

CURRICULUM VITAE

Thomas F. Rosenbaum

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Education:

A.B. cum laude in Physics, Harvard College	1977
M.A. in Physics, Princeton University	1979
Ph.D. in Physics, Princeton University	1982

Employment:

Bell Laboratories, Murray Hill	1979-1982
IBM Watson Research Center, Visiting Scientist	1982-1983
The University of Chicago	
Assistant Professor of Physics	1983-1986
Associate Professor of Physics	1986-1990
Professor of Physics	1990-2001
James Franck Professor of Physics	2001-2004
John T. Wilson Distinguished Service Professor	2004-
Director, NSF Materials Research Laboratory	1991-1994
Director, The James Franck Institute	1995-2001
Vice-President for Research and for Argonne National Laboratory	2002-2006
Provost	2007-2014
California Institute of Technology	
President	
Sonja and William Davidow Presidential Chair and Professor of Physics	2014-

Academic Honors:

Alfred P. Sloan Research Fellowship	1984
Presidential Young Investigator Award	1984
William L. McMillan Award	1986
Fellow, American Physical Society	1994
Bertman Memorial Lecture, Wesleyan University	1998
American Physical Society Centennial Lecturer	1998-1999
Fellow, American Association for the Advancement of Science	2004
Fellow, American Academy of Arts & Sciences	2010
Phi Beta Kappa (Honorary Inductee)	2010

Professional Activities:

Board of Governors, Argonne National Laboratory	2002-
Santa Fe Institute Science Board	2011-
Board of Trustees, National Opinion Research Center	2007-2014
Board of Trustees, University of Chicago Medical Center	2007-2014
Board of Directors, Bulletin of the Atomic Scientists	2004-2013
Council on Competitiveness, Technology Leadership and Strategy Initiative	2009-2012
Chair, Nominating Committee, American Physical Society	2006
CEO, UChicago Argonne, LLC	2006
Princeton University Materials Center Advisory Board	2003-2009
Chair, Johns Hopkins Materials Center Advisory Board	1998-2006
National Research Council Solid State Sciences Committee	2000-2003
Advisory Board, J. Physics: Condensed Matter	2000-2003
Scientific and Technical Advisory Committee (STAC), Argonne	2001-2003
Director, Materials Center Research Experience for Undergraduates (REU) Program	1994-1997
Program Committee: NSF Science & Technology Center for Superconductivity	1994-2000
University of Chicago Task Force on Quality of Student Experience	1994-1996
University of Chicago Council on Research	1989-1992
Council of the University Senate	1987-1990
Institute for Defense Analyses – Defense Sciences Study Group	1986-1988
William L. McMillan Award Committee	1988-1990

Ph.D. Students:

Stuart B. Field (Professor, Colorado State University)
Daniel H. Reich (Professor, Johns Hopkins University)
Brett D. Ellman (Professor, Kent State University)
Wenhao Wu (Professor, Texas A&M)
Sue A. Carter (Professor, University of California, Santa Cruz)
Gerald T. Seidler (Professor, University of Washington)
Deborah S. Jin (JILA; Professor, University of Colorado, Boulder; MacArthur Fellow)
Anke Husmann (Cambridge University, UK)
David Bitko (Science Teacher, Franklin High School, Somerset, NJ)
Emmin Shung (Senior Vice President, Sempra Energy Trading)
Justin Brooke (Lincoln Laboratories, Cambridge, MA)
Arunabha S. Roy (GE Research Laboratories, India)
Raghu Parthasarathy (Professor, University of Oregon)
Sayantani Ghosh (Professor, University of California, Merced)
Minhyea Lee (Professor, University of Colorado, Boulder)
Jingshi Hu (McKinsey & Company)
Carlos Ancona-Torres (Research Scientist, Risø, Denmark)
Rafael Jaramillo (Professor, MIT)
Michael A. Schmidt (Intel Corporation)
Arnab Banerjee (Oak Ridge National Laboratory)

Jiyang Wang (CGG Veritas)

Postdoctoral Fellows:

Jie Yang (Professor, University of Vermont)

Bellave Shivaram (Professor, University of Virginia)

Heinrich Jaeger (Professor, University of Chicago)

Weili Luo (Professor, University of Central Florida)

Rena Zieve (Professor, University of California, Davis)

Kara Beauchamp (Professor, Cornell College)

Andrew Yeh (Xerox Corporation)

Allan Smith (NIST)

Allard Hoekstra (Leiden University, The Netherlands)

Harold Schnyders (Professor, Grand Valley State University)

Henrik Rønnow (Professor, École Polytechnique Fédérale de Lausanne, Switzerland)

Yejun Feng (Physicist, Advanced Photon Source, Argonne National Laboratory)

Daniel Silevitch (Senior Research Associate, University of Chicago)

Sara Haravifard (Professor, Duke University)

PUBLICATIONS

T.F. Rosenbaum

1. "Non-Ohmic Conductivity of Barely Localized Electrons in Three Dimensions," T.F. Rosenbaum, K. Andres, and G.A. Thomas, *Solid State Commun.* **35**, 663 (1980).
2. "Sharp Metal-Insulator Transition in a Random Solid," T.F. Rosenbaum, K. Andres, G.A. Thomas, and R.N. Bhatt, *Phys. Rev. Lett.* **45**, 1723 (1980).
3. "Topological Physics Illustrated in the Laboratory," T.F. Rosenbaum and D.L. Stein, *Am. J. Phys.* **49**, 128 (1981).
4. "Conductivity Cusp in a Disordered Metal," T.F. Rosenbaum, K. Andres, G.A. Thomas, and P.A. Lee, *Phys. Rev. Lett.* **46**, 568 (1981).
5. "Metallic Conductivity Near the Metal-Insulator Transition," G.A. Thomas, T.F. Rosenbaum, and R.N. Bhatt, *Phys. Rev. Lett.* **46**, 1435 (1981).
6. "Low Temperature Magnetoresistance of a Disordered Metal," T.F. Rosenbaum, R.F. Milligan, G.A. Thomas, P.A. Lee, T.V. Ramakrishnan, R.N. Bhatt, K. DeConde, H. Hess, and T. Perry, *Phys. Rev. Lett.* **47**, 1758 (1981).
7. "Magnetoresistance in Three-Dimensional Disordered Metals," T.F. Rosenbaum, R.F. Milligan, G.A. Thomas, P.A. Lee, T.V. Ramakrishnan, and K. DeConde, *Physica* **107B**, 507 (1981).
8. "Optical and Precursive Properties Approaching the Metal to Insulator Transition in Highly Doped Si," M. Capizzi, T.F. Rosenbaum, K. Andres, G.A. Thomas, R.N. Bhatt, and T.M. Rice, in *Disordered Systems and Localization*, ed. by C. Castellani, C. DiCastro, and L. Peliti (Springer-Verlag, Berlin, 1981) p. 235.
9. "Electron Spin Resonance Indication of the Ferromagnetic-Spin Glass Transition in Amorphous FeMn Alloys," T.F. Rosenbaum, L.W. Rupp, Jr., G.A. Thomas, W.M. Walsh, Jr., H.S. Chen, J.R. Banavar, and P.B. Littlewood, *Solid State Commun.* **42**, 725 (1982).
10. "Observation of ESR Non-Linearities in a Spin Glass," T.F. Rosenbaum, L.W. Rupp, Jr., G.A. Thomas, H.S. Chen, J.R. Banavar, and C.M. Varma, *J. Phys. C* **15**, L975 (1982).
11. "Giant Dielectric Constants at the Approach to the Insulator-Metal Transition," H. Hess, K. DeConde, T.F. Rosenbaum, and G.A. Thomas, *Phys. Rev. B (Rapid Commun.)* **25**, 5578 (1982).
12. "Stress Tuning of the Metal-Insulator Transition," M.A. Paalanen, T.F. Rosenbaum, G.A. Thomas, and R.N. Bhatt, *Phys. Rev. Lett.* **48**, 1284 (1982).
13. "Measurements of Conductivity Near the Metal-Insulator Critical Point," G.A. Thomas, M. Paalanen, and T.F. Rosenbaum, *Phys. Rev. B (Rapid Commun.)* **27**, 3897 (1983).

14. "The Metal-Insulator Transition in a Doped Semiconductor," T.F. Rosenbaum, R.F. Milligan, M.A. Paalanen, G.A. Thomas, R.N. Bhatt, and W. Lin, *Phys. Rev. B* **27**, 7509 (1983).
15. "Critical Scaling of the Glassy Conductance in a Disordered Insulator," M.A. Paalanen, T.F. Rosenbaum, G.A. Thomas, and R.N. Bhatt, *Phys. Rev. Lett.* **51**, 1896 (1983).
16. "Experimental Observation of Continuous Melting Into a Hexatic Phase," T.F. Rosenbaum, S.E. Nagler, P.M. Horn, and R. Clarke, *Phys. Rev. Lett.* **50**, 1791 (1983).
17. "Short-Range Ordering and Freezing in a Randomly Mixed Ferroelectric-Antiferroelectric Crystal," E. Courtens, T.F. Rosenbaum, S.E. Nagler, and P.M. Horn, *Phys. Rev. B (Rapid Commun.)* **29**, 515 (1984).
18. "A New Adsorption Substrate: Single Crystal Exfoliated Graphite," R. Clarke, P.M. Horn, S.E. Nagler, and T.F. Rosenbaum, *J. Appl. Phys.* **55**, 1231 (1984).
19. "A Review of the Metal-Insulator Transition in Doped Semiconductors," R.F. Milligan, T.F. Rosenbaum, R.N. Bhatt, and G.A. Thomas, in *Electron-Electron Interaction in Disordered Systems*, ed. by M. Pollak and A.L. Efros in *Modern Problems in Condensed Matter Sciences* (Elsevier Science, Amsterdam, 1985) p. 231.
20. "Orientational Order in Xenon Fluid Monolayers on Single Crystals of Exfoliated Graphite," S.E. Nagler, P.M. Horn, T.F. Rosenbaum, R.J. Birgeneau, M. Sutton, S. Mochrie, D.E. Moncton, and R. Clarke, *Phys. Rev. B* **32**, 7373 (1985),
21. "Magnetic Field Induced Localization Transition in HgCdTe," T.F. Rosenbaum, S.B. Field, D.A. Nelson, and P.B. Littlewood, *Phys. Rev. Lett.* **54**, 241 (1985).
22. "The Disordered Insulator: Electron Glasses and Crystals," T.F. Rosenbaum, in *Localization and Metal-Insulator Transitions*, ed. by D. Adler and H. Fritzsche (Plenum Press, New York), 1985) p. 1.
23. "Scaling Behavior of Amorphous FeMn in Magnetic Fields," T.F. Rosenbaum, S.B. Field, and K.A. Muttalib, *Phys. Rev. B (Rapid Commun.)* **32**, 4804 (1985).
24. "Critical Behavior of the Hall Conductivity at the Metal-Insulator Transition." S.B. Field and T.F. Rosenbaum, *Phys. Rev. Lett.* **55**, 522 (1985).
25. "Magnetoresistivity in Single Crystal ErRh₄B₄," B.D. Dunlap, G.W. Crabtree, D.G. Hinks, W. Joss, F. Behroozi, L.N. Hall, and T.F. Rosenbaum, *J. Magnet. Mag. Mat.* **52**, 455 (1985).
26. "Evidence for Depinning of a Wigner Crystal in HgCdTe," S.B. Field, D.H. Reich, B.S. Shivaram, T.F. Rosenbaum, D.A. Nelson, and P.B. Littlewood, *Phys. Rev. B* **33**, 5082 (1986).
27. "Anisotropy of Transverse Sound in the Heavy Fermion Superconductor UPt₃," B.S. Shivaram, Y.H. Jeong, T.F. Rosenbaum, and D.G. Hinks, *Phys. Rev. Lett.* **56**, 1078 (1986).

28. "Weak Localization in Superconductors: A Study of Radiation-Damaged Nb₃Ir," K.E. Gray, R.T. Kampwirth, T.F. Rosenbaum, S.B. Field, and K.A. Muttalib, *Phys. Rev. B*, **35**, 8405 (1987).
29. "Ferromagnetism, Glassiness, and Metastability in a Dilute Dipolar-Coupled Magnet," D.H. Reich, T.F. Rosenbaum, G. Aeppli, and H.J. Guggenheim, *Phys. Rev. B (Rapid Commun.)* **34**, 4956 (1986).
30. "Unusual Angular and Temperature Dependence of the Upper Critical Field in UPt₃," B.S. Shivaram, T.F. Rosenbaum, and D.G. Hinks, *Phys. Rev. Lett.* **57**, 1259 (1986).
31. "Transverse Sound in a Magnetic Field in UPt₃," B.S. Shivaram, Y.H. Jeong, T.F. Rosenbaum, D.G. Hinks, and S. Schmitt-Rink, *Phys. Rev. B (Rapid Commun.)* **35**, 5372 (1987).
32. "The Metal-Insulator Transition at MilliKelvin Temperatures," T.F. Rosenbaum, in *Disordered Semiconductors*, ed. by M.A. Kastner, G.A. Thomas, and S.R. Ovshinsky (Plenum Press, New York, 1987), p. 23.
33. "Glassy Relaxation without Freezing in a Random Dipolar-Coupled Magnet," D.H. Reich, T.F. Rosenbaum, and G. Aeppli, *Phys. Rev. Lett.* **59**, 1969 (1987).
34. "Electron Correlation and Disorder in Hg_{1-x}Cd_xTe in Magnetic Field," S.B. Field, D.H. Reich, T.F. Rosenbaum, P.B. Littlewood, and D.A. Nelson, *Phys. Rev. B* **38**, 1856 (1988).
35. "Freezing of Spin and Charge in La_{2-x}Sr_xCuO₄," D.R. Harshman, G. Aeppli, G.P. Espinosa, A.S. Cooper, J.P. Remeika, E.J. Ansaldo, T. Riseman, D. Li. Williams, D.R. Noakes, B. Ellman, and T.F. Rosenbaum, *Phys. Rev. B (Rapid Commun.)* **38**, 852 (1988).
36. "Magnetic Correlations in La₂NiO_{4+δ} and La_{2-x}Sr_xCuO₄," G. Aeppli, D.R. Harshman, D. Buttrey, E. Ansaldo, G.P. Espinosa, A.S. Cooper, J.P. Remeika, T. Freltoft, T.M. Riseman, D.R. Noakes, B. Ellman, T.F. Rosenbaum, and D. Li. Williams, *Physica C* **153-155**, 1111 (1988).
37. "Transport Studies of La_{2-x}Sr_xCuO₄ Near the Insulator-Metal/Superconductor Transition," B. Ellman, H.M. Jaeger, D.P. Katz, T.F. Rosenbaum, A.S. Cooper, and G.P. Espinosa, *Phys. Rev. B*, **39**, 9012 (1989).
38. "Variation of the Metallic Onset with Magnetic Field in Doped Germanium," T.F. Rosenbaum, S.B. Field, and R.N. Bhatt, *Europhys. Lett.* **10**, 269 (1989).
39. "Field Dependent Specific Heat and Multiple Superconducting Phases in UPt₃," B. Ellman, J. Yang, T.F. Rosenbaum, and E. Bucher, *Phys. Rev. Lett.* **64**, 1569 (1990).
40. "Nature of Electronic States in a Disordered Metal: Magnetoresistance in Doped Germanium," T.F. Rosenbaum, S. Pepke, R.N. Bhatt, and T.V. Ramakrishnan, *Phys. Rev. B*, **42**, 11214 (1990).

41. "Dipolar Magnets and Glasses: Neutron Scattering, Dynamical, and Calorimetric Studies of Randomly Distributed Ising Spins," D.H. Reich, B. Ellman, J. Yang, T.F. Rosenbaum, G. Aeppli and D.P. Belanger, *Phys. Rev. B* **42**, 4631 (1990).
42. "The Role of Disorder in Highly Correlated Metals and Insulators," T.F. Rosenbaum and S.A. Carter, *J. Solid State Chem.* **88**, 94 (1990).
43. "The Effect of Correlations and Disorder on Electron States in the Mott-Hubbard Insulator V_2O_3 ," S.A. Carter, J. Yang, T.F. Rosenbaum, J. Spalek, and J.M. Honig, *Phys. Rev. B* **43**, 607 (1991).
44. "Scaling of the Irreversibility Line with Superconducting Transition Temperature in Oxygen Deficient $YBa_2Cu_3O_{7-\delta}$," G.T. Seidler, T.F. Rosenbaum, D.L. Heinz, J.W. Downey, A.P. Paulikas, and B.W. Veal, *Physica C* **183**, 333 (1991).
45. "From Classical to Quantum Glass," W. Wu, B. Ellman, T.F. Rosenbaum, G. Aeppli, and D.H. Reich, *Phys. Rev. Lett.* **67**, 2076 (1991).
46. "Dipolar Ferromagnets and Glasses," T.F. Rosenbaum, W. Wu, B. Ellman, J. Yang, G. Aeppli, and D.H. Reich, *J. Appl. Phys.* **70**, 5946 (1991).
47. "Dipole Interactions with Random Anisotropy in a Frozen Ferrofluid," W. Luo, S.R. Nagel, T.F. Rosenbaum, and R.E. Rosensweig, *Phys. Rev. Lett.* **67**, 2721 (1991).
48. "Thermodynamic Features in the H-T Plane of Superconducting UBe_{13} ," B. Ellman, T.F. Rosenbaum, J.S. Kim, and G.R. Stewart, *Phys. Rev. B (Rapid Commun.)* **44**, 12074 (1991).
49. "New Phase Boundary in Highly Correlated, Barely Metallic V_2O_3 ," S.A. Carter, T.F. Rosenbaum, J.M. Honig, and J. Spalek, *Phys. Rev. Lett.* **67**, 3440 (1991).
50. "Uniaxial Stress Anisotropy of the Double Superconducting Transition in UPt_3 ," D.S. Jin, S.A. Carter, B. Ellman, T.F. Rosenbaum, and D.G. Hinks, *Phys. Rev. Lett.* **68**, 1597 (1992).
51. "High Anisotropy and a Dimensionality Crossover in the Irreversibility Behavior of Oxygen-Deficient $YBa_2Cu_3O_{7-\delta}$," K.E. Gray, D.H. Kim, B.W. Veal, G.T. Seidler, T.F. Rosenbaum, and D.E. Farrell, *Phys. Rev. B* **45**, 10071 (1992).
52. "Two-Dimensional Superconductor-Insulator Transition in Bulk Single Crystal $YBa_2Cu_3O_{6.38}$," G.T. Seidler, T.F. Rosenbaum, and B.W. Veal, *Phys. Rev. B (Rapid Commun.)* **45**, 10162 (1992).
53. "Critical Fields and Flux Pinning in Single Crystal $Ba_{1-x}K_xBiO_3$," G.T. Seidler, T.F. Rosenbaum, P.D. Han, D.A. Payne, and B.W. Veal, *Physica C* **195**, 373 (1992).
54. "Vanishing Magnetization Relaxation in the High Field Quantum Limit in $YBa_2Cu_3O_{7-\delta}$," G.T. Seidler, C.S. Carrillo, T.F. Rosenbaum, U. Welp, G.W. Crabtree, and V.M. Vinokur, *Phys. Rev. Lett.* **70**, 2814 (1993).

55. "Incommensurate Spin Density Wave in Metallic $V_{2-y}O_3$," W. Bao, C. Broholm, S.A. Carter, T.F. Rosenbaum, G. Aeppli, P. Metcalf, J.M. Honig, J. Spalek, and S. Trevino, *Phys. Rev. Lett.* **71**, 766 (1993).
56. "Quenching of the Non-Linear Susceptibility at a $T = 0$ Spin Glass Transition," W. Wu, D. Bitko, T.F. Rosenbaum, and G. Aeppli, *Phys. Rev. Lett.* **71**, 1919 (1993).
57. "Mass Enhancement and Magnetic Order at the Mott-Hubbard Transition," S.A. Carter, T.F. Rosenbaum, P. Metcalf, J.M. Honig, and J. Spalek, *Phys. Rev. B (Rapid Commun.)* **48**, 16841 (1993).
58. "Low Temperature Specific Heat of $U_{1-x}Th_xBe_{13}$," D.S. Jin, T.F. Rosenbaum, J.S. Kim, and G.R. Stewart, *Phys. Rev. B (Rapid Commun.)* **49**, 1540 (1994).
59. "Pressure Tuning of the Double Transition in Thoriated UBe_{13} ," R.J. Zieve, D.S. Jin, T.F. Rosenbaum, J.S. Kim, and G.R. Stewart, *Phys. Rev. Lett.* **72**, 756 (1994).
60. "Critical Behavior of Si:P at the Metal-Insulator Transition," T.F. Rosenbaum, G.A. Thomas, and M.A. Paalanen, *Phys. Rev. Lett. (C)* **72**, 2121 (1994).
61. "The Quantum Glass Transition," G. Aeppli and T.F. Rosenbaum, in *Random Magnetism, High-Temperature Superconductivity*, ed. by W. Beyermann, N-L.H. Liu and D. MacLaughlin (World Scientific, 1994), pp. 77-84.
62. "Magnetic and Transport Studies of Pure V_2O_3 under Pressure," S.A. Carter, T.F. Rosenbaum, M. Lu, H.M. Jaeger, P. Metcalf, J.M. Honig, and J. Spalek, *Phys. Rev. B* **49**, 7898 (1994).
63. "Optical Properties of a Correlated Electron System: V_2O_3 ," G.A. Thomas, D.H. Rapkine, S.A. Carter, T.F. Rosenbaum, P. Metcalf, and J.M. Honig, *J. Low Temp. Phys.* **95**, 33 (1994).
64. "Observation of the Gap and Kinetic Energy in a Correlated Insulator," G.A. Thomas, D.H. Rapkine, S.A. Carter, A.J. Millis, T.F. Rosenbaum, P. Metcalf, and J.M. Honig, *Phys. Rev. Lett.* **73**, 1528 (1994).
65. "Local Order and Global Disorder in Bidisperse Ferrofluids," T.F. Rosenbaum, X.D. Shi, and S.R. Nagel, *J. Phys. Chem.* **99**, 2875 (1995).
66. "Low Temperature Action in $YBa_2Cu_3O_{7-\delta}$," G.T. Seidler, T.F. Rosenbaum, K.M. Beauchamp, H.M. Jaeger, G.W. Crabtree, U. Welp, and V.M. Vinokur, *Phys. Rev. Lett.* **74**, 1442 (1995).
67. "Vortex Lock-In Deep in the Bose Glass," K.M. Beauchamp, T.F. Rosenbaum, U. Welp, G.W. Crabtree, and V.M. Vinokur, *Phys. Rev. Lett.* **75**, 3942 (1995).
68. "New Results on Old Oxides," T.F. Rosenbaum, in *The Metal-Nonmetal Transition Revisited*, ed. by P.P. Edwards and C.N. Rao (Taylor & Francis, London, 1995), p. 105.

69. "Anomalous Flux Pinning in a Torus of Thoriated UBe₁₃," R.J. Zieve, T.F. Rosenbaum, J.S. Kim, G.R. Stewart, and M. Sigrist, *Phys. Rev. B (Rapid Commun.)* **51**, 12041 (1995).
70. "Local Probe of Vortex Pinning Energies in the Bose Glass," K.M. Beauchamp, L. Radzihovsky, E. Shung, T.F. Rosenbaum, U. Welp, and G.W. Crabtree, *Phys. Rev. B* **52**, 13025 (1995).
71. "Low-Temperature Electrical-Transport Properties of Single-Crystal Bismuth Films Under Pressure," M. Lu, R.J. Zieve, J.A. van Hulst, H.M. Jaeger, T.F. Rosenbaum, and S. Radelaar, *Phys. Rev. B* **53**, 1609 (1996).
72. "H-T Phase Diagrams of the Double Transition in Thoriated UBe₁₃," D.S. Jin, S.A. Carter, T.F. Rosenbaum, J.S. Kim, and G.R. Stewart, *Phys. Rev. B* **53**, 8549 (1996).
73. "Vortex Avalanches at One-Thousandth the Superconducting Transition Temperature," R.J. Zieve, T.F. Rosenbaum, H.M. Jaeger, G.T. Seidler, G.W. Crabtree, and U. Welp, *Phys. Rev. B* **53**, 11849 (1996).
74. "High-Frequency Dynamics and the Spin-Glass Transition," D. Bitko, N. Menon, S.R. Nagel, T.F. Rosenbaum, and G. Aeppli, *Europhys. Lett.* **33**, 489 (1996).
75. "High Sensitivity Sensor for Moderate Pressures," T.F. Rosenbaum, S.A. Carter, and J.M. Honig, *Rev. Sci. Instrum.* **67**, 617 (1996).
76. "Quantum Critical Behavior for a Model Magnet," D. Bitko, T.F. Rosenbaum, and G. Aeppli, *Phys. Rev. Lett.* **77**, 940 (1996).
77. "Dynamical Signature of the Mott-Hubbard Transition in Ni(S,Se)₂," A. Husmann, D.S. Jin, Y.V. Zastavker, T.F. Rosenbaum, X. Yao, and J.M. Honig, *Science* **274**, 1874 (1996).
78. "Quantum Magnets and Glasses," T.F. Rosenbaum, *J. Phys. Condens. Matter* **8**, 9759 (1996).
79. "Evidence for Glass and Spin-Glass Phase Transitions from the Dynamic Susceptibility," D. Bitko, S.N. Coppersmith, R.L. Leheny, N. Menon, S.R. Nagel, and T.F. Rosenbaum, *J. Res. Natl. Inst. Stand. Technol.* **102**, 207 (1997).
80. "Controlled Symmetry Breaking in Superconducting UPt₃," D.S. Jin, A. Husmann, T.F. Rosenbaum, T.E. Steyer, and K.T. Faber, *Phys. Rev. Lett.* **78**, 1775 (1997).
81. "Large Magnetoresistance in Non-Magnetic Silver Chalcogenides," R. Xu, A. Husmann, T.F. Rosenbaum, M.-L. Saboungi, J.E. Enderby, and P.B. Littlewood, *Nature* **390**, 57 (1997).
82. "Vortex Telegraph Noise in High Magnetic Fields," E. Shung, T.F. Rosenbaum, S.N. Coppersmith, G.W. Crabtree, and W. Kwok, *Phys. Rev. B* **56**, R11431 (1997).
83. "Local Magnetometry at High Fields and Low Temperatures using InAs Hall Sensors," E. Pugel, E. Shung, T.F. Rosenbaum, and S.P. Watkins, *Appl. Phys. Lett.* **71**, 2205 (1997).

84. "The Double Transition in Thoriated UBe_{13} ," T.F. Rosenbaum, *Superconductivity Review* **2**, 257 (1998).
85. "Quantum Critical Points -- Experiments," G. Aeppli and T.F. Rosenbaum, in *Dynamical Properties of Unconventional Magnetic Systems*, ed. by A.T. Skjeltorp and D. Sherrington (Kluwer Academic, Amsterdam, 1998), pp. 107-122.
86. "Vortex Pinning and Stability in the Low Field, Superconducting Phases of UPt_3 ," E. Shung, T.F. Rosenbaum, and M. Sigrist, *Phys. Rev. Lett.* **80**, 1078 (1998).
87. "Temperature Dependence of the Hall Angle in a Correlated, Three-Dimensional Metal," T.F. Rosenbaum, A. Husmann, S.A. Carter, and J.M. Honig, *Phys. Rev. B* **57**, R13997 (1998).
88. "Magnetic Correlations and Quantum Criticality in the Insulating Antiferromagnetic, Insulating Spin Liquid, Renormalized Fermi Liquid, and Metallic Antiferromagnetic Phases of the Mott System V_2O_3 ," W. Bao, C. Broholm, G. Aeppli, S.A. Carter, P. Dai, T.F. Rosenbaum, J.M. Honig, P. Metcalf, and S.F. Trevino, *Phys. Rev. B* **58**, 12727 (1998).
89. "Signature of the Matching Field in Bose-Glass Melting of Untwinned $\text{YBa}_2\text{Cu}_3\text{O}_{7-\delta}$ Single Crystals," A.W. Smith, H.M. Jaeger, T.F. Rosenbaum, W.K. Kwok, and G.W. Crabtree, *Phys. Rev. B* **59**, R11665 (1999).
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91. "Vortex Flow and Transverse Flux Screening at the Bose Glass Transition," A.W. Smith, H.M. Jaeger, T.F. Rosenbaum, A.M. Petrean, W.K. Kwok, and G.W. Crabtree, *Phys. Rev. Lett.* **84**, 4974 (2000).
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93. "Magnetoresistance in n-type and p-type Ag_2Te : Mechanisms and Applications," H.S. Schnyders, M.-L. Saboungi, and T.F. Rosenbaum, *Appl. Phys. Lett.* **76**, 1710 (2000).
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Patents

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