



FAKULTÄT FÜR  
NATURWISSENSCHAFTEN

# Publikationsbericht 2015

# FAKULTÄT FÜR NATURWISSENSCHAFTEN

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## 1. Leitung

Dekanin  
Prof. Dr. rer. nat. habil. Anna Katharina Braun  
Prodekan  
Prof. Dr. phil. Stefan Pollmann  
Studiendekan  
Prof. Dr. rer. nat. habil. Jan Wiersig

## 2. Veröffentlichungen

### **Habilitationen**

#### **Budinger, Eike; Ohl, Frank W. [Gutachter]**

Anatomie der neuronalen Verbindungen des Hörkortex zur Verarbeitung von multisensorischen Informationen und zur Gedächtnisbildung

In: Magdeburg, Univ., Fak. für Naturwiss., Habil.-Schr., 2015; 18 S.: graph. Darst.; 21 cm;

### **Dissertationen**

#### **Al-Sammak, Fadi F.; Wex, Thomas [Gutachter]**

The characterization of mucosal immune response in healthy volunteers vaccinated against *Helicobacter pylori*-derived antigens and challenged with CagA+ Strain. - Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015; XIV, 200 S.: graph.

Darst.; 30 cm;

#### **Buschschulte, Antje; Hopf, Jens-Max [Gutachter]**

Reward- and attention-related determinants of color selection in human visual cortex. - Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015; XII, 130 S.: Ill., graph. Darst.;

#### **Fischer, Adrian Georg; Ullsperger, Markus [Gutachter]**

Serotonergic modulation of action monitoring and cognitive control. - Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015; 164 S.: graph. Darst.;

#### **Haas, Michael**

Analysis of functional impairments of the human P2Y<sub>11</sub> nucleotide receptor with the alanine-87 - threonine mutation, and development of novel agonists specific for the human P2Y<sub>11</sub> and P2Y<sub>6</sub> receptors. - Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015; 90 Bl.: graph. Darst.;

#### **Heeren, Wiebke; Verhey, Jesko L. [Gutachter]**

Processing of relevant characteristics of complex sounds in normal-hearing listeners and cochlear implant users. - Zugl.: Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015; Berlin: Logos-Verlag; V, 214 S., S. VII - XXXVIII: Ill., graph. Darst.; 21 cm, ISBN 3832539972;

#### **Helbing, Cornelia**

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**Höche, Nicole; Dieterich, Daniela [Gutachter]**

In vitro und in vivo Analyse des synaptischen Fucosyl-Proteoms der Ratte. - Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015, 2014; VII, 150 Bl.: graph. Darst.;

**Kohrs, Christin; Ohl, Frank W. [Gutachter]**

Kernspintomographische Untersuchung zur Bedeutung von Rückmeldungen in der Mensch-Computer-Interaktion. - Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015; IV, 131 Bl.: graph. Darst.;

**Nordmann, Caroline**

Ca<sup>2+</sup>-unabhängige Phospholipase A<sub>2</sub> (iPLA<sub>2</sub>) und die Kontrolle der Produktion von reaktiven Sauerstoffspezies in Astrozyten und Hirnmitochondrien. - Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015, 2014; IX, 104 Bl.: graph. Darst.;

**Psotta, Laura; Leßmann, Volkmar [Gutachter]**

Einfluss der chronischen Reduktion des endogenen Neutrophins BDNF auf kognitive Prozesse im APP/PS1 Alzheimer-Mausmodell. - Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015, 2014; 137 S.: graph. Darst.;

**Saldeitis, Katja; Ohl, Frank [Gutachter]**

Thalamocortical and corticothalamic interactions of the auditory cortex in the Mongolian gerbil (*Meriones unguiculatus*). - Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015; VIII, 154 Bl., Bl. VIII-XLV: graph. Darst.;

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**Schwitlick, Christina**

The influence of specific mitochondrial polymorphisms on the  $\alpha$ -synuclein-induced pathology in a mouse model of Parkinson's disease. - Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015; 104 Bl.: graph. Darst.; 30 cm;

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**Vellage, Anne-Katrin**

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## 1. Leitung

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## 2. Veröffentlichungen

### **Begutachtete Zeitschriftenaufsätze**

#### **Becker, Volker; Kassner, Klaus**

Protocol-independent granular temperature supported by numerical simulations

In: Physical review / E. - College Park, Md: APS; Vol. 92.2015, 5, Art. 052201, insgesamt 15 S.;

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#### **Bishop, R. F.; Li, P. H. Y.; Götze, Oliver; Richter, Johannes; Campbell, C. E.**

Frustrated Heisenberg antiferromagnet on the honeycomb lattice - spin gap and low-energy parameters

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#### **Cao, Hui; Wiersig, Jan**

Dielectric microcavities - model systems for wave chaos and non-Hermitian physics

In: Reviews of modern physics. - College Park, Md: APS, Bd. 87.2015, 1, S. 61-111;

[Imp.fact.: 42,860]

#### **Derzhko, Oleg; Richter, Johannes**

Strongly correlated flat-band systems - the route from Heisenberg spins to Hubbard electrons

In: International journal of modern physics / B. - Singapore [u.a.]: World Scientific Publ; Vol. 29.2015, 12, Art. 1530007, insgesamt 10 S.;

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#### **Götze, Oliver; Richter, Johannes**

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#### **Götze, Oliver; Richter, Johannes; Zinke, Ronald; Farnell, D. J. J.**

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#### **Kassner, Klaus**

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**Kurnatowski, Martin von; Kassner, Klaus**

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In: Physical review applied. - College Park, Md. [u.a.]: American Physical Society; Vol. 4.2015, 4, Art. 044018, insgesamt 13 S.;

**Mertens, Stephan**

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Stable roommates problem with random preferences

In: Journal of statistical mechanics: theory and experiment. - Bristol: IOP Publ; 2015, Art. P01020, insgesamt 17 S.;

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**Müller, Patrick; Richter, Johannes; Hauser, Andreas; Ihle, Dieter**

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**Nishimoto, Satoshi; Drechsler, Stefan-Ludwig; Kuzian, Roman; Richter, Johannes; Brink, Jeroen van den**

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Frustrated diamond-chain quantum XXZ Heisenberg antiferromagnet in a magnetic field

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High-temperature expansion for frustrated magnets - application to the J1-J2 model on the BCC lattice  
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The spin-1/2 square-lattice J1-J2 mode I: the spin-gap issue  
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[Imp.fact.: 3,515]

**Buchbeiträge**

**Bürger, Vincent; Schlauch, Eva; Becker, Volker; Seto, Ryohei; Behr, Marek; Briesen, Heiko**

Simulating the restructuring of colloidal aggregates  
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Selection theory of dendritic growth in complex systems. - Magdeburg, Univ., Fak. für Naturwiss., Diss., 2015, 2014; 173  
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Prof. Dr. rer. nat. habil. Ralf Stannarius  
Vertr.-Prof. PD Dr. rer. nat. André Strittmatter  
Prof.in Dr.in rer. nat. habil. Dana Zöllner (Dorothea-Erxleben-Gastprofessur)  
Dr. rer. nat. Peter Veit  
Dr. rer. nat. Hartmut Witte

## 2. Veröffentlichungen

### ***Begutachtete Zeitschriftenaufsätze***

**Abd Hamid, Aini Ismafairus; Gall, Carolin; Speck, Oliver; Antal, Andrea; Sabel, Bernhard A.**

Effects of alternating current stimulation on the healthy and diseased brain  
In: Frontiers in neuroscience. - Lausanne: Frontiers Research Foundation; Vol. 9.2015, Art. 391, insgesamt 13 S.;  
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**Abd Hamid, Aini Ismafairus; Speck, Oliver; Hoffmann, Michael B.**

Quantitative assessment of visual cortex function with fMRI at 7 Tesla-test-retest variability  
In: Frontiers in human neuroscience. - Lausanne: Frontiers Research Foundation; Bd. 9.2015, Art.-Nr.477, insges. 11 S.;  
[Imp.fact.: 3,626]

**Achtstein, Alexander W.; Ballester, Ana; Movilla, Jose L.; Hennig, Jonas; Climente, Juan I.; Prudnikau, Anatol;  
Antanovich, Artsiom; Scott, Riccardo; Artemyev, Mikhail V.; Planelles, Josep; Woggon, Ulrike**

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luminescence excitation spectrum  
In: The journal of physical chemistry <Washington, DC> / C. - Washington, DC: Soc, Bd. 119.2015, 2, S. 1260-1267;  
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**Berger, Christoph; Dadgar, Armin; Bläsing, Jürgen; Lesnik, Andreas; Veit, Peter; Schmidt, Gordon; Hempel, Thomas;  
Christen, Jürgen; Krost, Alois; Strittmatter, André**

Growth of AlInN/GaN distributed Bragg reflectors with improved interface quality  
In: Journal of crystal growth. - Amsterdam [u.a.]: Elsevier, Bd. 414.2015, S. 105-109;  
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**Bokov, P. Yu.; Brazzini, T.; Romero, M. F.; Calle, F.; Feneberg, Martin; Goldhahn, Rüdiger**

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[Imp.fact.: 2,190]

**Chernysheva, E.; Ga evi , Ž.; García-Lepetit, N.; Van Der Meulen, H. P.; Müller, M.; Bertram, Frank; Veit, Peter; Torres-Pardo, A.; González Calbet, J. M.; Christen, Jürgen; Calleja, E.; Calleja, J. M.; Lazi , S.**

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In: epl: a letters journal exploring the frontiers of physics. - Les Ulis: EDP Sciences, Bd. 111.2015, 2, insges. 7 S.;

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**Dadgar, Armin**

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In: Physica status solidi / B. - Weinheim: Wiley-VCH, Bd. 252.2015, 5, S. 1063-1068;

[Imp.fact.: 1,605]

**Dähmlow, Patricia; Müller, Stefan C.**

Nonlinear effects of electric fields in the Belousov-Zhabotinsky reaction dissolved in a microemulsion

In: Chaos: an interdisciplinary journal of nonlinear science. - Woodbury, NY: American Institute of Physics; Vol. 25.2015,

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**Dölle, Sarah**

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In: Liquid crystals today: the newsletter of the International Liquid Crystal Society. - London [u.a.]: Taylor and Francis,

Bd. 24.2015, 4, S. 123-126;

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The separation of Gln and Glu in STEAM - a comparison study using short and long TEs/TMs at 3 and 7 T

In: Magnetic resonance materials in physics, biology and medicine: (MAGMA); the official journal of the European

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**Eremin, Alexey; Hirankittiwong, Pemika; Chattham, Nattaporn; Nádasi, Hajnalka; Stannarius, Ralf; Limtrakul, Jumras; Haba, Osamu; Yonetake, Koichiro; Takezoe, Hideo**

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**Feneberg, Martin; Winkler, Michael; Klamsner, Juliane; Stellmach, Joachim; Frentrup, Martin; Ploch, Simon; Mehnke, Frank; Wernicke, Tim; Kneissl, Michael; Goldhahn, Rüdiger**

Anisotropic optical properties of semipolar AlGaIn layers grown on m-plane sapphire



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[Imp.fact.: 3,515]

**Finger, Tilo; Schröter, Matthias; Stannarius, Ralf**

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In: New journal of physics: the open-access journal for physics. - [Bad Honnef]: Dt. Physikalische Ges; Vol. 17.2015, 9,  
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[Imp.fact.: 3,558]

**Friebe, Björn; Wollrab, Astrid; Thormann, Markus; Fischbach, Katharina; Ricke, Jens; Grueschow, Marcus; Kropf, Siegfried; Fischbach, Frank; Speck, Oliver**

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in Medicine. - New York, NY: Wiley-Liss, Bd. 41.2015, 6, S. 1675-1681;

[Imp.fact.: 3,210]

**Gridneva, E.; Richter, E.; Feneberg, Martin; Weyers, M.; Goldhahn, Rüdiger; Tränkle, G.**

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In: Physica status solidi / B. - Weinheim: Wiley-VCH, Bd. 252.2015, 5, S. 1180-1188;

[Imp.fact.: 1,605]

**Hafiz, Shopan; Zhang, Fan; Monavarian, Morteza; Avrutin, Vitaliy; Morkoç, Hadis; Özgür, Ümit; Metzner, Sebastian; Bertram, Frank; Christen, Jürgen; Gil, Bernard**

Determination of carrier diffusion length in GaN

In: Journal of applied physics: AIP's archival journal for significant new results in applied physics. - Melville, NY:  
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**Harth, Kirsten; Mauney, A.; Stannarius, Ralf**

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[Imp.fact.: 2,326]

**Harth, Kirsten; Shepherd, Larissa M.; Honaker, James; Stannarius, Ralf**

Dynamic interface tension of a smectic liquid crystal in anionic surfactant solutions

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[Imp.fact.: 1,358]

**Hennig, Jonas; Dadgar, Armin; Witte, Hartmut; Bläsing, Jürgen; Lesnik, Andreas; Strittmatter, André; Krost, Alois**

Enhanced sheet carrier densities in polarization controlled AlInN/AlN/GaN/InGaN field-effect transistor on Si (111)

In: AIP Advances. - New York, NY: American Inst. of Physics; Vol. 5.2015, 7, Art. 077146, insgesamt 9 S.;

[Imp.fact.: 1,524]

**Hennig, Jonas; Dadgar, Armin; Witte, Hartmut; Bläsing, Jürgen; Lesnik, Andreas; Strittmatter, André; Krost, Alois**

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**Hupfeld, Sebastian; Huch, Nicolas; Speck, Oliver**

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**Kaganskiy, Arseniy; Gschrey, Manuel; Schlehahn, Alexander; Schmidt, Ronny; Schulze, Jan-Hindrik; Heindel, Tobias; Strittmatter, André; Rodt, Sven; Reitzenstein, Stephan**

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- [S.I.]: American Institute of Physics; Vol. 86.2015, 7, Art. 073903, insgesamt 6 S.;

[Imp.fact.: 1,614]

**Kalkofen, Bodo; Amusan, Akinwumi A.; Bukhari, Muhammad S. K.; Garke, Bernd; Lisker, Marco; Gargouri, Hassan; Burte, Edmund P.**

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In: Journal of vacuum science & technology / A. - New York, NY: Inst; Vol. 33.2015, 3, Art.031512, insgesamt 12 S.;

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**Kemper, R. M.; Veit, Peter; Mietze, C.; Dempewolf, Anja; Wecker, T.; Bertram, Frank; Christen, Jürgen; Lindner, J. K. N.; As, D. J.**

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In: Physica status solidi / C. - Berlin: Wiley-VCH, Bd. 12.2015, 4/5, S. 469-472;

**Mattern, Hendrik; Godenschweger, Frank; Sciarra, Alessandro; Stucht, Daniel; Speck, Oliver**

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## 1. Leitung

Prof. Dr. Markus Ullsperger

## 2. Veröffentlichungen

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## 1. Leitung

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## 2. Veröffentlichungen

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