baron, Elias; Goldhahn, Rüdiger; Feneberg, Martin**

Highly doped nitrides - correlation between plasma frequencies and band gap shifts

International Workshop on Nitride Semiconductors - O'ahu, Hawai . - 2024 ;

[Workshop: International Workshop on Nitride Semiconductors, IWN 2024, O'ahu, Hawai'i, November 3-8, 2024]

### **Belker, Othmar; Gerlach, Thomas; Hubmann, Max Joris; Müller, Noah; Eisenmann, Marcel; Rose, Gerd; Speck, Oliver; Wacker, Frank; Hensen, Bennet; Gutberlet, Marcel**

Investigating the feasibility of MR-based conductivity measurement during electroporation of multi-conductivity agarose phantom on a clinical 1.5 T MRI

14th International Interventional MRI Symposium - Leipzig . - 2024, S. 86 ;

[Symposium: 14th Interventional MRI Symposium, Annapolis, Maryland, October 17-18, 2024]

**Belker, Othmar; Gerlach, Thomas; Hubmann, Max Joris; Speck, Oliver; Wacker, Frank; Hensen, Bennet; Gutberlet, Marcel**

Treatment monitoring of irreversible electroporation in a potato model with a two-shot CP/CPMG-RARE sequence and spiral sampling

ISMRM & ISMRT Annual Meeting & Exhibition - Concord, CA : International Society for Magnetic Resonance in Medicine . - 2024, Artikel 3659 ;

[Konferenz: ISMRM & ISMRT Annual Meeting & Exhibition, Singapore, 04-09 May 2024]

**Belker, Othmar; Gerlach, Thomas; Krafft, Axel Joachim; Maier, Florian; Requardt, Martin; Horstmann, Dominik; Rose, Gerd; Speck, Oliver; Wacker, Frank; Hensen, Bennet; Gutberlet, Marcel**

First experience with MR thermometry and assessment of the ablation zone in microwave ablation of a bioprotein phantom on a 0.55T scanner

14th International Interventional MRI Symposium - Leipzig . - 2024, S. 17 ;

[Symposium: 14th Interventional MRI Symposium, Annapolis, Maryland, October 17-18, 2024]

**Berger, Christoph; Dadgar, Armin; Strittmatter, André**

Impact of overgrowth conditions on characteristics of tunnel-junction LEDs

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel HL 52.3 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Bruckmann, Christian; Bläsing, Jürgen; Dadgar, Armin; Strittmatter, André**

Local GaAs growth on patterned Si(001) surfaces by Laser-assisted MOVPE

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel O 17.2 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Díaz, Mario; Fuchs, Erelle; Mattern, Hendrik; Behme, Daniel; Duarte, Roberto; Valdes Hernandez, Maria del C.; Wardlaw, Joanna M.; Schreiber, Stefanie; Trujillo, Maria; Bernal Moyano, Jose**

Contrast-agnostic deep-learning-based detection of perivascular spaces in magnetic resonance imaging

Alzheimer's and dementia - Hoboken, NJ : Wiley, Bd. 20 (2024), Heft Suppl. 2, Artikel e088012, insges. 2 S.

[Imp.fact.: 13.1]

**Düx, Daniel Markus; Kowal, Robert; Schröer, Simon; Maune, Holger; Speck, Oliver; Wacker, Frank; Gutberlet, Marcel; Hensen, Bennet**

Advances in musculoskeletal imaging - the potential of wireless metasurface coils

ISMRM & ISMRT Annual Meeting & Exhibition - Concord, CA : International Society for Magnetic Resonance in Medicine . - 2024, Artikel 0483 ;

[Konferenz: ISMRM & ISMRT Annual Meeting & Exhibition, Singapore, 04-09 May 2024]

**Fischer, Lukas; Menzel, Andreas M.**

Higher-order modes of deformation of magnetic gels and elastomers

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel CPP 7.4 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Greczmiel, Luca; Bertram, Frank; Schmidt, Gordon; Veit, Peter; Eisele, Holger; Dempewolf, Anja; Petzold, Silke; Christen, Jürgen; Strittmatter, André; Dadgar, Armin**

Highly spatially resolved investigation of structural and optical properties of a GaN-based p-n-diode

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel HL 44.7 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Grümbel, Jona; Lüttich, Christopher; Bläsing, Jürgen; Dadgar, Armin; Feneberg, Martin; Goldhahn, Rüdiger**

Phases of sputtered Hf<sub>x</sub>Ny: XRD, Ellipsometry and Raman spectroscopy studies

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel HL 1.11 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Gümpel, Jona; Baron, Elias; Bläsing, Jürgen; Hörich, Florian; Dempewolf, Anja; Dadgar, Armin; Goldhahn, Rüdiger; Feneberg, Martin**

Corrosion of ScN heated up to 900 K at ambientlab conditions

International Workshop on Nitride Semiconductors - O'ahu, Hawai . - 2024, Artikel P34 ;

[Workshop: International Workshop on Nitride Semiconductors, IWN 2024, O'ahu, Hawai'i, November 3-8, 2024]

**Harms, Christina; Grümbel, Jona; Goldhahn, Rüdiger; Feneberg, Martin**

Temperature dependent free carrier concentration in GaN:Si

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef :

DPG . - 2024, Artikel HL 36.58 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Hubmann, Max Joris; Kowal, Robert; Orzada, Stephan; Speck, Oliver; Maune, Holger**

Simulation of the transmit performance of 8-channel arrays for 7T head-imaging with a large diameter transmit coil

ESMRMB 2024 - ESMRMB, Artikel 379 ;

[Meeting: 2024 ESMRMB 40th Annual Scientific Meeting, Barcelona, 2 - 5 October 2024]

**Hölzer, Lennart; Kluth, Elias; Goldhahn, Rüdiger; Jeon, Dae-Woo; Akaiwa, Kazuaki; Feneberg, Martin**

Photoluminescence study of corundum-like  $\alpha$ -Ga<sub>2</sub>O<sub>3</sub>

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef :

DPG . - 2024, Artikel HL25.1 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Hörich, Florian; Bläsing, Jürgen; Grümbel, Jona; Feneberg, Martin; Goldhahn, Rüdiger; Dadgar, Armin; Strittmatter, André**

n-type doping of GaN via pulsed sputter epitaxy

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef :

DPG . - 2024, Artikel HL 1.4 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Kluth, Elias; Fay, Michael; Parmenter, Christopher; Roberts, Joseph; Smith, Emily; Stoppiello, Craig; Massabuau, Fabien; Goldhahn, Rüdiger; Feneberg, Martin**

Red shift and amplitude increase in the dielectric function of corundum-like  $\alpha$ -(Ti<sub>x</sub>Ga<sub>1-x</sub>)<sub>2</sub>O<sub>3</sub>

International Workshop on Gallium Oxide and Related Materials - Berlin . - 2024, S. 34, Artikel WEP\_14 ;

[International Workshop on Gallium Oxide and Related Materials, IWGO 2024, Berlin, May 26 - 31, 2024]

**Kluth, Elias; Karg, Alexander; Eickhoff, Martin; Goldhahn, Rüdiger; Feneberg, Martin**

Red shift of the absorption onset in orthorhombic  $\kappa$ -(In<sub>x</sub>Ga<sub>1-x</sub>)<sub>2</sub>O<sub>3</sub> alloys

International Workshop on Gallium Oxide and Related Materials - Berlin . - 2024, S. 23, Artikel MoP\_39 ;

[International Workshop on Gallium Oxide and Related Materials, IWGO 2024, Berlin, May 26 - 31, 2024]

**Kluth, Elias; Karg, Alexander; Eickhoff, Martin; Goldhahn, Rüdiger; Feneberg, Martin**

Red shift of the absorption onset in orthorhombic  $\kappa$ -(In<sub>x</sub>Ga<sub>1-x</sub>)<sub>2</sub>O<sub>3</sub> alloys

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef :

DPG . - 2024, Artikel HL25.2 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Kowal, Robert; Hubmann, Max Joris; Knull, Lucas; Düx, Daniel Markus; Gutberlet, Marcel; Hensen, Bennet; Maier, Florian; Wacker, Frank; Speck, Oliver; Maune, Holger**

Potential of metasurface resonators for low-field MRI systems

ISMRM & ISMRT Annual Meeting & Exhibition - Concord, CA : International Society for Magnetic Resonance in Medicine . - 2024, Artikel 1572 ;

[Konferenz: ISMRM & ISMRT Annual Meeting & Exhibition, Singapore, 04-09 May 2024]

**Kowal, Robert; Knull, Lucas; Hubmann, Max Joris; Vogt, Ivan; Düx, Daniel; Gutberlet, Marcel; Hensen, Bennet; Wacker, Frank; Speck, Oliver; Maune, Holger**

MR-active needle guides with wireless metasurface coils for transperineal prostate interventions

14th International Interventional MRI Symposium - Leipzig . - 2024, S. 28 ;

[Symposium: 14th Interventional MRI Symposium, Annapolis, Maryland, October 17-18, 2024]

**Kullig, Julius; Grom, Daniel; Klembt, Sebastian; Wiersig, Jan**

Higher-order exceptional points in waveguide-coupled microcavities

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel DY 47.6 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Lequy, Theo; Menzel, Andreas M.**

Stochastically driven motion under nonlinear, Coulomb-tanh friction - a basic representation of the consequences of shear thinning

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel DY 41.3 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Lüttich, Christopher; Hörich, Florian; Bläsing, Jürgen; Strittmatter, André; Dadgar, Armin**

HfN as conductive buffer for GaN epitaxy

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel HL 44.11 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Mattern, Hendrik; Einspänner, Eric; Fuchs, Erelle; Schreiber, Stefanie; Behme, Daniel**

Sleepy QSM - pilot study to assess the effect of sleep deprivation on brain homeostasis with 7 T QSM

Magnetic resonance materials in physics, biology and medicine - Heidelberg : Springer, Bd. 37 (2024), Heft Supplement 1, S. S510-S511, Artikel 311

[Imp.fact.: 2.0]

**Mattern, Hendrik; Tung, Yi-Hang; Lüsebrink, Falk; Rose, Georg**

Assessing the potential of 7T and high-performance gradients for high-resolution R2\* mapping in deep gray matter

ISMRM & ISMRT Annual Meeting & Exhibition - Concord, CA : International Society for Magnetic Resonance in Medicine . - 2024, Artikel 2174 ;

[Konferenz: ISMRM & ISMRT Annual Meeting & Exhibition, Singapore, 04-09 May 2024]

**Müller, Patrick; Horndasch, Laslo; Mattern, Hendrik; Neumann, Katja; Cardace, Silvio; Arndt, Philipp; Pfister, Malte; Groscheck, Thomas; Vielhaber, Stefan; Meuth, Sven; Behme, Daniel; Schmeißer, Alexander; Schreiber, Stefanie; Braun-Dullaues, Rüdiger**

Cerebral small vessel disease in patients with heart failure with preserved ejection fraction (HFpEF) - a pilot study

Clinical research in cardiology - Berlin : Springer, Bd. 113 (2024), Heft 8, S. 1285, Artikel p895

[Imp.fact.: 3.8]

**Müller, Patrick; Horndasch, Laslo; Neumann, Katja; Mattern, Hendrik; Cardace, Silvio; Arndt, Philipp; Pfister, Malte; Groscheck, Thomas; Vielhaber, Stefan; Meuth, Sven; Dunay, Ildikò Rita; Schmeißer, Alexander; Behme, Daniel; Schreiber, Stefanie; Braun-Dullaues, Rüdiger**

Cerebral small vessel disease mediates the effect of arterial stiffness on cognitive decline in patients with heart failure with preserved ejection fraction

Journal of hypertension - London : Lippincott, Williams & Wilkins, Bd. 42 (2024), Heft Suppl 1, S. e92-e93

[Imp.fact.: 3.3]

**Müller, Patrick; Neumann, Katja; Horndasch, Laslo; Mattern, Hendrik; Groscheck, Thomas; Meuth, Sven; Schmeißer, Alexander; Behme, Daniel; Schreiber, Stefanie; Braun-Dullaues, Rüdiger**

Cerebral small vessel disease as a mediator between heart failure with preserved ejection fraction and cognitive decline

European stroke journal - London : Sage Publishing, Bd. 9 (2024), Heft 1S, S. 624, Artikel 1749

[Imp.fact.: 5.9]

**Müller, Patrick; Neumann, Katja; Laslo, Horndasch; Mattern, Hendrik; Groscheck, Thomas; Meuth, Sven; Schmeißer, Alexander; Behme, Daniel; Schreiber, Stefanie; Braun-Dullaues, Rüdiger**  
Cerebral small Vessel disease as a mediator between heart failure with preserved ejection fraction and cognitive decline

10th European Stroke Organisation Conference - Basel . - 2024, Artikel 1749 ;

[Konferenz: 10th European Stroke Organisation Conference, Basel, 15-17 May 2024]

**Ratcliff, Laura; Oshima, Takayoshi; Nippert, Felix; Janzen, Benjamin; Kluth, Elias; Goldhahn, Rüdiger; Feneberg, Martin; Mazzolini, Piero; Bierwagen, Oliver; Wouters, Charlotte; Nofal, Musbah; Albrecht, Martin; Swallow, Jack; Jones, Leanne; Thakur, Pardeep; Lee, Tien-Lin; Kalha, Curran; Schlueter, Christoph; Veal, Tim; Varley, Joel; Wagner, Markus; Regoutz, Anna**

Tackling disorder in  $\gamma$ -Ga<sub>2</sub>O<sub>3</sub>

International Workshop on Gallium Oxide and Related Materials - Berlin . - 2024, S. 26, Artikel TuA2\_1 ;

[International Workshop on Gallium Oxide and Related Materials, IWGO 2024, Berlin, May 26 - 31, 2024]

**Rose, Jonas; Baron, Elias; Goldhahn, Rüdiger; Zscherp, Mario; Jentsch, Silas A.; Chatterjee, Sangam; Schörmann, Jörg; Feneberg, Martin**

Optical properties of cubic In<sub>x</sub>Ga<sub>1-x</sub>N thin films

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel HL 1.2 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Rose, Jonas; Baron, Elias; Zscherp, Elias; Jentsch, Silas; Goldhahn, Rüdiger; Chatterjee, Sangam; Schörmann, Jörg; Feneberg, Martin**

Optical properties of cubic In<sub>x</sub>Ga<sub>1-x</sub>N (0 ≤ x ≤ 1)

International Workshop on Nitride Semiconductors - O'ahu, Hawai . - 2024, Artikel P39 ;

[Workshop: International Workshop on Nitride Semiconductors, IWN 2024, O'ahu, Hawai'i, November 3-8, 2024]

**Seibt, Janis; Speck, Oliver**

Limits of prospective geometric slice selection correction in off-center MRI

ESMRMB 2024 - ESMRMB, Artikel 222 ;

[Meeting: 2024 ESMRMB 40th Annual Scientific Meeting, Barcelona, 2 - 5 October 2024]

**Sprenger, Alexander R.; Menzel, Andreas M.**

Microswimming under a wedge-shaped confinement

Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef : DPG . - 2024, Artikel CPP 11.10 ;

[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

**Stoll, Susanne; Lüsebrink-Rindsland, Jann Falk Silvester; Schwarzkopf, D. Samuel; Mattern, Hendrik; Liu, Peng; Noelle, Johanna; Kühn, Esther**

Modeling 2D population receptive fields of the fingertips in human primary somatosensory cortex

Brain in Depth (BID) Conference 2024 / Brain in Depth Conference , 2024 - Tübingen ; Kühn, Esther \*1983-\*, Artikel 106, insges. 1 S.

**Tung, Yi-Hang; Seeliger, Erdmann; Mattern, Hendrik; Rose, Georg**

High b-value in vivo whole-brain diffusion MRI at 7T with a high-performance gradient system

ISMRM & ISMRT Annual Meeting & Exhibition - Concord, CA : International Society for Magnetic Resonance in Medicine . - 2024, Artikel 5103 ;

[Konferenz: ISMRM & ISMRT Annual Meeting & Exhibition, Singapore, 04-09 May 2024]

**Velasquez Vides, Jose Raul; Herrmann, Carl J. J.; Gladytz, Thomas; Shalika, Shahriar; Millward, Jason M.; Waiczies, Sonia; Seeliger, Erdmann; Mattern, Hendrik; Rose, Georg; Niendorf, Thoralf**

Simultaneous and respiratory motion-synchronized T2 and T2\* mapping of the human kidneys

ISMRM & ISMRT Annual Meeting & Exhibition - Concord, CA : International Society for Magnetic Resonance in Medicine . - 2024, Artikel 2754 ;

[Konferenz: ISMRM & ISMRT Annual Meeting & Exhibition, Singapore, 04-09 May 2024]

**Vockert, Niklas; Lümke, Lilli; Yi, Yeo-Jin; Garcia-Garcia, Berta; Behrenbruch, Niklas; Marquardt, Jonas; Hayek, Dayana; Mattern, Hendrik; Hämmerer, Dorothea; Diersch, Nadine; Kühn, Esther; Schreiber, Stefanie; Maass, Anne**

Examining hippocampal vessel distances in relation to cognition and brain structure in young adults  
Aperture Neuro - Organization for Human Brain Mapping, Bd. 4 (2024), Heft Suppl. 1, S. 3709-3710, Artikel 2282

**Wiersig, Jan**

Response strength of general non-Hermitian systems at exceptional points  
META 2024 Toyama - Japan / International Conference on Metamaterials, Photonic Crystals and Plasmonics ,  
2024 - [Erscheinungsort nicht ermittelbar]: [Verlag nicht ermittelbar]; Takahara, Junichi, S. 138 ;  
[Konferenz: 14th International Conference on Metamaterials, Photonic Crystals and Plasmonics, META 2024,  
Toyama, Japan, July 16-19, 2024]

**Wolf, Stefan; Grümbel, Jona; Oshima, Yuichi; Lüttich, Christopher; Hörich, Florian; Dadgar, Armin; Feneberg, Martin; Goldhahn, Rüdiger**

Multiphonon Raman scattering in rocksalt ScN  
Verhandlungen der Deutschen Physikalischen Gesellschaft / Deutsche Physikalische Gesellschaft - Bad Honnef :  
DPG . - 2024, Artikel HL 1.9 ;  
[Tagung: Verhandlungen der Deutschen Physikalischen Gesellschaft, Berlin, 17.-22. März 2024]

## DISSERTATIONEN

**Kluth, Elias; Feneberg, Martin [AkademischeR BetreuerIn]**

Optische Eigenschaften von Gruppe-III Sesquioxiden und deren Legierungen  
Magdeburg: Universitätsbibliothek, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für  
Naturwissenschaften 2024, 1 Online-Ressource (159 Seiten, 142,2 MB) ;  
[Literaturverzeichnis: Seite 137-159][Literaturverzeichnis: Seite 137-159]

**Sarasaen, Chompunuch; Rose, Georg [AkademischeR BetreuerIn]; Speck, Oliver [AkademischeR BetreuerIn]**

Incorporation of prior knowledge into dynamic MRI reconstruction  
Magdeburg: Universitätsbibliothek, Dissertation Otto-von-Guericke-Universität Magdeburg, Fakultät für  
Elektrotechnik und Informationstechnik 2024, 1 Online-Ressource (xix, 129 Seiten, 28,98 MB) ;  
[Literaturverzeichnis: Seite 101-122][Literaturverzeichnis: Seite 101-122]