

# PHYSICAL REVIEW E

For editorial and subscription correspondence,  
please see inside front cover  
(ISSN: 1539-3755)

## PERIODICALS

Postmaster send address changes to:  
APS Subscription Services  
Suite 1N01  
2 Huntington Quadrangle  
Melville, NY 11747-4502

THIRD SERIES, VOLUME 78, NUMBER 5

CONTENTS

NOVEMBER 2008

## PART 1: STATISTICAL, SOFT MATTER, AND BIOLOGICAL PHYSICS

### RAPID COMMUNICATIONS

#### Liquid crystals

- Kerr constant and third-order nonlinear optic susceptibility measurements in a liquid crystal composed of bent-shaped molecules (*4 pages*) ..... 050701(R)  
Surajit Dhara, Fumito Araoka, Mongryong Lee, Khoa Van Le, Lingfen Guo, B. K. Sadashiva,  
Kigook Song, Ken Ishikawa, and Hideo Takezoe

#### Polymers

- Microvoid formation and strain hardening in highly cross-linked polymer networks (*4 pages*) ..... 050801(R)  
Debashish Mukherji and Cameron F. Abrams

#### Biological physics

- Dynamical scaling exponents for polymer translocation through a nanopore (*4 pages*) ..... 050901(R)  
Kaifu Luo, Santtu T. T. Ollila, Ilkka Huopaniemi, Tapio Ala-Nissila, Pawel Pomorski, Mikko Karttunen,  
See-Chen Ying, and Aniket Bhattacharya
- Spatially correlated fluctuations and coherence dynamics in photosynthesis (*4 pages*) ..... 050902(R)  
Z. G. Yu, M. A. Berding, and Haobin Wang
- Oscillations and patterns in interacting populations of two species (*4 pages*) ..... 050903(R)  
Matti Peltomäki, Martin Rost, and Mikko Alava

### ARTICLES

#### Statistical physics

- Superstatistical distributions from a maximum entropy principle (*7 pages*) ..... 051101  
Erik Van der Straeten and Christian Beck
- Maximum distributions of bridges of noncolliding Brownian paths (*15 pages*) ..... 051102  
Naoki Kobayashi, Minami Izumi, and Makoto Katori
- Kinetics of self-induced aggregation of Brownian particles: Non-Markovian and non-Gaussian features  
(*7 pages*) ..... 051103  
Pulak Kumar Ghosh, Monoj Kumar Sen, and Bidhan Chandra Bag



Copyright 2008 by The American Physical Society

(Continued)



1539-3755(200811)78:5:1;1-H