

# Literaturverzeichnis

- [1] Paul Beard. Biomedical photoacoustic imaging. *Interface Focus*, 1(4):602–631, 2011.
- [2] G. Bison, N. Castagna, A. Hofer, P. Knowles, J.-L. Schenker, M. Kasprzak, H. Saudan, and A. Weis. A room temperature 19-channel magnetic field mapping device for cardiac signals. *Applied Physics Letters*, 95(17):173701, 2009. doi: 10.1063/1.3255041. URL <http://link.aip.org/link/?APL/95/173701/1>.
- [3] F. Bloch. Nuclear induction. *Phys. Rev.*, 70:460–485, 1946.
- [4] Julio A Chalela, Chelsea S Kidwell, Lauren M Nentwich, Marie Luby, John A Butman, Andrew M Demchuk, Michael D Hill, Nicholas Patronas, Lawrence Latour, and Steven Warach. Magnetic resonance imaging and computed tomography in emergency assessment of patients with suspected acute stroke: a prospective comparison. *Lancet*, 369:293–298, 2007.
- [5] Steven Chu. Laser trapping of neutral particles. *Scientific American*, February 1992:49–54, 1992.
- [6] Christopher M. Clark, Julie A. Schneider, Barry J. Bedell, Thomas G. Beach, Warren B. Bilker, Mark A. Mintun, Michael J. Pontecorvo, Franz Hefti, Alan P. Carpenter, Matthew L. Flitter, Michael J. Krautkramer, Hank F. Kung, R. Edward Coleman, P. Murali Doraiswamy, Adam S. Fleisher, Marwan N. Sabbagh, Carl H. Sadowsky, Eric M. Reiman, Simone P. Zehntner, and Daniel M. Skovronsky. Use of florbetapir-pet for imaging -amyloid pathology. *JAMA*, 305(3):275–283, 2011.
- [7] Young IR Clow H. Britain’s brains produce first nmr scans. *New Scientist*, 80:588, 1978.
- [8] Olaf Dössel. *Bildgebende Verfahren in der Medizin*. Springer, 2000.
- [9] Daniel S. Elson, Rui Li, Christopher Dunsby, Robert Eckersley, and Meng-Xing Tang. Ultrasound-mediated optical tomography: a review of current methods. *Interface Focus*, 1(4):632–648, 2011.
- [10] Claudia Errico, Juliette Pierre, Sophie Pezet, Yann Desailly, Zsolt Lenkei, Olivier Couture, and Mickael Tanter. Ultrafast ultrasound localization microscopy for deep super-resolution vascular imaging. *Nature*, 527(7579):499–502, 2015.
- [11] Zhiping Feng, Weiting Zhang, Jianmin Xu, Carole Gauron, Bertrand Ducos, Sophie Vriz, Michel Volovitch, Ludovic Jullien, Shimon Weiss, and David Bensimon. Optical control and study of biological processes at the single-cell level in a live organism. *Reports on Progress in Physics*, 76(7):072601, 2013.
- [12] B. J. Garrison and R. Srinivasan. Ablative photodecomposition of polymers. *J. Vac. Sci. Technol. A*, 3:746–748, 1985.
- [13] S. K. Gayen and R. R. Alfano. Sensing lesions in tissues with light. *Optics Express*, 4:475–480, 1999.
- [14] Bernhard Gleich and Jurgen Weizenecker. Tomographic imaging using the nonlinear response of magnetic particles. *Nature*, 435(7046):1214–1217, 2005.
- [15] Jochen Guck, Revathi Ananthkrishnan, Hamid Mahmood, Tess J. Moon, C. Casey Cunningham, and Josef Kaes. The optical stretcher: A novel laser tool to micromanipulate cells. *Biophysical J.*, 81:767–784, 2001.

- [16] Matti Hämäläinen, Riitta Hari, Risto J. Ilmoniemi, Jukka Knuutila, and Olli V. Lounasmaa. Magnetoencephalography - theory, instrumentation, and applications to noninvasive studies of the working human brain. *Rev. Mod. Phys.*, 65:413–497, 1993.
- [17] Song-I Han, Siegfried Stapf, and Bernhard Bluemich. Nmr imaging of falling water drops. *Phys. Rev. Lett.*, 87:144501 – 1–4, 2001.
- [18] Stefan W. Hell and Jan Wichmann. Breaking the diffraction resolution limit by stimulated emission: stimulated-emission-depletion fluorescence microscopy. *Opt. Lett.*, 19(11):780–782, 1994.
- [19] K Jacobson, ED Sheets, and R Simson. Revisiting the fluid mosaic model of membranes. *Science*, 268(5216):1441–1442, 1995.
- [20] Ch. Kittel. *Einführung in die Festkörperphysik*. R. Oldenburg, Muenchen, 1996.
- [21] Britt Kunnen, Callum Macdonald, Alexander Doronin, Steven Jacques, Michael Eccles, and Igor Meglinski. Application of circularly polarized light for non-invasive diagnosis of cancerous tissues and turbid tissue-like scattering media. *J. Biophotonics*, 8(4):317–323, 2015. ISSN 1864-0648.
- [22] Franziska Lautenschläger, Stephan Paschke, Stefan Schinkinger, Arlette Bruel, Michael Beil, and Jochen Guck. The regulatory role of cell mechanics for migration of differentiating myeloid cells. *Proc Natl Acad Sci*, 106:15696–15701, 2009.
- [23] P.C. Lauterbur. Image formation by induced local interactions: example employing nuclear magnetic resonance. *Nature*, 242:190–191, 1973.
- [24] Zhiwei Li, Bahman Anvari, Masayoshi Takashima, Peter Brecht, Jorge H. Torres, and William E. Brownell. Membrane tether formation from outer hair cells with optical tweezers. *Biophysical J.*, 82:1386–1395, 2002.
- [25] Berenike Maier. Wie Gene wandern. *Physik Journal*, 11(Okt.12):33–38, 2012.
- [26] Masahiro Maruyama, Hitoshi Shimada, Tetsuya Sahara, Hitoshi Shinotoh, Bin Ji, Jun Maeda, Ming-Rong Zhang, JohnQ. Trojanowski, VirginiaM.-Y. Lee, Maiko Ono, Kazuto Masamoto, Harumasa Takano, Naruhiko Sahara, Nobuhisa Iwata, Nobuyuki Okamura, Shozo Furumoto, Yukitsuka Kudo, Qing Chang, TakaoMiC. Saido, Akihiko Takashima, Jada Lewis, Ming-Kuei Jang, Ichio Aoki, Hiroshi Ito, and Makoto Higuchi. Imaging of tau pathology in a tauopathy mouse model and in alzheimer patients compared to normal controls. *Neuron*, 79(6):1094 – 1108, 2013.
- [27] Kohei Mizuno, Juntaro Ishii, Hideo Kishida, Yuhei Hayamizu, Satoshi Yasuda, Don N Futaba, Motoo Yumura, and Kenji Hata. A black body absorber from vertically aligned single-walled carbon nanotubes. *Proceedings of the National Academy of Sciences of the United States of America*, 106(15):6044–6047, 2009. doi: 10.1073/pnas.0900155106. URL <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2669394/>.
- [28] Markolf H. Niemz. *Laser-Tissue Interactions*. Springer, 2004.
- [29] F. Pfeiffer, M. Bech, O. Bunk, P. Kraft, E. F. Eikenberry, Ch. Bronnimann, C. Grunzweig, and C. David. Hard-x-ray dark-field imaging using a grating interferometer. *Nat Mater*, 7(2):134–137, 2008.
- [30] Franz Pfeiffer, Timm Weitkamp, Oliver Bunk, and Christian David. Phase retrieval and differential phase-contrast imaging with low-brilliance x-ray sources. *Nat Phys*, 2(4):258–261, 2006.
- [31] Thorsten Pieper. *Diffusion of fluorescent mo-*

- lecules in micro- and nanostructured environments*. PhD thesis, TuDo, 2007.
- [32] Eva Rittweger, Kyu Young Han, Scott E. Irvine, Christian Eggeling, and Stefan W. Hell. Sted microscopy reveals crystal colour centres with nanometric resolution. *Nat Photon*, 3(3): 144–147, 2009.
- [33] P. B. Roemer, W. A. Edelstein, C. E. Hayes, S. P. Souza, and O. M. Mueller. The nmr phased array. *Magnetic Resonance in Medicine*, 16(2):192–225, 1990.
- [34] L. Rondin, J.-P. Tetienne, P. Spinicelli, C. Dal Savio, K. Karrai, G. Dantelle, A. Thiaville, S. Rohart, J.-F. Roch, and V. Jacques. Nanoscale magnetic field mapping with a single spin scanning probe magnetometer. *Applied Physics Letters*, 100(15):153118, 2012.
- [35] Emine U. Saritas, Patrick W. Goodwill, Laura R. Croft, Justin J. Konkle, Kuan Lu, Bo Zheng, and Steven M. Conolly. Magnetic particle imaging (mpi) for nmr and mri researchers. *J. Magn. Reson.*, 229(0):116–126, 2013.
- [36] Dibyendu Kumar Sasmal and H. Peter Lu. Single-molecule patch-clamp fret microscopy studies of nmda receptor ion channel dynamics in living cells: Revealing the multiple conformational states associated with a channel at its electrical off state. *JACS*, 136(37):12998–13005, 2014.
- [37] H.C. Torrey. Transient nutations in nuclear magnetic resonance. *Phys. Rev.*, 76:1059–1068, 1949.
- [38] Michael Vogel. Der Fingerhut. *Physik Journal*, 13:1, 2014.
- [39] Nora D. Volkow, Linda Chang, Gene-Jack Wang, Joanna S. Fowler, Dinko Franceschi, Mark Sedler, Samuel J. Gatley, Eric Miller, Robert Hitzemann, Yu-Shin Ding, and Jean Logan. Loss of dopamine transporters in methamphetamine abusers recovers with protracted abstinence. *J. Neuroscience*, 21:9414–9418, 2001.
- [40] Weis, Antoine. Optically pumped alkali magnetometers for biomedical applications. *Europhysics News*, 43(3):20–23, 2012.
- [41] Falk Wottawah, Stefan Schinkinger, Bryan Lincoln, Revathi Ananthakrishnan, Maren Romeyke, Jochen Guck, and Josef Kaes. Optical rheology of biological cells. *Phys. Rev. Lett.*, 94: 098103, 2005.
- [42] Yi Zhang, N. Wolters, D. Lomparski, W. Zander, M. Banzet, J. Schubert, H.-J. Krause, and P. van Leeuwen. Multi-channel hts rf squid gradiometer system recording fetal and adult magnetocardiograms. *Applied Superconductivity, IEEE Transactions on*, 15(2):631–634, 2005. ISSN 1051-8223.
- [43] Yudong Zhu, Christopher J. Hardy, Daniel K. Sodickson, Randy O. Giaquinto, Charles L. Dumoulin, Gontran Kenwood, Thoralf Niendorf, Hubert Lejay, Charles A. McKenzie, Michael A. Ohliger, and Neil M. Rofsky. Highly parallel volumetric imaging with a 32-element rf coil array. *Magn. Reson. Med.*, 52(4):869–877, 2004.