BIBLIOGRAPHY

[1] G. Moore, Electronics **38**, 114 (1965).

[2] P. Benioff, J. Stat. Phys. **22**, 563 (1980).

[3] R. Feynman, Int. J. Theor. Phys. **21**, 467 (1982).

[4] S. Lloyd, Science **273**, 1073 (1996).

[5] D. Deutsch, Proc. R. Soc. Lond. A **400**, 97 (1985).

[6] D. Deutsch, Proc. R. Soc. Lond. A **425**, 73 (1989).

[7] D. Deutsch and R. Jozsa, Proc. R. Soc. Lond. A **439**, 553 (1982).

[8] P. Shor, in *Proceedings 35th Annual Symposium of Foundations on Computer Science*, page 124, 1994.

[9] P. Shor, SIAM Journal of Computing **26**, 1484 (1997).

[10] L. Grover, Phys. Rev. Lett. **79**, 325 (1997).

[11] J. I. Cirac and R. Zoller, Phys. Rev. Lett. **74**, 4091 (1995).

[12] Q. A. Turchette, C. J. Hood, W. Lange, H. Mabuchi, and H. J. Kimble, Phys. Rev. Lett. **75**, 4710 (1995).

[13] J. E. Mooij, T. P. Orlando, L. Levitov, L. Tian, C. H. van der Wal, and S. Lloyd, Science **285**, 1036 (1999).

[14] Y. Makhlin, G. Scöhn, and A. Shnirman, Nature **398**, 305 (1999).

[15] D. Loss and D. P. DiVincenzo, Phys. Rev. A **57**, 120 (1998).

[16] M. Mehring, Appl. Magn. Reson. **17**, 141 (1999).

[17] W. Harneit, Phys. Rev. A **65**, 032322 (2002).

[18] D. Suter and K. Lim, Phys. Rev. A **65**, 052309 (2002).

[19] J. Twamley, Phys. Rev. A **67**, 02318 (2003).

[20] D. Cory, A. F. Fahmy, and T. F. Havel, Proc. Natl. Acad. Sci. USA **94**, 1634 (1997).

[21] N. Gershenfeld and I. L. Chuang, Science **275**, 350 (1997).

[22] L. Vandersypen, M. Steffen, G. Breyta, C. Yannoni, M. Sherwood, and I. Chuang, Nature **414**, 83 (2001).

[23] J. A. Jones, Fortschr. Phys. **48**, 909 (2000).

[24] D. Deutsch, A. Barenco, and A. Ekert, Proc. R. Soc. London A **449**, 669 (1995).

[25] A. Einstein, B. Podolsky, and N. Rosen, Phys. Rev. **47**, 777 (1935).

[26] N. Bohr, Phys. Rev. **48**, 696 (1935).

[27] E. Schrödinger, Die Naturwissenschaften **23**, 807 (1935).

[28] J. S. Bell, Physics **1**, 195 (1964).

[29] P. G. A. Aspect and G. Roger, Phys. Rev. Lett. **47**, 460 (1981).

[30] M. Lamehi and W. Mittig, Phys. Rev. D **14**, 2543 (1976).

[31] J. J. Sakurai, *Modern Quantum Mechanics*, chapter 3, Addison-Wesley Publishing Company, Inc., 1982.

[32] E. Zavoiskii, J. Phys. USSR **6**, 245 (1945).

[33] M. Mehring and V. A. Weberruß, *Object-Oriented Magnetic Resonance*, Academic Press, London, 2001.

[34] J. Orton, *Electron Paramagnetic Resonance*, London Iliffe Books Ltd, 1968.

[35] C. P. Poole and H. A. Farach, *Relaxation in Magnetic Resonance*, chapter 5, ACADEMIC PRESS, INC. (LONDON) LTD, 1971.

[36] U. Fano, Rev. Mod. Phys. **29**, 74 (1957).

[37] K. Blum, *Density Matrix Theory and Application*, Plenum Press, New York, 1989.

[38] C. N. Banwell and H. Primas, Mol. Phys. **6**, 225 (1963).

[39] A. Schweiger and G. Jeschke, *Principles of pulse electron paramagnetic resonance*, Oxford University Press, 2001.

[40] S. Vega and A. Pines, J. Chem. Phys. **66**, 5624 (1977).

[41] S. Vega, J. Chem. Phys. **68**, 5518 (1978).

[42] E. L. Hanh, Phys. Rev. **80**, 580 (1950).

[43] G. Feher, Phys. Rev. **105**, 1122 (1957).

[44] H. W. Kroto, J. R. Heath, S. C. O'Brien, R. F. Curl, and R. E. Smalley, Nature **318**, 162 (1985).

[45] W. Krätschmer, L. D. Lamb, K. Fostiropoulos, and D. R. Huffman, Nature **347**, 354 (1990).

[46] T. A. Murphy, T. Pawlik, A. Weidinger, M. Höhne, R. Alcala, and J.-M. Spaeth, Phys. Rev. Lett. **77**, 1075 (1996).

[47] C. Meyer, PhD thesis, Freie Universität Berlin, 2002.

[48] A. Weidinger, B. Pietzak, M. Waiblinger, K. Lips, B. Nuber, and A. Hirsch, in *AIP Conference Procedings 442*, page 363, 1998.

[49] N. W. C. Knapp, H. Käss, K.-P. Dinse, B. Pietzak, M. Waiblinger, and A. Weidinger, Mol. Phys. **95**, 999 (1998).

[50] P. Jakes, K.-P. Dinse, C. Meyer, W. Harneit, and A. Weidinger, Phys. Chem. Chem. Phys. **5**, 4080 (2003).

[51] B. Pietzak, PhD thesis, Technische Universität Berlin, 1998.

[52] J. L. Morton, A. M. Tyryshkin, A. Ardavan, S. A. Lyon, and G. A. D. Briggs, J. Chem. Phys. Lett. **122**, 174504 (2005).

[53] W. W. Holloway, Jr and R. Novick, Phys. Rev. Lett. **1**, 367 (1958).

[54] L. W. Anderson, F. M. Pipkin, and J. C. Baird, Jr, Phys. Rev. **116**, 87 (1959).

[55] G. S. Jackel, W. H. Nelson, and W. Cordy, Phys. Rev. **176**, 453 (1968).

[56] J. Greer, Chem. Phys. Lett. **326**, 567 (2000).

[57] J. A. Larsson, J. C. Greer, W. Harneit, and A. Weidinger, J. Chem. Phys. **116**, 7849 (2002).

[58] N. Weiden, H. Käss, and K.-P. Dinse, J. Phys. Chem. B **103**, 9826 (1999).

[59] M. Saunders, H. A. Jimenez-Vazquez, R. J. Cross, S. Mroczkowski, D. I. Freesberg, and F. Anet, Nature **367**, 256 (1994).

[60] S. Stoll and A. Schweiger, J. Magn. Res. **178**, 42 (2006).

[61] J. Butterworth, Proc. Phys. Soc. **86**, 297 (1965).

[62] J. E. Wertz and J. R. Bolton, *Electron Paramagnetic Resonance Elementary Theory and Practical Applications*, McGraw-Hill, Inc., 1972.

[63] M. Waiblinger, K. Lips, W. Harneit, A. Weidinger, E. Dietel, and A. Hirsch, Phys. Rev. B **64**, 159901(E) (2001).

[64] C. Bingel, Chem. Ber. **126**, 1957 (1993).

[65] B. Pietzak, M. Waiblinger, T. A. Murphy, A. Weidinger, M. Höhne, E. Dietel, and A. Hirsch, Carbon **36**, 613 (1998).

[66] E. Dietel, A. Hirsch, B. Pietzak, M. Waiblinger, K. Lips, A. Weidinger, A. Gruss, and K. Dinse, J. Am. Chem. Soc. **121**, 2432 (1999).

[67] M. Scheloske, B. Naydenov, C. Meyer, and W. Harneit, Israel Journal of Chemistry , accepted.

[68] B. Goedde, M. Waiblinger, P. Jakes, N. Weiden, K.-P. Dinse, and A. Weidinger, Chem. Phys. Lett. **334**, 12 (2001).

[69] B. Kane, Nature **393**, 133 (1998).

[70] S. Lloyd, Science **261**, 1569 (1993).

[71] S. C. Benjamin, Phys. Rev. A **61**, 020301 (2000).

[72] S. C. Benjamin, Phys. Rev. Lett. **88**, 017904 (2002).

[73] A. Gruber, A. Dräbenstedt, C. Tietz, L. Fleury, J. Wrachtrup, and C. von Borczyskowski, Science **276**, 2012 (1997).

[74] F. Jelezko, T. Gaebel, I. Popa, A. Gruber, and J.Wrachtrup, Phys. Rev. Lett. **92**, 076401 (2004).

[75] C. Meyer, W. Harneit, K. Lips, and A. Weidinger, Phys. Rev. A **65**, 061201 (2002).

[76] C. Meyer, W. Harneit, A. Weidinger, and K. Lips, Phys. Stat. Sol. B **233**, 462 (2002).

[77] P. Jakes, N. Weiden, R.-A. Eichel, A. Gembus, K.-P. Dinse, C. Meyer, W. Harneit, and A. Weidinger, J. Magn. Res. **156**, 303 (2002).

[78] H. Süss, M. Lutz, and J. Hulliger, Cryst. Eng. Comm. **4**, 610 (2002).

[79] B. Naydenov, C. Spudat, W. Harneit, H. Süss, J. Hulliger, J. Nuss, and M. Jansen, Chem. Phys. Lett. **424**, 327 (2006).

[80] B. Naydenov, C. Spudat, M. Scheloske, H. Süss, J. Hulliger, and W. Harneit, phys. stat. sol. (c) , accepted.

[81] U. Binninger, C. Bernhard, A. Hofer, C. Niedermayer, E. Rechnagel, and J. E. amd A. Weidinger, Phys. Rev. Lett. **51**, 14867 (1995).

[82] A. Abragam and B. Bleaney, *Electronic Paramgnetic Resonace of Transition Ions*, Clarendon Press, Oxford, 1970.

[83] J. Lambe, N. Laurance, E. C. McIrvine, and R. W. Terhune, Phys. Rev. **122**, 1161 (1961).

[84] M. M. Dorio and J. H. Freed, *Multiple Electron Resonance Spectroscopy*, Plenum Press, New York and London, 1979.

[85] P. F. Liao and S. R. Hartmann, Phys. Rev. B **8**, 69 (1973).

[86] J. S. Hyde, G. H. Rist, and L. E. G. Eriksson, J. Phys. Chem. **72**, 4269 (1968).

[87] A. V. Astashkin and A. Kawamori, J. Magn. Res. **135**, 406 (1998).

[88] P.-P. Zänker, G. Jeschke, and D. Goldfarb, J. Chem. Phys. **122**, 024515 (2005).

[89] F. Bloch, Phys. Rev. **70**, 460 (1946).

[90] A. G. Redfield, IBM Journal **1**, 19 (1957).

[91] A. G. Redfield, Adv. Magn. Res. **1**, 1 (1965).

[92] M. Waiblinger, PhD thesis, Universität Konsanz, 2001.

[93] S. Knorr, A. Grupp, M. Mehring, M. Waiblinger, and A. Weidinger, in *AIP Conference Procedings 544*, page 191, 2000.

[94] S. Knorr, PhD thesis, Universität Stuttgart, 2002.

[95] J. J. L. Morton, A. M. Tyryshkin, A. Ardavan, K. Porfyrakis, S. Lyon, and G. Briggs, J. Chem. Phys. **124**, 014508 (2006).

[96] A. Grupp, B. Pietzak, M. Waiblinger, T. A. Murphy, A. Weidinger, and E. Rodunger, in *Molecular Nanostructures,*, page 224, World Scientific, Singapure, 1998.

[97] C. Kittel, *Introduction to Solid State Physics, Seventh Edition*, Wiley & Sons Inc, New York, 2003.

[98] N. M. Atherton, *Principles of Electron Spin Resonance*, Ellis Horwood Limited, 1993.

[99] H. Y. Carr and E. M. Purcell, Phys. Rev. **94**, 630 (1954).

[100] S. Meiboom and D. Gill, Rev. Sci. Intr **29**, 688 (1958).

[101] J. S. Waugh, C. H. Wang, L. M. Huber, and R. L. Vold, J. Chem. Phys. **48**, 662 (1968).

[102] U. Haeberlen and J. S. Waugh, Phys. Rev. **175**, 453 (1968).

[103] W.-K. Rhim, A. Pines, and J. S. Waugh, Phys. Rev. B **3**, 684 (1971).

[104] T. Ladd, D. Maryenko, Y. Yamamoto, E. Abe, and K. M. Itoh, Phys. Rev. B **71**, 014401 (2005).

[105] J. R. Harbridge, S. S. Eaton, and G. R. Eaton, J. Magn. Res. **164**, 44 (2003).

[106] A. M. Raitsimring, K. M. Salikhov, B. A. Umanski, and Y. D. Tsvetkov, Sov. Phys. Solid State **16**, 492 (1972).

[107] K. M. Salikhov, S. A. Dzuba, and A. M. Raitsimring, J. Magn. Res. **42**, 255 (1981).

[108] I. M. Brown, *Time Domain Electron Spin Resonance (eds. L. Kevan and R.N. Schwartz)*, chapter 6, page 195, John Wiley & Sons, 1979.

[109] J. R. Klauder and P. W. Anderson, Phys. Rev. **125**, 912 (1962).

[110] S. S. Eaton and G. R. Eaton, J. Magn. Res. A **102**, 354 (1993).

[111] A. M. Tyrishkin, S. A. Lyon, A. V. Astashkin, and A. M. Raitsimring, Phys. Rev. B **68**, 193207 (2003).

[112] M. Chiba and Akira.Hirai, J. Phys. Soc. Japan **33**, 730 (1972).

[113] R. Tycko, G. Dabbagh, R. M. Fleming, R. C. Haddon, A. V. Makhija, and S. M. Zahurak, Phys. Rev. Lett. **67**, 1886 (1991).

[114] R. F. Kiefl, J. W. Schneider, A. MacFarlane, K. Chow, T. L. Duty, T. L. Estle, B. Hitti, R. L. Lichti, E. J. Ansaldo, C. Schwab, P. W. Percival, G. Wei, S. Wlodek, K. Kojima, W. J. Romanow, J. P. McCauley, Jr, N. Coustel, J. Fischer, and A. B. S. III, Phys. Rev. Lett. **68**, 1347 (1992).

[115] S. L. Braunstein, C. M. Caves, R. Jozsa, N. Linden, S. Popescu, and R. Schack, Phys. Rev. Lett. **83**, 1054 (1999).

[116] R. Schack and C. M. Caves, Phys. Rev. A **60**, 4354 (1999).

[117] I. L. Chuang, n. Gershenfeld, M. G. Kubinec, and D. W. Leung, Proc. R. Soc. Lond. A **454**, 447 (1998).

[118] M. Mehring, J. Mende, and W. Scherer, Phys. Rev. Lett. **90**, 153001 (2003).

[119] M. Mehring, W. Scherer, and A. Weidinger, Phys. Rev. Lett. **93**, 206603 (2004).

[120] D. P. Weitekamp, Adv. Magn. Reson. **11**, 111 (1983).

[121] W. Scherer, PhD thesis, Universität Stuttgart, 2004.