

The Table of Contents is a total listing of Parts A and B.
Part A consists of pages 020301(R)–022708, and Part B pages 023401–029901(E).

PART A

RAPID COMMUNICATIONS

Quantum information

Experimental demonstration of one-sided device-independent self-testing of any pure two-qubit entangled state (6 pages) 020301(R)
Zhihao Bian, A. S. Majumdar, C. Jebarathinam, Kunkun Wang, Lei Xiao, Xiang Zhan, Yongsheng Zhang, and Peng Xue

Berry phase estimation in gate-based adiabatic quantum simulation (5 pages) 020302(R)
Bruno Murta, G. Catarina, and J. Fernández-Rossier

Entanglement negativity as a universal non-Markovianity witness (5 pages) 020303(R)
Jan Kołodziej, Swapna Rana, and Alexander Streltsov

Atomic and molecular processes in external fields, including interactions with strong fields and short pulses

Ionization-free resonantly enhanced low-order harmonic generation in a dense gas mixture by a mid-IR laser field (4 pages) 021401(R)
E. A. Migal, S. Yu. Stremoukhov, and F. V. Potemkin

Longitudinal photon-momentum transfer in strong-field double ionization of argon atoms (6 pages) 021402(R)
Fenghao Sun, Xiang Chen, Wenbin Zhang, Junjie Qiang, Hui Li, Peifen Lu, Xiaochun Gong, Qinying Ji, Kang Lin, Hanxiao Li, Jihong Tong, Fei Chen, Camilo Ruiz, Jian Wu, and Feng He

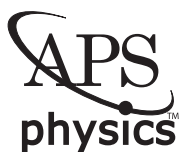
Observation of persistent orientation of chiral molecules by a laser field with twisted polarization (7 pages) 021403(R)
Ilya Tutunnikov, Johannes Floß, Erez Gershnel, Paul Brumer, Ilya Sh. Averbukh, Alexander A. Milner, and Valery Milner

Giant polarization drag in a gas of molecular super-rotors (4 pages) 021404(R)
Uri Steinitz and Ilya Sh. Averbukh

ARTICLES

Fundamental concepts

Emerging unitary evolutions in dissipatively coupled systems (9 pages) 022101
C. Arenz and A. Metelmann



Copyright 2020 by American Physical Society



2469-9926(202002)101:2:A;1-8

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 101, NUMBER 2

FEBRUARY 2020

Estimation independence as an axiom for quantum uncertainty (<i>10 pages</i>)	022102
Agung Budiyo	
Quantum traversal time across a potential well (<i>13 pages</i>)	022103
Dean Alvin L. Pablico and Eric A. Galapon	
Derivation of quantum theory with superselection rules (<i>27 pages</i>)	022104
Kenji Nakahira	
Quantization of the damped harmonic oscillator based on a modified Bateman Lagrangian (<i>7 pages</i>)	022105
Shinichi Deguchi and Yuki Fujiwara	
Breaking rotational symmetry in a trapped-ion quantum tunneling rotor (<i>7 pages</i>)	022106
Ryutaro Ohira, Takashi Mukaiyama, and Kenji Toyoda	
Feedback ansatz for adaptive-feedback quantum metrology training with machine learning (<i>7 pages</i>)	022107
Yi Peng and Heng Fan	
Analytical double-unitary-transformation approach for strongly and periodically driven three-level systems (<i>12 pages</i>)	022108
Yingying Han, Xiao-Qing Luo, Tie-Fu Li, and Wenxian Zhang	
Complexity of the steady state of weakly symmetric open quantum lattices (<i>10 pages</i>)	022109
Davide Nigro	
Quantifying phonon-induced non-Markovianity in color centers in diamond (<i>10 pages</i>)	022110
Ariel Norambuena, Jerónimo R. Maze, Peter Rabl, and Raúl Coto	
Semilocalization transition driven by a single asymmetrical tunneling (<i>12 pages</i>)	022111
P. Wang, K. L. Zhang, and Z. Song	
Pearson correlation coefficient as a measure for certifying and quantifying high-dimensional entanglement (<i>18 pages</i>)	022112
C. Jebarathinam, Dipankar Home, and Urbasi Sinha	
Duality in quantum work (<i>6 pages</i>)	022113
Bao-Ming Xu, Zhan Chun Tu, and Jian Zou	
Geometric phase corrected by initial system-environment correlations (<i>13 pages</i>)	022114
Sharoon Austin, Sheraz Zahid, and Adam Zaman Chaudhry	
Non-Markovian effect on quantum optical metrology under a dissipative environment (<i>7 pages</i>)	022115
Kai Bai, Hong-Gang Luo, Wenxian Zhang, and Meng Xiao	
Experimental investigation of linear-entropy-based uncertainty relations in all-optical systems (<i>7 pages</i>)	022116
Zhi-Yong Ding, Huan Yang, Hao Yuan, Dong Wang, Jie Yang, and Liu Ye	
Nonlocality claims are inconsistent with Hilbert-space quantum mechanics (<i>12 pages</i>)	022117
Robert B. Griffiths	
Quantum information	
Passive continuous-variable quantum secret sharing using a thermal source (<i>10 pages</i>)	022301
Xiaodong Wu, Yijun Wang, and Duan Huang	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 101, NUMBER 2

FEBRUARY 2020

Joint Schmidt-type decomposition for two bipartite pure quantum states (7 pages)	022302
Christopher Eltschka and Jens Siewert	
Generalized-mean Cramér-Rao bounds for multiparameter quantum metrology (9 pages)	022303
Xiao-Ming Lu, Zhihao Ma, and Chengjie Zhang	
Scalable quantum computing with qudits on a graph (7 pages)	022304
E. O. Kiktenko, A. S. Nikolaeva, Peng Xu, G. V. Shlyapnikov, and A. K. Fedorov	
Digital-analog quantum computation (12 pages)	022305
Adrian Parra-Rodriguez, Pavel Lougovski, Lucas Lamata, Enrique Solano, and Mikel Sanz	
Locally distinguishing unextendible product bases by using entanglement efficiently (8 pages)	022306
Zhi-Chao Zhang, Xia Wu, and Xiangdong Zhang	
User-specified random sampling of quantum channels and its applications (17 pages)	022307
Jun Yan Sim, Jun Suzuki, Berthold-Georg Englert, and Hui Khoo Ng	
Single-step implementation of high-fidelity n -bit Toffoli gates (15 pages)	022308
S. E. Rasmussen, K. Groenland, R. Gerritsma, K. Schoutens, and N. T. Zinner	
Flexible quantum tokens in spacetime (7 pages)	022309
Adrian Kent and Damián Pitalúa-García	
Continuous-time quantum-walk spatial search on the Bollobás scale-free network (9 pages)	022310
Tomo Osada, Bruno Coutinho, Yasser Omar, Kaoru Sanaka, William J. Munro, and Kae Nemoto	
Entanglement of two nitrogen-vacancy ensembles via a nanotube (9 pages)	022311
Yong-Hong Ma, Quan-Zhen Ding, and E Wu	
Scaling hypothesis of a spatial search on fractal lattices using a quantum walk (8 pages)	022312
Rei Sato, Tetsuro Nikuni, and Shohei Watabe	
Detecting non-Abelian statistics of topological states on a chain of superconducting circuits (6 pages)	022313
Jun-Yi Cao, Jia Liu, L. B. Shao, and Zheng-Yuan Xue	
Quantum entanglement in one-dimensional anyons (11 pages)	022314
H. S. Mani, Ramadas N, and V. V. Sreedhar	
Universal limitations on implementing resourceful unitary evolutions (10 pages)	022315
Ryuji Takagi and Hiroyasu Tajima	
Quantum gradient descent for linear systems and least squares (18 pages)	022316
Iordanis Kerenidis and Anupam Prakash	
Experimental realization of self-guided quantum process tomography (6 pages)	022317
Zhibo Hou, Jun-Feng Tang, Christopher Ferrie, Guo-Yong Xiang, Chuan-Feng Li, and Guang-Can Guo	
Continuous phase-space representations for finite-dimensional quantum states and their tomography (13 pages)	022318
Bálint Koczor, Robert Zeier, and Steffen J. Glaser	
Monitoring scheme against local oscillator attacks for practical continuous-variable quantum-key-distribution systems in complex communication environments (10 pages)	022319
Yi Zheng, Weiqi Liu, Zhengwen Cao, and Jinye Peng	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 101, NUMBER 2

FEBRUARY 2020

Time-optimal control of a dissipative qubit (<i>12 pages</i>)	022320
Chungwei Lin, Dries Sels, and Yebin Wang	
Universal gates for protected superconducting qubits using optimal control (<i>13 pages</i>)	022321
Mohamed Abdelhafez, Brian Baker, András Gyenis, Pranav Mundada, Andrew A. Houck, David Schuster, and Jens Koch	
Row and column iteration methods to solve linear systems on a quantum computer (<i>8 pages</i>)	022322
Changpeng Shao and Hua Xiang	
Subwavelength quantum imaging with noisy detectors (<i>6 pages</i>)	022323
Cosmo Lupo	
Experimental certification of the steering criterion based on a general entropic uncertainty relation (<i>6 pages</i>)	022324
Huan Yang, Zhi-Yong Ding, Dong Wang, Hao Yuan, Xue-Ke Song, Jie Yang, Chang-Jin Zhang, and Liu Ye	
Characterization of exact one-query quantum algorithms (<i>5 pages</i>)	022325
Weijiang Chen, Zekun Ye, and Lvzhou Li	
Necessary conditions for steerability of two qubits from consideration of local operations (<i>7 pages</i>)	022326
Travis J. Baker and Howard M. Wiseman	
Persistent spin squeezing of a dissipative one-axis twisting model embedded in a general thermal environment (<i>9 pages</i>)	022327
Yong-Hong Ma, Quan-Zhen Ding, and Ting Yu	
Short-depth circuits for efficient expectation-value estimation (<i>19 pages</i>)	022328
A. Roggero and A. Baroni	
Entanglement generation via power-of-SWAP operations between dynamic electron-spin qubits (<i>11 pages</i>)	022329
Hugo V. Lepage, Aleksander A. Lasek, David R. M. Arvidsson-Shukur, and Crispin H. W. Barnes	
Noncyclic geometric quantum computation with shortcut to adiabaticity (<i>7 pages</i>)	022330
Qing-Xian Lv, Zhen-Tao Liang, Hong-Zhi Liu, Jia-Hao Liang, Kai-Yu Liao, and Yan-Xiong Du	
Reverse quantum annealing of the p -spin model with relaxation (<i>10 pages</i>)	022331
Gianluca Passarelli, Ka-Wa Yip, Daniel A. Lidar, Hidetoshi Nishimori, and Procolo Lucignano	
Majorana representation for mixed states (<i>16 pages</i>)	022332
E. Serrano-Ensástiga and D. Braun	
Improved Lieb-Robinson bound for many-body Hamiltonians with power-law interactions (<i>13 pages</i>)	022333
Dominic V. Else, Francisco Machado, Chetan Nayak, and Norman Y. Yao	
Objective compressive quantum process tomography (<i>8 pages</i>)	022334
Y. S. Teo, G. I. Struchalin, E. V. Kovlakov, D. Ahn, H. Jeong, S. S. Straupe, S. P. Kulik, G. Leuchs, and L. L. Sánchez-Soto	
Quantifying the resource content of quantum channels: An operational approach (<i>8 pages</i>)	022335
Lu Li, Kaifeng Bu, and Zi-Wen Liu	
Counterfactual Trojan horse attack (<i>11 pages</i>)	022336
Zheng-Hong Li, LuoJia Wang, Jingping Xu, Yaping Yang, M. Al-Amri, and M. Suhail Zubairy	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 101, NUMBER 2

FEBRUARY 2020

Efficient linear optical generation of a multipartite W state via a quantum eraser (5 pages)	022337
Yong-Su Kim, Young-Wook Cho, Hyang-Tag Lim, and Sang-Wook Han	

Atomic and molecular structure and dynamics; high-precision measurements

Nonrelativistic QED approach to the fine- and hyperfine-structure corrections of order $m\alpha^6$ and $m\alpha^6(m/M)$: Application to the hydrogen atom (10 pages)	022501
M. Haidar, Z.-X. Zhong, V. I. Korobov, and J.-Ph. Karr	

Electron affinity measurements of lanthanide atoms: Pr, Nd, and Tb (10 pages)	022502
Xiaoxi Fu, Yuzhu Lu, Rulin Tang, and Chuangang Ning	

Space-time-resolved Breit-Wheeler process for a model system (20 pages)	022503
Y. Lu, N. Christensen, Q. Su, and R. Grobe	

Hyperfine transitions in the first overtone mode of hydrogen deuteride (11 pages)	022504
Patrick Dupré	

QED calculation of the dipole polarizability of helium atom (13 pages)	022505
Mariusz Puchalski, Krzysztof Szalewicz, Michał Lesiuk, and Bogumił Jeziorski	

Quantum threshold reflection of He-atom beams from rough surfaces (6 pages)	022506
G. Rojas-Lorenzo, J. Rubayo-Soneira, S. Miret-Artés, and E. Pollak	

Quasibound states of an antiproton and a hydrogen atom (9 pages)	022507
Daniel Baye and Jérémy Dohet-Eraly	

Atomic and molecular collisions and interactions

Effect of the Breit interaction on inner-shell electron-impact excitation and subsequent radiative decay of highly charged berylliumlike ions (8 pages)	022701
Z. W. Wu, M. M. Zhao, C. Ren, C. Z. Dong, and J. Jiang	

Model-potential calculations of positron binding, scattering, and annihilation for atoms and small molecules using a Gaussian basis (22 pages)	022702
A. R. Swann and G. F. Gribakin	

Calculations of electron scattering on H-like ions (6 pages)	022703
I. Bray, H. Hayat, D. V. Fursa, A. S. Kadyrov, A. W. Bray, and M. Cytowski	

Violation of centrosymmetry in time-resolved ultrafast-electron diffraction from vibrating oriented diatomic molecules (15 pages)	022704
Hua-Chieh Shao and Anthony F. Starace	

YbH^+ formation in an ytterbium ion trap (7 pages)	022705
Thai M. Hoang, Yuan-Yu Jau, Richard Overstreet, and Peter D. D. Schwindt	

Quasibound states of tetrahedral quantum structures (11 pages)	022706
A. D. Barr, F. J. Estrella, and L. E. Reichl	

Frustrated orbital Feshbach resonances in a Fermi gas (13 pages)	022707
E. K. Laird, Z.-Y. Shi, M. M. Parish, and J. Levinsen	

(Continued)

Radiative electron capture to the continuum in $U^{89+} + N_2$ collisions: Experiment and theory (7 pages)	022708
P.-M. Hillenbrand, S. Hagmann, M. E. Groshev, D. Banaś, E. P. Benis, C. Brandau, E. De Filippo, O. Forstner, J. Glorius, R. E. Grisenti, A. Gumberidze, D. L. Guo, B. Hai, M. O. Herdrich, M. Lestinsky, Yu. A. Litvinov, E. V. Pagano, N. Petridis, M. S. Sanjari, D. Schury, U. Spillmann, S. Trotsenko, M. Vockert, G. Weber, V. A. Yerokhin, and Th. Stöhlker	

PART B

Atomic and molecular processes in external fields, including interactions with strong fields and short pulses

X-ray transient absorption spectroscopy by an ultrashort x-ray-laser pulse in a continuous-wave IR field (14 pages)	023401
Xin Shi, Yong Wu, Jian Guo Wang, Victor Kimberg, and Song Bin Zhang	
Recollision dynamics analysis of high-order harmonic generation in solids (9 pages)	023402
Silin Fu, Yongkang Feng, Jinbin Li, Shengjun Yue, Xiao Zhang, Bitao Hu, and Hongchuan Du	
Dark-state optical potential barriers with nanoscale spacing (6 pages)	023403
Wenchao Ge and M. Suhail Zubairy	
Theoretical study of molecular-frame angular emission distributions of electrons emitted by interatomic Coulombic decay from helium dimers (6 pages)	023404
Abir Mhamdi, Jonas Rist, Tilo Havermeier, Reinhard Dörner, Till Jahnke, and Philipp V. Demekhin	
Density-based one-dimensional model potentials for strong-field simulations in He, H_2^+ , and H_2 (16 pages)	023405
Szilárd Majorosi, Mihály G. Benedict, Ferenc Bogár, Gábor Paragi, and Attila Czirják	
Interference effect in high-order harmonic generation from degenerate current-carrying orbitals of polyatomic molecules (9 pages)	023406
Dian Wang, Xiaosong Zhu, Hua Yuan, Pengfei Lan, and Peixiang Lu	
Optimization of high-order harmonic generation by optimal control theory: Ascending a functional landscape in extreme conditions (26 pages)	023407
Ido Schaefer and Ronnie Kosloff	
Photoabsorption, photoionization, and Auger processes at the carbon K edge in CH_3I (13 pages)	023408
Ruairidh Forbes, Stephen T. Pratt, Alberto De Fanis, Aleksandar R. Milosavljević, Christophe Nicolas, John D. Bozek, Nicholas A. Besley, and David M. P. Holland	
Orientation-dependent dissociative ionization of H_2 in strong elliptic laser fields: Modification of the release time through molecular orientation (5 pages)	023409
Arnab Khan, Daniel Trabert, Sebastian Eckart, Maksim Kunitski, Till Jahnke, and Reinhard Dörner	
Exploiting landscape geometry to enhance quantum optimal control (7 pages)	023410
Martín Larocca, Esteban Calzetta, and Diego A. Wisniacki	
Polarization of high-order harmonic generation in oriented molecules with intense ultrashort laser pulses (9 pages)	023411
Kai-Jun Yuan, Catherine Lefebvre, Szczepan Chelkowski, Huizhong Lu, and André D. Bandrauk	
Real-time observation of disintegration processes within argon clusters ionized by a hard-x-ray pulse of moderate fluence (8 pages)	023412
Yoshiaki Kumagai, Zoltan Jurek, Weiqing Xu, Hironobu Fukuzawa, Koji Motomura, Denys Iablonskyi, Kiyonobu Nagaya, Shin-ichi Wada, Subhendu Mondal, Tetsuya Tachibana, Yuta Ito, Tsukasa Sakai,	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 101, NUMBER 2

FEBRUARY 2020

Kenji Matsunami, Toshiyuki Nishiyama, Takayuki Umemoto, Christophe Nicolas, Catalin Miron, Tadashi Togashi, Kanade Ogawa, Shigeki Owada, Kensuke Tono, Makina Yabashi, Sang-Kil Son, Beata Ziaja, Robin Santra, and Kiyoshi Ueda

Core-hole spectator Auger decay (7 pages)	023413
K. Jänkälä, P. Lablanquie, L. Andric, M. A. Khalal, J. Palaudoux, F. Penent, J.-M. Bizau, D. Cubaynes, S. Guilbaud, K. Ito, K. Bučar, M. Žitnik, M. Huttula, T. Kaneyasu, and Y. Hikosaka	
Photoelectron holography from multiple-return backscattering electron orbits (7 pages)	023414
ShaoGang Yu, XuanYang Lai, YanLan Wang, SongPo Xu, LinQiang Hua, Wei Quan, and XiaoJun Liu	
Ground-state cooling of a single atom inside a high-bandwidth cavity (4 pages)	023415
Eduardo Uruñuela, Wolfgang Alt, Elvira Keiler, Dieter Meschede, Deepak Pandey, Hannes Pfeifer, and Tobias Macha	
Matter waves and collective properties of cold atoms and molecules	
Short-time expansion of Heisenberg operators in open collective quantum spin systems (22 pages)	023601
Michael A. Perlin and Ana Maria Rey	
Dipolar bosons in one dimension: The case of longitudinal dipole alignment (7 pages)	023602
Youssef Kora and Massimo Boninsegni	
Interaction-impeded relaxation in the presence of finite-temperature baths (6 pages)	023603
Ryan Tan, Xiansong Xu, and Dario Poletti	
Geometry-induced entanglement in a mass-imbalanced few-fermion system (8 pages)	023604
Damian Włodzyński, Daniel Pęczak, and Tomasz Sowiński	
Full distribution of the superfluid fraction and extreme value statistics in a one-dimensional disordered Bose gas (7 pages)	023605
M. Albert and C. A. Müller	
Limitations for field-enhanced atom interferometry (9 pages)	023606
D. Comparat	
Bound-state spectrum of an impurity in a quantum vortex (13 pages)	023607
João E. H. Braz and H. Terças	
Scale-invariant relaxation dynamics in two-component Bose-Einstein condensates with large particle-number imbalance (15 pages)	023608
Kazuya Fujimoto, Kazunori Haneda, Kazue Kudo, and Yuki Kawaguchi	
Bound-state band reconstruction and resonance in a spin-1/2 Bose gas with one-dimensional spin-orbit coupling (7 pages)	023609
Qi Gu, Yuncheng Xiong, and Lan Yin	
Kibble-Zurek mechanism in a quantum link model (11 pages)	023610
Yao-Tai Kang, Chung-Yu Lo, Shuai Yin, and Pochung Chen	
Persistent oscillations versus thermalization in the quench dynamics of quantum gases with long-range interactions (6 pages)	023611
Yikai Chen and Zi Cai	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 101, NUMBER 2

FEBRUARY 2020

	Cavity-induced Fulde-Ferrell-Larkin-Ovchinnikov superfluids of ultracold Fermi gases (<i>6 pages</i>)	023612
	Zhen Zheng and Z. D. Wang	
	Crossover from weak to strong quench in a spinor Bose-Einstein condensate (<i>7 pages</i>)	023613
	Seji Kang, Deokhwa Hong, Joon Hyun Kim, and Y. Shin	
✂	Excited-band Bloch oscillations for precision atom interferometry (<i>7 pages</i>)	023614
	Katherine E. McAlpine, Daniel Gochner, and Subhadeep Gupta	
	Pulse- and continuously driven many-body quantum dynamics of bosonic impurities in a Bose-Einstein condensate (<i>20 pages</i>)	023615
	K. Mukherjee, S. I. Mistakidis, S. Majumder, and P. Schmelcher	
✂	Superradiant optomechanical phases of cold atomic gases in optical resonators (<i>18 pages</i>)	023616
	Simon B. Jäger, Murray J. Holland, and Giovanna Morigi	
	Superfluid-to-Mott transition in a Bose-Hubbard ring: Persistent currents and defect formation (<i>10 pages</i>)	023617
	L. Kohn, P. Silvi, M. Gerster, M. Keck, R. Fazio, G. E. Santoro, and S. Montangero	
	Rosen-Zener-Stückelberg interferometry of ultracold atoms (<i>7 pages</i>)	023618
	Sheng-Chang Li and Li-Bin Fu	
	Mean-field interaction-induced dimensional crossover from two to three dimensions in a weakly interacting Bose gas (<i>5 pages</i>)	023619
	Jiho Noh, Jeongwon Lee, and Jongchul Mun	
	Interaction-induced topological bound states and Thouless pumping in a one-dimensional optical lattice (<i>12 pages</i>)	023620
	Ling Lin, Yongguan Ke, and Chaohong Lee	
	Magnetic stripe soliton and localized stripe wave in spin-1 Bose-Einstein condensates (<i>7 pages</i>)	023621
	Li-Chen Zhao, Xi-Wang Luo, and Chuanwei Zhang	
	Statistical properties of cold bosons in a ring trap (<i>10 pages</i>)	023622
	Maciej Kruk, Maciej Łebek, and Kazimierz Rzażewski	
	Emptiness formation probability in one-dimensional Bose liquids (<i>8 pages</i>)	023623
	Hsiu-Chung Yeh and Alex Kamenev	
	<i>f</i> -wave superfluidity from repulsive interaction in Rydberg-dressed Fermi gas (<i>6 pages</i>)	023624
	Ahmet Keleş, Erhai Zhao, and Xiaopeng Li	
	Quantum optics, physics of lasers, nonlinear optics, classical optics	
✂	Broadband analysis and self-control of spectral fluctuations in a passively phase-stable Er-doped fiber frequency comb (<i>14 pages</i>)	023801
	A. Liehl, P. Sulzer, D. Fehrenbacher, S. Eggert, M. Ludwig, F. Ritzkowski, D. V. Seletskiy, and A. Leitenstorfer	
	Self-trapped quantum walks (<i>7 pages</i>)	023802
	A. R. C. Buarque and W. S. Dias	
	Photon statistics and dynamics of nanolasers subject to intensity feedback (<i>10 pages</i>)	023803
	T. Wang, Z. L. Deng, J. C. Sun, X. H. Wang, G. P. Puccioni, G. F. Wang, and G. L. Lippi	

(Continued)

CONTENTS - Continued

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 101, NUMBER 2

FEBRUARY 2020

Simultaneous retrodiction of multimode optomechanical systems using matched filters (<i>14 pages</i>)	023804
Jonathan Kohler, Justin A. Gerber, Emma Deist, and Dan M. Stamper-Kurn	
Magnetically controllable photon blockade under a weak quantum-dot-cavity coupling condition (<i>16 pages</i>)	023805
Shuting Shen, Jiahua Li, and Ying Wu	
Transient optical response of cold Rydberg atoms with electromagnetically induced transparency (<i>17 pages</i>)	023806
Ya-Wei Guo, Si-Liu Xu, Jun-Rong He, Pan Deng, Milivoj R. Belić, and Yuan Zhao	
Quantum trajectory theory of few-photon cavity-QED systems with a time-delayed coherent feedback (<i>13 pages</i>)	023807
Gavin Crowder, Howard Carmichael, and Stephen Hughes	
Attempt to find the hidden symmetry in the asymmetric quantum Rabi model (<i>8 pages</i>)	023808
S. Ashhab	
Reconfigurable cluster-state generation in specially poled nonlinear waveguide arrays (<i>8 pages</i>)	023809
James G. Titchener, Alexander S. Solntsev, and Andrey A. Sukhorukov	
Improving photon antibunching with two dipole-coupled atoms in whispering-gallery-mode microresonators (<i>13 pages</i>)	023810
Ye Qu, Shuting Shen, Jiahua Li, and Ying Wu	
Discrete approximation of topologically protected modes in magneto-optical media (<i>16 pages</i>)	023811
Mark J. Ablowitz and Justin T. Cole	
Reactive energy in nondiffracting localized waves (<i>9 pages</i>)	023812
Peeter Saari and Ioannis Besieris	
Enhancement of tripartite quantum correlation by coherent feedback control (<i>10 pages</i>)	023813
Yinyin Zhong and Jietai Jing	
Quench dynamics in one-dimensional optomechanical arrays (<i>14 pages</i>)	023814
Sadegh Raeisi and Florian Marquardt	
Nonlinear solutions for $\chi^{(2)}$ frequency combs in optical microresonators (<i>10 pages</i>)	023815
E. Podivilov, S. Smirnov, I. Breunig, and B. Sturman	
Giant second-order cross nonlinearities via direct perturbation to the dark state in coherent population trapping (<i>11 pages</i>)	023816
Guanghui Wang, Xiangming Hu, Qingping Hu, and Liang Hu	
All-optical logic gate based on manipulation of surface polaritons solitons via external gradient magnetic fields (<i>8 pages</i>)	023818
Qi Liu, Na Li, and Chaohua Tan	
Three-dimensional spin Hall effect of light in tight focusing (<i>7 pages</i>)	023819
Weixing Shu, Chuyang Lin, Jun Wu, Shizhen Chen, Xiaohui Ling, Xinxing Zhou, Hailu Luo, and Shuangchun Wen	
Lévy flights for light in ordered lasers (<i>6 pages</i>)	023820
Erick G. Rocha, Emanuel P. Santos, Bruno J. dos Santos, Samuel S. de Albuquerque, Pablo I. R. Pincheira, Carlos Argolo, and André L. Moura	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 101, NUMBER 2

FEBRUARY 2020

Spatially structured transparency and transfer of optical vortices via four-wave mixing in a quantum-dot nanostructure (8 pages)	023821
Rahmatullah, Muqaddar Abbas, Ziauddin, and Sajid Qamar	
Pulse reverse engineering for controlling two-level quantum systems (9 pages)	023822
Du Ran, Wu-Jiang Shan, Zhi-Cheng Shi, Zhen-Biao Yang, Jie Song, and Yan Xia	
Distinguishing phases using the dynamical response of driven-dissipative light-matter systems (9 pages)	023823
M. Soriente, R. Chitra, and O. Zilberberg	
Conditional spectroscopy via nonstationary optical homodyne quantum state tomography (11 pages)	023824
Johannes Thewes, Carolin Lüders, and Marc Abmann	
Masked states of an atom coupled to a standing-wave cavity mode (12 pages)	023825
R. Gutiérrez-Jáuregui	
Giant photonic spin Hall effect near the Dirac points (7 pages)	023826
Wenhao Xu, Qiang Yang, Guangzhou Ye, Weijie Wu, Wenshuai Zhang, Hailu Luo, and Shuangchun Wen	
Chiral Maxwell waves in continuous media from Berry monopoles (12 pages)	023827
M. Marciani and P. Delplace	
☞ Controlling photon bunching and antibunching of two quantum emitters near a core-shell sphere (15 pages)	023828
Tiago J. Arruda, Romain Bachelard, John Weiner, Sebastian Slama, and Philippe W. Courteille	
Cooperative spontaneous emission via a renormalization approach: Classical versus semiclassical effects (8 pages)	023829
C. E. Máximo, R. Bachelard, F. E. A. dos Santos, and C. J. Villas-Boas	
Subradiance dynamics in a singly excited chirally coupled atomic chain (10 pages)	023830
H. H. Jen, M.-S. Chang, G.-D. Lin, and Y.-C. Chen	
Linear and nonlinear crystal optics using the magnetic field of light (9 pages)	023831
Zachary N. Buckholtz and Deniz D. Yavuz	
Generation of two different polarization-entangled biphoton states in a potassium titanyl phosphate waveguide device with multiple periodic poling (9 pages)	023832
Vineet Kumar Shukla and Joyee Ghosh	
Generation of stable and breathing flat-top solitons via Raman assisted four wave mixing in microresonators (8 pages)	023833
Shunyu Yao, Chengying Bao, Pan Wang, and Changxi Yang	
Conversion and manipulation of radial quantum modes in second-harmonic-generation processes (7 pages)	023834
Rui-Zhi Zhao, Rong-Er Lu, Xu-Hao Hong, Xia Feng, Ya-Guang Xu, Xu-Dong Yuan, Chao Zhang, Yi-Qiang Qin, and Yong-Yuan Zhu	
High-fidelity photon-subtraction operation for large-photon-number Fock states (8 pages)	023835
Shengli Zhang	
Transition between amplified spontaneous emission and superfluorescence in a longitudinally pumped medium by an x-ray free-electron-laser pulse (13 pages)	023836
Yu-Hung Kuan and Wen-Te Liao	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 101, NUMBER 2

FEBRUARY 2020

Coherent control of spatial and angular Goos-Hänchen shifts in a metal-clad waveguide structure (<i>8 pages</i>)	023837
Ren-Gang Wan and M. Suhail Zubairy	
Quantum signatures of transitions from stable fixed points to limit cycles in optomechanical systems (<i>7 pages</i>) . . .	023838
Qing Xia Meng, Zhi Jiao Deng, Zhigang Zhu, and Liang Huang	
Influence of different disorder types on Aharonov-Bohm caging in the diamond chain (<i>8 pages</i>)	023839
Goran Gligorić, Daniel Leykam, and Aleksandra Maluckov	
Extended symmetries in geometrical optics (<i>6 pages</i>)	023840
Zhyrair Gevorkian, Mher Davtyan, and Armen Nersessian	
Fano resonance and amplification in a quadratically coupled optomechanical system with a Kerr medium (<i>9 pages</i>)	023841
Sumei Huang and Aixi Chen	
Quadratic optomechanical coupling in an active-passive-cavity system (<i>9 pages</i>)	023842
Yuanwei Zhang	
Doubly periodic solutions of the focusing nonlinear Schrödinger equation: Recurrence, period doubling, and amplification outside the conventional modulation-instability band (<i>11 pages</i>)	023843
Matteo Conforti, Arnaud Mussot, Alexandre Kudlinski, Stefano Trillo, and Nail Akhmediev	

ERRATA

Retraction: Anomalous Doppler-effect singularities in radiative heat generation, interaction forces, and frictional torque for two rotating nanoparticles [Phys. Rev. A 96 , 012520 (2017)] (<i>1 page</i>)	029901(E)
A. I. Volokitin	