Marek Cieplak February 1 , 2020

Professor of Physics
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Current functions:

- Head of the Biological Physics Laboratory at the Institute of Physics of the Polish Academy of Sciences in Warsaw
- Member of the Board of *Journal of Physics: Condensed Matter*
- Member of the Editorial Committee of *Acta Physica Polonica A* (since 2014)
- Member of the Board of the Division of Physics in Life Sciences of the European Physical Society (till March 2014 – Chairman of the Division)
- Member of the Faculty Council at the Institute of Physics and at the Institute of Biochemistry and Biophysics of the Polish Academy of Sciences in Warsaw
- Member of the Board of Consortium NanoBioGeo running the "National Interdisciplinary Laboratory of Functional Nanomaterials - NanoFun" involving 8 research institutes in Poland.
- Member (and Chairman till 2014) of the Colloquium Committee at the Institute of Physics of the Polish Academy of Sciences since 2011.

Education and employment:

- 1973 M.Sc. degree with honors from Warsaw University, *Correlation functions in van der Waals fluid*, advisor: J. Piasecki
- 1977 Ph.D in physics from the University of Pittsburgh, USA, *Theoretical problems in magnetism,* advisor: F. Keffer
- 1984 habilitation, Warsaw University, *Nature of ordering in spin glasses*
- 1973-1989 employed at Physics Department, Warsaw University
- since 1989 at the Institute of Physics, Polish Academy of Sciences in Warsaw
- 1990-1995 Associate Professor
- since 1995 Full Professor at the Institute of Physics, Polish Academy of Sciences

Research stays abroad:

- University of Pittsburgh, USA, graduate studies, 1975-1977
- Chalmers Institute of Technology, Gothenburg, Sweden 1978-1979 (4 months)
- Department of Physics and Astronomy, Rutgers University, USA, Postdoctoral Fellow 1981-1983; summer teaching 1990–2000
- Department of Polymer Science, University of Massachusetts, Amherst, MA, USA, Visiting Professor, 1984 (3 months)
- Department of Physics, Universitat Konstanz, Konstanz, Germany, 1985 (1 month)
- Department of Physics and Astronomy, Johns Hopkins University, USA, visiting Associate Professor, 1987-89; visiting professor, 6 months in 2001; summer teaching 2001-2016 (3 months a year)

- Department of Physics, Penn State University, USA, many visits each year between 1990 and 2006
- Universite Pierre et Marie, Paris, France, Visiting Professor, January and September 1992

Scientific interests:

- biological physics (protein folding, protein stretching, genetic networks, protein complexes such as virus capsids and cellulosome),
- theoretical condensed matter physics (especially magnetism)
- disordered systems (spin glasses, porous media, random magnetic fields),
- physics of fluids at nanoscale (molecular dynamics, cellular automata, nanochannels, droplets)
- growth processes, river networks, friction at the atomic level
- self-organization of functionalized nanaoparticles and biosensors

Awards:

- Scientific Prize of the Polish Academy of Sciences, December 1978, 1996
- Award of the Director of the Institute of Physics, Polish Academy of Sciences, March 1995,1996, 1997, 2007
- Fellow of the American Physical Society, 1998
- Professor of the Month of June at Johns Hopkins University, Baltimore , MD, USA, awarded by the Alpha-Kappa-Phi Sorority, July 2001
- Outstanding referee of the American Physical Society, February 2008
- Nominated for the Award of the Minister of Science and Higher Education, November 2009
- Group award (with D. Elbaum, M. Godlewski, E. Guziewicz, L. Sirko,and T. Wojtowicz) for the project *Quantum semiconductor nanostructures for applications in biology and medicine - Development and commercialization of new generation devices for molecular-based diagnostics based on Polish semiconducting systems*. Given by Technicon, The 5'th Fairs of Industrial Technology, Science and Innovations, Gdansk, October 2009

Invited lectures at conferences:

- 120 invited lectures at international conferences and on 6 national (Poland) conferences
- Out of these:
  a) 94 on the subjects of biological physics (since 1996)
  b) 10 at the American Physical Society March Meeting (1989, 1996, 2000, 2002, 2004, 2007, 2009, 2013, 2015, 2018)
  c) 1 at the American Chemical Society Fall Meeting, Philadelphia, USA (2012)
  d) 1 at the Institute of Physics Condensed Matter and Materials Physics conference in Exter, England (2006)
  e) 2 in the School of Physics in Les Houches, France (1991, 2009)
  f) 1 in Aspen Center for Theoretical Physics, USA (1993)
  g) 1 plenary talk at the Conference on Statistical Physics, Berlin (1992)
  h) 8 at various workshops at the International Center for Theoretical Physics in Trieste, Italy (1996, 1998, 2001, 2003, 2008, 2009, 2012, 2016)

Publications:

- The author of more then 270 scientific papers and book chapters
- 2 papers in Science, 9 papers in Proc. Natl. Acad. Sci. (USA), 18 papers in Phys. Rev. Lett.
- A graduate **textbook**: ***Theory of Quanta*** published by Oxford University Press (1992) and Polish Scientific Company (1991, 2001; with I. Białynicki-Birula and J. Kamiński) – cited 157 times (according to Google Scholar)
- More than 6200 citations (5100 without self-citations; based on Web of Science)
- Hirsch factor: 39

Examples of better cited papers

(citations are given according to the Web of Science and then to Google Scholar):

- N. S. Holter, M. Mitra, A. Maritan, M. Cieplak, J. R. Banavar, N. V. Fedoroff, *Fundamental patterns underlying gene expression profiles: simplicity from complexity*, Proc. Natl. Acad. Sci. (USA) **97**, 8409-8414 (2000) – cited 297/563 times
- M. Cieplak, J. Koplik, J.R. Banavar, *Boundary conditions at a fluid-solid interface*, Phys. Rev. Lett. **86** 803-806 (2001) – cited 256/354 times
- M. Cieplak, E. Smith, M. O. Robbins, *Molecular origins of friction: The force on adsorbed layers*, Science **265**, 1209-1212 (1994) – cited 217/274 times
- N.S. Holter, A. Maritan, M. Cieplak, N.V. Fedoroff, J.R. Banavar, *Dynamic modeling of gene expression data*, Proc. Natl. Acad. Sci. USA **98**, 1693-1698 (2001) – cited 223/375 times
- J. R. Banavar, M. Cieplak, *Nature of ordering in spin glasses*, Phys. Rev. Lett. **48**, 832-835 (1982) – cited 141/168 times
- N. Martys, M. Cieplak, M. O. Robbins, *Critical phenomena in fluid invasion of porous media*, Phys. Rev. Lett. **66**, 1058-1061 (1991) – cited 146/186 times
- M. Cieplak, M. O. Robbins, *Dynamical transition in quasistatic invasion of porous media*, Phys. Rev. Lett. **60**, 2042-2045 (1988) – cited 129/168 times
- E. D. Smith, M. O. Robbins, M. Cieplak, *Friction on adsorbed monolayers*, Phys. Rev. B **54**, 8252-8260 (1996) – cited 132/190 times
- M.Cieplak, A. Maritan, J. R. Banavar, *Optimal paths and domain-walls in the strong disorder limit*, Phys. Rev. Lett. **72**, 2320-2324 (1994) – cited 121/148 times
- M. Cieplak, T. X. Hoang, *Universality classes in folding times of proteins*, Biophys. J. **84**, 475-488 (2003) – cited 110/121 times
- T. R. Lezon, J. R. Banavar, M. Cieplak, A. Maritan, and N. Fedoroff, Using the princilple of entropy maximization to infer genetic interaction networks from gene expression patterns, Proc. Natl. Acad. Sci. USA **103**, 19033-19038 (2006) – cited 133/173 times
- T. X. Hoang, M. Cieplak, *Molecular dynamics of folding of secondary structures in Go-type models of proteins*, J. Chem. Phys. **112**, 6851-6862 (2000) – cited 93/103 times
- T. X. Hoang, M. Cieplak, *Sequencing of folding events in Go-type proteins*, J. Chem. Phys. **113**, 8319-8328 (2000) – cited 85/88 times
- A. Maritan, F. Colaiori, A. Flammini, M. Cieplak, J. R. Banavar, *Universality classes of optimal channel networks*, Science 272, 984-986 (1996) – cited 89/111 times
- M. Cieplak, M. Henkel, J. Karbowski, J. R. Banavar, *Master equation approach to protein folding and kinetic traps*, Phys. Rev. Lett. **80**, 3654-3657 (1998) – cited 74/90 times

- J. I. Sułkowska, M. Cieplak, *Mechanical stretching of proteins – a theoretical survey of the Protein Data Bank*, J. Phys.: Cond. Mat. 19, 283201 (2007) – cited 97/117 times
- J. I. Sułkowska, M. Cieplak, *Selection of optimal variants of Go-like models of proteins through studies of stretchin*g, Biophys. J. **95**, 3174-3191 (2008) – cited 86 times

Teaching record:

- Recitation sections and lectures on all standard theoretical graduate and undergraduate courses run at the Physics Department of Warsaw University (such as *statistical physics, electrodynamics, quantum mechanics, physics for mathematicians, magnetism*, and other; 1973-1989
- Graduate courses at the Institute of Physics, Polish Academy of Sciences: *Phase transitions in random systems* (1992), *Biological physics* (2005)
- Undergraduate recitation sections at the University of Pittsburgh (1975—1977)
- Summer undergraduate lecturing at Rutgers University (1990 – 2000) and Johns Hopkins University (2001-2016) - *General Physics* courses
- Undergraduate course *Quantum Physics* at College of Sciences, Warsaw (1995)
- Advisor to about 10 M.Sc. students, several B.Sc. students, and 9 Ph.D. students; currently, advisor to 2 graduate students
- In charge of symposia for graduate students at the Institute of Physics, Polish Academy of Sciences, 1997-2001, once a semester

Recent and Current grants:

- *Dynamics of biomolecules in coarse-grained models*, grant from the Ministry of Science and Higher Education, 330 000 PLN, finished in 2011
- FUNMOL - *Muti-scale formation of functional nanocrystal-molecule assemblies and architectures*, in an European consortium within FP7-NMP-2007-SMALL, the Polish part for modelling: 120 000 EUR and 91 017 PLN, finished in 2013
- *Proteins at solid interfaces and proteinic structures in simulations and experiment*, grant from the National Science Center, 2011-2014, 390 000 PLN
- FiberFuel, ERA-NET European grant, *Improved cellulosomes to enhance saccharification of industrially-suitable lignocellulosic residues*, 150 000 EUR (2013-2016)
- CellulosomePlus, FP7 European grant, *Boosting Lignocellulose Biomass Deconstruction with Designer Cellulosomes for Industrial Applications*, 369 000 EUR (2013-2017)
- MisingLink, European JPND project, *Identification and structural characterization of the primordial cytotoxic conformers of the amyloidogenic cascade: Ideal prevention/ diagnostic/therapeutic targets in neurodegeneration*, 545 941 PLN (2015-2018)
- *Structure-based dynamical models of large and complex biomolecular systems,* grant from the National Science Centre in Poland, 678 540 PLN, 2015-2018
- *Multiscale and multiphase molecular dynamics of intrinsically disordered proteins and proteinaceous liquid droplets*, National Science Center, 2018-2021, 1 159 400 PLN.

Recent organizational achievements:

- Organization of 7 international conferences *Workshop on Structure and Function of Biomolecules*, Będlewo, May 13-15, 2004 (with A. Sienkiewicz) and May 11-13, 2006 (with A. Sienkiewicz and R. Stolarski), *Biomolecules and Nanostructures – Będlewo 3*, Będlewo, September 4-8, 2011 (with Niedźwiecka), *Biomolecules and Nanostructures 4*, Pułtusk, May 15-19, 2013 (with Niedźwiecka), *Biomolecules and Nanostructures 5*, Jaroszowice, May 13-17, 2015 (with Niedźwiecka), *Biomolecules and Nanostructures 6*, Podlesice, May 10-14, 2017 (with Niedźwiecka), *Biomolecules and Nanostructures 7*, Pomlewo, May 15-19, 2019 (with Niedźwiecka)
- Organization of four symposia on bio-materials at the E-MRS meetings in Warsaw (2011, 2013, 2014, 2020)
- Organization of a biophysics symposium at the Polish Physical Society meeting in Kielce, September 6-11, 2015
- February 2004 – creation and then organization of the Biological Physics Group within the Division of X-ray and Electron Microscopy Research at the Institute of Physics, Polish Academy of Sciences; on March 1, 2010 the group became and independent division and acquired the name: Laboratory of Biological Physics
- Setting up of the biochemical laboratory for the group by making grant applications and participating in the design, since 2004 – primarily with A. Niedzwiecka and also with A. Sienkiewicz, A. Nowicka and D. Elbaum
- Establishment of the BSDB database (ifpan.edu.pl/BSDB) on protein stretching at the Institute of Physics - together with M. Sikora, J. I. Sułkowska and B. S. Witkowski
- Running of the Seminar on Biological Physics and Bioinformatics at the Institute of Physics and the Institute of Biochemistry and Biophysics with P. Zielenkiewicz (Institute of Biochemistry and Biophysics) and B. Lesyng (Warsaw University), since 2004; the location of the seminar alternates between the two institutes

List of publications

1. M. Cieplak and Ł. A. Turski, Two Bose fluid picture of a Heisenberg ferromagnet, Z. Phys. B 23, 355 (1976)

2. M. Cieplak, Spin-wave theory of the paramagnetic phase boundary in transversally anisotropic antiferromagnets, Phys. Rev. B 15, 5310 (1977)

3. M. Cieplak and F. Keffer, Spin waves in systems with weak exchange fields, Phys. Rev. B 18, 1253 (1978)

4. M. Cieplak, Spin waves in systems with weak exchange fields II, Acta Physica Polonica, A 53, 423 (1978)

5. M. Cieplak, Spin waves in systems with weak antiferromagnetic exchange fields, Acta Physica Polonica, A 53, 439 (1978)

6. M. Cieplak, Localized model for systems with double exchange couplings, Phys. Rev. B 18, 3470 (1978)

7. M. Cieplak, Microscopic model for the exchange inversion transition, J. Phys. C 12, 667 (1979)

8. M. Cieplak, M. Gutowski, and A. Sjolander, Static correlations in 1-dimensional classical easy plane magnets, J. Phys. C 13, 5009 (1980)

9. M. Cieplak and Ł. A. Turski, Solitons in quantum Heisenberg chain, J. Phys. C 13, 5741 (1980)

10. M. Cieplak and Ł. A. Turski, Magnetic solitons and elastic kink-like excitations in classical compressible Heisenberg chain, J. Phys. C 13, L777 (1980)

11. M. Cieplak and A. Kryszeń, Static correlations in 1-dimensional classical easy-axis magnets, J. Phys. C 14, 4849 (1981)

12. M. Cieplak and A. Sjolander, Dynamical correlations in one-dimensional easy plane magnets, J. Phys. C 14, 4861 (1981)

13. J. R. Banavar and M. Cieplak, Nature of ordering in spin glasses, Phys. Rev. Lett. 48, 832 (1982)

14. J. R. Banavar and M. Cieplak, Area dependence of exchange stiffness energy in a spin glass, Phys. Rev. B 26, 2662 (1982)

15. J. R. Banavar, M. Cieplak, and M. Z. Cieplak, Influence of boundary conditions on random unfrustrated magnetic systems, Phys. Rev. B 26, 2482 (1982)

16. M. Cieplak and J. R. Banavar, Sensitivity to boundary conditions of Ising spin glasses, Phys. Rev. B 27, 293 (1983)

17. J. R. Banavar and M. Cieplak, Scaling stiffness of spin glasses, J. Phys. C 16, L755 (1983)

18. M. Cieplak and J. R. Banavar, Lower critical dimensionality of Heisenberg spin glasses, Phys. Rev. B 29, 469 (1984)

19. J. R. Banavar and M. Cieplak, Renormalization group analysis on fractals: Ising spin glass and the Schrodinger equation, Phys. Rev. B 28, 3813 (1983)

20. M. Cieplak, Density of electronic states in granular metals, J. Phys. F. 14, 609 (1984)

21. M. Z. Cieplak and M. Cieplak, Numerical studies of the isotropic Heisenberg model for random ferromagnets and spin glasses, J. Phys. C 17, 2933 (1984)

22. M. Z. Cieplak and M. Cieplak, Coordination number of percolating clusters, Phys. Lett. 104 A, 290 (1984)

23. M. Cieplak and J. R. Banavar, Frustration on fractals, in Magnetic Excitations and Fluctuations, ed. S. W. Lovesey, U. Balucani, F. Borsa, and V. Tognetti, Springer Series in Solid State Sciences 54, Berlin 1984, p.115

24. M. Cieplak, What is a spin glass?, Proceedings of the Polish Conference on Magnetism, Poznan, Poland, June 1984, in Acta Magnetica 1 S, 20 (1984)

25. M. Cieplak, Nature of ordering in spin glasses, Postepy Fizyki 35, 353 (1984) - a review in Polish

26. M. Cieplak and M. Z. Cieplak, Scaling stiffness and correlations in the spin glass—ferromagnet transition: evidence for the mixed phase, J. Phys. C 18, 1481 (1985)

27. J. R. Banavar, M. Cieplak, and M. Muthukumar, Dynamics of frustrated spin clusters, J. Phys. C 18, L157 (1985)

28. R. G. Caflisch, J. R. Banavar, and M. Cieplak, Critical behavior of the scaling-stiffness coefficient of spin glasses, J. Phys. C 18, L991 (1985)

29. M. Cieplak and M. Muthukumar, Rouse relaxation times of random copolimers, Macromolecules 18, 1350 (1985)

30. M. Cieplak, P. Cieplak, and M. A. Załuska, Frustration--driven transitions on fractals, J. Phys. C 19, 4063 (1986)

31. M. Cieplak, M. Z. Cieplak, and J. Łusakowski, Dynamical susceptibility of frustrated spin clusters, M. Cieplak and J. Phys. C 19, 5253 (1986)

32. J. Eluszkiewicz and M. Cieplak, Random walks on fractals, Postepy Fizyki 37, 409 (1986) - a review in Polish

33. M. Cieplak and A. Majhofer, Spectral dimensionality and hyperscaling, Phys. Rev. B (Brief Reports) 34, 4892 (1986)

34. M. A. Załuska-Kotur, M. Cieplak, and P. Cieplak, Mixed spin--glass in Ising systems, J. Phys. C 20, 3741 (1987)

35. M.Cieplak, G. Ismail, and J. Łusakowski, Scaling stiffness energy of anisotropic spin systems, J. Phys. C 20, 1301 (1987)

36. M. Cieplak and G. Ismail, Localized spin waves in disordered ferromagnetic chains, J. Phys. C 20, 1309 (1987)

37. M. Cieplak and A. Majhofer, Local energy minima in quantum spin glasses, J. Phys. A 20, 3445 (1987)

38. M. Cieplak and T. R. Gawron, Metastable states in disordered ferromagnets, J. Phys. A 20, 5657 (1987)

39. M. Cieplak, M. Z. Cieplak, and J. Łusakowski, Dynamic spin susceptibility of semimagnetic semiconductors, Phys. Rev. B 36, 620 (1987)

40. M. Cieplak and J. Jaeckle, Hidden valley structure of Ising spin glasses, Zeit. Phys. B 66, 325 (1987)

41. A. Majhofer and M. Cieplak, Non-universality of random walks in random environments, J. Phys. A 21, 3481 (1988)

42. M. Cieplak and G. Szamel, Dynamic specific heat of spin glasses - studies of a 6-spin cluster, Phys. Rev. B 37, 1790 (1988)

43. J. R. Banavar, M. Cieplak, and D. L. Johnson, Surface conduction and length scales in porous media, Phys. Rev. B (Rapid Comm.) 37, 7975 (1988)

44. M. Cieplak and M. O. Robbins, Dynamical transition in quasistatic fluid invasion in porous media, Phys. Rev. Lett. 60, 2042 (1988)

45. M. Cieplak and G. Ismail, Spectrum of relaxation times in 1-dimensional spin glasses, Acta Physica Polonica A 7, 513 (1989)

46. J. R. Banavar and M. Cieplak, Zero--temperature scaling for Potts spin glasses, Phys. Rev. B 39, 9633 (1989)

47. M. Z. Cieplak, T. Gawron, and M. Cieplak, Dynamics of diluted antiferromagnetic Ising spin systems on the fcc lattice, Phys. Rev. B 39, 6757 (1989)

48. J. R. Banavar and M. Cieplak, Nature of ordering in Potts spin glasses, Phys. Rev. B 40, 4613 (1989)

49. M. Cieplak and M. O. Robbins, Influence of contact angle on quasi-static fluid invasion of porous media, Phys. Rev. B 41, 11508 (1990)

50. M. Cieplak and J. R. Banavar, Scaling of stiffness in Ising spin glasses, J. Phys. A 23, 4385 (1990)

51. B. Sundaram, M. Cieplak, and J. R. Banavar, Ordering characterized by a strange attractor, Phys. Rev. A (Rapid Comm.) 41, 5713 (1990)

52. N. Martys, M. O. Robbins, and M. Cieplak, Finite-size scaling studies of fluid invasion in porous media, in Scaling in Disordered Materials: Fractal Structure and Dynamics, ed. J. P. Stokes, M. O. Robbins, and T. A. Witten, Materials Research Society, Pittsburgh, PA, 1990

53. M. Cieplak, and M. O. Robbins, Critical phenomena in fluid invasion of porous media, N. Martys, Phys. Rev. Lett. 66, 1058 (1991); reprinted in Dynamics of Fractal Surfaces, ed. F. Family and T. Vicsek, World Scientific, Singapore 1991, p. 419

54. T. R. Gawron, M. Cieplak, and J. R. Banavar, Scaling of energy barriers in Ising spin glasses, J. Phys. A 24, L127 (1991)

55. M. Cieplak, J. R. Banavar, and A. Khurana, Gauge invariance and the vortex glass, J. Phys. A 24, L145 (1991)

56. S. K. Kurtz, S. Kumar, J.R. Banavar, K. Kunz, D. Steich, S. S. Chang, M. Leffler, and M. Cieplak, An interactive computer simulation of global microstructures in polycrystalline ceramics, Ferroelectrics, 120, 131 (1991)

57. J. R. Banavar, M. Cieplak, and A. Maritan, Monte-Carlo mean field theory, Phys. Rev. Lett. 67, 1807 (1991)

58. N. Martys, M. O. Robbins, and M. Cieplak, Scaling relations for interface motion through disordered media: Application to two-dimensional fluid invasion, Phys. Rev. B 44, 12294 (1991)

59. M. Cieplak, B. R. Bułka, and T. Dietl, Universal conductance fluctuations in spin glasses, Phys. Rev. B 44, 12337 (1991)

60. T. R. Gawron and M. Cieplak, Site percolation thresholds of the fcc lattice, Acta Physica Polonica 80, 461 (1991)

61.G. Grabecki, A. Lennard, W. Plesiewicz, J. Jaroszynski, M. Cieplak, T. Skoskiewicz, T. Dietl, E. Kaminska, A. Piotrowska, and B. Bulka, Conductance fluctuations in microstructures of HgCdMnTe bicrystals Acta Physica Polonica 80, 307 (1991)

62. A. Maritan, M. R. Swift, M. Cieplak, M. H. W. Chan, M. W. Cole, and J. R. Banavar, Ordering and phase transitions in random-field Ising systems, Phys. Rev. Lett. 67, 1821 (1991)

63. M. Cieplak, J. R. Banavar, M. S. Li, and A. Khurana, Frustration, scaling, and local gauge invariance, Phys. Rev. B 45, 786 (1992)

64. M. O. Robbins, M. Cieplak, H. Ji, B. Koiller, and N. Martys, Growth in systems in quenched disorder in Proceedings of the NATO School on Growth Patterns in Physical Sciences and Biology, Granada, Spain, 1991, ed. L. Sander and P. Meakin (Plenum Press, New York, 1992)

65. M. Cieplak and M. O. Robbins, Critical phenomena in fluid invasion: transitions in growth morphology, in Surface Disordering: Growth, Roughening and Phase Transitions, eds. R. Julien, J. Kertesz, P. Meakin, and D. E. Wolf (Les Houches workshop), Nova Sci. Publ., New York, 1992, p.185

66.M. S. Li, T. R. Gawron, and M. Cieplak, Scaling properties of quadrupolar and octupolar glasses, Physics Letters A 164, 120 (1992)

67. A. Maritan, M. Cieplak, M. R. Swift, F. Toigo, and J. R. Banavar, Random-anisotropy Blume-Emery-Griffiths model, Phys. Rev. Lett. 69, 221 (1992)

68. M. Cieplak, U. D'Ortona, D. Salin, R. B. Rybka, and J. R. Banavar, Cellular automata studies of mixing in chaotic systems, Comp. Mat. Sci., 1, 87 (1992)

69. M. S. Li, M. Cieplak, and T. R. Gawron, Scaling properties of S >1/2 Ising spin glasses, J. Phys. A 25, 5005 (1992)

70. R. B. Rybka, M. Cieplak, U. D'Ortona, D. Salin, and J. R. Banavar, Cellular automata studies of circular Couette Flows: chaotic mixing Phys. Rev. E 48, 757 (1993)

71. M. R. Swift, A. Maritan, M. Cieplak, and J. R. Banavar, Phase diagrams for random field Ising systems, J. Phys. A 27, 1525 (1994)

72. M. Cieplak, A. Maritan, and J. R. Banavar, Optimal paths and domain walls in the strong disorder limit, Phys. Rev. Lett. 72, 2320 (1994)

73. M. S. Li and M. Cieplak, Kosterlitz-Thouless transition in multipolar systems, Phys. Rev. B. 47, 608 (1993)

74. M. Cieplak, M. S. Li, and J. R. Banavar, Universality and chaos in XY spin glasses, Phys. Rev. B 47, 5022 (1993)

75. M. Cieplak and J. R. Banavar, Scaling and phase transitions in random systems, Physica A 194, 63 (1993)

76. R. A. Hassan, M. Cieplak, and M. S. Li, Quadrupolar and S=1 Ising spin glasses in local mean field approximation, Physica A 192, 1 (1993)

77. M. S. Li, M. Cieplak, and T. R. Gawron, Sensitivity to changes in boundary conditions in S=1 Ising glasses, Physica A 205, 497 (1994)

78. M. S. Li and M. Cieplak, Chaos in gauge glasses in the critical region, Physica A, 197, 507 (1993).

79. M. A. Załuska-Kotur and M. Cieplak, Dipole interactions with random anisotropy: a local mean field study, Europhys. Lett. 23, 85 (1993)

80. M. S. Li and M. Cieplak, Scaling properties of quantum spin glasses, Physica A 207, 463 (1994)

81. A. Maritan, M. Cieplak, and J. R. Banavar, Spin-flip avalanches and dynamics of first order phase transitions, Phys. Rev. Lett. 72, 946 (1994)

82. M. S. Li and M. Cieplak, Renormalization group study of the coupled XY-Ising models, Phys. Rev. B 50, 955 (1994)

83. M. Cieplak,, E. Smith, and M. O. Robbins, Molecular origins of friction: The force on adsorbed layers, Science, 265, 1209 (1994)

84. A. Maritan, M. Cieplak, T. Bellini, and J. R. Banavar, Nematic-isotropic transition in porous media, Phys. Rev. Lett. 72, 4113 (1994)

85. M. S. Li, H. A. Refaat, and M. Cieplak, Irreversibility in Ising spin glasses in transverse fields, J. Phys. C 6, 2595 (1994)

86. M. S. Li and M. Cieplak, First order transition in random two-dimensional XY model, Physics Lett. A 184, 223 (1994)

87. U. d'Ortona, D. Salin, M. Cieplak, R. B. Rybka, and J. R. Banavar, Two-color Boltzmann cellular automata: surface tension and wetting Phys. Rev. E 51, 3718 (1995)

88. M. Cieplak, A. Maritan, and J. R. Banavar, Interfacial geometry and overhanging configurations, J. Phys. A Lett. 27, L765 (1994)

89. T. Q. Hung, M. S. Li, and M. Cieplak, Local mean field study of two-sublattice frustrated Ising systems, J. M. M. M. 138, 153 (1994)

90. G. Grabecki, T. Dietl, M. Cieplak, W. Plesiewicz, A. Lenard, T. Skoskiewicz, E. Kaminska, A. Piotrowska, R. Zarecka, G. Springholz, and G. Bauer, Second harmonic generation in spin-glass microstructures and fabrication of microstructures in IV-VI epilayers Acta Phys. Polonica 84, 781 (1993)

91. U. D'Ortona, D. Salin, M. Cieplak, and J. R. Banavar, Interfacial Phenomena in Boltzmann Cellular Automata Europh. Lett. 28, 317 (1994)

92. R. B. Rybka, M. Cieplak, and D. Salin, Boltzmann cellular automata studies of the spinodal decomposition, Physica A 222, 105 (1995)

93. R. B. Rybka, M. Cieplak, P. Haensel, D. Salin, and R. Banavar, Cellular automata model of the accretion disk, J. of Astron. Astrophys. 298, 637 (1995)

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