

R. Moessner: List of Publications

001. Exact results for interacting electrons in high Landau levels (R. Moessner and J. T. Chalker), Phys. Rev. B **54**, 5006 (1996)
002. Two Systems with macroscopically degenerate groundstates: electrons in high Landau levels and geometrically frustrated antiferromagnets, D. Phil. thesis, Oxford University (1997)
003. Interacting electrons in high Landau levels (R. Moessner and J. T. Chalker), in " *High Magnetic Fields in the Physics of Semiconductors II*" ed. by G. Landwehr and W. Ossau, 135-138 (1997)
004. Relief and generation of frustration in pyrochlore magnets by single-ion anisotropy (R. Moessner), Phys. Rev. B **57**, R5587 (1998)
005. Properties of a Classical Spin Liquid: The Heisenberg Pyrochlore Antiferromagnet (R. Moessner and J. T. Chalker), Phys. Rev. Lett. **80**, 2929 (1998)
006. Low-temperature properties of classical, geometrically frustrated antiferromagnets (R. Moessner and J. T. Chalker), Phys. Rev. B **58**, 12049 (1998)
007. Magnetic Susceptibility of Diluted Pyrochlore and $\text{SrCr}_{9-9x}\text{Ga}_{3+9x}\text{O}_{19}$ Antiferromagnets (R. Moessner and A. J. Berlinsky), Phys. Rev. Lett. **83**, 3293 (1999)
008. Two-Dimensional Periodic Frustrated Ising Models in a Transverse Field (R. Moessner, S. L. Sondhi and P. Chandra), Phys. Rev. Lett. **84**, 4457 (2000)
009. Slow holes in the triangular Ising antiferromagnet (R. Moessner and S. L. Sondhi), Phys. Rev. B **62**, 14122 (2000)
010. Magnets with strong geometric frustration (R. Moessner), Can. J. Phys. **79**, 1283 (2001)
011. Frustrated order by disorder: The pyrochlore anti-ferromagnet with bond disorder (L. Bellier-Castella, M. J. P. Gingras, P. C. W. Holdsworth and R. Moessner), Can. J. Phys. **79**, 1365 (2001)
012. Resonating Valence Bond Phase in the Triangular Lattice Quantum Dimer Model (R. Moessner and S. L. Sondhi), Phys. Rev. Lett. **86**, 1881 (2001)
013. Ising models of quantum frustration (R. Moessner and S. L. Sondhi), Phys. Rev. B **63**, 224401 (2001)
014. Phase diagram of the hexagonal lattice quantum dimer model (R. Moessner, S. L. Sondhi and P. Chandra), Phys. Rev. B **64**, 144416 (2001)

- 015. Short-ranged resonating valence bond physics, quantum dimer models and Ising gauge theories (R. Moessner, S. L. Sondhi and E. Fradkin), Phys. Rev. B **65**, 024504 (2001)
- 016. Order by distortion and string modes in pyrochlore antiferromagnet (O. Tchernyshyov, R. Moessner and S. L. Sondhi), Phys. Rev. Lett. **88**, 067203 (2002)
- 017. Spin-Peierls phases in pyrochlore antiferromagnets (O. Tchernyshyov, R. Moessner and S. L. Sondhi), Phys. Rev. B **66**, 064403 (2002)
- 018. Classical dimers on the triangular lattice (P. Fendley, R. Moessner and S. L. Sondhi), Phys. Rev. B **66**, 214513 (2002)
- 019. Resonating Valence Bond Liquid Physics on the Triangular Lattice (R. Moessner and S. L. Sondhi), Progr. Theor. Phys. Supp. **145**, 37 (2002)
- 020. Pocket Monte Carlo algorithm for classical doped dimer models (W. Krauth and R. Moessner), Phys. Rev. B **67**, 064503 (2003)
- 021. Ising and dimer models in two and three dimensions (R. Moessner and S. L. Sondhi), Phys. Rev. B **68**, 054405 (2003)
- 022. Theory of the [111] magnetization plateau in spin ice (R. Moessner and S. L. Sondhi), Phys. Rev. B **68**, 064411 (2003)
- 023. Interplay of quantum and thermal fluctuations in a frustrated magnet (S. V. Isakov and R. Moessner), Phys. Rev. B **68**, 104409 (2003)
- 024. Bond order from disorder in the planar pyrochlore magnet (O. Tchernyshyov, O. A. Starykh, R. Moessner and A. G. Abanov), Phys. Rev. B **68**, 144422 (2003)
- 025. Coulomb and Liquid Dimer Models in Three Dimensions (D. A. Huse, W. Krauth, R. Moessner and S. L. Sondhi), Phys. Rev. Lett. **91**, 167004 (2003)
- 026. Three dimensional resonating valence bond liquids and their excitations (R. Moessner and S. L. Sondhi), Phys. Rev. B **68**, 184512 (2003)
- 027. Valence-bond crystal in a $\{111\}$ slice of the pyrochlore antiferromagnet (O. Tchernyshyov, H. Yao and R. Moessner), Phys. Rev. B **69**, 212402 (2004)
- 028. Bipartite Rokhsar-Kivelson points and Cantor deconfinement (E. Fradkin, D. A. Huse, R. Moessner, V. Oganesyan and S. L. Sondhi), Phys. Rev. B **69**, 224415 (2004)

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030. Magnetization curve of spin ice in a [111] magnetic field (S. V. Isakov, K. Raman, R. Moessner and S. L. Sondhi), *Phys. Rev. B* **70**, 104418 (2004)
031. Dipolar Spin Correlations in Classical Pyrochlore Magnets (S. V. Isakov, K. Gregor, R. Moessner and S. L. Sondhi), *Phys. Rev. Lett.* **93**, 167204 (2004)
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033. Why Spin Ice Obeys the Ice Rules (S. V. Isakov, R. Moessner and S. L. Sondhi), *Phys. Rev. Lett.* **95**, 217201 (2005)
034. From exotic phases to microscopic Hamiltonians (R. Moessner, K. S. Raman and S. L. Sondhi), in "*Effective Models for Low-Dimensional Strongly Correlated Systems*" ed. by G. G. Batrouni and D. Poilblanc, 30-40 (2006)
035. Flux expulsion and greedy bosons: Frustrated magnets at large N (O. Tchernyshyov, R. Moessner and S. L. Sondhi), *Europhys. Lett.* **73**, 278 (2006)
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037. Quantum dimer models and effective Hamiltonians on the pyrochlore lattice (R. Moessner, S. L. Sondhi and M. O. Goerbig), *Phys. Rev. B* **73**, 094430 (2006)
038. Semiclassical degeneracies and ordering for highly frustrated magnets in a field (S. R. Hassan and R. Moessner), *Phys. Rev. B* **73**, 094443 (2006)
039. Correlations and confinement in nonplanar two-dimensional dimer models (A. W. Sandvik and R. Moessner), *Phys. Rev. B* **73**, 144504 (2006)
040. Artificial Square Ice and Related Dipolar Nanoarrays (G. Möller and R. Moessner), *Phys. Rev. Lett.* **96**, 237202 (2006)
041. Unconventional Continuous Phase Transition in a Three-Dimensional Dimer Model (F. Alet, G. Misguich, V. Pasquier, R. Moessner and J. L. Jacobsen), *Phys. Rev. Lett.* **97**, 030403 (2006)

- 042. Linear independence of localized magnon states (H.-J. Schmidt, J. Richter and R. Moessner), *J. Phys. A: Math. Gen.* **39**, 10673 (2006)
- 043. Electron interactions in graphene in a strong magnetic field (M. O. Goerbig, R. Moessner and B. Douçot), *Phys. Rev. B* **74**, 161407(R) (2006)
- 044. Inhomogeneous quantum antiferromagnetism on periodic lattices (A. Jagannathan, R. Moessner and S. Wessel), *Phys. Rev. B* **74**, 184410 (2006)
- 045. Two geometrically frustrated magnets studied by neutron diffraction (I. Mirebeau, A. Apetrei, I. N. Goncharenko and R. Moessner), *Physica B* **385-386**, 307 (2006)
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- 047. Nonmonotonic Zero-Point Entropy in Diluted Spin Ice (X. Ke, R. S. Freitas, B. G. Ueland, G. C. Lau, M. L. Dahlberg, R. J. Cava, R. Moessner and P. Schiffer), *Phys. Rev. Lett.* **99**, 137203 (2007)
- 048. Magnetic monopoles in spin ice (C. Castelnovo, R. Moessner and S. L. Sondhi), *Nature* **451**, 42 (2008)
- 049. Generic Mixed Columnar-Plaquette Phases in Rokhsar-Kivelson Models (A. Ralko, D. Poilblanc and R. Moessner), *Phys. Rev. Lett.* **100**, 037201 (2008)
- 050. Three-Dimensional Kasteleyn Transition: Spin Ice in a [100] Field (L. D. C. Jaubert, J. T. Chalker, P. C. W. Holdsworth and R. Moessner), *Phys. Rev. Lett.* **100**, 067207 (2008)
- 051. Variational Wave-Function Study of the Triangular Lattice Supersolid (A. Sen, P. Dutt, K. Damle and R. Moessner), *Phys. Rev. Lett.* **100**, 147204 (2008)
- 052. Quantum dimer models and exotic orders (K. S. Raman, E. Fradkin, R. Moessner, S. Papanikolaou and S. L. Sondhi), in "*Quantum Magnetism*" NATO Science for Peace and Security Series B - Physics and Biophysics, 139 (2008)
- 053. Partial order from disorder in a classical pyrochlore antiferromagnet (G.-W. Chern, R. Moessner and O. Tchernyshyov), *Phys. Rev. B* **78**, 144418 (2008)
- 054. Mixed columnar-plaquette crystal of correlated fermions on the two-dimensional pyrochlore lattice at fractional filling (F. Trouselet, D. Poilblanc and R. Moessner), *Phys. Rev. B* **78**, 195191 (2008)

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056. Unconventional magnets in external magnetic fields (R. Moessner), *HFM 2008*, *J. of Physics: Conference Series* **145**, 012001 (2009)
057. The Kasteleyn transition in three dimensions: spin ice in a [100] field (L. D. C. Jaubert, J. T. Chalker, P. C. W. Holdsworth and R. Moessner), *HFM 2008*, *J. of Physics: Conference Series* **145**, 012024 (2009)
058. Magnetism: Monopoles on the move (R. Moessner and P. Schiffer), *Nature Physics* **5**, 250 (2009)
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060. Dirac Strings and Magnetic Monopoles in the Spin Ice $\text{Dy}_2\text{Ti}_2\text{O}_7$ (D. J. P. Morris, D. A. Tennant, S. A. Grigera, B. Klemke, C. Castelnovo, R. Moessner, C. Czternasty, M. Meissner, K. C. Rule, J.-U. Hoffmann, K. Kiefer, S. Gerischer, D. Slobinsky and R. S. Perry), *Science* **326**, 411 (2009)
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065. Lattice Instabilities in the Frustrated Magnet CdCr_2O_4 : An Ultrasonic Study (S. Zherlitsyn, O. Chiatti, A. Sytcheva, J. Wosnitza, S. Bhattacharjee, R. Moessner, M. Zhitomirsky, P. Lemmens, V. Tsurkan and A. Loidl), *J. Low Temp. Phys.* **159**, 134 (2010)
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072. Nonlinear electric transport in graphene: Quantum quench dynamics and the Schwinger mechanism (B. Dóra and R. Moessner), *Phys. Rev. B* **81**, 165431 (2010)
073. Irrational Charge from Topological Order (R. Moessner and S. L. Sondhi), *Phys. Rev. Lett.* **105**, 166401 (2010)
074. Quantum quench dynamics and population inversion in bilayer graphene (B. Dóra, E. V. Castro and R. Moessner), *Phys. Rev. B* **82**, 125441 (2010)
075. Symmetry Breaking on the Three-Dimensional Hyperkagome Lattice of $\text{Na}_4\text{Ir}_3\text{O}_8$ (E. J. Bergholtz, A. M. Läuchli and R. Moessner), *Phys. Rev. Lett.* **105**, 237202 (2010)
076. Unconventional Magnetization Processes and Thermal Runaway in Spin-Ice $\text{Dy}_2\text{Ti}_2\text{O}_7$ (D. Slobinsky, C. Castelnovo, R. A. Borzi, A. S. Gibbs, A. P. Mackenzie, R. Moessner and S. A. Grigera), *Phys. Rev. Lett.* **105**, 267205 (2010)
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100. Bionic Coulomb phase on the pyrochlore lattice (V. Khemani, R. Moessner, S. A. Parameswaran and S. L. Sondhi), *Phys. Rev. B* **86**, 054411 (2012)
101. Quantum Adiabatic Algorithm and Scaling of Gaps at First-Order Quantum Phase Transitions (C. R. Laumann, R. Moessner, A. Scardicchio and S. L. Sondhi), *Phys. Rev. Lett.* **109**, 030502 (2012)
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