

PHYSICAL REVIEW A

For editorial and subscription correspondence,
please see inside front cover
(ISSN: 1050-2947)

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

THIRD SERIES, VOLUME 73, NUMBER 4

CONTENTS

APRIL 2006

RAPID COMMUNICATIONS

Quantum information

- Simultaneous observation of correlations in position-momentum and polarization variables (*4 pages*) 040301(R)
M. P. Almeida, S. P. Walborn, and P. H. Souto Ribeiro
- Multipartite entanglement generation and fidelity decay in disordered qubit systems (*4 pages*) 040302(R)
Simone Montangero and Lorenza Viola
- Experimental reversion of the optimal quantum cloning and flipping processes (*4 pages*) 040303(R)
Fabio Sciarrino, Veronica Secondi, and Francesco De Martini
- Heisenberg-limited measurements with superconducting circuits (*4 pages*) 040304(R)
Alexandre Guillaume and Jonathan P. Dowling
- Direct measurement of finite-time disentanglement induced by a reservoir (*4 pages*) 040305(R)
M. França Santos, P. Milman, L. Davidovich, and N. Zagury

Atomic and molecular structure and dynamics

- Coulomb deexcitation of pionic hydrogen within the close-coupling method (*4 pages*) 040501(R)
V. N. Pomerantsev and V. P. Popov

Atomic and molecular collisions and interactions

- Autodissociation of doubly charged water molecules (*4 pages*) 040701(R)
S. W. J. Scully, J. A. Wyer, V. Senthil, M. B. Shah, and E. C. Montenegro
- Feshbach spectroscopy of a K-Rb atomic mixture (*4 pages*) 040702(R)
Francesca Ferlaine, Chiara D'Errico, Giacomo Roati, Matteo Zaccanti, Massimo Inguscio,
Giovanni Modugno, and Andrea Simoni

Photon, electron, atom, and molecule interactions with solids and surfaces

- Guiding of highly charged ions by highly ordered SiO₂ nanocapillaries (*4 pages*) 040901(R)
M. B. Sahana, P. Skog, Gy. Viktor, R. T. Rajendra Kumar, and R. Schuch

Clusters (including fullerenes)

- Kinetic energy of ions after Coulomb explosion of clusters induced by an intense laser pulse (*4 pages*) 041201(R)
Md. Ranaul Islam, Ulf Saalman, and Jan M. Rost



Copyright 2006 by The American Physical Society

(Continued)



1050-2947(200604)73:4;1-O

Atomic and molecular processes in external fields

Holding molecular dications together in strong laser fields (<i>4 pages</i>)	041401(R)
Chunlei Guo	
Evidence of two-center interference in high-order harmonic generation from CO ₂ (<i>4 pages</i>)	041402(R)
Anh-Thu Le, X.-M. Tong, and C. D. Lin	
One-photon-assisted formation of ultracold polar molecules (<i>4 pages</i>)	041403(R)
Elizabeth Juarros, Philippe Pellegrini, Kate Kirby, and Robin Côté	
Capture and ionization in laser-assisted proton–hydrogen collisions (<i>4 pages</i>)	041404(R)
Thomas Niederhausen and Uwe Thumm	
Controlling polar molecules in optical lattices (<i>4 pages</i>)	041405(R)
S. Kotochigova and E. Tiesinga	
Temporal separation of H ₂ double-ionization channels using intense ultrashort 10-fs laser pulses (<i>4 pages</i>)	041406(R)
S. Saugout and C. Cornaggia	
Electrodynamically trapped Yb ⁺ ions for quantum information processing (<i>4 pages</i>)	041407(R)
Chr. Balzer, A. Braun, T. Hannemann, Chr. Paape, M. Ettler, W. Neuhauser, and Chr. Wunderlich	

Matter waves

Understanding the superfluid phase diagram in trapped Fermi gases (<i>4 pages</i>)	041601(R)
Qijin Chen, C. A. Regal, M. Greiner, D. S. Jin, and K. Levin	
Resonant control of spin dynamics in ultracold quantum gases by microwave dressing (<i>4 pages</i>)	041602(R)
Fabrice Gerbier, Artur Widera, Simon Fölling, Olaf Mandel, and Immanuel Bloch	
Ground-state description of a single vortex in an atomic Fermi gas: From BCS to Bose–Einstein condensation (<i>4 pages</i>)	041603(R)
Chih-Chun Chien, Yan He, Qijin Chen, and K. Levin	
Low-lying twisting and acoustic modes of a rotating Bose-Einstein condensate (<i>4 pages</i>)	041604(R)
F. Chevy	
Bragg spectroscopy of vortex lattices in Bose-Einstein condensates (<i>4 pages</i>)	041605(R)
S. R. Muniz, D. S. Naik, and C. Raman	
Large magnetic storage ring for Bose-Einstein condensates (<i>4 pages</i>)	041606(R)
A. S. Arnold, C. S. Garvie, and E. Riis	
Two-color spectroscopy of fermions in mean-field BCS-BEC crossover theory (<i>4 pages</i>)	041607(R)
Marijan Koštrun and Robin Côté	
Energy absorption of a Bose gas in a periodically modulated optical lattice (<i>4 pages</i>)	041608(R)
A. Iucci, M. A. Cazalilla, A. F. Ho, and T. Giamarchi	
Cold-atom optical lattices as quantum analog simulators for aperiodic one-dimensional localization without disorder (<i>4 pages</i>)	041609(R)
V. W. Scarola and S. Das Sarma	

Quantum optics, physics of lasers, nonlinear optics

Quantum-state engineering with continuous-variable postselection (<i>4 pages</i>)	041801(R)
Andrew M. Lance, Hyunseok Jeong, Nicolai B. Grosse, Thomas Symul, Timothy C. Ralph, and Ping Koy Lam	
Observation of multiple thresholds in the many-atom cavity QED microlaser (<i>4 pages</i>)	041802(R)
C. Fang-Yen, C. C. Yu, S. Ha, W. Choi, K. An, R. R. Dasari, and M. S. Feld	
Dispersive properties and large Kerr nonlinearities using dipole-induced transparency in a single-sided cavity (<i>4 pages</i>)	041803(R)
Edo Waks and Jelena Vuckovic	

ARTICLES

Fundamental concepts

Relativistic corrections in a three-boson system of equal masses (<i>8 pages</i>)	042101
Ph. Droz-Vincent	
Sign and other aspects of semiclassical Casimir energies (<i>16 pages</i>)	042102
Martin Schaden	
Tunable Casimir forces by means of the external magnetic field (<i>5 pages</i>)	042103
Jing Wang, Xiangdong Zhang, Shou-Yong Pei, and Da-He Liu	
Perturbative approach to the adiabatic approximation (<i>6 pages</i>)	042104
R. MacKenzie, E. Marcotte, and H. Paquette	
Tomographic reconstruction of quantum states in N spatial dimensions (<i>8 pages</i>)	042105
Anders S. Mouritzen and Klaus Mølmer	
Time-extended measurement of the position of a particle (<i>13 pages</i>)	042106
Francesc S. Roig	
Barrier paradox in the Klein zone (<i>7 pages</i>)	042107
Stefano De Leo and Pietro P. Rotelli	
Switching via quantum activation: A parametrically modulated oscillator (<i>14 pages</i>)	042108
M. Marthaler and M. I. Dykman	
Bell inequalities stronger than the Clauser-Horne-Shimony-Holt inequality for three-level isotropic states (<i>9 pages</i>)	042109
Tsuyoshi Ito, Hiroshi Imai, and David Avis	
Entanglement and dephasing of quantum dissipative systems (<i>7 pages</i>)	042110
T. Stauber and F. Guinea	
Degree of entanglement as a physically ill-posed problem: The case of entanglement with vacuum (<i>7 pages</i>)	042111
Marcin Pawłowski and Marek Czachor	
Tensor polarizability and dispersive quantum measurement of multilevel atoms (<i>14 pages</i>)	042112
J. M. Geremia, John K. Stockton, and Hideo Mabuchi	
Zeno and anti-Zeno effect for a two-level system in a squeezed bath (<i>8 pages</i>)	042113
D. F. Mundarain and J. Stephany	

Quantum information

Unambiguous discrimination among quantum operations (<i>5 pages</i>)	042301
Guoming Wang and Mingsheng Ying	
Quantum walk on the line: Entanglement and nonlocal initial conditions (<i>9 pages</i>)	042302
G. Abal, R. Siri, A. Romanelli, and R. Donangelo	
Long-distance quantum communication with neutral atoms (<i>14 pages</i>)	042303
Mohsen Razavi and Jeffrey H. Shapiro	
Practical purification scheme for decohered coherent-state superpositions via partial homodyne detection (<i>7 pages</i>)	042304
Shigenari Suzuki, Masahiro Takeoka, Masahide Sasaki, Ulrik L. Andersen, and Fumihiko Kannari	
Quantum direct communication with authentication (<i>5 pages</i>)	042305
Hwayean Lee, Jongin Lim, and HyungJin Yang	
Quantum communication, reference frames, and gauge theory (<i>9 pages</i>)	042306
S. J. van Enk	
Information-disturbance tradeoff in quantum measurements (<i>4 pages</i>)	042307
Lorenzo Maccone	
Bell-type inequalities embedded in the subgraph of graph states (<i>4 pages</i>)	042308
Li-Yi Hsu	
Generalized teleportation protocol (<i>4 pages</i>)	042309
Goren Gordon and Gustavo Rigolin	
Entanglement evaluation of non-Gaussian states generated by photon subtraction from squeezed states (<i>12 pages</i>)	042310
Akira Kitagawa, Masahiro Takeoka, Masahide Sasaki, and Anthony Chefles	
Deterministic and unambiguous dense coding (<i>12 pages</i>)	042311
Shengjun Wu, Scott M. Cohen, Yuqing Sun, and Robert B. Griffiths	
Correspondence between quantum and classical information: Generalized quantum measurements (<i>16 pages</i>)	042312
Boris A. Grishanin and Victor N. Zadkov	
Universal quantum computation with the $\nu=5/2$ fractional quantum Hall state (<i>16 pages</i>)	042313
Sergey Bravyi	
Infinitesimal local operations and differential conditions for entanglement monotones (<i>11 pages</i>)	042314
Ognyan Oreshkov and Todd A. Brun	
Continuous-variable quantum-information distributor: Reversible telecloning (<i>5 pages</i>)	042315
Jing Zhang, Changde Xie, and Kunchi Peng	
Hashing protocol for distilling multipartite Calderbank-Shor-Steane states (<i>13 pages</i>)	042316
Erik Hostens, Jeroen Dehaene, and Bart De Moor	
Information-disturbance theorem for mutually unbiased observables (<i>4 pages</i>)	042317
Takayuki Miyadera and Hideki Imai	
Finite-dimensional states and entanglement generation for a nonlinear coupler (<i>8 pages</i>)	042318
A. Kowalewska-Kudłaszyk and W. Leoński	

Entanglement transfer from entangled two-mode fields to a pair of separable and mixed qubits (9 pages)	042319
Jian Zou, Jun Gang Li, Bin Shao, Jian Li, and Qian ShuLi	
Single-site entanglement of fermions at a quantum phase transition (4 pages)	042320
Daniel Larsson and Henrik Johannesson	
Arbitrary state controlled-unitary gate by adiabatic passage (6 pages)	042321
X. Lacour, N. Sangouard, S. Guérin, and H. R. Jauslin	
Atomic and molecular structure and dynamics	
Interferometric measurements of dynamic polarizabilities for metal atoms using electrically exploding wires in vacuum (8 pages)	042501
G. S. Sarkisov, I. L. Beigman, V. P. Shevelko, and K. W. Struve	
Dissipative Stern-Gerlach recombination experiment (7 pages)	042502
Thiago R. de Oliveira and A. O. Caldeira	
<i>Ab initio</i> calculations of external-field shifts of the 661-nm quadrupolar clock transition in neutral Ag atoms (7 pages)	042503
Suat Topcu, Jamil Nasser, Latévi Max Lawson Daku, and Stephan Fritzsche	
4 <i>f</i> -3 <i>d</i> emission spectra of the rare earths: An interpretation of the lines observed on both sides of the resonances (13 pages)	042504
C. Bonnelle and P. Motais	
Numerical solver of the time-dependent Schrödinger equation with Coulomb singularities (10 pages)	042505
Ariel Gordon, Christian Jirauschek, and Franz X. Kärtner	
Atomic and molecular collisions and interactions	
Multiple photoionization and fragmentation of C ₆₀ in the 18–280-eV range (8 pages)	042701
P. N. Juranić, D. Lukić, K. Barger, and R. Wehlitz	
Low-energy elastic and inelastic scattering of electrons from SO ₂ using the <i>R</i> -matrix method (12 pages)	042702
Monika Gupta and K. L. Baluja	
Generalized oscillator strengths for the valence-shell excitations of argon (9 pages)	042703
Lin-Fan Zhu, Hua-Dong Cheng, Zhen-Sheng Yuan, Xiao-Jing Liu, Jian-Min Sun, and Ke-Zun Xu	
Photoabsorption and photoionization dynamics study of silicon tetrafluoride in the framework of time-dependent density-functional theory (14 pages)	042704
D. Toffoli, M. Stener, and P. Decleva	
Two-channel <i>R</i> -matrix analysis of magnetic-field-induced Feshbach resonances (10 pages)	042705
Nicolai Nygaard, Barry I. Schneider, and Paul S. Julienne	
Dissociative recombination of Ar ₂ ⁺ (12 pages)	042706
J. Royal and A. E. Orel	
Factorization in breakup and recombination processes for atoms with a large scattering length (6 pages)	042707
Eric Braaten and Dongqing Zhang	
Hyper-Rayleigh light-scattering spectra determined by <i>ab initio</i> collisional hyperpolarizabilities of He-Ne atomic pairs (14 pages)	042708
W. Głaz, T. Bancewicz, J.-L. Godet, G. Maroulis, and A. Haskopoulos	

Observation of perturbed $3snp$ double photoexcited Ryberg series of beryllium atoms (6 pages)	042709
Fumiko Yoshida, Leo Matsuoka, Hiroyuki Osaki, Satoshi Kikkawa, Yu Fukushima, Tetsuo Nagata, Yoshiro Azuma, Satoshi Obara, and Shuichi Hasegawa	
Low-energy electron-impact single ionization of helium (7 pages)	042710
J. Colgan, M. S. Pindzola, G. Childers, and M. A. Khakoo	
Fano interference and cross-section fluctuations in molecular photodissociation (5 pages)	042711
Y. Alhassid, Yan V. Fyodorov, T. Gorin, W. Ihra, and B. Mehlig	
Ion-neutral chemical reactions between ultracold localized ions and neutral molecules with single-particle resolution (9 pages)	042712
B. Roth, P. Blythe, H. Wenz, H. Daerr, and S. Schiller	
Collisional depolarization of Zeeman coherences in the $^{133}\text{Cs } 6p^2P_{3/2}$ level: Double-resonance two-photon polarization spectroscopy (6 pages)	042713
S. B. Bayram, S. Kin, M. J. Welsh, and J. D. Hinkle	
($e, 2e$) study on distorted-wave and relativistic effects in the inner-shell ionization processes of xenon $4d_{5/2}$ and $4d_{3/2}$ (4 pages)	042714
X. G. Ren, C. G. Ning, J. K. Deng, G. L. Su, S. F. Zhang, and Y. R. Huang	
Production and transport of long-lifetime excited states in preequilibrium ion-solid collisions (13 pages)	042715
Emily Lamour, Benoît Gervais, Jean Pierre Rozet, and Dominique Vernhet	
Attosecond xuv pulses for complete mapping of the time-dependent wave packets of D_2^+ (4 pages)	042716
X. M. Tong and C. D. Lin	
Photon, electron, atom, and molecule interactions with solids and surfaces	
Angular effects in the energy loss of slow protons and helium ions transmitted through thin Al and Au films (6 pages)	042901
C. D. Archubi, J. C. Eckardt, G. H. Lantschner, and N. R. Arista	
Charge-state dependence of energy loss of MeV dimers in GaAs(100) (6 pages)	042902
B. Sundaravel, Christopher David, A. K. Balamurugan, S. Rajagopalan, A. K. Tyagi, B. K. Panigrahi, K. G. M. Nair, and B. Viswanathan	
Ionization of Rydberg atoms colliding with a metal surface (11 pages)	042903
J. Sjakste, A. G. Borisov, and J. P. Gauyacq	
Atomic and molecular processes in external fields	
Ultrafast ionization study of N_2 in intense linearly and circularly polarized laser fields (9 pages)	043401
J. McKenna, M. Suresh, B. Srigengan, I. D. Williams, W. A. Bryan, E. M. L. English, S. L. Stebbings, W. R. Newell, I. C. E. Turcu, J. M. Smith, E. J. Divall, C. J. Hooker, A. J. Langley, and J. L. Collier	
Electron acceleration from rest in vacuum by an axicon Gaussian laser beam (6 pages)	043402
Yousef I. Salamin	
Classical trajectories of molecules exposed to few-optical-cycle light pulses (9 pages)	043403
S. Stagira, G. Sansone, C. Vozzi, and M. Nisoli	
Behavior of H_2^+ and H_2 in strong laser fields simulated by fermion molecular dynamics (11 pages)	043404
K. J. LaGattuta	
Radiative cascade of highly excited hydrogen atoms in strong magnetic fields (10 pages)	043405
Türker Topçu and Francis Robicheaux	

Analysis of a single-atom dipole trap (<i>7 pages</i>)	043406
Markus Weber, Jürgen Volz, Karen Saucke, Christian Kurtsiefer, and Harald Weinfurter	
Mapping of the optical frequency comb to the atom-velocity comb (<i>10 pages</i>)	043407
T. Ban, D. Aumiler, H. Skenderović, and G. Pichler	
Electromagnetic transitions between states satisfying free-boundary conditions (<i>10 pages</i>)	043408
L. A. A. Nikolopoulos	
Short-pulse photoassociation in rubidium below the D_1 line (<i>14 pages</i>)	043409
Christiane P. Koch, Ronnie Kosloff, and Françoise Masnou-Seeuws	
Optimized production of large Bose-Einstein condensates (<i>14 pages</i>)	043410
D. Comparat, A. Fioretti, G. Stern, E. Dimova, B. Laburthe Tolra, and P. Pillet	
High-order harmonic generation in alkanes (<i>9 pages</i>)	043411
C. Altucci, R. Velotta, E. Heesel, E. Springate, J. P. Marangos, C. Vozzi, E. Benedetti, F. Calegari, G. Sansone, S. Stagira, M. Nisoli, and V. Tosa	
Two-electron ionization and stabilization beyond the dipole approximation (<i>15 pages</i>)	043412
Andreas Staudt and Christoph H. Keitel	
Photodetachment of H^- in a static electric field near an elastic wall (<i>7 pages</i>)	043413
Guangcan Yang, Yizhuang Zheng, and Xianxing Chi	
Laser-assisted charge transfer in $He^{2+}+H$ collisions (<i>9 pages</i>)	043414
Fatima Anis, V. Roudnev, R. Cabrera-Trujillo, and B. D. Esry	
Preparation of nondegenerate coherent superpositions in a three-state ladder system assisted by Stark shifts (<i>10 pages</i>)	043415
N. Sangouard, L. P. Yatsenko, B. W. Shore, and T. Halfmann	
Dynamic Stark effect and forbidden-transition spectral line shapes (<i>13 pages</i>)	043416
J. E. Stalnaker, D. Budker, S. J. Freedman, J. S. Guzman, S. M. Rochester, and V. V. Yashchuk	
Light-induced potentials ignite dissociation of N_2^{2+} (<i>4 pages</i>)	043417
Ryan N. Coffee, Li Fang, and George N. Gibson	

Matter waves

Shock waves in a one-dimensional Bose gas: From a Bose-Einstein condensate to a Tonks gas (<i>10 pages</i>) . . .	043601
Bogdan Damski	
Cavity QED detection of interfering matter waves (<i>4 pages</i>)	043602
T. Bourdel, T. Donner, S. Ritter, A. Öttl, M. Köhl, and T. Esslinger	
Nambu-Goldstone mode in a rotating dilute Bose-Einstein condensate (<i>8 pages</i>)	043603
Masahito Ueda and Tatsuya Nakajima	
Transition temperature of a weakly interacting Bose gas (<i>6 pages</i>)	043604
Yee-Mou Kao and T. F. Jiang	
Many-body effects on adiabatic passage through Feshbach resonances (<i>9 pages</i>)	043605
I. Tikhonenkov, E. Pazy, Y. B. Band, M. Fleischhauer, and A. Vardi	
Quantum phases of a Feshbach-resonant atomic Bose gas in one dimension (<i>6 pages</i>)	043606
Yu-Wen Lee and Yu-Li Lee	

Slave-particle approach to the finite-temperature properties of ultracold Bose gases in optical lattices (12 pages)	043607
Xiancong Lu, Jinbin Li, and Yue Yu	
Interaction-induced localization of an impurity in a trapped Bose-Einstein condensate (6 pages)	043608
Ryan M. Kalas and D. Blume	
Coupled-cluster theory for systems of bosons in external traps (13 pages)	043609
Lorenz S. Cederbaum, Ofir E. Alon, and Alexej I. Streltsov	
Thomas-Fermi ground state of dipolar fermions in a circular storage ring (8 pages)	043610
O. Dutta, M. Jääskeläinen, and P. Meystre	
Photoassociation and optical Feshbach resonances in an atomic Bose-Einstein condensate: Treatment of correlation effects (17 pages)	043611
Pascal Naidon and Françoise Masnou-Seeuws	
Subsonic critical velocity of a Bose-Einstein condensate at finite temperature (4 pages)	043612
Patrick Navez and Robert Graham	
Single-atom mirror for one-dimensional atomic lattice gases (20 pages)	043613
A. Micheli and P. Zoller	
Entropy and correlation functions of a driven quantum spin chain (15 pages)	043614
R. W. Cherng and L. S. Levitov	
Vortex stability in nearly-two-dimensional Bose-Einstein condensates with attraction (10 pages)	043615
Dumitru Mihalache, Dumitru Mazilu, Boris A. Malomed, and Falk Lederer	
Stability of trapped fermionic gases with attractive interactions (4 pages)	043616
Benjamin M. Fregoso and Gordon Baym	
Quantum turbulence and correlations in Bose-Einstein condensate collisions (18 pages)	043617
A. A. Norrie, R. J. Ballagh, and C. W. Gardiner	
Three-body recombination of ultracold Bose gases using the truncated Wigner method (8 pages)	043618
A. A. Norrie, R. J. Ballagh, C. W. Gardiner, and A. S. Bradley	
Mixing-demixing in a trapped degenerate fermion-fermion mixture (6 pages)	043619
Sadhan K. Adhikari	
Quantum optics, physics of lasers, nonlinear optics	
Radiation properties of cavity Čerenkov radiation (6 pages)	043801
Ju Gao and Fang Shen	
Pulse normalization in slow-light media (9 pages)	043802
Bruno Macke and Bernard Ségard	
Bilinear and quadratic Hamiltonians in two-mode cavity quantum electrodynamics (5 pages)	043803
F. O. Prado, N. G. de Almeida, M. H. Y. Moussa, and C. J. Villas-Bôas	
Analogy between optically driven injection-locked laser diodes and driven damped linear oscillators (9 pages)	043804
Atsushi Murakami and K. Alan Shore	
Correlated photons and collective excitations of a cyclic atomic ensemble (10 pages)	043805
Yong Li, Li Zheng, Yu-xi Liu, and C. P. Sun	

CONTENTS - Continued

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 73, NUMBER 4

APRIL 2006

Hong-Ou-Mandel interferometer with cavities: Theory (10 pages)	043806
C. Olindo, M. A. Sagiolo, C. H. Monken, S. Pádua, and A. Delgado	
Multimode theory of measurement-induced non-Gaussian operation on wideband squeezed light: Analytical formula (18 pages)	043807
Masahide Sasaki and Shigenari Suzuki	
Magnetically induced suppression and enhancement of optical excitation of ruby at anticrossing points (8 pages)	043808
Roman Kolesov	
Ultralow light in inhomogeneously broadened media (4 pages)	043809
G. S. Agarwal and T. N. Dey	
Electromagnetically induced transparency and dark fluorescence in a cascade three-level diatomic lithium system (9 pages)	043810
Jianbing Qi and A. Marjatta Lyyra	
Numerical investigation of photon creation in a three-dimensional resonantly vibrating cavity: Transverse electric modes (13 pages)	043811
Marcus Ruser	
Modeling spatial effects in multi-longitudinal-mode semiconductor lasers (6 pages)	043812
C. Serrat and C. Masoller	
Entangled-state cycles from conditional quantum evolution (11 pages)	043813
Mile Gu, A. S. Parkins, and H. J. Carmichael	
Two-color photon polarization entanglement using a single nonlinear crystal (5 pages)	043814
Ryan S. Bennink	

BRIEF REPORTS

Quantum information

Groverian measure of entanglement for mixed states (4 pages)	044301
Daniel Shapira, Yishai Shimon, and Ofer Biham	
Connecting the generalized robustness and the geometric measure of entanglement (4 pages)	044302
Daniel Cavalcanti	
Impossibility of exact flipping of three arbitrary quantum states via incomparability (4 pages)	044303
Indrani Chattopadhyay and Debasis Sarkar	
Nonequivalence of two flavors of oblivious transfer at the quantum level (4 pages)	044304
Guang Ping He and Z. D. Wang	
Eavesdropping without quantum memory (4 pages)	044305
H. Bechmann-Pasquinucci	

Atomic and molecular structure and dynamics

Single-particle kinetic energy in density-functional theory: Harmonic confinement in two and three dimensions (3 pages)	044501
N. H. March	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 73, NUMBER 4

APRIL 2006

Addendum to “Time-dependent variational principle with constraints for parametrized wave functions” (4 pages)	044502
Katsuhisa Ohta	

Atomic and molecular collisions and interactions

Friedel theorem for two-dimensional relativistic spin- $\frac{1}{2}$ systems (4 pages)	044701
De-Hone Lin	

Quantum optics, physics of lasers, nonlinear optics

Gaussian cloning of coherent states with known phases (3 pages)	045801
Moorad Alexanian	

COMMENTS

Comment on “Strong-field ionization of laser-irradiated light homonuclear diatomic molecules: A generalized strong-field approximation–linear combination of atomic orbitals model” (4 pages)	047401
Thomas Kim Kjeldsen and Lars Bojer Madsen	
Reply to “Comment on ‘Strong-field ionization of laser-irradiated light homonuclear diatomic molecules: A generalized strong-field approximation–linear combination of atomic orbitals model’ ” (5 pages)	047402
Vladimir I. Usachenko	
Comment on “Casimir force acting on magnetodielectric bodies embedded in media” (2 pages)	047801
L. P. Pitaevskii	
Reply to “Comment on ‘Casimir force acting on magnetodielectric bodies embedded in media’ ” (1 page)	047802
Christian Raabe and Dirk-Gunnar Welsch	

ERRATA

Erratum: Improving the security of multiparty quantum secret sharing against Trojan horse attack [Phys. Rev. A 72 , 044302 (2005)] (1 page)	049901(E)
Fu-Guo Deng, Xi-Han Li, Hong-Yu Zhou, and Zhan-jun Zhang	
Erratum: Hyperfine structure of metastable states in $^3\text{He}^+\bar{p}$ atom [Phys. Rev. A 73 , 022509 (2006)] (1 page)	049902(E)
Vladimir I. Korobov	
Erratum: Structure and stability of Mott-insulator shells of bosons trapped in an optical lattice [Phys. Rev. A 71 , 063601 (2005)] (1 page)	049903(E)
B. DeMarco, C. Lannert, S. Vishveshwara, and T.-C. Wei	
Erratum: Connection between entanglement and the speed of quantum evolution [Phys. Rev. A 72 , 032337 (2005)] (1 page)	049904(E)
J. Batle, M. Casas, A. Plastino, and A. R. Plastino	
Erratum: Exploring the optimal sensitivity of sum-variance nonseparability criteria for spin-1/2 systems [Phys. Rev. A 70 , 062320 (2004)] (1 page)	049905(E)
Irfan Ali Khan and John C. Howell	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 73, NUMBER 4

APRIL 2006

Editorial Note: Wave representation of geometrical laser beam trajectories in a hemiconfocal cavity [Phys. Rev. A 69 , 053807 (2004)] (<i>1 page</i>)	049906(E)
Y. F. Chen, C. H. Jiang, Y. P. Lan, and K. F. Huang	