

CONTENTS - *Continued*

PHYSICAL REVIEW E

THIRD SERIES, VOLUME 63, NUMBER 6

JUNE 2001

Nystrom plus correction method for solving bound-state equations in momentum space (<i>8 pages</i>) Alfred Tang and John W. Norbury	066703
--	--------

BRIEF REPORTS

General methods of statistical physics

Directed self-avoiding walks in random media (<i>4 pages</i>) S. B. Santra, W. A. Seitz, and D. J. Klein	067101
Anomalous relaxation and self-organization in nonequilibrium processes (<i>4 pages</i>) Ibrahim Fatkullin, Konstantin Kladko, Igor Mitkov, and A. R. Bishop	067102
Extremal principle for the steady-state selection in driven lattice gases with open boundaries (<i>4 pages</i>) Johannes S. Hager	067103
Phase transition of the one-dimensional coagulation-production process (<i>4 pages</i>) Géza Ódor	067104

Chaos and pattern formation

Controlling spatiotemporal chaos in coupled map lattices (<i>4 pages</i>) KaiEn Zhu and Tianlun Chen	067201
---	--------

Plasma physics

Mechanical model for the plasma maser effect (<i>4 pages</i>) S. V. Vladimirov, S. A. Maierov, M. Y. Yu, and L. Stenflo	067401
Dislocation-mediated melting: The one-component plasma limit (<i>4 pages</i>) Leonid Burakovsky and Dean L. Preston	067402

COMMENTS

Chaos and pattern formation

Comment on “Models of intermediate spectral statistics” (<i>2 pages</i>) T. Gorin, M. Müller, and P. Seba	068201
--	--------

ERRATA

Erratum: Energy relaxation and the quasiequation of state of a dense two-temperature nonequilibrium plasma [Phys. Rev. E 58 , 3705 (1998)] (<i>1 page</i>) M. W. C. Dharma-wardana and François Perrot	069901(E)
---	-----------

Cumulative Author Index	i
-----------------------------------	---

CONTENTS - Continued

PHYSICAL REVIEW E

THIRD SERIES, VOLUME 63, NUMBER 6

JUNE 2001

Physics of beams

- Traveling-wave tubes and backward-wave oscillators with weak external magnetic fields (7 pages) 066501
T. M. Abu-elfadl, G. S. Nusinovich, A. G. Shkvarunets, Y. Carmel, T. M. Antonsen, Jr., and D. Goebel

Classical physics, including nonlinear media and photonic materials

- Polarization state of quadratic spatial optical solitons (6 pages) 066601
N. N. Rosanov and S. V. Fedorov
- Universal criterion and amplitude equation for a nonequilibrium Ising-Bloch transition (4 pages) 066602
D. Michaelis, U. Peschel, F. Lederer, D. V. Skryabin, and W. J. Firth
- Discrete breathers in dissipative lattices (12 pages) 066603
J. L. Marín, F. Falo, P. J. Martínez, and L. M. Floría
- Stability of stationary states in the cubic nonlinear Schrödinger equation: Applications to the Bose-Einstein condensate (9 pages) 066604
L. D. Carr, J. N. Kutz, and W. P. Reinhardt
- Stopping of acoustic waves by sonic polymer-fluid composites (6 pages) 066605
Ph. Lambin, A. Khelif, J. O. Vasseur, L. Dobrzynski, and B. Djafari-Rouhani
- Quantization of weakly nonlinear lattices: Envelope solitons (5 pages) 066606
V. V. Konotop and S. Takeno
- Nonadiabatic interaction of a propagating wave packet with localized parametric pumping (8 pages) 066607
G. A. Melkov, A. A. Serga, V. S. Tiberkevich, Yu. V. Kobljanskij, and A. N. Slavin
- Interactions between two-dimensional composite vector solitons carrying topological charges (10 pages) 066608
Ziad H. Musslimani, Marin Soljačić, Mordechai Segev, and Demetrios N. Christodoulides
- Nonreciprocal magnetic photonic crystals (17 pages) 066609
A. Figotin and I. Vitebsky
- Walking cavity solitons (5 pages) 066610
Dmitry V. Skryabin and Alan R. Champneys
- Acoustic wave propagation in a one-dimensional layered system (8 pages) 066611
Pi-Gang Luan and Zhen Ye
- Energy eigenstates of magnetostatic waves and oscillations (10 pages) 066612
E. O. Kamenetskii
- Dynamics of kinks in one- and two-dimensional hyperbolic models with quasidiscrete nonlinearities (7 pages) 066613
Horacio G. Rotstein, Igor Mitkov, Anatol M. Zhabotinsky, and Irving R. Epstein
- One-dimensional toy model of globular clusters (6 pages) 066614
D. Fanelli, M. Merafina, and S. Ruffo
- Green's tensor technique for scattering in two-dimensional stratified media (8 pages) 066615
Michael Paulus and Olivier J. F. Martin
- Role of polarization mode dispersion on modulational instability in optical fibers (12 pages) 066616
J. Garnier, F. Kh. Abdullaev, E. Seve, and S. Wabnitz

Computational physics

- Efficient reconstruction of multiphase morphologies from correlation functions (8 pages) 066701
M. G. Rozman and Marcel Utz
- Thirteen-velocity three-dimensional lattice Boltzmann model (7 pages) 066702
Dominique d'Humières, M'hamed Bouzidi, and Pierre Lallemand

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW E

THIRD SERIES, VOLUME 63, NUMBER 6

JUNE 2001

Chaotic properties of the soft-disk Lorentz gas (6 pages)	066216
J.C. Kimball	
Regular and anomalous quantum diffusion in the Fibonacci kicked rotator (6 pages)	066217
G. Casati, G. Mantica, and D. L. Shepelyansky	
Dynamics of periodically forced semiconductor laser with optical feedback (6 pages)	066218
Jorge Manuel Mendez, R. Laje, M. Giudici, J. Aliaga, and G. B. Mindlin	
Unifying framework for synchronization of coupled dynamical systems (4 pages)	066219
S. Boccaletti, Louis M. Pecora, and A. Pelaez	
Localization properties of groups of eigenstates in chaotic systems (8 pages)	066220
D. A. Wisniacki, F. Borondo, E. Vergini, and R. M. Benito	
Chaos induced by quantum effect due to breakdown of the Born-Oppenheimer adiabaticity (10 pages)	066221
Hiroshi Fujisaki and Kazuo Takatsuka	

Nonlinear hydrodynamics and turbulence

Pattern formation in directional solidification under shear flow. I. Linear stability analysis and basic patterns (13 pages)	066301
Yannick Marietti, Jean-Marc Debierre, Thomas M. Bock, and Klaus Kassner	
Pattern formation in directional solidification under shear flow. II. Morphologies and their characterization (13 pages)	066302
Yannick Marietti, Jean-Marc Debierre, Thomas M. Bock, and Klaus Kassner	
Optical pulse characteristics of sonoluminescence at low acoustic drive levels (13 pages)	066303
Vijay H. Arakeri and Asis Giri	
Diffusion in biased turbulence (10 pages)	066304
M. Vlad, F. Spineanu, J. H. Misguich, and R. Balescu	
Behavior of sink and source defects in a one-dimensional traveling finger pattern (6 pages)	066305
Piotr Habdas, Matthew J. Case, and John R. de Bruyn	
Experimental study of miscible displacement fronts in rough self-affine fractures (10 pages)	066306
Harold Auradou, Jean-Pierre Hulin, and Stéphane Roux	
Stability of hexagonal patterns in Bénard-Marangoni convection (13 pages)	066307
B. Echebarria and C. Pérez-García	
Dynamical models for sand ripples beneath surface waves (8 pages)	066308
Ken Haste Andersen, Marie-Line Chabanol, and Martin van Hecke	

Plasma physics

Beam propagation of x rays in a laser-produced plasma and a modified relation of interferometry in measuring the electron density (6 pages)	066401
Hong Guo, Timon Chengyi Liu, Xiquan Fu, Wei Hu, and Song Yu	
Bulk-to-surface-wave self-conversion in optically induced ionization processes (8 pages)	066402
V. B. Gildenburg, N. A. Zharova, and M. I. Bakunov	
Nonlinear resonances of particles in a dusty plasma sheath (8 pages)	066403
C. Zafiu, A. Melzer, and A. Piel	
Path integral Monte Carlo simulation of the low-density hydrogen plasma (10 pages)	066404
B. Militzer and D. M. Ceperley	
Kubo number and magnetic field line diffusion coefficient for anisotropic magnetic turbulence (5 pages)	066405
P. Pommois, P. Veltri, and G. Zimbardo	
Kinetic approach to low-frequency waves in dusty self-gravitating plasmas (7 pages)	066406
Victoria V. Yaroshenko, Gerald Jacobs, and Frank Verheest	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW E

THIRD SERIES, VOLUME 63, NUMBER 6

JUNE 2001

Calculation of effective Hamiltonians for renormalized or non-Hamiltonian systems (7 pages)	066128
Dorit Ron and Robert H. Swendsen	
Self-consistent theory of rupture by progressive diffuse damage (11 pages)	066129
S. Gluzman and D. Sornette	
Monte Carlo simulations of short-time critical dynamics with a conserved quantity (8 pages)	066130
B. Zheng and H. J. Luo	
Rotation-induced phase transition in a spherical gravitating system (10 pages)	066131
Peter Klinko, Bruce N. Miller, and Igor Prokhorenkov	
Competitive growth model involving random deposition and random deposition with surface relaxation (6 pages)	066132
Claudio M. Horowitz, Roberto A. Monetti, and Ezequiel V. Albano	
Roughness exponent in two-dimensional percolation, Potts model, and clock model (6 pages)	066133
José Arnaldo Redinz and Marcelo Lobato Martins	
Chaos and pattern formation	
Exact trace formulas for a class of one-dimensional ray-splitting systems (6 pages)	066201
Y. Dabaghian, R. V. Jensen, and R. Blümel	
Detecting nonstationarity and state transitions in a time series (8 pages)	066202
J. B. Gao	
Chaos synchronization based on a continuous chaos control method in semiconductor lasers with optical feedback (8 pages)	066203
Atsushi Murakami and Junji Ohtsubo	
Random matrix theory and acoustic resonances in plates with an approximate symmetry (11 pages)	066204
A. Andersen, C. Ellegaard, A. D. Jackson, and K. Schaadt	
Many-hole interactions and the average lifetimes of chaotic transients that precede controlled periodic motion (13 pages)	066205
Hrvoje Buljan and Vladimir Paar	
Wave fronts and spatiotemporal chaos in an array of coupled Lorenz oscillators (7 pages)	066206
Diego Pazó, Noelia Montejo, and Vicente Pérez-Muñuzuri	
Dynamic scenarios of multistable switching in semiconductor superlattices (8 pages)	066207
A. Amann, A. Wacker, L. L. Bonilla, and E. Schöll	
Semiclassical singularities from bifurcating orbits (4 pages)	066208
Christopher Manderfeld and Henning Schomerus	
Characterization, dynamics and stabilization of diffractive domain walls and dark ring cavity solitons in parametric oscillators (16 pages)	066209
Gian-Luca Oppo, Andrew J. Scroggie, and William J. Firth	
Sensitivity at the degenerate points of energy levels in a quantum system with nonintegrable perturbation (7 pages)	066210
Yingxin Jin and Kaifen He	
Blowout bifurcations and the onset of magnetic activity in turbulent dynamos (4 pages)	066211
David Sweet, Edward Ott, John M. Finn, Thomas M. Antonsen, Jr., and Daniel P. Lathrop	
Stabilization of ratchet dynamics by weak periodic signals (5 pages)	066212
Maria Barbi and Mario Salerno	
Diffusion by extrinsic noise in the kicked Harper map (9 pages)	066213
Gunyoung Park and C. S. Chang	
Localization of eigenfunctions in the stadium billiard (16 pages)	066214
W. E. Bies, L. Kaplan, M. R. Haggerty, and E. J. Heller	
Classical dynamics on graphs (22 pages)	066215
F. Barra and P. Gaspard	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW E

THIRD SERIES, VOLUME 63, NUMBER 6

JUNE 2001

Homogeneous nucleation of a noncritical phase near a continuous phase transition (5 pages)	066105
Richard P. Sear	
Time dependence of breakdown in a global fiber-bundle model with continuous damage (4 pages)	066106
L. Moral, Y. Moreno, J. B. Gómez, and A. F. Pacheco	
Density of states, Potts zeros, and Fisher zeros of the Q -state Potts model for continuous Q (12 pages)	066107
Seung-Yeon Kim and Richard J. Creswick	
Method of intervals for the study of diffusion-limited annihilation, $A + A \rightarrow 0$ (8 pages)	066108
Thomas O. Masser and Daniel ben-Avraham	
Susceptibility and percolation in two-dimensional random field Ising magnets (14 pages)	066109
E. T. Seppälä and M. J. Alava	
Extremal statistics in the energetics of domain walls (4 pages)	066110
E. T. Seppälä, M. J. Alava, and P. M. Duxbury	
Time decay of the remanent magnetization in the $\pm J$ spin glass model at $T=0$ (4 pages)	066111
J. Kłos and S. Kobe	
Harris criterion on hierarchical lattices: Rigorous inequalities and counterexamples in Ising systems (4 pages)	066112
Avishay Efrat	
Thermal resonance in signal transmission (12 pages)	066113
Ramon Reigada, Antonio Sarmiento, and Katja Lindenberg	
Stochastic dynamics in a two-dimensional oscillator near a saddle-node bifurcation (10 pages)	066114
M. E. Inchiosa, V. In, A. R. Bulsara, K. Wiesenfeld, T. Heath, and M. H. Choi	
Test particle in a quantum gas (8 pages)	066115
Bassano Vacchini	
Tendency towards maximum complexity in a nonequilibrium isolated system (9 pages)	066116
Xavier Calbet and Ricardo López-Ruiz	
Epidemic dynamics and endemic states in complex networks (8 pages)	066117
Romualdo Pastor-Satorras and Alessandro Vespignani	
Critical behavior of a one-dimensional diffusive epidemic process (5 pages)	066118
U. L. Fulco, D. N. Messias, and M. L. Lyra	
Hysteresis and the dynamic phase transition in thin ferromagnetic films (10 pages)	066119
Hyunbum Jang and Malcolm J. Grimsom	
Effects of the sticking probability on the scaling of the island density in a point island model (5 pages)	066120
K. Mazzitello, C. M. Aldao, and H. O. Martín	
Sliding friction dynamics of hard single asperities on soft substrates (14 pages)	066121
W. P. Vellinga and C. P. Hendriks	
Bethe ansatz solution of triangular trimers on the triangular lattice (18 pages)	066122
Alain Verberkmoes and Bernard Nienhuis	
Organization of growing random networks (14 pages)	066123
P. L. Krapivsky and S. Redner	
Ehrenfest's argument extended to a formalism of nonequilibrium thermodynamics (6 pages)	066124
Alexander N. Gorban, Iliya V. Karlin, Hans Christian Öttinger, and Larisa L. Tatarinova	
Partial and random covering times in one dimension (7 pages)	066125
Marcelo S. Nascimento, Maurício D. Coutinho-Filho, and Carlos S. O. Yokoi	
Reactive dynamics on two-dimensional supports: Monte Carlo simulations and mean-field theory (8 pages)	066126
G. Kalosakas and A. Provata	
Comparative study of an Eden model for the irreversible growth of spins and the equilibrium Ising model (8 pages)	066127
Julián Candia and Ezequiel V. Albano	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW E

THIRD SERIES, VOLUME 63, NUMBER 6

JUNE 2001

PART 2

RAPID COMMUNICATIONS

General methods of statistical physics

- Mode-coupling theory of the fifth-order Raman spectrum of an atomic liquid (*4 pages*) 065101(R)
R. Aldrin Denny and David R. Reichman
- Local-functional theory of critical adsorption (*4 pages*) 065102(R)
Z. Borjan and P. J. Upton
- Binary spreading process with parity conservation (*4 pages*) 065103(R)
Kwangho Park, Haye Hinrichsen, and In-mook Kim

Chaos and pattern formation

- Periodic-orbit bifurcations and superdeformed shell structure (*4 pages*) 065201(R)
A. G. Magner, S. N. Fedotkin, K. Arita, K. Matsuyanagi, and M. Brack
- Synchronization induced by Langevin dynamics (*4 pages*) 065202(R)
M. Cieřla, S. P. Dias, L. Longa, and F. A. Oliveira
- Multiscale analysis of complex systems (*4 pages*) 065203(R)
P.-M. Binder and Jorge A. Plazas
- Subharmonic destruction of generalized chaos synchronization (*4 pages*) 065204(R)
Nikolai F. Rulkov and Clifford Tureman Lewis

Nonlinear hydrodynamics and turbulence

- Scaling laws and vortex profiles in two-dimensional decaying turbulence (*4 pages*) 065301(R)
Jean-Philippe Laval, Pierre-Henri Chavanis, Bérengère Dubrulle, and Clément Sire
- Method for measuring local hydraulic permeability using magnetic resonance imaging (*4 pages*) 065302(R)
Martin Bencsik and Chandrasekhar Ramanathan
- Turbulence in a free surface (*4 pages*) 065303(R)
W. I. Goldburg, J. R. Cressman, Z. Vörös, B. Eckhardt, and J. Schumacher

Plasma physics

- Dynamics of Raman instabilities using chirped laser pulses (*4 pages*) 065401(R)
J. Faure, J.-R. Marquès, V. Malka, F. Amiranoff, Z. Najmudin, B. Walton, J.-P. Rousseau, S. Ranc, A. Solodov, and P. Mora

REGULAR ARTICLES

General methods of statistical physics

- Area-preserving dynamics of a long slender finger by curvature: A test case for globally conserved phase ordering (*7 pages*) 066101
Avner Peleg, Baruch Meerson, Arkady Vilenkin, and Massimo Conti
- Pattern formation in a surface chemical reaction with global delayed feedback (*13 pages*) 066102
M. Bertram and A. S. Mikhailov
- Multichoice minority game (*5 pages*) 066103
Liat Ein-Dor, Richard Metzler, Ido Kanter, and Wolfgang Kinzel
- Criticality in confined ionic fluids (*6 pages*) 066104
J. E. Flores-Mena, Marcia C. Barbosa, and Yan Levin

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW E

THIRD SERIES, VOLUME 63, NUMBER 6

JUNE 2001

BRIEF REPORTS

Statistical physics of soft matter

- Size-dependent degree distribution of a scale-free growing network (4 pages) 062101
 S. N. Dorogovtsev, J. F. F. Mendes, and A. N. Samukhin
- Distinguishing fractional and white noise in one and two dimensions (4 pages) 062102
 Alex Hansen, Jean Schmittbuhl, and G. George Batrouni

Equilibrium and linear transport properties of fluids

- Drift velocity of C_{60}^+ in gases follows rarefied gas dynamics (3 pages) 062201
 Kenichi Nanbu and Go Wakayama

Granular materials

- Test of the fractional Debye-Stokes-Einstein equation in low-molecular-weight glass-forming liquids under condition of high compression (4 pages) 062301
 Stella Hensel Bielowska, Tatiana Psurek, Jerzy Ziolo, and Marian Paluch

Colloidal dispersions, suspensions, and aggregates

- Effect of the anisotropy of the cells on the topological properties of two- and three-dimensional froths (3 pages) 062401
 Patrick Richard, Jean-Paul Troadec, Luc Oger, and Annie Gervois

Films, interfaces, and crystal growth

- (2 + 1)-dimensional stochastic growth model and its application to some experimental observations (4 pages) 062601
 S. V. Ghaisas

Liquid crystals

- Observation of a pretransitional effect near a virtual smectic-A–smectic-C* transition (4 pages) 062701
 Seiji Shibahara, Yoichi Takanishi, Jun Yamamoto, Toyokazu Ogasawara, Ken Ishikawa, Hiroshi Yokoyama, and Hideo Takezoe
- Cluster Monte Carlo simulations of the nematic-isotropic transition (4 pages) 062702
 N. V. Priezjev and Robert A. Pelcovits
- Velocity of an electric-field-induced synclonic solitary wave invading the anticlinic liquid crystal phase (3 pages) 062703
 Neha S. Bhatt, Shiyong Zhang, S. S. Keast, M. E. Neubert, and Charles Rosenblatt

COMMENTS

Statistical physics of soft matter

- Comment on “1/f noise in the Bak-Sneppen model” (2 pages) 063101
 Jörn Davidsen and Norbert Lüthje

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW E

THIRD SERIES, VOLUME 63, NUMBER 6

JUNE 2001

Small quartz silica spheres induced disorder in octylcyanobiphenyl (8CB) liquid crystals: A thermal study (9 pages)	061713
M. Marinelli, A. K. Ghosh, and F. Mercuri	
Polymers	
Polymer fragmentation in extensional flow (5 pages)	061801
Armando M. Maroja, Fernando A. Oliveira, Michał Cieřła, and Lech Longa	
Theoretical simulation of holographic polymer-dispersed liquid-crystal films via pattern photopolymerization-induced phase separation (8 pages)	061802
Thein Kyu, Domasius Nwabunma, and Hao-Wen Chiu	
Collapse of the $Ia\bar{3}d$ cubic symmetry by uniaxial stretching of a double-gyroid block copolymer (5 pages)	061803
Shinichi Sakurai, Daisuke Isobe, Shigeru Okamoto, Takeshi Yao, and Shunji Nomura	
Counterion evaporation (5 pages)	061804
C. Fleck and H. H. von Grünberg	
Strongly adsorbed comb copolymers with rigid side chains (9 pages)	061805
Roman Stepanyan, Andrei Subbotin, and Gerrit ten Brinke	
Density functional theory of charged colloidal systems (8 pages)	061806
Derek Y. C. Chan	
Effect of rigidity on the crystallization processes of short polymer melts (6 pages)	061807
Toshiaki Miura, Ryoichi Kishi, Masuhiro Mikami, and Yoshikazu Tanabe	
Order in semiflexible polymers at an interface (5 pages)	061808
A. ten Bosch	
Cylindrical phase of block copolymers: Stability of circular configuration to elliptical distortions and thin film morphologies (4 pages)	061809
G. G. Pereira	
Biological physics	
Shaping of a scroll wave filament by cardiac fibers (9 pages)	061901
Omer Berenfeld, Marcel Wellner, José Jalife, and Arkady M. Pertsov	
Modified Donnan potentials for ion transport through biological ion channels (8 pages)	061902
Dirk Gillespie and Robert S. Eisenberg	
Dynamic model of base pair breathing in a DNA chain with a defect (11 pages)	061903
Jonathan A. D. Wattis, Sarah A. Harris, Christina R. Grindon, and Charles A. Laughton	
Phase transition in a spatial Lotka-Volterra model (4 pages)	061904
György Szabó and Tamás Czárán	
Gradient descent learning in and out of equilibrium (6 pages)	061905
Nestor Caticha and Evaldo Araújo de Oliveira	
Two-state protein model with water interactions: Influence of temperature on the intrinsic viscosity of myoglobin (5 pages)	061906
Audun Bakk	
Critical and oscillatory behavior of a system of smart preys and predators (6 pages)	061907
Alejandro F. Rozenfeld and Ezequiel V. Albano	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW E

THIRD SERIES, VOLUME 63, NUMBER 6

JUNE 2001

Interface fluctuations, bulk fluctuations, and dimensionality in the off-equilibrium response of coarsening systems (4 pages)	061506
Federico Corberi, Eugenio Lippiello, and Marco Zannetti	
Dynamical susceptibility of solid ferrocolloids (10 pages)	061507
Andrey Yu. Zubarev and Larisa Yu. Iskakova	
Shape oscillations of a viscoelastic drop (10 pages)	061508
Damir B. Khismatullin and Ali Nadim	
Low-temperature behavior of core-softened models: Water and silica behavior (7 pages)	061509
E. A. Jagla	
Films, interfaces, and crystal growth	
Phase-field simulations of dendritic crystal growth in a forced flow (16 pages)	061601
X. Tong, C. Beckermann, A. Karma, and Q. Li	
Topography and instability of monolayers near domain boundaries (12 pages)	061602
H. Diamant, T. A. Witten, C. Ege, A. Gopal, and K. Y. C. Lee	
Temporal evolution of relaxation in rubbed polystyrene thin films (4 pages)	061603
O. C. Tsang, O. K. C. Tsui, and Z. Yang	
Interaction and deformation of viscoelastic particles: Nonadhesive particles (9 pages)	061604
Phil Attard	
Liquid crystals	
Disjoining pressure in free-standing smectic-A films and its effect on their reflectivity (8 pages)	061701
L. V. Mirantsev	
Dislocation geometry in the TGB _A phase: Linear theory (11 pages)	061702
Igor Bluestein, Randall D. Kamien, and T. C. Lubensky	
Molecular orientation near the surface of a smectic liquid crystal cell showing V-shaped switching by means of attenuated total internal reflection ellipsometry (7 pages)	061703
Shinya Ikeda, Toyokazu Ogasawara, Michi Nakata, Yoichi Takanishi, Ken Ishikawa, and Hideo Takezoe	
Grain-boundary motion in layered phases (9 pages)	061704
Denis Boyer and Jorge Viñals	
Liquid crystals of polyelectrolyte networks (15 pages)	061705
R. Bruinsma	
Shear response of a smectic film stabilized by an external field (6 pages)	061706
T. Franosch and D. R. Nelson	
Transport tensors in perfectly aligned low-density fluids: Self-diffusion and thermal conductivity (8 pages)	061707
G. S. Singh and B. Kumar	
Macroscopic dynamics near the isotropic-smectic-A phase transition (6 pages)	061708
Helmut R. Brand, Prabir K. Mukherjee, and Harald Pleiner	
Aging of surface anchoring and surface viscosity of a nematic liquid crystal on photoaligning poly-(vinyl-cinnamate) (5 pages)	061709
Mojca Vilfan, I. Drevenšek Olenik, A. Mertelj, and M. Copič	
Macroscopic chirality of a liquid crystal from nonchiral molecules (5 pages)	061710
A. Jákli, G. G. Nair, C. K. Lee, R. Sun, and L. C. Chien	
Optical studies of the smectic- C_a^* phase layer structure in free-standing films (8 pages)	061711
D. A. Olson, S. Pankratz, P. M. Johnson, A. Cady, H. T. Nguyen, and C. C. Huang	
Sensitive methods for estimating the anchoring strength of nematic liquid crystals on Langmuir-Blodgett monolayers of fatty acids	061712
Valentina S. U. Fazio, Francesca Nannelli, and Lachezar Komitov	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW E

THIRD SERIES, VOLUME 63, NUMBER 6

JUNE 2001

Influence of shape on ordering of granular systems in two dimensions (9 pages)	061303
I. C. Rankenburg and R. J. Zieve	
Bifurcation diagram for compartmentalized granular gases (9 pages)	061304
Devaraj van der Meer, Ko van der Weele, and Detlef Lohse	
Hydrodynamics of an open vibrated granular system (10 pages)	061305
J. Javier Brey, M. J. Ruiz-Montero, and F. Moreno	
Lyapunov spectrum of granular gases (11 pages)	061306
Sean McNamara and Michel Mareschal	
Grain reconstruction of porous media: Application to a low-porosity Fontainebleau sandstone (17 pages)	061307
J.-F. Thovert, F. Yousefian, P. Spanne, C. G. Jacquin, and P. M. Adler	
Inelastic collapse in simple shear flow of a granular medium (9 pages)	061308
M. Alam and C. M. Hrenya	
Evidence for universality within the classes of deterministic and stochastic sandpile models (8 pages)	061309
Ofer Biham, Erel Milshtein, and Ofer Malcai	
Effects of gravity and nonlinearity on the waves in the granular chain (7 pages)	061310
Jongbae Hong and Aiguo Xu	
Granular temperature profiles in three-dimensional vibrofluidized granular beds (10 pages)	061311
R. D. Wildman, J. M. Huntley, and D. J. Parker	
Self-organized criticality in a sheared granular stick-slip system (4 pages)	061312
Fergal Dalton and David Corcoran	
Colloidal dispersions, suspensions, and aggregates	
Flow dichroism in critical colloidal fluids (12 pages)	061401
T. A. J. Lenstra and J. K. G. Dhont	
Topology of slightly polydisperse real foams (10 pages)	061402
C. Monnereau, B. Prunet-Foch, and M. Vignes-Adler	
Shear viscosity of phase-separating polymer blends with viscous asymmetry (5 pages)	061403
H. S. Jeon and E. K. Hobbie	
Diffusing-wave spectroscopy of nonergodic media (11 pages)	061404
F. Scheffold, S. E. Skipetrov, S. Romer, and P. Schurtenberger	
Critical behavior of gelation probed by the dynamics of latex spheres (9 pages)	061405
G. C. Fadda, D. Lairez, and J. Pelta	
Droplet polydispersity and shape fluctuations in AOT [bis(2-ethylhexyl)sulfosuccinate sodium salt] microemulsions studied by contrast variation small-angle neutron scattering (18 pages)	061406
Lise Arleth and Jan Skov Pedersen	
Structured and complex fluids	
Liquid-liquid equilibrium for monodisperse spherical particles (5 pages)	061501
E. A. Jagla	
Glass transition and density fluctuations in the fragile glass former orthoterphenyl (19 pages)	061502
G. Monaco, D. Fioretto, L. Comez, and G. Ruocco	
Unusual features of long-range density fluctuations in glass-forming organic liquids: A Rayleigh and Rayleigh-Brillouin light scattering study (12 pages)	061503
A. Patkowski, E. W. Fischer, W. Steffen, H. Gläser, M. Baumann, T. Ruths, and G. Meier	
Molecular dynamics studies of strongly coupled charged particle bilayers at finite temperatures (8 pages) . . .	061504
Z. Donkó and G. J. Kalman	
Velocity correlations and diffusion during sedimentation (7 pages)	061505
E. Kuusela and T. Ala-Nissila	

(Continued)