

Literaturverzeichnis

- [1] Paul Beard. Biomedical photoacoustic imaging. *Interface Focus*, 1(4):602–631, 2011.
- [2] F. Bloch. Nuclear induction. *Phys. Rev.*, 70: 460–485, 1946.
- [3] 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.
- [4] Steven Chu. Laser trapping of neutral particles. *Scientific American*, February 1992:49–54, 1992.
- [5] 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.
- [6] Olaf Dössel. *Bildgebende Verfahren in der Medizin*. Springer, 2000.
- [7] 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.
- [8] 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.
- [9] B. J. Garrison and R. Srinivasan. Ablative photodecomposition of polymers. *J. Vac. Sci. Technol. A*, 3:746–748, 1985.
- [10] S. K. Gayen and R. R. Alfano. Sensing lesions in tissues with light. *Optics Express*, 4:475–480, 1999.
- [11] Bernhard Gleich and Jurgen Weizenecker. Tomographic imaging using the nonlinear response of magnetic particles. *Nature*, 435(7046): 1214–1217, 06 2005.
- [12] Jochen Guck, Revathi Ananthakrishnan, 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.
- [13] 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, Apr 1993. doi: 10.1103/RevModPhys.65.413.
- [14] Song-I Han, Siegfried Staph, and Bernhard Bluemich. Nmr imaging of falling water drops. *Phys. Rev. Lett.*, 87:144501 – 1–4, 2001.
- [15] 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.
- [16] K Jacobson, ED Sheets, and R Simson. Revisiting the fluid mosaic model of membranes. *Science*, 268(5216):1441–1442, 1995.
- [17] Ch. Kittel. *Einführung in die Festkörperphysik*. R. Oldenbourg, Muenchen, 1996.

- [18] 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.
- [19] P.C. Lauterbur. Image formation by induced local interactions: example employing nuclear magnetic resonance. *Nature*, 242:190–191, 1973.
- [20] Zhiwei Li, Bahman Anvari, Masayoshi Tashima, 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.
- [21] Berenike Maier. Wie Gene wandern. *Physik Journal*, 11(Okt.12):33–38, 2012.
- [22] Masahiro Maruyama, Hitoshi Shimada, Tetsuya Suhara, Hitoshi Shinotoh, Bin Ji, Jun Mameda, 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. ISSN 0896-6273.
- [23] Markolf H. Niemz. *Laser-Tissue Interactions*. Springer, 2004.
- [24] F. Pfeiffer, M. Bech, O. Bunk, P. Kraft, E. F. Eikenberry, Ch. Brönnimann, C. Grunzweig, and C. David. Hard-x-ray dark-field imaging using a grating interferometer. *Nat Mater*, 7(2):134–137, 02 2008.
- [25] 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, 04 2006. URL <http://dx.doi.org/10.1038/nphys265>.
- [26] Thorsten Pieper. *Diffusion of fluorescent molecules in micro- and nanostructured environments*. PhD thesis, TuDo, 2007.
- [27] 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, 03 2009.
- [28] 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. ISSN 1522-2594.
- [29] 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.
- [30] 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. *Journal of Magnetic Resonance*, 229(0):116–126, 4 2013.
- [31] 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. *Journal of the American Chemical Society*, 136(37):12998–13005, 2015/01/07 2014. doi: 10.1021/ja506231j.
- [32] 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.
- [33] Weis, Antoine. Optically pumped alkali magnetometers for biomedical applications. *Europhysics News*, 43(3):20–23, 2012.

- [34] 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.
- [35] 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.
- [36] 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.