

# Amit Chakrabarti

**William and Joan Porter Professor and Head**  
**Department of Physics, Kansas State University, Manhattan, KS 66506**  
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## **Education:**

- Ph.D. Physics, 1987, University of Minnesota
- M.S. Physics, 1982, University of Calcutta, India
- B.S. (with honors) Physics, 1979, University of Calcutta, India

## **Professional Experience:**

- William and Joan Porter Professor and Head, 2011- present, Department of Physics, Kansas State University
- Professor, 2000-present, Department of Physics, Kansas State University
- Interim Head, 2006-2007, Department of Physics, Kansas State University
- Associate Professor, 1994-2000, Department of Physics, Kansas State University
- Assistant Professor, 1990-1994, Department of Physics, Kansas State University
- Research Associate, 1988-89, Lehigh University
- Research Associate, 1987-88, Temple University

## **Awards and Honors:**

- Commerce Bank Distinguished Graduate Faculty Award, 2009, KSU
- Presidential Teaching Award, 2002, KSU
- Stamey Teaching Award, 2000, KSU
- Stamey Teaching Award, 1992, KSU
- Faculty Development Award, 1992, KSU
- Doctoral Dissertation Fellowship, 1986-87
- Ranked 1st in Masters of Science Examination (1982)

## **Invited Talks (Total 31) including:**

- University of Toledo (2011)
- Iowa State University, Mechanical Engineering (2010).
- Iowa State University, Chemical and Biological Engineering (2008).
- Lehigh University (2008).
- Argonne National Laboratory, Chicago (2007).
- Four Corners Retreat, Workshop organized by nano-bio researchers from Kansas, Nebraska, Iowa, and, Missouri, Kansas City (2007).
- India and Abroad: A Conference on Condensed Matter Physics, Calcutta, India (2001).
- NIST, Gaithersburg (2000).
- APS March Meeting, Los Angeles (1998).
- *Keynote* presentation in the 11th Conference of the European Colloid and Interface Society, Lunteren, Netherlands (1997).
- American Chemical Society Colloid Symposium, Toronto (1993).

## **Funded Research Proposals:**

- “Nanometer Stoichiometric Particle Compound Solutions and Control of their Self-Assembly into the Condensed Phase”, NSF-NIRT, \$1,200,000 (2006-2011), with four other PI.
- “Center for Nanostructured Materials for Indoor Air Quality”, Kansas State University, Targeted Excellence Award, \$625,000 7/1/2007 - 6/30/2011, with four others PI.
- Aggregation in Dense Systems, NASA, \$450,000 (2003-2006), with Chris Sorensen.
- Aggregation in Non-Mean-Field Systems, \$300,000, NASA (2000-2003), with Chris Sorensen.
- Structure Formation in Thin Polymer Films on Patterned Surfaces, \$60,000, ACS-PRF (1999-2001).
- Acquisition of Upgraded High Performance Multiprocessors for Computational research in Science and Engineering, \$652,493 (including matching funds), NSF (1997-2000), Co-PI.
- Acquisition of Major Research Instrumentation (Particle Image Velocimetry) for Kansas Universities, \$90,000, NSF-EPSCoR (1999-2000), Co-PI with 8 others.
- Kansas Center for Complex Fluid Flows, \$902,000 (including matching funds), NSF-EPSCoR (1997-1999), Co-PI with 10 others.
- Ordering Processes in Porous Media, \$120,000, NSF, Materials Theory (1993-1997).
- Program for Complex Fluid Flows, \$243,000 (including matching funds), KSU Graduate School (1996-1998).
- Phase Separation in Polymer Mixtures, \$50,000 , ACS-PRF, (1993-1997).
- Phase Separation in Polymer Mixtures, \$18,000 , ACS-PRF, Type G, (1991-1993)
- Materials Synthesis and Processing, NSF-EPSCoR, my share was 1.5 graduate students support (approximately \$23,250 per year) (1992-1995).
- Kansas Center for Advanced Scientific Computing, NSF-EPSCoR, my share was 1 graduate student support (approximately \$14,000 per year) (1994-1998).

## **List of Former Students Receiving PhD in Physics under my supervision:**

1. S. J. Khan, currently at Washington University, St Louis.
2. F. Pierce, currently at Sandia National laboratories.
3. D. Fry, currently at NASA.
4. H. Chen, currently at Phillips Electronics Corp.
5. H. Liu, currently at Sprint Corp.
6. Z. Shou, currently at Stanford University.
7. I. Podariu, currently at University of Nebraska, Omaha.
8. G. Brown, currently at Florida State University.
9. R. Zajac, currently at Kansas State University, Salina Campus.

## **List of Former Post-doctoral Fellows:**

Z. Zhang, former postdoctoral scholar, currently at America Online Corp.

## Service at the Department and College Level:

- Chair, search committee for Head of Statistics (2012).
- Member, search committee for Finance / Budget officer of the college of Arts and Sciences (2012).
- Member, search committee for Chief Information Officer and Vice Provost for Information Technology Services (2009).
- Member, Search Committee for Dean of Arts and Sciences (2008).
- Chair, Provost's committee for five year review of Dean of Arts and Sciences (2007).
- Member, College Committee on Curriculum and Courses (2002-2005).
- Chaired numerous departmental committees over the last 20 years.
- Member of departmental advisory committee several times over last 20 years.

## Publications (Total 154; h-index = 28):

1. *Shear History Independence in Colloidal Aggregation*, W. R. Heinson, C. M. Sorensen and A. Chakrabarti, *Langmuir*, **28**, 11337 (2012).
2. *Nucleation in Short-Range Attractive Colloids: Ordering and Symmetry of Clusters*, S. J. Khan, O.L. Weaver, C.M. Sorensen, and A. Chakrabarti, *Langmuir*, **28**, 16015 (2012).
3. *Discrete Dipole Approximation for Low-Energy Photoelectron Emission from NaCl Nanoparticles*, M. J. Berg, K. R. Wilson, C. M. Sorensen, A. Chakrabarti and M. Ahmed, *J. of Quant. Spectrosc. Radiat. Transfer.* **113**, 259- 265 (2012).
4. *Synthesis of Silica Aerosol Gels via Controlled Detonation*, R. Dhaubhadel, T. P. Rieker, A. Chakrabarti and C. M. Sorensen, *Aerosol Sci. & Tech.*, **46**, 596 (2012).
5. *Solubility of Gold Nanoparticles as a Function of Ligand Shell and Alkane Solvent*, B. C. Lohman, J. A. Powell, S. Cingarapu, C. B. Aakeroy, A. Chakrabarti, K. J. Klabunde, B. M. Law, and C. M. Sorensen, *Phys. Chem. Chem. Phys.*, **14**, 6509 (2012).
6. *Nucleation of Nanoparticle Superclusters from Solution*, S. J. Khan, C. M. Sorensen and A. Chakrabarti, *Langmuir*, **28**, 5570 (2012).
7. *A three parameter description of the structure of diffusion limited cluster fractal aggregates*, W. R. Heinson, C. M. Sorensen and A. Chakrabarti, *Journal of Colloid and Interface Science*, **375**, 65 (2012).
8. *Ethanol Shock and Lysozyme Aggregation*, L. R. Nemzer, B. N. Flanders, J. D. Schmit, A. Chakrabarti and C. M. Sorensen, accepted for publication in *Soft Matter* (2012).
9. *Formation of Light-weight Low-density Materials via Gas Phase Aerosol Gelation*, C. M. Sorensen, R. Dhaubhadel, C. S. Gerving, and A. Chakrabarti, *MRS proceedings*, Vol. 1306, 93 (2011).
10. *Kinetics of Nanochain Formation in a Simplified Model of Amelogenin Biomacromolecules* Wei Li et al., *Biophysical Journal*, **101**, 2502-2506 (2011).  
**Our simulation artwork was used on the cover page of the Journal.**
11. *Pathways of Cluster Growth and Kinetic Slowing Down in a Model of Short-Range Attractive Colloids* Toni Perez et al., *Langmuir* **27**, 11401-11408 (2011) .
12. *A new explanation of the extinction paradox* , M. Berg, C.M. Sorensen, A. Chakrabarti, *Journal of Quantitative Spectroscopy & Radiative Transfer*, **112** , 1170-1181 (2011).
13. *The Sol to Gel Transition in Irreversible Particulate Systems*, C.M. Sorensen and A. Chakrabarti, **Invited Review**, *Soft Matter*, **7**, 2284-2296 (2011).

14. *Brownian Dynamics Simulation of Insulin Microsphere Formation from Break-up of a Fractal Network*, Wei Li, James D. Gunton, Siddique Khan, Kevin Schoelz, and A. Chakrabarti, *J. Chem. Phys.* **134**, 024902 (2011)
15. *Some Topics in the kinetics of protein aggregation*, James D. Gunton, Wei Li, Ya Liu, Toni Perez, Siddique Khan, and A. Chakrabarti, *Procedia Computer Science* (in press).
16. *Does Shape Anisotropy Control the Fractal Dimension in Diffusion-Limited Cluster-Cluster Aggregation?* W.R. Heinson, C.M. Sorensen, and A. Chakrabarti, *Aerosol. Sci. and Tech.* (Research Letter) **44**, i (2010).
17. *Explanations of the patterns in Mie Theory*, M.J. Berg, C.M. Sorensen, and A. Chakrabarti, *J. Quant. Spectros. Radiant Transf.* **111**, 782 (2010).
18. *Computer Simulation of Aggregation with Consecutive Coalescence and Non-Coalescence Stages in Aerosols*, W.R. Heinson, C.M. Sorensen, and A. Chakrabarti, *Aerosol. Sci. and Tech.* **44**, 380 (2010).
19. *Nucleation of Gold Nanoparticle Superclusters from Solution*, H. Yan, S. Cingarapu, K. J. Klabunde, A. Chakrabarti, and C. M. Sorensen, *Phys. Rev. Lett.*, **102**, 095501 (2009).
20. *Self-Assembly of Ligated Gold Nanoparticles: Phenomenological Modeling and Computer Simulations*, Siddique J. Khan, F. Pierce, C.M. Sorensen, and A. Chakrabarti, (**Invited to be published in the 25<sup>th</sup> Anniversary special issue**); *Langmuir*, **25**, 13861 (2009).
21. *Light Scattering Study of Aggregation Kinetics in Dense, Gelling Aerosols*, R. Dhaubhadel, A. Chakrabarti and C. M. Sorensen, *Aerosol Sci and Tech.* **43**, 1053 (2009).
22. *A Simple Model of Directional Interactions for Proteins*, Xiaofei Li, J. D. Gunton, and A. Chakrabarti, *J. Chem. Phys.* **131**, 115101 (2009).
23. *Kinetics and Morphology of Cluster Growth in a Model of Short-Range Attractive Colloids*, Siddique J. Khan, C.M. Sorensen, and A. Chakrabarti, *J. Chem. Phys.* **131**, 194908 (2009).
24. *General derivation of the total electromagnetic cross sections for an arbitrary particle*, M. J. Berg, C. M. Sorensen and A. Chakrabarti, *J. Quant. Spectros. Radiant Transf.* **110**, 43 (2009).
25. *Modeling arrested cluster growth in quenched nanoparticle solutions*, I. Podariu, Hao Yan, C. M. Sorensen, and A. Chakrabarti, *J. Chem. Phys.* **129**, 034706 (2008).
26. *Shear effects on crystal nucleation in colloidal suspensions*, Juan J. Cerdà, Tomás Sintés, C. Holm, C. M. Sorensen, and A. Chakrabarti, *Phys. Rev. E* **78** 031403 (2008).
27. *Reflection symmetry of a sphere's internal field and its consequences on scattering: a microphysical approach*, M. J. Berg, C. M. Sorensen, and A. Chakrabarti, *J. Opt. Soc. Am. A* **25**, pp. 98-107 (2008).
28. *Extinction and the optical theorem. Part I. Single particles*, M. J. Berg, C. M. Sorensen and A. Chakrabarti, *J. Opt. Soc. Am. A* **25**, pp. 1504-1513 (2008).
29. *Extinction and the optical theorem. Part II. Multiple particles*, M. J. Berg, C. M. Sorensen and A. Chakrabarti, *J. Opt. Soc. Am. A* **25**, pp. 1514-1520 (2008).
30. *The Effect of Shear on Colloidal Aggregation and Gelation using Small Angle Light Scattering*, T. Mokhtari, A. Chakrabarti, and C.M. Sorensen, *J. Coll. & Inter. Sci.*, **327**, 216-223 (2008).
31. *Computer simulation of phase separation under a double temperature quench*, Iulia Podariu and Amitabha Chakrabarti, *J. Chem. Phys.* **126**, 154509 (2007).
32. *Aerosol Gelation: Synthesis of a Novel, Lightweight, High Specific Surface Area Material*, R. Dhaubhadel, C.S. Gerving, A. Chakrabarti, and C.M., Sorensen, *Aerosol Science and Technology*, **41**, 804 (2007).

33. *Extinction and the electromagnetic optical theorem*, M. J. Berg, C. M. Sorensen, and A. Chakrabarti, in *Peer Reviewed Abstracts of the Tenth Conference on Electromagnetic and Light Scattering*, G. Videen, M. I. Mishchenko, P. M. Menguc, and N. Zakharova, eds. (2007).
34. *Computer simulation of diffusion-limited cluster-cluster aggregation with an Epstein drag force*, F. Pierce, C.M. Sorensen, and A. Chakrabarti, *Phys. Rev. E*, **74**, 021411 (2006).
35. *Hybrid superaggregate morphology as a result of aggregation in a cluster-dense aerosol*, R. Dhaubhadel, F. Pierce, A. Chakrabarti, C.M. Sorensen, *Phys. Rev. E*, **73**, 011404 (2006).
36. *Aggregation-Fragmentation in a Model of DNA-Mediated Colloidal Assembly*, F. Pierce, C.M. Sorensen, and A. Chakrabarti, *Langmuir*, **21**, 8992 (2005).
37. *Excluded volume effects on polymer adsorption onto spherical surfaces*, J.J. Cerda, T. Sintes, A. Chakrabarti, *Macromolecules*, **38**, 1469 (2005).
38. *Multiple-scattering effects on light scattering optical structure factor measurements*, T. Mokhtari, C.M. Sorensen, and A.Chakrabarti, *Appl. Opt.* **44**, 7858 (2005).
39. *Patterns in Mie Scattering: evolution when normalized by the Rayleigh cross-section*, M.J. Berg, C.M. Sorensen, and A.Chakrabarti, *Appl. Opt.* **44**, 7487 (2005).
40. *Structural crossover in dense irreversibly aggregating particulate systems*, D. Fry, A. Chakrabarti, W. Kim, and, C.M. Sorensen, *Phys. Rev. E* **69**, 061401 (2004).
41. *Molecular dynamics simulation of the transition from dispersed to solid phase*, A. Chakrabarti, D. Fry, and C.M. Sorensen, *Phys. Rev. E* **69**, 031408 (2004).
42. *Computer Simulation of Selective Aggregation in Binary Colloids*, F.Pierce, A. Chakrabarti, D. Fry, and, C.M. Sorensen, *Langmuir* **20**, 2498 (2004).
43. *Universal Occurrence of Soot Aggregates with a Fractal Dimension 2.6 in Heavily Sooting Laminar Diffusion Flames*, W. Kim, C. M. Sorensen, and A. Chakrabarti, *Langmuir* **20**, 3969 (2004).
44. *Kinetics of Phase Transformations in Depletion-Driven Colloids*, J.J. Cerda, T. Sintes, C.M. Sorensen, and A. Chakrabarti, *Phys. Rev. E* **70**, 011405 (2004).
45. *Cluster Shape Anisotropy in Irreversibly Aggregating Particulate Systems*, D. Fry, A. Mohammad, A. Chakrabarti, and C.M. Sorensen, *Langmuir* **20**, 7871 (2004).
46. *Structure factor scaling in colloidal phase separation*, J.J. Cerda, T. Sintes, C.M. Sorensen, A. Chakrabarti, *Phys. Rev. E* **70**, 051405 (2004).
47. *Morphology of asymmetric block copolymer thin films*, I. Podariu, and A. Chakrabarti, *Journal of Chemical Physics*, **118**, 11249 (2003).
48. *Observation of Soot Superaggregates in Laminar Acetylene/Air Diffusion Flames with a Fractal Dimension of 2.6*, C.M. Sorensen, W. Kim, D. Fry, D. Shi, and A. Chakrabarti, *Langmuir* **19**, 7560 (2003).
49. *Enhanced Kinetics and Free-Volume Universality in Dense Aggregating Systems*, D. Fry, T. Sintes, A. Chakrabarti, and C.M. Sorensen, *Phys. Rev. Lett.* **89**, 148301 (2002).
50. *Anisotropic Ordering in Sheared Binary Fluids with Viscous Asymmetry: Experiment and Computer Simulation*, H.S. Jeon, Z. Shou, A. Chakrabarti, and E.K. Hobbie, *Phys. Rev. E*. **65**, 41508 (2002).
51. *Late Stages of Ordering in Thin Polymer Films on Chemically Heterogeneous Substrates: Energetics and Metastability*, Z. Shou and A. Chakrabarti, *Polymer* **42**, 6141 (2001).
52. *Block Copolymer Thin Films on Corrugated Substrates*, I. Podariu and A. Chakrabarti, *J. Chem. Phys.* **113**, 6423 (2000).
53. *Viscous Flow and Coarsening of Microdomains in Diblock Copolymer Thin Films*, I. Podariu, Z. Shou, and A. Chakrabarti, *Phys. Rev. E (Rapid Communications)* **62**, R3059 (2000).

54. *Interfacial Profiles of Mismatched Lamellae in Thin Diblock Copolymer Films*, G.G. Pereira, D.R.M. Williams, and A. Chakrabarti, *Chem. Phys.* **112**, 10011 (2000).
55. *Shear Effects on Phase Separating Polymer Solutions: a Molecular Dynamics Study*, H. Liu and A. Chakrabarti, *J. Chem. Phys.* **112**, 10582 (2000).
56. *Ordering of Viscous Liquid Mixtures Under a Steady Shear Flow*, Z. Shou and A. Chakrabarti, *Phys. Rev. E (Rapid Communications)*, **61**, R2200 (2000).
57. *Trends in the Adsorption of Mono-End Capped Polystyrene onto Polar Substrates: Theoretical Predictions and Experimental Observations*, Z. Jian, R. Zajac, A. Chakrabarti, T. Dyakonov, X. Guo, C. Sorensen, D. Burns, and W.T.K. Stevenson, *J. Appl. Polym. Sci.*, **76**, 1422 (2000).
58. *Network Domain Structure in Phase Separating Polymer Solutions*, H. Liu, A. Bhattacharya, and A. Chakrabarti, *J. Chem. Phys.* **111**, 11183 (1999).
59. *Effects of a Fumed Silica Network on Kinetics of Phase Separation in Polymer Blends*, A. Chakrabarti, *J. Chem. Phys.* **111**, 9418 (1999).
60. *Molecular Dynamics Study of Adsorption and Spreading of a Polymer Chain onto a Flat Surface*, H. Liu and A. Chakrabarti, *Polymer* **40**, 7285 (1999).
61. *Phase Behavior of Binary Fluid Mixtures Confined in a Model Aerogel*, R. Salazar, R. Toral and A. Chakrabarti, *Journal of Sol-Gel Science and Technology*, **15**, 175 (1999).
62. *Network-like Pattern Formation in Phase Separating Polymer Solutions: a Molecular Dynamics Study*, A. Bhattacharya, S. D. Mahanti, and A. Chakrabarti, *Phys. Rev. Lett.*, **80**, 333 (1998).
63. *Morphology of thin block copolymer films on chemically patterned substrates*, H. Chen and A. Chakrabarti, *J. Chem. Phys.*, **108**, 6897 (1998).
64. *Hydrodynamic Effects on Domain Growth in Off-Critical Polymer Blends*, H. Chen and A. Chakrabarti, *J. Chem. Phys.*, **108**, 6006 (1998).
65. *Early Stages of Dewetting of Microscopically Thin Polymer Films: A Molecular Dynamics Study*, H. Liu, A. Bhattacharya, and A. Chakrabarti, *J. Chem. Phys.* **109**, 8607 (1998).
66. *Block Copolymer Films on Patterned Surfaces*, A. Chakrabarti and H. Chen, *Journal of Polymer Science: Polymer Physics* **36**, 3127 (1998).
67. *Self-Assembly of Neutral and Polar Surfactants: An Off-Lattice Monte Carlo Approach*, A. Bhattacharya, S. D. Mahanti, and Chakrabarti, *J. Chem. Phys.* **108**, 10281 (1998).
68. *Monte Carlo Study of Layer Formation and Exchange Kinetics in Polymer Adsorption*, A. Chakrabarti and R. Zajac, *Progress in Colloid and Polymer Science*, **110**, 291 (1998).
69. *Simulation of Phase Behavior of Fluids in Gels*, R. Salazar, R. Toral and A. Chakrabarti, in *Fourth Granada Lectures in Computational Physics*, edited by P. L. Garrido and J. Marro (Springer, Berlin, 1997).
70. *Monte Carlo Study of the Effects of Chemical Impurities on the Adsorption of Polymer Chains*, R. Zajac and A. Chakrabarti, *J. Chem. Phys.*, **107**, 8637 (1997).
71. *Surface-directed Spinodal Decomposition: Hydrodynamic Effects*, H. Chen and A. Chakrabarti, *Phys. Rev. E*, **55**, 5680 (1997).
72. *Kinetics of Phase Ordering of Nematic Liquid Crystals in a Confined Geometry*, A. Bhattacharya, M. Rao and A. Chakrabarti, *Phys. Rev. E*, **53**, 4899 (1996).
73. *Diffusion and Magnetic Relaxation in Model Porous Media*, A. Bhattacharya, S. D. Mahanti and A. Chakrabarti, *Phys. Rev. B*, **53**, 11495 (1996).
74. *Substrate Induced Bulk Alignment of Liquid Crystals*, Z. Zhang, A. Chakrabarti, O. G. Mouritsen, and M. J. Zuckermann, *Phys. Rev. E*, **53**, 2461 (1996).

75. *Statics and Dynamics of Homopolymer Adsorption and Desorption: A Monte Carlo Study*, R. Zajac and A. Chakrabarti, *J. Chem. Phys.* **104**, 2418 (1996).
76. *Conformational Properties of Polyelectrolyte Brushes : A Monte Carlo and Self-Consistent-Field Study*, H. Chen, R. Zajac, and A. Chakrabarti, *Journal of Chem. Phys.* **104**, 1579 (1996).
77. *Fractal Structure of Silica Colloids Revisited*, T. Sintès, R. Toral and A. Chakrabarti, *J. Phys. A* **29**, 533 (1996).
78. *Dynamics of Nematic Ordering in Porous Media*, Z. Zhang and Chakrabarti, *Europhys. Lett.*, **33**, 23 (1996).
79. *Diffusion and Magnetic Relaxation in Computer Generated Model Porous Media*, A. Bhattacharya, S. D. Mahanti and A. Chakrabarti, in *Access in Nonporous Materials*, edited by T. J. Pinnavaia and M. F. Thorpe, Plenum Press, New York (1995).
80. *Nematic Ordering in a Vycor-like Restrictive Geometry: A Two-Dimensional Model*, Z. Zhang and A. Chakrabarti, *Physical Review E* **52**, 4991 (1995).
81. *Layering Phase Separation of Densely Grafted Diblock Copolymers*, G. Brown, A. Chakrabarti, and J. F. Marko, *Macromolecules* **28**, 7817 (1995).
82. *Irreversible Polymer Adsorption from Semidilute and Moderately Dense Solutions*, R. Zajac and A. Chakrabarti, *Phys. Rev. E* **52**, 6536 (1995).
83. *Effects of Grafting Geometry and Solvent Quality on the Structure of Bimodal Polymer Brushes*, H. Chen and A. Chakrabarti, *Phys. Rev. E* **52**, 3915 (1995).
84. *Slow Domain Growth in a System with Competing Interactions*, M. Rao and A. Chakrabarti, *Phys. Rev. E (Rapid Communications)*, **52**, R13 (1995).
85. *Phase Separation of Binary Fluids in Porous Media: Asymmetries in Pore Geometry and Fluid Composition*, Z. Zhang and A. Chakrabarti, *Physical Review E*, **52**, 2736 (1995).
86. *Large Scale simulations of the two-dimensional Cahn-Hilliard Model*, R. Toral, A. Chakrabarti and J.D. Gunton, *Physica A* **213**, 41 (1995).
87. *Ordering of Block Copolymer Melts in Confined Geometry*, G. Brown and A. Chakrabarti, *J. Chem. Phys.*, **102**, 1440 (1995).
88. *Phase Separation of Binary Fluids in a Cylindrical Pore: a Molecular Dynamics Study*, Z. Zhang and A. Chakrabarti, *Phys. Rev. E (Rapid Communications)* **50**, R4290 (1994).
89. *Dynamical Scaling of Fractal Aggregates in Dense Colloidal Solutions*, T. Sintès, R. Toral and A. Chakrabarti, *Phys. Rev. E (Rapid Commun.)*, **50**, R3330 (1994).
90. *Reversible aggregation in self-associating polymer systems*, T. Sintès, R. Toral, and A. Chakrabarti, *Phys. Rev. E* **50**, 2967 (1994).
91. *Surface-Induced Nucleation*, G. Brown, A. Chakrabarti, and J. F. Marko, *Phys. Rev. E* **50**, 1674 (1994).
92. *Surface-Induced Ordering in Block Copolymer Melts*, G. Brown and A. Chakrabarti, *J. Chem. Phys.* **101**, 3310 (1994).
93. *Forces between Polymer Brushes: Monte Carlo Simulation of a Continuous-Space Model*, R. Toral, A. Chakrabarti, and R. Dickman, *Physical Review E*, **50**, 343 (1994).
94. *Surface-Induced Asymmetries during Spinodal Decomposition in Off-Critical Polymer Mixtures*, G. Krausch, E. J. Kramer, F. S. Bates, Marko, G. Brown, and A. Chakrabarti, *Macromolecules*, **27**, 6768 (1994).
95. *Anisotropy-Induced Crossover in Domain Growth Kinetics*, M. Rao and A. Chakrabarti, *Phys. Rev. Lett.* **72**, 2911 (1994).
96. *Dynamical Scaling Functions in Conserved Vector Order Parameter Systems without Topological Defects*, M. Rao, and A. Chakrabarti, *Phys. Rev. E*, **49**, 3727 (1994).

97. *Kinetics and Thermodynamics of End-Functionalized Polymer Adsorption and Desorption Processes*, R. Zajac and A. Chakrabarti, *Physical Review E*, **49**, 3069 (1994).
98. *Microphase Separation of a Dense Two-Component Grafted Polymer Layer*, G. Brown, A. Chakrabarti, and J. F. Marko, *Europhys Lett.* **25**, 239 (1994).
99. *Phase Separation in Binary Mixtures Confined in a Strip Geometry*, A. Bhattacharya, M. Rao, and A. Chakrabarti, *Phys. Rev.* **49**, 524 (1994).
100. *Interpenetrations in Polymer Brushes*, A. Chakrabarti, P. Nelson and R. Toral, *J. Chem. Phys.*, **100**, 748 (1994).
101. *Monte Carlo Study of Pancake to Brush Transition*, A. Chakrabarti, *Journal of Chemical Physics* **100**, 631 (1994).
102. *Monte Carlo Study of Phase Separation in Critical Polymer Blends*, G. Brown and A. Chakrabarti, *Physical Review E*, **48**, 3705 (1993).
103. *Kinetics of Domain Growth in a Random-Field Model in Three Dimensions*, M. Rao, and A. Chakrabarti, *Phys. Rev. Lett.*, **71**, 3501 (1993).
104. *Static and Dynamic Collective Correlations of Polymer Brushes*, J. F. Marko and A. Chakrabarti, *Physical Review E*, **48**, 2739 (1993).
105. *Conserved Dynamics of a Two-Dimensional Random Field Model*, M. Rao and A. Chakrabarti, *Physical Review E (Rapid Communications)*, **48**, R25 (1993).
106. *Comment on Finite Temperature Phase Transition in Metallic Spin-Glasses*, A. Chakrabarti and C. Dasgupta, *Physical Review Letters*, **70**, 3178 (1993).
107. *Monte-Carlo Study of Polymer Chains End-Grafted onto a Spherical Interface*, R. Toral and A. Chakrabarti, *Physical Review E*, **47**, 4240 (1993).
108. *Late Stage Coarsening for Off-Critical Quenches: Scaling Functions and Growth Law*, A. Chakrabarti, R. Toral and J. D. Gunton, *Phys. Rev. E*, **47**, 3025 (1993).
109. *Generation of Gaussian Distributed Random Numbers by Using a Numerical Inversion Method*, R. Toral and A. Chakrabarti, *Comp. Phys. Commun.*, **74**, 327 (1993).
110. *Lamellar Phase in a Model for Block Copolymers*, A. Chakrabarti and J. D. Gunton, *Phys. Rev. E (Rapid Communications)*, **47**, R792 (1993).
111. *Phase Separation Dynamics in Off-Critical Polymer Blends*, Brown and A. Chakrabarti, *J. Chem. Phys.* **98**, 2451 (1993).
112. *Structure of Polymer Chains End-grafted on an Interacting Surface*, A. Chakrabarti, P. Nelson and R. Toral, *Phys. Rev. A* **46**, 4930 (1992).
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