

References

1. M. Saunders, A. Wishnia and J. G. Kirkwood (1957). *J. Am. Chem. Soc.* **79**, 3289–3290.
The nuclear magnetic resonance spectrum of ribonuclease.
2. J. S. Cohen, J. W. Jaroszewski, O. Kaplan, J. Ruiz-Cabello and S. W. Collier (1995). *Progr. NMR Spectrosc.* **28**, 53–85.
A history of biological applications of NMR spectroscopy.
3. J. Jeener (1971). *Ampere International Summer School*, Basko Polje, Yugoslavia.
Pulse pair techniques in high resolution NMR.
4. W. P. Aue, E. Bartholdi and R. R. Ernst (1976). *J. Chem. Phys.* **64**, 2229–2246.
Two-dimensional spectroscopy. Application to nuclear magnetic resonance.
5. K. Wüthrich, G. Wider, G. Wagner and W. Braun (1982). *J. Mol. Biol.* **155**, 311–319.
Sequential resonance assignments as a basis for determination of spatial protein structures by high resolution proton nuclear magnetic resonance.
6. G. Wider, K. H. Lee and K. Wüthrich (1982). *J. Mol. Biol.* **155**, 367–388.
Sequential resonance assignments in protein ^1H nuclear magnetic resonance spectra: glucagon bound to perdeuterated dodecylphosphocholine micelles.
7. G. Wider, S. Macura, A. Kumar, R. R. Ernst and K. Wüthrich (1984). *J. Magn. Reson.* **56**, 207–234.
Homocuclear two-dimensional ^1H NMR of proteins. Experimental procedures.
8. J. Jeener, B. H. Meier, P. Bachmann, and R. R. Ernst (1979). *J. Chem. Phys.* **71**, 4546–4553.
Investigation of exchange processes by two-dimensional NMR spectroscopy.
9. A. Kumar, R. R. Ernst and K. Wüthrich (1980). *Biochem. Biophys. Res. Com.* **95**, 1–6.
A 2D NOE experiment for the elucidation of complete proton-proton cross-relaxation networks in biological macromolecules.
10. A. S. Arseniev, G. Wider, F. J. Joubert and K. Wüthrich (1982). *J. Mol. Biol.* **159**, 323–351.
Assignment of the ^1H NMR spectrum of the trypsin inhibitor E from *Dendroaspis polylepis*: 2D NMR at 500 MHz.
11. P. Strop, G. Wider and K. Wüthrich (1983). *J. Mol. Biol.* **166**, 641–667.
Assignment of the ^1H NMR spectrum of the proteinase inhibitor IIA from bull seminal plasma by 2D NMR at 500 MHz.
12. W. Braun, G. Wider, K. H. Lee and K. Wüthrich, *J. Mol. Biol.* **169**, 921–948 (1983).
Conformation of glucagon in a lipid-water interphase by ^1H nuclear magnetic resonance.
13. M. P. Williamson, T. F. Havel and K. Wüthrich (1985). *J. Biol. Mol.* **182**, 295–315.
Solution conformation of proteinase inhibitor IIA from bull seminal plasma by ^1H nuclear magnetic resonance and distance geometry.

14. G. M. Clore and A. M. Gronenborn (1991). *Progr. NMR Spectrosc.* **23**, 43–92.
Applications of three- and four-dimensional heteronuclear NMR spectroscopy to protein structure determination.
15. K. Wüthrich (1986). *NMR of Proteins and Nucleic Acids*. Wiley: New York.
16. R. R. Ernst, G. Bodenhausen and A. Wokaun (1987 and 1994). *Principles of Nuclear Magnetic Resonance in One and Two Dimensions*. Clarendon Press: Oxford.
17. A. E. Derome (1987). *Modern NMR techniques for chemistry research*. Pergamon Press: Oxford.
18. M. Goldman (1988). *Quantum description of high-resolution NMR in liquids*. Clarendon Press: New York.
19. C. P. Slichter (1992). *Principles of magnetic resonance*. Springer: Berlin.
20. G. M. Clore and A. M. Gronenborn (eds.) (1993). *NMR of proteins*. CRC Press: Boca Raton.
21. W. R. Croasmun and R. M. K. Carlson, eds. (1994). *Two-dimensional NMR spectroscopy: Applications for chemists and biochemists*. VCH Publishers: New York.
22. J. N. S. Evans (1995). *Biomolecular NMR spectroscopy*. Oxford: Oxford University Press.
23. F. A. Bovey and P. A. Mirau (1996). *Nuclear magnetic resonance spectroscopy of macromolecules*. Academic Press: San Diego.
24. J. Cavanagh, W. J. Fairbrother, A. G. Palmer III and N. J. Skelton (1996). *Protein NMR spectroscopy: principles and practice*. Academic Press: San Diego.
25. S. K. Sarkar ed. (1996). *NMR Spectroscopy and its application in biomedical research*. Elsevier: Amsterdam.
26. F. J. M. van de Ven (1996). *Multidimensional NMR in Liquids*. VCH Publishers: New York.
27. J. L. Markley and S. J. Opella, eds. (1997). *Biological NMR spectroscopy*. Oxford University Press: New York.
28. O. W. Sørensen, G. W. Eich, M. H. Levitt, G. Bodenhausen and R. R. Ernst (1983). *Progr. NMR Spectrosc.* **16**, 163–192.
Product operator formalism for the description of NMR pulse experiments.
29. A. Abragam (1961). *The principles of nuclear magnetism*. Oxford University Press: London.
30. F. Bloch (1946). *Phys. Rev.* **70**, 460–477.
Nuclear induction.
31. M. H. Levitt (1997). *J. Magn. Reson.* **126**, 164–182.
The signs of frequencies and phases in NMR.

32. F. Bloch and A. Siegert (1940). *Phys. Rev.* **57**, 522–527.
Magnetic resonance for nonrotating fields.
33. N. F. Ramsey (1955). *Phys. Rev.* **100**, 1191–1194.
Resonance transitions induced by perturbations at two or more different frequencies.
34. M. A. McCoy and L. Müller (1992). *J. Magn. Reson.* **98**, 674–679.
Coherence quenching induced by frequency-selective homonuclear decoupling.
35. M. A. McCoy and L. Müller (1992). *J. Magn. Reson.* **99**, 18–36.
Nonresonant effects of frequency-selective pulses.
36. J. Shriver (1991). *J. Magn. Reson.* **94**, 612–616.
NMR product operator calculations in Mathematica.
37. P. Güntert, N. Schaefer, G. Otting and K. Wüthrich (1993). *J. Magn. Reson.* **101**, 103–105.
POMA: A complete Mathematica implementation of the NMR product-operator formalism.
38. G. Bodenhausen, H. Kogler and R. R. Ernst (1984). *J. Magn. Reson.* **58**, 370–388.
Selection of coherence–transfer pathways in NMR pulse experiments.
39. A. Bain (1984). *J. Magn. Reson.* **56**, 418–427.
Coherence levels and coherence pathways in NMR. A simple way to design phase cycling.
40. H. Kessler, M. Gehrke and C. Griesinger (1988). *Angew. Chem., Int. Ed. Engl.* **27**, 490–536.
Two-dimensional NMR spectroscopy: background and overview of the experiments.
41. L. Werbelow (1984). *J. Magn. Reson.* **57**, 136–139.
Frequency dependence of relaxation rates and nuclear Overhauser effects.
42. C. Biamonti, C. B. Rios, B. A. Lyons and G. T. Montelione (1994). *Adv. Biophys. Chem.* **4**, 51–120.
Multidimensional NMR experiments and analysis techniques for determining homo- and heteronuclear scalar coupling constants in proteins and nucleic acids.
43. L. Braunschweiler and R. R. Ernst (1983). *J. Magn. Reson.* **53**, 521–528.
Coherence transfer by isotropic mixing: application to proton correlation spectroscopy.
44. A. Bax and D. G. Davis (1985). *J. Magn. Reson.* **65**, 355–360.
MLEV-17 based 2D homonuclear magnetization transfer spectroscopy.
45. G. A. Morris and R. Freeman (1979). *J. Am. Chem. Soc.* **101**, 760–762.
Enhancement of NMR signals by polarization transfer.
46. A. Bax (1989). *Meth. Enzym.* **176**, 151–168.
Homonuclear Hartmann-Hahn experiments.
47. R. Bazzo and J. Boyd (1987). *J. Magn. Reson.* **75**, 452–466.
A theoretical analysis of homonuclear cross-polarization coherence transfer in liquids.
48. S. R. Hartmann and E. L. Hahn (1962). *Phys. Rev.* **128**, 2042–2053.
Nuclear double resonance in the rotating frame.

49. I. Solomon (1955). *Phys. Rev.* **99**, 559–565.
Relaxation processes in a system of two spins.
50. D. Neuhaus and M. Williamson (1989). *The nuclear Overhauser effect in structural and conformational analysis*. VCH Publishers: New York.
51. A. Kumar, G. Wagner, R. R. Ernst and K. Wüthrich (1981). *J. Am. Chem. Soc.* **103**, 3654–3658.
Buildup rates of NOEs measured by 2D proton NMR spectroscopy: implications for studies of protein conformation.
52. T. E. Bull (1992). *Progr. NMR Spectrosc.* **24**, 377–410.
Relaxation in the rotating frame in liquids.
53. A. A. Bothner-By, R. L. Stephens, J. Lee, C. D. Warren and R. W. Jeanloz (1984). *J. Am. Chem. Soc.* **106**, 811–813.
Structure determination of a tetrasaccharide: transient nuclear Overhauser effects in the rotating frame.
54. A. Bax and D. G. Davis (1985). *J. Magn. Reson.* **63**, 207–213.
Practical aspects of two-dimensional transverse NOE spectroscopy.
55. G. Bodenhausen, R. Freeman and D. L. Turner (1977). *J. Magn. Reson.* **27**, 511–514.
Suppression of artifacts in two-dimensional *J* spectroscopy.
56. R. Freeman, S. P. Kempell and M. H. Levitt (1980). *J. Magn. Reson.* **38**, 453–479.
Radiofrequency pulse sequences which compensate their own imperfections.
57. M. H. Levitt (1986). *Progr. NMR Spectrosc.* **18**, 61–122.
Composite pulses.
58. L. Emsley (1994). *Meth. Enzym.* **239**, 207–246.
Selective pulses and their applications to assignment and structure determination in NMR.
59. H. Kessler, H. Oschkinat, C. Griesinger and W. Bermel (1986). *J. Magn. Reson.* **70**, 106–133.
Transformation of homonuclear 2D NMR techniques into 1D techniques using Gaussian pulses.
60. H. Geen and R. Freeman (1991). *J. Magn. Reson.* **93**, 93–141.
Band-selective radiofrequency pulses.
61. L. Emsley and G. Bodenhausen (1990). *Chem. Phys. Lett.* **165**, 469–476.
Gaussian pulse cascades: new analytical functions for rectangular selective inversion and in-phase excitation in NMR.
62. J.-P. Böhlen and G. Bodenhausen (1993). *J. Magn. Reson. A* **102**, 293–301.
Experimental aspects of chirp NMR spectroscopy.

63. P. C. M. van Zijl, T.-L. Hwang, M. O'Neil Johnson and M. Garwood (1996). *J. Am. Chem Soc.* **118**, 5510–5511.
Optimized excitation and automation for high-resolution NMR using B_1 -insensitive rotation pulses.
64. E. Kupče and R. Freeman (1997). *J. Magn. Reson.* **127**, 36–48.
Compensation for spin-spin coupling effects during adiabatic pulses.
65. M. Garwood and Y. Ke (1991). *J. Magn. Reson.* **94**, 511–525.
Symmetric pulses to induce arbitrary flip angles with compensation for *rf* inhomogeneity and resonance offsets.
66. T.-L. Hwang, P. C. M. van Zijl and M. Garwood (1997). *J. Magn. Reson.* **124**, 250–254.
Broadband adiabatic refocusing without phase distortion.
67. E. O. Stejskal and J. E. Tanner (1965). *J. Chem. Phys.* **42**, 288–292.
Spin diffusion measurements: spin echoes in the presence of a time-dependent field gradient.
68. G. Wider, V. Dötsch, and K. Wüthrich (1994). *J. Magn. Reson. A* **108**, 255–258.
Self-compensating pulsed magnetic-field gradients for short recovery times.
69. A. Bax and S. S. Pochapsky (1992). *J. Magn. Reson.* **99**, 638–643.
Optimized recording of heteronuclear multidimensional NMR spectra using pulsed field gradients.
70. G. Wider and K. Wüthrich (1993). *J. Magn. Reson. B* **102**, 239–241.
A simple experimental scheme using pulsed field gradients for coherence-pathway rejection and solvent suppression in phase-sensitive heteronuclear correlation spectra.
71. J. Keeler, R. T. Clowes, A. L. Davis and E. D. Laue (1994). *Meth. Enzym.* **239**, 145–207.
Pulsed field gradients: theory and practice.
72. L. E. Kay (1995). *Curr. Opinion Struct. Biol.* **5**, 674–681.
Field gradient techniques in NMR spectroscopy.
73. G. Wider, R. Riek and K. Wüthrich (1996). *J. Am. Chem Soc.* **118**, 11629–11634.
Diffusion filters for separation of solvent–protein and protein–protein NOEs (HYDRA).
74. C. J. R. Counsell, M. H. Levitt and R. R. Ernst (1985). *J. Magn. Reson.* **64**, 470–478.
The selection of coherence-transfer pathways by inhomogeneous *z* pulses.
75. D. Canet (1997). *Progr. NMR Spectrosc.* **30**, 101–135.
Radiofrequency field gradient experiments.
76. W. E. Maas, F. Laukien and D. G. Cory (1993). *J. Magn. Reson. A* **103**, 115–117.
Coherence selection by radiofrequency gradients.
77. B. A. Messerle, G. Wider, G. Otting, C. Weber and K. Wüthrich (1989). *J. Magn. Reson.* **85**, 608–613.
Solvent suppression using a spin-lock in 2D and 3D NMR spectroscopy with H_2O solutions.

78. W. E. Maas and D. G. Cory (1995). *J. Magn. Reson. A* **112**, 229–236.
Heteronuclear correlation spectroscopy with *rf* gradients.
79. D. C. Champeney (1973). *Fourier transforms and their physical applications*. Academic Press: New York.
80. A. G. Redfield and S. D. Kunz (1975). *J. Magn. Reson.* **19**, 250–254.
Quadrature Fourier NMR detection: simple multiplex for dual detection and discussion.
81. D. Marion and K. Wüthrich (1983). *Biochem. Biophys. Res. Comm.* **113**, 967–974.
Application of phase sensitive two-dimensional correlated spectroscopy (COSY) for measurements of ^1H - ^1H spin-spin coupling constants in proteins.
82. J. C. J. Barna and E. D. Laue (1987). *J. Magn. Reson.* **75**, 384–389.
Conventional and exponential sampling for 2D NMR experiments with application to a 2D NMR spectrum of a protein.
83. P. Schmieder, A. S. Stern, G. Wagner and J. C. Hoch (1994). *J. Biomol. NMR* **4**, 483–490.
Improved resolution in triple-resonance spectra by nonlinear sampling in the constant-time domain.
84. P. Schmieder, A. S. Stern, G. Wagner and J. C. Hoch (1997). *J. Magn. Reson.* **125**, 332–339.
Quantification of maximum-entropy reconstructions.
85. M. Gueron, P. Plateau and M. Decorsps (1991). *Progr. NMR spectrosc.* **23**, 135–209.
Solvent signal suppression in NMR.
86. G. Wider, R. V. Hosur and K. Wüthrich (1983). *J. Magn. Reson.* **52**, 130–135.
Suppression of the solvent resonance in 2D NMR spectra of proteins in H_2O solution.
87. M. Piotto, V. Saudek and V. Sklenar (1992). *J. Biomol. NMR* **2**, 661–665.
Gradient-tailored excitation for single quantum NMR spectroscopy of aqueous solutions.
88. S. Grzesiek and A. Bax (1993). *J. Am. Chem. Soc.* **115**, 12593–12594.
The importance of not saturating H_2O in protein NMR. Application to sensitivity enhancement and NOE measurements.
89. S. Mori, C. Abeygunawardana, M. O. Johnson and P. van Zijl (1996). *J. Magn. Reson. B* **108**, 94–98. (Correction in *J. Magn. Reson. B* **110**, 321 (1996)).
Improved sensitivity of HSQC spectra of exchanging protons at short interscan delays using a new fast HSQC (FHSQC) detection scheme that avoids water saturation.
90. V. Sklenar (1995). *J. Magn. Reson. A* **114**, 132–135.
Suppression of radiation damping in multidimensional NMR experiments using magnetic field gradients.
91. C. Anklin, M. Rindlisbacher, G. Otting and F. H. Laukien (1995). *J. Magn. Reson. B* **106**, 199–201.
A probehead with switchable quality factor. Suppression of radiation damping.

92. P. Broekaert and J. Jeener (1995). *J. Magn. Reson. A* **113**, 60–64.
Suppression of radiation damping in NMR in liquids by active electronic feedback.
93. A. Louis-Joseph, D. Abergel and J.-Y. Lallemand (1995). *J. Biomol. NMR* **5**, 212–216.
Neutralization of radiation damping by selective feedback on a 400 MHz NMR spectrometer.
94. H. T. Edzes (1990). *J. Magn. Reson.* **86**, 293–303.
The nuclear magnetizations as the origin of transient changes in the magnetic field in pulsed NMR experiments.
95. A. Sobol, G. Wider, H. Iwai and K. Wüthrich (1998). *J. Magn. Reson.* **130**, 262–271.
Solvent magnetization artifacts in high field NMR studies of macromolecular hydration.
96. R. Hurd (1991). *J. Magn. Reson.* **93**, 666–670.
Novel method for detection of pure-phase, double-absorption lineshapes in gradient-enhanced spectroscopy.
97. E. O. Stejskal and J. Schaefer (1974). *J. Magn. Reson.* **14**, 160–169.
Comparison of quadrature and single phase Fourier transform NMR.
98. G. Zhu, D. A. Torchia and A. Bax (1993). *J. Magn. Reson. A* **105**, 219–222.
Discrete Fourier transformation of NMR signals. The relationship between sampling delay time and spectral baseline.
99. D. Marion and A. Bax (1988). *J. Magn. Reson.* **79**, 352–356.
Baseline distortions in real Fourier–transform NMR spectra.
100. D. I. Hoult, C.-N. Chen, H. Eden and M. Eden (1983). *J. Magn. Reson.* **51**, 110–117.
Elimination of baseline artifacts in spectra and their integrals.
101. G. Wider (1990). *J. Magn. Reson.* **89**, 406–409.
Elimination of baseline artifacts in NMR spectra by oversampling.
102. M. A. Delsuc and J. Y. Lallemand (1986). *J. Magn. Reson.* **69**, 504–507.
Improvement of dynamic range in NMR by oversampling.
103. D. I. Hoult and R. E. Richards (1975). *Proc. R Soc. Lond. A.* **344**, 311–340.
Critical factors in the design of sensitive high resolution NMR spectrometers.
104. C. Griesinger, O. W. Sørensen and R. R. Ernst (1989). *J. Magn. Reson.* **84**, 14–63.
Three-dimensional Fourier spectroscopy: application to high-resolution NMR.
105. O. W. Sørensen (1990). *J. Magn. Reson.* **89**, 210–216.
Aspects and prospects of multidimensional NMR experiments using magnetic field gradients.
106. L. E. Kay, G. M. Clore, A. Bax and A. M. Gronenborn (1990). *Science* **249**, 411–414.
Four-dimensional heteronuclear triple-resonance NMR spectroscopy of interleukin-1 β in solution.

107. T. Szyperski, G. Wider, J. Bushweller and K. Wüthrich (1993). *J. Biomol. NMR*, **3**, 127–132.
3D ^{13}C - ^{15}N -heteronuclear two-spin coherence spectroscopy for polypeptide backbone assignments in ^{13}C - ^{15}N -double-labelled proteins.
108. T. Szyperski, G. Wider, J. Bushweller and K. Wüthrich (1993). *J. Am. Chem. Soc.* **115**, 9307–9308.
Reduced dimensionality in triple-resonance NMR experiments.
109. A. Bax, M. Ikura, L. E. Kay and G. Zhu (1991). *J. Magn. Reson.* **91**, 174–178.
Removal of F_1 baseline distortion and optimization of folding in multidimensional NMR spectra.
110. D. Marion, M. Ikura, R. Tschudin and A. Bax (1989). *J. Magn. Reson.* **85**, 393–399.
Rapid recording of 2D NMR spectra without phase cycling. Application to the study of hydrogen exchange in proteins.
111. D. J. States, R. A. Haberkorn and D. J. Ruben (1982). *J. Magn. Reson.* **48**, 286–292.
A two-dimensional nuclear Overhauser experiment with pure absorption phase in four quadrants.
112. R. E. Hoffman and G. C. Levy (1991). *Progr. NMR spectrosc.* **23**, 211–258.
Modern methods of NMR data processing and data evaluation.
113. J. C. Hoch and A. S. Stern (1996). *NMR data processing*. Wiley-Lyss, New York.
114. I. Pelczer and B. G. Carter (1997). In D. G. Reid (ed.): Protein NMR techniques, *Methods in Molecular Biology* **60**, 71–156. Humana Press: New Jersey.
Data processing in multidimensional NMR.
115. E. Bartholdi and R. R. Ernst (1973). *J. Magn. Reson.* **11**, 9–19.
Fourier spectroscopy and the causality principle.
116. G. Otting, H. Widmer, G. Wagner and K. Wüthrich (1986). *J. Magn. Reson.* **66**, 187–193.
Origin of t_1 and t_2 ridges in 2D NMR spectra and procedures for suppression.
117. P. Güntert, V. Dötsch, G. Wider and K. Wüthrich (1992). *J. Biomol. NMR* **2**, 619–629.
Processing of multi-dimensional NMR data with the new software PROSA.
118. F. Delaglio, S. Grzesiek, G. W. Vuister, G. Zhu, J. Pfeifer and A. Bax (1995). *J. Biomol. NMR* **6**, 277–293.
NMRPipe: A multidimensional spectral processing system based on UNIX pipes.
119. S. Sperra and A. Bax (1991). *J. Am. Chem. Soc.* **113**, 5490–5492.
Empirical correlation between protein backbone conformation and $^{13}\text{C}^\alpha$ and $^{13}\text{C}^\beta$ NMR chemical shifts.
120. D. S. Wishart and B. D. Sykes (1994). *J. Biomol. NMR* **4**, 171–180.
The ^{13}C chemical-shift index: a simple method for the identification of protein secondary structure using ^{13}C chemical-shift data.

121. D. Braun, G. Wider and K. Wüthrich (1994). *J. Am. Chem. Soc.* **116**, 8466–8469.
Sequence-corrected ^{15}N “random coil” chemical shifts.
122. R. Wimmer, N. Müller and S. B. Petersen (1997). *J. Biomol. NMR* **9**, 101–104.
BBReader: a computer program for the combined use of the BioMagResBank and PDB databases.
123. P. Luginbühl, T. Szyperski and K. Wüthrich (1995). *J. Magn. Reson. B* **109**, 229–233.
Statistical basis for the use of $^{13}\text{C}^\alpha$ chemical shifts in protein structure determination.
124. L. Szilagyí (1995). *Progr. NMR Spectrosc.*, **27**, 325–443.
Chemical shifts in proteins come of age.
125. D. S. Wishart, C. G. Bigam, J. Yao, F. Abildgaard, H. J. Dyson, E. Oldfield, J. L. Markley and B. D. Sykes (1995). *J. Biomol. NMR* **6**, 135–140.
 ^1H , ^{13}C and ^{15}N chemical shift referencing in biomolecular NMR.
126. T. Maurer and H. R. Kalbitzer (1996). *J. Magn. Reson. B* **113**, 177–178.
Indirect referencing of ^{31}P and ^{19}F NMR spectra.
127. D. I. Hoult (1978). *Progr. NMR Spectrosc.* **12**, 41–77.
The NMR receiver: a description and analysis of design.
128. D. I. Hoult (1996). In M. Grant and R. K. Harris (eds.): *Encyclopedia of nuclear magnetic resonance*, 4256–4266. J. Wiley: West Sussex, England.
Sensitivity of the NMR experiment.
129. G. M. Morris (1988). *J. Magn. Reson.* **78**, 281–291.
Assessment of spectrometer pulse reproducibility.
130. D. M LeMaster (1994). *Progr. NMR Spectrosc.* **26**, 317–419.
Isotope labelling in solution, protein assignment and structural analysis.
131. S. Grzesiek, J. Anglister, H. Ren and A. Bax (1993). *J. Am. Chem. Soc.* **115**, 4369–4370.
 ^{13}C line narrowing by ^2H decoupling in $^2\text{H}/^{13}\text{C}/^{15}\text{N}$ -enriched proteins. Application to triple resonance 4D J connectivity of sequential amides.
132. X. Shan, K. H. Gardner, D. R. Muhandiram, N. S. Rao, C. H. Arrowsmith and L. E. Kay (1996). *J. Am. Chem. Soc.* **118**, 6570–6579.
Assignment of ^{15}N , $^{13}\text{C}^\alpha$, $^{13}\text{C}^\beta$, and HN resonances in a ^{15}N , $^{13}\text{C}^\alpha$, ^2H labelled 64 kDa Trp repressor–operator complex using triple-resonance NMR spectroscopy and ^2H decoupling.
133. K. Pervushin, G. Wider, and K. Wüthrich (1997). *J. Am. Chem. Soc.* **119**, 3842–3843.
Deuterium relaxation in a uniformly ^{15}N labelled homeodomain and its DNA complex.
134. P. C. M. Van Zijl, S. Sukumar, M. O’Neil Johnson, P. Webb and R. E. Hurd (1994). *J. Magn. Reson. A* **111**, 203–207.
Optimized shimming for high-resolution NMR using 3D image-based field mapping.

135. R. D. Black, T. A. Early, P. B. Roemer, O. M. Mueller, A. Mogro-Campero, L. G. Turner and G. A. Johnson (1993). *Science* **259**, 793–795.
A high-temperature superconducting receiver for NMR microscopy.
136. S. Crozier, I. M. Brereton, F. O. Zelaya, W. U. Roffmann and D. M. Doddrell (1997). *J. Magn. Reson.* **126**, 39–47.
Sample-induced *rf* perturbations in high-field, high-resolution NMR spectroscopy.
137. W. Jahnke (1996). *J. Magn. Reson. B* **113**, 262–266.
Spatial aspects of *rf* inhomogeneity in high-resolution NMR and their consideration in improving isotope-editing experiments.
138. D. Braun, G. Wider, and K. Wüthrich (1996). *J. Magn. Reson. B* **110**, 313–315.
Monitoring NMR spectrometer performance during data accumulation for macromolecular structure determination.
139. A. Bax and M. Ikura (1991). *J. Biomol. NMR.* **1**, 99–104.
An efficient 3D NMR technique for correlating the proton and ¹⁵N backbone amide resonances with the α -carbon of the preceding residue in uniformly ¹⁵N/¹³C enriched proteins.
140. S. Grzesiek and A. Bax (1992). *J. Magn. Reson.* **96**, 432–440.
Improved 3D triple-resonance NMR techniques applied to a 31 kDa protein.
141. A. Bax and D. Marion (1988). *J. Magn. Reson.* **78**, 186–191.
Improved resolution and sensitivity in ¹H-detected heteronuclear multiple-bond correlation spectroscopy.
142. D. Neuhaus, G. Wider, G. Wagner and K. Wüthrich (1984). *J. Magn. Reson.* **57**, 164–168.
X-relayed ¹H-¹H correlated spectroscopy.
143. G. Otting and K. Wüthrich (1990). *Q. Rev. Biophys.* **23**, 39–96.
Heteronuclear filters in 2D [¹H, ¹H]-NMR spectroscopy: combined use with isotope labeling for studies of macromolecular conformation and intermolecular interactions.
144. G. Wider, C. Weber, H. Widmer, R. Traber and K. Wüthrich (1990). *J. Am. Chem. Soc.* **112**, 9015–9016.
Use of a double-half-filter in two-dimensional ¹H NMR studies of receptor-bound cyclosporin.
145. G. Wider, C. Weber and K. Wüthrich (1991). *J. Am. Chem. Soc.* **113**, 4676–4678.
Proton-proton Overhauser effects of receptor-bound cyclosporin A observed with the use of a heteronuclear-resolved half-filter experiment.
146. K. Nagayama, A. Kumar, K. Wüthrich and R. R. Ernst (1980). *J. Magn. Reson.* **40**, 321–333.
Experimental techniques of 2D correlated spectroscopy.
147. R. Baumann, G. Wider, R. R. Ernst and K. Wüthrich (1981). *J. Magn. Reson.* **44**, 402–406.
Improvement of 2D NOE and 2D correlated spectra by symmetrization.

148. L. Müller (1979). *J. Am. Chem. Soc.* **101**, 4481–4484.
Sensitivity enhanced detection of weak nuclei using heteronuclear multiple quantum coherence.
149. A. Wokaun and R. R. Ernst (1977). *Chem. Phys Lett.* **52**, 407–412.
Selective detection of multiple quantum transitions in NMR by two-dimensional spectroscopy.
150. C. Griesinger, G. Otting, K. Wüthrich and R. R. Ernst (1988). *J. Am. Chem Soc.* **110**, 7870–7872.
Clean TOCSY for ^1H spin system identification in macromolecules.
151. M. H. Levitt and R. Freeman (1981). *J. Magn. Reson.* **43**, 502–507.
Composite pulse decoupling.
152. J. Cavanagh and M. Rance (1992). *J. Magn. Reson.* **96**, 670–678.
Suppression of cross-relaxation effects in TOCSY spectra *via* a modified DIPSI-2 mixing sequence.
153. J. Briand and R. R. Ernst (1991). *Chem. Phys. Lett.* **185**, 276–285.
Computer-optimized homonuclear TOCSY experiments with suppression of cross relaxation.
154. M. Kadkhodaie, T.-L. Hwang and A. J. Shaka (1993). *J. Magn. Reson. A* **105**, 104–107.
A simple windowless mixing sequence to suppress cross relaxation in TOCSY experiments.
155. U. Kerssebaum, R. Markert, J. Quant, W. Bermel, S. J. Glaser and C. Griesinger (1992). *J. Magn. Reson.* **99**, 184–191.
Power reduction in clean TOCSY experiments with shaped pulses.
156. J. Cavanagh and M. Rance (1990). *J. Magn. Reson.* **88**, 72–85.
Sensitivity improvement in isotropic mixing (TOCSY) experiments.
157. J. Cavanagh, W. J. Chazin and M. Rance (1990). *J. Magn. Reson.* **87**, 110–131.
The time dependence of coherence transfer in homonuclear isotropic mixing experiments.
158. A. J. Shaka, C. J. Lee and A. Pines (1988). *J. Magn. Reson.* **77**, 274–293.
Iterative schemes for bilinear operators; application to spin decoupling.
159. M. Kadkhodaie, O. Rivas, M. Tan and A. J. Shaka (1991). *J. Magn. Reson.* **91**, 437–443.
Broadband homonuclear cross polarization using flip-flop spectroscopy.
160. H. L. Eaton, S. W. Fesik, S. J. Glaser and G. P. Drobny (1990). *J. Magn. Reson.* **90**, 452–463.
Time dependence of ^{13}C – ^{13}C magnetization transfer in isotropic mixing experiments involving amino acid spin systems.
161. M. Rance, G. Bodenhausen, G. Wagner, K. Wüthrich and R. R. Ernst (1985). *J. Magn. Reson.* **65**, 497–510.
A systematic approach to the suppression of J cross peaks in 2D exchange and 2D NOE spectroscopy.

162. S. Macura, K. Wüthrich and R. R. Ernst (1982). *J. Magn. Reson.* **47**, 351–357.
The relevance of J cross peaks in 2D NOE experiments of macromolecules.
163. G. Otting (1990). *J. Magn. Reson.* **86**, 496–508.
Zero quantum suppression in NOESY and experiments with a z filter.
164. J. J. Titman, A. L. Davis, E. D. Laue and J. Keeler (1990). *J. Magn. Reson.* **89**, 176–183.
Selection of coherence pathways using inhomogeneous adiabatic pulses. Removal of zero quantum coherence.
165. J. Cavanagh and J. Keeler (1988). *J. Magn. Reson.* **80**, 186–194.
Suppression of HOHAHA and "false" NOE cross peaks in CAMELSPIN spectra.
166. T.-L. Hwang and A. J. Shaka (1992). *J. Am. Chem. Soc.* **114**, 3157–3159.
Cross relaxation without TOCSY: transverse rotating-frame Overhauser effect spectroscopy.
167. C. Griesinger and R. R. Ernst (1987). *J. Magn. Reson.* **75**, 261–271.
Frequency offset effects and their elimination in NMR rotating-frame cross-relaxation spectroscopy.
168. Z. Dezheng, T. Fujiwara and K. Nagayama (1989). *J. Magn. Reson.* **81**, 628–630.
Suppression of off-resonance effects in 1D and 2D ROESY.
169. C. J. Bauer, T. A. Frenkiel and A. N. Lane (1990). *J. Magn. Reson.* **87**, 144–152.
A comparison of the ROESY and NOESY experiments for large molecules, with application to nucleic acids.
170. J. Fejzo, W. M. Westler, S. Macura and J. L. Markley (1991). *J. Magn. Reson.* **92**, 20–29.
Strategies for eliminating unwanted cross-relaxation and coherence-transfer effects from 2D chemical-exchange spectra.
171. C. G. Hoogstraten, W. M. Westler, S. Macura and J. L. Markley (1995). *J. Am. Chem. Soc.* **117**, 5610–5611.
NOE measurements in the absence of spin diffusion: application to methylene groups in proteins and effects on local structural parameters.
172. S. J. F. Vincent, C. Zwahlen and G. Bodenhausen (1996). *J. Biomol. NMR* **7**, 169–172.
Suppression of spin diffusion in selected frequency bands of NOE spectra.
173. B. Boulat, I. Burghardt and G. Bodenhausen (1992). *J. Am. Chem. Soc.* **114**, 10679.
Measurement of Overhauser effects in magnetic resonance of proteins by synchronous nutation.
174. J. Fejzo, W. M. Westler, S. Macura and J. L. Markley (1990). *J. Am. Chem. Soc.* **112**, 2574–2577.
Elimination of cross-relaxation effects from 2D chemical-exchange spectra of macromolecules.
175. A. A. Maudsley and R. R. Ernst (1977). *Chem. Phys. Lett.* **50**, 368–372.
Indirect detection of magnetic resonance by heteronuclear 2D spectroscopy.

176. D. M. Doddrell, D. T. Pegg and M. R. Bendall (1982). *J. Magn. Reson.* **48**, 323–327.
Distortionless enhancement of NMR signals by polarization transfer.
177. A. G. Palmer, J. Cavanagh, P. E. Wright and M. Rance (1991). *J. Magn. Reson.* **93**, 151–170.
Sensitivity improvement in proton-detected 2D heteronuclear correlation NMR spectroscopy.
178. L. Müller and R. R. Ernst (1979). *Mol. Phys.* **38**, 963–992.
Coherence transfer in the rotating frame. Application to heteronuclear cross-correlation spectroscopy.
179. A. Majumdar and E. R. P. Zuiderweg (1995). *J. Magn. Reson. A* **113**, 19–31.
Efficiencies of double- and triple-resonance *J* cross polarization in multidimensional NMR.
180. M. G. Schwendinger, J. Quant, J. Schleucher, S. J. Glaser and C. Griesinger (1994). *J. Magn. Reson. A* **111**, 115–120.
Broadband heteronuclear Hartmann–Hahn sequences.
181. N. Sunitha Bai, N. Hari and R. Ramachandran (1994). *J. Magn. Reson. A* **106**, 248–252.
Numerical design of broadband heteronuclear cross-polarization sequences.
182. E. R. P. Zuiderweg, L. Zeng, B. Brutscher and R. C. Morshauer (1996). *J. Biomol. NMR* **8**, 147–160.
Band-selective hetero- and homonuclear cross-polarization using trains of shaped pulses
183. A. A. Bothner-By and R. Shukula (1988). *J. Magn. Reson.* **77**, 524–535.
Spin-locked states of homonuclear two-spin systems.
184. R. R. Ernst (1966). *J. Chem. Phys.* **45**, 3845–3865.
Nuclear magnetic double resonance with an incoherent radio-frequency field.
185. A. J. Shaka, J. Keeler, T. Frenkiel and R. Freeman (1983). *J. Magn. Reson.* **52**, 335–338.
An improved sequence for broadband decoupling: WALTZ-16.
186. A. J. Shaka, P. B. Barker and R. Freeman (1985). *J. Magn. Reson.* **64**, 547–552.
Computer optimized decoupling scheme for wideband applications and low-level operation.
187. T. Fujiwara, T. Anai, N. Kurihara and K. Nagayama (1993). *J. Magn. Reson. A* **104**, 103–105.
Frequency-switched composite pulses for decoupling carbon-13 spins over ultrabroad bandwidths.
188. Z. Starčuk, Jr., K. Bartušek and Z. Starčuk (1994). *J. Magn. Reson. A* **107**, 24–31.
Heteronuclear broadband spin-flip decoupling with adiabatic pulses.
189. M. R. Bendall (1995). *J. Magn. Reson. A* **112**, 126–129.
Broadband and narrow band spin decoupling using adiabatic spin flips.
190. R. Fu and G. Bodenhausen (1995). *J. Magn. Reson. A* **117**, 324–325.
Ultra-broadband decoupling.

191. E. Kupče and R. Freeman (1996). *J. Magn. Reson. A* **118**, 299–303.
Optimized adiabatic pulses for wideband spin inversion.
192. A. C. Wang and A. Bax (1993). *J. Biomol. NMR* **3**, 715–720.
Minimizing the effects of radio-frequency heating in multidimensional NMR experiments.
193. E. Kupče, R. Freeman, G. Wider and K. Wüthrich (1996). *J. Magn. Reson. A* **120**, 264–268.
Figure of merit and cycling sidebands in adiabatic decoupling schemes.
194. E. Kupče, R. Freeman, G. Wider and K. Wüthrich (1996). *J. Magn. Reson. A* **122**, 81–84.
Suppression of cycling sidebands using bi-level adiabatic decoupling.
195. T. E. Skinner and M. R. Bendall (1997). *J. Magn. Reson.* **124**, 474–478.
A phase-cycling algorithm for reducing sidebands in adiabatic decoupling.
196. T.-L. Hwang, M. Garwood, A. Tannus and P. C. M. van Zijl (1996). *J. Magn. Reson. A* **121**, 221–226.
Reduction of sideband intensities in adiabatic decoupling using modulation generated through adiabatic R-variation (MGAR).
197. A. Hammarström and G. Otting (1994). *J. Am. Chem. Soc.* **116**, 8847–8848.
Improved spectral resolution in ^1H NMR spectroscopy by homonuclear semiselective shaped pulse decoupling during acquisition.
198. M. A. McCoy and L. Müller (1992). *J. Am. Chem. Soc.* **114**, 2108–2112.
Selective shaped pulse decoupling in NMR: homonuclear [^{13}C]-carbonyl decoupling.
199. M. A. McCoy and L. Müller (1993). *J. Magn. Reson. A* **101**, 122–130.
Selective decoupling.
200. E. Kupče, J. Boyd and I. D. Campbell (1994). *J. Magn. Reson. A* **110**, 109–112.
Cool decoupling and mixing waveforms.
201. E. Kupče and G. Wagner (1995). *J. Magn. Reson. B* **109**, 329–333.
Wideband homonuclear decoupling in protein spectra.
202. V. Dötsch and G. Wider (1995). *J. Am. Chem. Soc.* **117**, 6064–6070.
Exchange rates of internal water molecules in proteins measured using pulsed field gradients.
203. P. C. M. Van Zijl and C. T. W. Moonen (1990). *J. Magn. Reson.* **87**, 18–25.
Complete water suppression for solutions of large molecules based on diffusional differences between solute and solvent (DRYCLEAN).
204. A. J. Dingley, J. P. Mackay, B. E. Chapman, M. B. Morris, P. W. Kuchel, B. D. Hambly and G. F. King (1995). *J. Biomol. NMR* **6**, 321–328.
Measuring protein self-association using pulsed-field-gradient NMR spectroscopy: application to myosin light chain 2.
205. A. S. Altieri, D. P. Hinton and R. A. Byrd (1995). *J. Am. Chem. Soc.* **117**, 7566–7567.
Association of biomolecular systems via PFG-NMR diffusion measurements.

206. J. Boyd, U. Hommel and I. D. Campbell (1990). *Chem. Phys. Lett.* **175**, 477–482.
Influence of cross-correlation between dipolar and anisotropic chemical shift relaxation mechanisms upon longitudinal relaxation rates of ^{15}N in macromolecules.
207. A. Bax, P. G. de Jong, A. F. Mehlkopf and J. Smidt (1980). *Chem. Phys. Lett.* **69**, 567–570.
Separation of the different orders of NMR multiple quantum transitions by the use of pulsed field gradients.
208. V. Dötsch, G. Wider, and K. Wüthrich (1994). *J. Magn. Reson. A* **109**, 263–264.
Phase-sensitive spectra in a single scan with coherence selection by pulsed field gradients.
209. A. Bax, M. Ikura, L. E. Kay, D. A. Torchia and R. Tschudin (1990). *J. Magn. Reson.* **86**, 304–318.
Comparison of different modes of 2D reverse correlation NMR for the study of proteins.
210. G. V. T. Swapna, C. B. Rios, Z. Shang and G. T. Montelione (1997). *J. Biomol. NMR* **9**, 105–111.
Application of multiple quantum line narrowing with simultaneous ^1H and ^{13}C constant-time scalar-coupling evolution in PFG-HACANH and PFG-HACA(CO)NH triple-resonance experiments.
211. A. Bax, A. F. Mehlkopf and J. Smidt (1979). *J. Magn. Reson.* **35**, 167–169.
Homonuclear broadband-decoupled absorption spectra, with linewidths which are independent of the transverse relaxation rate.
212. G. W. Vuister and A. Bax (1992). *J. Magn. Reson.* **98**, 428–435.
Resolution enhancement and spectral editing of uniformly ^{13}C enriched proteins by homonuclear broadband ^{13}C decoupling.
213. L. E. Kay, M. Ikura and A. Bax (1991). *J. Magn. Reson.* **91**, 84–92.
The design and optimization of complex NMR experiments. Application to a triple-resonance pulse scheme correlating H^α , NH, and ^{15}N chemical shifts in ^{15}N - ^{13}C -labelled proteins.
214. S. Grzesiek and A. Bax (1993). *J. Biomol. NMR* **3**, 185–204.
Amino acid type determination in the sequential assignment procedure of uniformly $^{13}\text{C}/^{15}\text{N}$ -enriched proteins.
215. T. M. Logan, E. T. Olejniczak, R. X. Xu and S. W. Fesik (1993). *J. Biol. NMR* **3**, 225–231.
A general method for assigning NMR spectra of denatured proteins using 3D HC(CO)NH-TOCSY triple resonance experiments.
216. D. R. Muhandiram and L. E. Kay (1993). *J. Magn. Reson. B* **103**, 203–216.
Gradient-enhanced triple-resonance 3D NMR experiments with improved sensitivity.

217. M. Sattler, M. G. Schwendinger, J. Schleucher and C. Griesinger (1995). *J. Biomol. NMR* **6**, 11–22.
Novel strategies for sensitivity enhancement in heteronuclear multidimensional NMR experiments employing pulsed field gradients.
218. M. Czisch, A. Ross, C. Cieslar and T. A. Holak (1996). *J. Biomol. NMR* **7**, 121–130.
Some practical aspects of B_0 gradient pulses.
219. O. W. Sørensen, M. Rance and R. R. Ernst (1984). *J. Magn. Reson.* **56**, 527–534.
z-filters for purging phase- or multiplet-distorted spectra.
220. A. L. Davis, G. Estcourt, J. Keeler, E. D. Laue, and J. J. Titman (1993). *J. Magn. Reson. A* **105**, 167–183.
Improvement of z-filters and purging pulses by the use of zero quantum dephasing in homogeneous B_1 or B_0 fields.
221. F. C. Bernstein, T. F. Koetzle, G. J. B. Williams, E. F. Meyer, Jr., M. D. Brice, J. R. Rodgers, O. Kennard, T. Shimanouchi and M. Tasumi (1977). *J. Mol. Biol.* **112**, 535–542.
The protein data bank: a computer-based archival file for macromolecular structures.
222. Z. Otwinowski, R. W. Schevitz, R. G. Zhang, C. L. Lawson, A. Joachimiak, R. Q. Marmorstein, B. F. Luisi and P. B. Sigler (1988). *Nature* **335**, 321–329.
Crystal structure of *trp* repressor/operator complex at atomic resolution.
223. Y. Q. Qian, G. Otting and K. Wüthrich (1993). *J. Am. Chem. Soc.* **115**, 1189–1190.
NMR detection of hydration water in the intermolecular interface of a protein-DNA complex.
224. K. Wüthrich, M. Billeter, P. Güntert, P. Luginbühl, R. Riek and G. Wider (1996). *Faraday Disc.* **103**, 245–253.
NMR studies of the hydration of biological macromolecules.
225. O. K. Daszkiewicz, J. W. Hennel, B. Lubas and T. W. Szczepkowski (1963). *Nature* **200**, 1006–1007.
Proton magnetic relaxation and protein hydration.
226. V. P. Denisov and B. Halle (1995). *J. Mol. Biol.* **245**, 682–697.
Protein hydration dynamics in aqueous solution: a comparison of BPTI and ubiquitin by oxygen-17 spin relaxation dispersion.
227. G. Otting and K. Wüthrich (1989). *J. Am. Chem. Soc.* **111**, 1871–1875.
Studies of protein hydration in aqueous solution by direct NMR observation of individual protein-bound water molecules.
228. G. Otting, E. Liepinsh and K. Wüthrich (1991). *Science* **254**, 974–980.
Protein hydration in aqueous solution.
229. G. Otting, E. Liepinsh and K. Wüthrich (1991). *J. Am. Chem. Soc.* **113**, 4363–4364.
Proton exchange with internal water molecules in the protein BPTI in aqueous solution.

230. G. Otting, E. Liepinsh and K. Wüthrich (1992). *J. Am. Chem. Soc.* **114**, 7093–7095.
Polypeptide hydration in mixed solvents at low temperatures.
231. P. S. Belton (1994). *Progr. Biophys. Molec. Biol.* **61**, 61–79.
NMR studies of protein hydration.
232. I. P. Gerothanassis (1994). *Progr. NMR Spectrosc.* **26**, 171–237.
Multinuclear and multidimensional NMR methodology for studying individual water molecules bound to peptides and proteins in solution: principles and applications.
233. R. G. Bryant (1996). *Annu. Rev. Biophys. Biomol. Struct.* **25**, 29–53.
The dynamics of water-protein interactions.
234. V. P. Denisov, B. Halle, J. Peters and H. D. Hörlein (1995). *Biochemistry* **34**, 9046–9051.
Residence times of the buried water molecules in BPTI and its G36S mutant.
235. E. Liepinsh, H. Rink, G. Otting and K. Wüthrich (1993). *J. Biomol. NMR* **3**, 253–257.
Contribution from hydration of carboxylate groups to the spectrum of water-polypeptide proton-proton Overhauser effects in aqueous solution.
236. E. Liepinsh and G. Otting (1996). *Nature Biotechnol.* **15**, 264–258.
Organic solvents identify specific ligand binding sites on protein surfaces.
237. E. Liepinsh and G. Otting (1994). *J. Am. Chem. Soc.* **116**, 9670–9674.
Specificity of urea binding to proteins.
238. V. Dötsch, G. Wider, G. Siegal and K. Wüthrich (1995). *FEBS Lett.* **366**, 6–10.
Interaction of urea with an unfolded protein, the DNA binding domain of the 434-repressor.
239. D. Neri, M. Billeter, G. Wider and K. Wüthrich (1992). *Science* **257**, 1559–1563.
Structure of the urea unfolded 434 repressor determined by NMR in solution.
240. D. Neri, G. Wider, and K. Wüthrich (1992). *Proc. Natl. Acad. Sci. USA* **89**, 4397–4401.
Complete ^{15}N and ^1H NMR assignments for the amino-terminal domain of the 434 repressor in the urea-unfolded form.
241. D. Neri, G. Wider, and K. Wüthrich (1992). *FEBS Lett.* **303**, 129–135.
 ^1H , ^{15}N , ^{13}C NMR assignments of the 434 repressor fragments 1–63 and 44–63 unfolded in urea.
242. R. W. Kriwacki, R. B. Hill, J. M. Flanagan, J. P. Caradonna, and J. H. Prestegard (1993). *J. Am. Chem. Soc.* **115**, 8907–8911.
New NMR methods for the characterization of bound waters in macromolecules.
243. S. Grzesiek and A. Bax (1993). *J. Biomol. NMR* **3**, 627–638.
Measurement of amide proton exchange rates and NOEs with water in $^{13}\text{C}/^{15}\text{N}$ -enriched calcineurin B.
244. P. X. Qi, J. L. Urbauer, E. J. Fuentes, M. F. Leopold and A. J. Wand (1994). *Nature Struct. Biol.* **1**, 378–382.
Structural water in oxidized and reduced horse heart cytochrome c.

245. S. Mori, M. O. Johnson, J. M. Berg, and P. C. M. Van Zijl (1994). *J. Am. Chem. Soc.* **116**, 11982–11984.
Water exchange filter (WEX filter) for NMR studies of macromolecules.
246. G. Otting and E. Liepinsh (1995). *J. Biomol. NMR* **5**, 420–426.
Selective excitation of intense solvent signals in the presence of radiation damping.
247. C. Dalvit and U. Hommel (1995). *J. Biomol. NMR* **5**, 306–310.
New pulsed field gradient NMR experiments for the detection of bound water in proteins.
248. S. Mori, J. M. Berg, and P. C. M. Van Zijl (1996). *J. Biomol. NMR* **7**, 77–82.
Separation of intramolecular NOE and exchange peaks in water exchange spectroscopy using spin echo filters.
249. S. Grzesiek, A. Bax, L. K. Nicholson, T. Yamazaki, P. Wingfield, S. J. Stahl, C. J. Eyermann, D. A. Torchia, C. N. Hodge, P. Y. S. Lam, P. K. Jadhav, and C.-H. Chang (1994). *J. Am. Chem. Soc.* **116**, 1581–1582.
NMR evidence for the displacement of a conserved interior water molecule in HIV protease by a non-peptide cyclic urea-based inhibitor.
250. G. Otting, E. Liepinsh, B. T. Farmer II and K. Wüthrich (1991). *J. Biomol. NMR* **1**, 209–215.
Protein hydration studied with homonuclear 3D ^1H NMR experiments.
251. E. Liepinsh, G. Otting and K. Wüthrich (1992). *J. Biomol. NMR* **2**, 447–465.
NMR spectroscopy of hydroxyl protons in aqueous solutions of peptides and proteins.
252. S. H. Koenig and W. E. Schillinger (1969). *J. Biol. Chem.* **244**, 3283–3289.
Nuclear magnetic relaxation dispersion in protein solutions. Apotransferrin.
253. V. P. Denisov and B. Halle (1995). *J. Mol. Biol.* **245**, 698–709.
Hydrogen exchange and protein hydration: the deuteron spin relaxation dispersions of BPTI and ubiquitin.
254. A. Wlodawer, J. Deisenhofer and R. Huber (1987). *J. Mol. Biol.* **193**, 145–156.
Comparison of two highly refined structures of BPTI.
255. F. Noack (1986). *Progr. NMR Spectrosc.* **18**, 171–276.
NMR field-cycling spectroscopy: principles and applications.
256. V. P. Denisov and B. Halle (1994). *J. Am. Chem. Soc.* **116**, 10324–10325.
Dynamics of the internal and external hydration of globular proteins.
257. S. H. Koenig, R. G. Bryant, K. Hallenga and S. J. Gary (1978). *Biochemistry* **17**, 4348–4358.
Magnetic cross-relaxation among protons in protein solutions.
258. K. Venu, V. P. Denisov and B. Halle (1997). *J. Am. Chem. Soc.* **119**, 3122–3134.
Water ^1H magnetic relaxation dispersion in protein solutions. A quantitative assessment of internal hydration, proton exchange, and cross relaxation.

259. L. Piculell and B. Halle (1986). *J. Chem. Soc., Faraday Trans. 1* **82**, 401–414.
Water spin relaxation in colloidal systems. Part 2. ^{17}O and ^2H relaxation in protein solutions.
260. S. Meiboom (1961). *J. Chem. Phys.* **34**, 375–388.
NMR study of the proton transfer in water.
261. B. Halle and H. Wennerström (1981). *J. Chem. Phys.* **75**, 1928–1943.
Interpretation of magnetic resonance data from water nuclei in heterogeneous systems.
262. V. P. Denisov, J. Peters, H. D. Hörlein and B. Halle (1996). *Nature Struct. Biol.* **3**, 505–509.
Using buried water molecules to explore the energy landscape of proteins.
263. N. Bloembergen and R. V. Pound (1954). *Phys. Rev.* **95**, 8–12.
Radiation damping in magnetic resonance experiments.
264. J. Jeener, A. Vlassenbroek, and P. Broekaert (1995). *J. Chem. Phys.* **103**, 1309–1332.
Unified derivation of the dipolar field and relaxation terms in the Bloch-Redfield equations of liquid NMR.
265. B. Lix, F. D. Sönnichsen, and B. D. Sykes (1996). *J. Magn. Reson. A* **121**, 83–87.
The role of transient changes in sample susceptibility in causing apparent multiple quantum peaks in NOESY spectra.
266. H. Iwai and K. Wüthrich (1997). *Personal communication*.
267. M. Ikura and A. Bax (1992). *J. Am. Chem. Soc.* **114**, 2433–2440.
Isotope-filtered 2D NMR of a protein-peptide complex: study of a skeletal muscle myosin light chain kinase fragment bound to calmodulin.
268. W. A. Hendrickson and K. Wüthrich (eds.) (1991–1996). *Macromolecular Structures*. Current Biology: London.
269. K. Pervushin, R. Riek, G. Wider, and K. Wüthrich (1997). *Proc. Natl. Acad. Sci. USA* **94**, in press.
Attenuated T_2 relaxation by mutual cancellation of dipole-dipole coupling and chemical shift anisotropy: an avenue to NMR structures of very large biological macromolecules in solution?