

*The Table of Contents is a total listing of Parts A and B.
Part A consists of pages L010401–012825, and Part B pages 013101–019906(E).*

PART A

LETTERS

Quantum information science

Quantum algorithm for the advection-diffusion equation by direct block encoding of the time-marching operator (*6 pages*) L010401

Paul Over, Sergio Bengoechea, Peter Brearley, Sylvain Laizet, and Thomas Rung

Local entanglement transfer from an entanglement source to multiple pairs of spatially separated observers (*6 pages*) L010402

Tanmoy Mondal, Kornikar Sen, Chirag Srivastava, and Ujjwal Sen

Quantum technologies

Extra cost of erasure due to quantum lifetime broadening (*6 pages*) L010601

Joe Dunlop, Federico Cerisola, Juliette Monsel, Sofia Sevitz, Jorge Tabanera-Bravo, Jonathan Dexter, Federico Fedele, Natalia Ares, and Janet Anders

Atomic and molecular structure and dynamics; high-precision experiments

Direct extraction of nuclear structure information using precision lithium-ion spectroscopy (*7 pages*) L010801

Hua Guan, Xiao-Qiu Qi, Jian-Guo Li, Peng-Peng Zhou, Wei Sun, Shao-Long Chen, Xu-Rui Chang, Yao Huang, Pei-Pei Zhang, Zong-Chao Yan, G. W. F. Drake, Ai-Xi Chen, Zhen-Xiang Zhong, Jia-Li Wang, Nicolas Michel, Ting-Yun Shi, and Ke-Lin Gao

Light-induced processes in atomic-scale systems

Tuning the terahertz response of liquids by creating polar many-body excitations (*7 pages*) L011101

Gerard McCaul, Matthias Runge, Michael Woerner, Diyar Talbayev, Thomas Elsaesser, and Denys I. Bondar

Attosecond pulse synthesis from high-order harmonic generation in intense squeezed light (*8 pages*) L011102

ShiJun Wang, XuanYang Lai, and XiaoJun Liu

Ultracold systems and matter waves

☞ Topological quantum floating phase of dipolar bosons in an optical ladder (*6 pages*) L011301

Henning Korbmaier, Gustavo A. Domínguez-Castro, Mateusz Łacki, Jakub Zakrzewski, and Luis Santos



(Continued)



2469-9926(202507)112:1:B;1-V

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 112, NUMBER 1

JULY 2025

Engineering the Bogoliubov modes through geometry and interaction: From collective edge modes to flat-band excitations (<i>6 pages</i>)	L011302
Maryam Darvishi, Fatemeh Pouresmaeeli, and Saeed H. Abedinpour	
Area laws and thermalization from classical entropies in a Bose-Einstein condensate (<i>7 pages</i>)	L011303
Yannick Deller, Martin Gärtner, Tobias Haas, Markus K. Oberthaler, Moritz Reh, and Helmut Strobel	
Scattering resonances and pairing in a Rabi-coupled Fermi gas (<i>8 pages</i>)	L011304
Olivier Bleu, Brendan C. Mulkerin, Cesar R. Cabrera, Jesper Levinsen, and Meera M. Parish	
Correlated-hopping-induced topological order in an atomic mixture (<i>8 pages</i>)	L011305
Ashirbad Padhan, Luca Barbiero, and Tapan Mishra	

Quantum optics

☞ Magic-wavelength nanofiber-based two-color dipole trap with sub- $\lambda/2$ spacing (<i>6 pages</i>)	L011701
Lucas Pache, Martin Cordier, Hector Letellier, Max Schemmer, Philipp Schneeweiss, Jürgen Volz, and Arno Rauschenbeutel	
Tailoring indistinguishability of photons using longitudinal spatial coherence (<i>6 pages</i>)	L011702
Preeti Sharma, Gaytri Arya, and Bhaskar Kanseri	

ARTICLES

Fundamental concepts

Classical analog of entanglement for a kicked top (<i>10 pages</i>)	012201
Bilal Khalid and Sabre Kais	
Quantum Schrödinger bridges: Large deviations and time-symmetric ensembles (<i>13 pages</i>)	012202
Olga Movilla Miangolarra, Ralph Sabbagh, and Tryphon T. Georgiou	
☞ Generalized entropic quantum speed limits (<i>17 pages</i>)	012203
Jucelino Ferreira de Sousa and Diego Paiva Pires	
Dynamical non-Hermitian systems: Fingerprints and pure-dephasing-induced protection effect (<i>14 pages</i>)	012204
Wanchen Ma, Hao Zhang, and Junjie Liu	
Reliable quantum advantage in quantum battery charging (<i>11 pages</i>)	012205
Davide Rinaldi, Radim Filip, Dario Gerace, and Giacomo Guarnieri	
Accuracy of a time-dependent generalized Gibbs ensemble approach under weak dissipation (<i>16 pages</i>)	012206
Luca Lumia, Gianni Aupetit-Diallo, Jérôme Dubail, and Mario Collura	
☞ Open quantum systems with particle and bath driven by time-dependent fields (<i>9 pages</i>)	012207
Daniele Gamba, Bingyu Cui, and Alessio Zaccane	
Nonsecular thermalization dynamics of multilevel quantum systems: Complete positivity and insights from Kossakowski matrix spectra (<i>11 pages</i>)	012208
Timur V. Tscherbul	
Random non-Hermitian Hamiltonian framework for symmetry-breaking dynamics (<i>15 pages</i>)	012209
Pei Wang	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 112, NUMBER 1

JULY 2025

☞ Role of non-Markovian dissipation in quantum phase transitions: Tricriticality, spin squeezing, and directional symmetry breaking (<i>15 pages</i>)	012210
Baptiste Debecker, Lukas Pausch, Jonathan Louvet, Thierry Bastin, John Martin, and François Damanet	
☞ Input-output hierarchical equations of motion (<i>34 pages</i>)	012211
Mauro Cirio, Pengfei Liang, and Neill Lambert	
Exploring the effects of mass dependence in spontaneous collapse models (<i>24 pages</i>)	012212
Nicolò Piccione and Angelo Bassi	
Quantum interference of force with entangled photons (<i>6 pages</i>)	012213
Gabriela S. Militani, Artur Matoso, Denise F. Ávila, Raul Corrêa, Reinaldo O. Vianna, Pablo L. Saldanha, and Sebastião Pádua	
Advantage of Greenberger-Horne-Zeilinger correlation in communication complexity: A step beyond the conventional Greenberger-Horne-Zeilinger paradox (<i>7 pages</i>)	012214
Ananya Chakraborty, Kunika Agarwal, Sahil Gopalkrishna Naik, and Manik Banik	
Generation of the complete Bell basis via Hong-Ou-Mandel interference of vector modes (<i>6 pages</i>)	012215
Xiaoqin Gao, Dilip Paneru, Francesco Di Colandrea, Yingwen Zhang, and Ebrahim Karimi	
Real-time instanton approach to quantum activation (<i>15 pages</i>)	012216
Chang-Woo Lee, Paul Brookes, Kee-Su Park, Marzena H. Szymańska, and Eran Ginossar	
Impact of a tunneling particle on the quantum state of a barrier: Two-particle wave-packet model (<i>10 pages</i>)	012217
Roman Michelko and Peter Bokes	
Powering a quantum clock with a nonequilibrium steady state (<i>6 pages</i>)	012218
Daniele Nello and Alessandro Silva	
Unbounded sharing of network nonlocality in the two-forked tree-shaped scenario (<i>10 pages</i>)	012219
Hao Sun, Fenzhuo Guo, Haifeng Dong, Sujuan Qin, and Fei Gao	
Enhanced frequency and temperature estimation by a $\mathcal{PT}$ -symmetric quantum oscillator (<i>10 pages</i>)	012220
Jonas F. G. Santos	
Adiabatic perturbation theory invariant under the unitary transformations (<i>11 pages</i>)	012221
Hsiang-Shun Chou	
Wave-particle duality in multipath interferometers via quantum Fisher information (<i>8 pages</i>)	012222
Xue Wang and Shuangshuang Fu	
Quantum synchronization blockade induced by nonreciprocal coupling (<i>12 pages</i>)	012223
Tobias Kehrer and Christoph Bruder	
Riemannian approach to the Lindbladian dynamics of a locally purified tensor network (<i>19 pages</i>)	012224
Emiliano Godinez-Ramirez, Richard M. Milbradt, and Christian B. Mendl	
Quantum walks on a network based on a dual Sierpinski gasket and a dendrimer (<i>21 pages</i>)	012225
Geyson Maquiné Batalha and Mircea Galiceanu	
☞ Dissipative quantum phase transitions monitored by current fluctuations (<i>12 pages</i>)	012226
Masataka Matsumoto, Zi Cai, and Matteo Baggioli	

(Continued)

Quantum information science

Interfacing Gottesman-Kitaev-Preskill qubits to quantum memories (<i>16 pages</i>)	012401
Prajit Dhara, Liang Jiang, and Saikat Guha	
Quantum <i>XYZ</i> cyclic codes for biased noise (<i>14 pages</i>)	012402
Zhipeng Liang, Fusheng Yang, Zhengzhong Yi, and Xuan Wang	
Revealing quantum operator scrambling via measuring Holevo information on digital quantum simulators (<i>8 pages</i>)	012403
Bin Sun, Geng-Bin Cao, Xi-Dan Hu, and Dan-Bo Zhang	
Unconditionally superposition-robust entangled state in all multiparty quantum systems (<i>10 pages</i>)	012404
Swati Choudhary, Ujjwal Sen, and Saronath Halder	
Performance of quantum annealing for 2-satisfiability problems with multiple satisfying assignments (<i>15 pages</i>)	012405
Vrinda Mehta, Hans De Raedt, Kristel Michielsen, and Fengping Jin	
Non-Markovian noise mitigation: Practical implementation, error analysis, and the role of spectral properties of the environment (<i>14 pages</i>)	012406
Ke Wang and Xiantao Li	
Quantum determinant estimation (<i>6 pages</i>)	012407
J. Agerskov and K. Splittorff	
Application of zero-noise-extrapolation-based quantum error mitigation to a silicon spin qubit (<i>9 pages</i>)	012408
Hanseo Sohn, Jaewon Jung, Jaemin Park, Hyeongyu Jang, Lucas E. A. Stehouwer, Davide Degli Esposti, Giordano Scappucci, and Dohun Kim	
Quantum active learning (<i>14 pages</i>)	012409
Yongcheng Ding, Yue Ban, Mikel Sanz, José D. Martín-Guerrero, and Xi Chen	
Detecting high-dimensional time-bin entanglement in fiber-loop systems (<i>17 pages</i>)	012410
Niklas Euler, Monika Monika, Ulf Peschel, and Martin Gärtner	
Multipartite entanglement structures in quantum stabilizer states (<i>10 pages</i>)	012411
Vaibhav Sharma and Erich J. Mueller	
Quasi-inverse of qubit channels for mixed states (<i>6 pages</i>)	012412
Muhammad Faizan and Muhammad Faryad	
Reducing complexity of shadow process tomography with generalized measurements (<i>11 pages</i>)	012413
Haigang Wang and Kan He	
Unraveling reverse annealing: A study of D-Wave quantum annealers (<i>14 pages</i>)	012414
Vrinda Mehta, Hans De Raedt, Kristel Michielsen, and Fengping Jin	
Complexity of entanglement embezzlement (<i>10 pages</i>)	012415
Tal Schwartzman	
Higher-dimensional-entanglement detection and quantum-channel characterization using moments of generalized positive maps (<i>12 pages</i>)	012416
Bivas Mallick, Ananda G. Maity, Nirman Ganguly, and A. S. Majumdar	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 112, NUMBER 1

JULY 2025

Imperfect entangling power of quantum gates (<i>16 pages</i>)	012417
Sudipta Mondal, Samir Kumar Hazra, and Aditi Sen(De)	
Overcoming the superposition-state limitation for directed graph centrality ranking with ancilla assistance (<i>9 pages</i>)	012418
Miaomiao Yu, Pingyu Zhu, Yang Wang, Yan Wang, Yuxing Du, Kun Wang, and Ping Xu	
Entanglement witnesses for fermionic lattices (<i>13 pages</i>)	012419
Bing Xu, Yangyang Wang, Xiaofei Qi, and Jinchuan Hou	
Virtual cloning of quantum states (<i>8 pages</i>)	012420
Zhi-Hao Bi, Jing-Tao Qiu, and Xiao-Dong Yu	
Phase-selective tripartite entanglement and asymmetric Einstein-Podolsky-Rosen steering in squeezed optomechanics (<i>18 pages</i>)	012421
Ya-Feng Jiao, Jie Wang, Dong-Yang Wang, Lei Tang, Yan Wang, Yun-Lan Zuo, Wan-Su Bao, Le-Man Kuang, and Hui Jing	
Warm-start adaptive-bias quantum approximate optimization algorithm (<i>18 pages</i>)	012422
Yunlong Yu, Xiang-Bin Wang, Nic Shannon, and Robert Joynt	
Quantum nested search for the shortest vector problem (<i>20 pages</i>)	012423
Runxi Cao, Baocang Wang, and Juntao Gao	
Performance analysis of different photon-mediated entanglement generation schemes under optical dephasing and spectral diffusion (<i>8 pages</i>)	012424
Kinfung Ngan and Shuo Sun	
Nonstabilizerness entanglement entropy: A measure of hardness in the classical simulation of quantum many-body systems with tensor network states (<i>11 pages</i>)	012425
Jiale Huang, Xiangjian Qian, and Mingpu Qin	
Separable ellipsoids around multipartite states (<i>7 pages</i>)	012426
Robin Y. Wen, Gilles Perez, Liuke Lyu, William Witczak-Krempa, and Achim Kempf	
Complementarity relations in a multipath interferometer with quantum memory (<i>10 pages</i>)	012427
Yue Sun, Ming-Jing Zhao, and Peng-Tong Li	
Experimental robust certification of the maximally entangled state via nonprojective measurements (<i>8 pages</i>)	012428
Meng-Yun Ma, Chao-Jie Sun, Xu Xu, Kai-Mei Zheng, Han-Yu Cheng, Qi-Ping Su, Chui-Ping Yang, and Yong-Nan Sun	
Nonreciprocal charging in a quantum battery via a mediator (<i>11 pages</i>)	012429
Cheng-Ze Sun, Zai-Kun Wang, Wei-Bin Yan, Ying-Jie Zhang, Zhong-Xiao Man, and Qing-Yu Cai	
Detecting spacelike vacuum entanglement at all distances and promoting negativity to a necessary and sufficient entanglement measure in many-body regimes (<i>13 pages</i>)	012430
Boyu Gao and Natalie Klco	
Transfer learning for a deep-unfolded combinatorial optimization solver with quantum annealer (<i>10 pages</i>)	012431
Ryo Hagiwara, Shunta Arai, and Satoshi Takabe	

(Continued)

Quantum technologies

Dephasing-induced leakage in multilevel superconducting quantum circuits (<i>9 pages</i>)	012601
Frederick W. Strauch	
Short-time simulation of quantum dynamics by Pauli measurements (<i>10 pages</i>)	012602
Paul K. Faehrmann, Jens Eisert, Mária Kieferová, and Richard Kueng	
Quantum Monte Carlo methods and stabilizer states (<i>9 pages</i>)	012603
Bhilahari Jeevanesan	
Fluctuation as a probe of entanglement transition in a monitored free-fermion chain (<i>10 pages</i>)	012604
Wen-Jie Qiu, Yi-Cong Yu, and Xiaoming Cai	
Robust, fast, and high-fidelity composite single-qubit gates for superconducting transmon qubits (<i>10 pages</i>)	012605
Hristo G. Tonchev, Boyan T. Torosov, and Nikolay V. Vitanov	
Self-testing supersinglets with perfect quantum strategies (<i>10 pages</i>)	012606
Debashis Saha and Adán Cabello	
Efficient quantum circuit execution with continuous distribution of entanglement (<i>16 pages</i>)	012607
Hao Fu, Fangzheng Chen, Mingzheng Zhu, Chi Zhang, Jun Wu, Wei Xie, and Xiang-Yang Li	
Noise-resistant phonon operations in a hybrid superconducting circuit-mechanical resonator system (<i>10 pages</i>)	012608
Le-Tian Zhu, Xing-Yu Zhu, Guang-Can Guo, Tao Tu, and Chuan-Feng Li	
Robust implicit quantum control of interacting spin chains (<i>12 pages</i>)	012609
Luca Stefanescu, Louis Edwards-Pratt, Jeremy O'Connor, Ezra Tsegaye, Nguyen H. Le, and Florian Mintert	
Binned-detector probability distributions for Gaussian boson sampling validation (<i>14 pages</i>)	012610
Gabriele Bressanini, Benoit Seron, Leonardo Novo, Nicolas J. Cerf, and M. S. Kim	
Continuous-variable quantum teleportation, $U(2)$ -invariant squeezing, and non-Gaussian resource states (<i>10 pages</i>)	012611
Mohak Sharma, Chandan Kumar, Shikhar Arora, and Arvind	
Generalized numerical framework for improved finite-sized key rates with Rényi entropy (<i>7 pages</i>)	012612
Rebecca R. B. Chung, Nelly H. Y. Ng, and Yu Cai	
Spin contrast, finite temperature, and noise in matter-wave interferometers (<i>12 pages</i>)	012613
Tian Zhou, Ryan Rizaldy, Martine Schut, and Anupam Mazumdar	
Real-time scattering processes with continuous-variable quantum computers (<i>15 pages</i>)	012614
Steven Abel, Michael Spannowsky, and Simon Williams	
Nonlinear protocol for high-dimensional quantum teleportation (<i>9 pages</i>)	012615
Luca Bianchi, Carlo Marconi, Giulia Guarda, and Davide Bacco	
Finite-key analysis of high-dimensional quantum key distribution utilizing a subset of the monitoring states (<i>10 pages</i>)	012616
Zhengeng Zhao, Yongqiang Du, Wei Li, and Kejin Wei	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 112, NUMBER 1

JULY 2025

Dissipation-assisted steady-state entanglement engineering based on electron transfer models (16 pages)	012617
Mingjian Zhu, Visal So, Guido Pagano, and Han Pu	
Entanglement-assisted private communication over a classical-quantum multiple-access channel (11 pages)	012618
Xiaomin Liu, Fangyuan Chen, and Zhengjun Xi	
Boson sampling validation approach by examining the sample space filling (11 pages)	012619
A. A. Mazanik and A. N. Rubtsov	
Hybrid quantum simulations with qubits and qumodes on trapped-ion platforms (19 pages)	012620
Jack Y. Araz, Matt Grau, Jake Montgomery, and Felix Ringer	
Deterministic carving of quantum states with Grover's algorithm (27 pages)	012621
Omar Nagib, M. Saffman, and K. Mølmer	
Quantum reservoir computing on random regular graphs (9 pages)	012622
Moein N. Ivaki, Achilleas Lazarides, and Tapio Ala-Nissila	
Analog quantum simulation of Dirac Hamiltonians in circuit QED using Rabi-driven qubits (13 pages)	012623
Gal Gumpel, Jiwon Kang, Eliya Blumenthal, Aron Klevansky, Eunseong Kim, and Shay Hacoheh-Gourgy	
 Nondemolition fluorescence readout and high-fidelity unconditional reset of a fluxonium qubit via dissipation engineering (10 pages)	012624
Shu Watanabe, Kotaro Hida, Kohei Matsuura, and Yasunobu Nakamura	
Classical postprocessing approach for quantum amplitude estimation (9 pages)	012625
Yongdan Yang and Ruyu Yang	
Spin-squeezed vector atomic magnetometry (11 pages)	012626
Jinyang Li, Gour Pati, Renu Tripathi, and Selim M. Shahriar	
Atomic and molecular structure and dynamics; high-precision experiments	
Spin manipulation and nuclear polarization enhancement in particle beams with static magnetic fields (14 pages)	012801
C. S. Kannis, R. Engels, T. El-Kordy, N. Faatz, S. J. Pütz, V. Verhoeven, T. P. Rakitzis, and M. Büscher	
Systematic Bayesian optimization for atomic structure calculations of heavy elements (21 pages)	012802
Ricardo Ferreira da Silva, Andreas Flörs, Luís Leitão, José P. Marques, Gabriel Martínez-Pinedo, and Jorge M. Sampaio	
Spectroscopic footprints of quantum friction in nonreciprocal and chiral media (17 pages)	012803
O. J. Franca, Fabian Spallek, Steffen M. Giesen, Robert Berger, Kilian Singer, Stefan Aull, and Stefan Yoshi Buhmann	
Doubly differential cross sections for ionization in $\text{He}^{2+} + \text{He}$ collisions (10 pages)	012804
Sh. U. Alladustov, K. H. Spicer, N. W. Antonio, A. M. Kotian, and A. S. Kadyrov	
Charge-exchange dynamics in He^+ and He^{2+} collisions with Ne and Ar at 0.63–1.41-a.u. velocities (9 pages)	012805
Xinfei Hui, Baowei Ding, Deyang Yu, Tao Guo, Xiaoxun Song, Tongmin Zhang, Long Kang, Jinyu Li, Xiaolong Zhu, and Ximeng Chen	
Ionization and state-selective electron capture in collisions of fully stripped and hydrogenlike oxygen ions with hydrogen atoms (13 pages)	012806
A. M. Kotian, N. W. Antonio, and A. S. Kadyrov	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A	THIRD SERIES, VOLUME 112, NUMBER 1	JULY 2025
Measurement of D -line energies in sodiumlike Ir (<i>10 pages</i>)		012807
H. Staiger, G. Mondeel, S. A. Blundell, Dipti, G. O'Neil, R. Silwal, A. Lapierre, G. Gwinner, J. N. Tan, J. D. Gillaspy, Yu. Ralchenko, and E. Takacs		
Spins extracted from fermionic states and their entanglement properties (<i>14 pages</i>)		012808
Filippo Troiani, Andrea Secchi, and Stefano Pittalis		
Comparative analysis of Mg^+ properties using multiconfiguration Dirac-Hartree-Fock and relativistic coupled-cluster methods (<i>16 pages</i>)		012809
B. K. Sahoo, Per Jönsson, and Gediminas Gaigalas		
Positronium formation and threshold behavior in positron-sodium collisions at low energies (<i>11 pages</i>)		012810
Ning-Ning Gao, Hui-Li Han, and Ting-Yun Shi		
One- and two-photon spectroscopy with a test of the Kennard-Stepanov relation in high-pressure two-species xenon–noble-gas mixtures (<i>8 pages</i>)		012811
Eric Boltersdorf, Thilo vom Hövel, Jeremy Andrew Morín Nenoff, Frank Vewinger, and Martin Weitz		
State-selective single- and double-electron capture in slow N^{4+} -He collisions (<i>8 pages</i>)		012812
Dadi Xing, Shucheng Cui, Xiaoxia Wang, Denghong Zhang, Xubin Zhu, Kaizhao Lin, Yong Gao, Dalong Guo, Dongmei Zhao, Shaofeng Zhang, Xiaolong Zhu, and X. Ma		
Fast calculation of diffraction patterns from an ensemble of aligned molecules (<i>11 pages</i>)		012813
Yanwei Xiong and Martin Centurion		
Resonance strengths and linear polarization of higher-order electronic recombination from Li-like to N-like ions (<i>7 pages</i>)		012814
Tianluo Luo, Zhencen He, Zhihao Yang, and Zhimin Hu		
Selective reflection Casimir-Polder spectroscopy in vapor cells: The influence of the thermal velocity distribution (<i>7 pages</i>)		012815
B. Dutta, C. Boldt, G. Garcia-Arellano, M. Ducloy, P. Pedri, S. Scheel, and A. Laliotis		
Radiative corrections to the nuclear size and polarizability effects in atomic systems (<i>10 pages</i>)		012816
Krzysztof Pachucki		
Applications of maximum likelihood estimations for analyzing photon counts in few-atom experiments (<i>10 pages</i>)		012817
M. Weyland, L. Sanchez, P. Ruksasakchai, and M. F. Andersen		
Momentum imaging and kinetic-energy-release measurements for various fragmentation pathways in MeV-energy proton collisions with an SO_2 molecule (<i>10 pages</i>)		012818
Sandeep Bajrangji Bari, Ranojit Das, R. Tyagi, and A. H. Kelkar		
High-precision measurement of the $2s2p\ ^1P_1^o$ center of gravity in neutral 9Be at the parts-per-billion level (<i>6 pages</i>)		012819
K. J. Ahrendsen, E. M. Kay, and W. D. Williams		
Atom-field-medium interactions. II. Covariance matrix dynamics for N harmonic atoms in a dielectric-altered quantum field and effects of dielectric on atom-field entanglement (<i>20 pages</i>)		012820
Jen-Tsung Hsiang and Bei-Lok Hu		

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 112, NUMBER 1

JULY 2025

Laser-fluence-dependent production of molecular thorium ions in different charge states for trapped-ion experiments (<i>9 pages</i>)	012821
Jonas Stricker, Jean Velten, Valerii Andriushkov, Lennard M. Arndt, Dmitry Budker, Konstantin Gaul, Dennis Renisch, Ferdinand Schmidt-Kaler, Azer Trimeche, Lars von der Wense, and Christoph E. Düllmann (TACTICa Collaboration)	
Electronic structure calculation for superheavy elements livermorium (Lv, $Z = 116$) and tennessine (Ts, $Z = 117$) and their lighter analogs Te, I, Po, and At (<i>9 pages</i>)	012822
V. A. Dzuba, V. V. Flambaum, and G. K. Vong	
Role of the deposited charge in the transmission of low-energy electrons through insulating nanocapillaries (<i>11 pages</i>)	012823
Shuai Ha, Pengfei Li, Wenming Zhang, Bo Jin, Ben Niu, Zidong Chen, Hua Yuan, Chengliang Wan, Ying Cui, Ke Yao, Yue Ma, Zhihu Yang, Reinhold Schuch, Hongqiang Zhang, and Ximeng Chen	
Bayesian approach for strong-field QED tests with He-like ions (<i>6 pages</i>)	012824
César Godinho, Jorge Machado, Nancy Paul, Mauro Guerra, Paul Indelicato, and Martino Trassinelli	
Time-dependent coupled-cluster theory of multireference systems (<i>13 pages</i>)	012825
Martín A. Mosquera	

PART B

Light-induced processes in atomic-scale systems

Machine-learning-constructed molecular potential and its application for exploring deep-lying-orbital effects in high-order harmonic generation (<i>17 pages</i>)	013101
Duong D. Hoang-Trong, Khang Tran, Doan-An Trieu, Quan-Hao Truong, Ngoc-Hung Phan, Ngoc-Loan Phan, and Van-Hoang Le	
Atom transporting and routing by crossed waveguides on a chip (<i>7 pages</i>)	013102
Aiping Liu, Tong Wang, Xiaofeng Jian, Pengfei Zhang, Mingkai Chen, Xifeng Ren, Chang-Ling Zou, and Qin Wang	
Polarizability of one-dimensional soft-core atoms (<i>7 pages</i>)	013103
Thomas Garm Pedersen	
Algorithmic cooling based on quantum measurement (<i>8 pages</i>)	013104
Hao Fan, Feng-Lin Wu, Lu Wang, Shu-Qian Liu, and Si-Yuan Liu	
Orientation-dependent enhanced ionization in acetylene revealed by ultrafast cross-polarized pulse pairs (<i>8 pages</i>)	013105
S. A. Mohideen, A. J. Howard, C. Cheng, I. Gabalski, A. M. Ghrist, E. Weckwerth, and P. H. Bucksbaum	
Origin of entanglement in an $H(2p)$ atom pair produced through the photodissociation of an H_2 molecule (<i>9 pages</i>)	013106
Kouichi Hosaka, Yutaro Torizuka, Philipp Schmidt, Takeshi Odagiri, Arno Ehresmann, Masashi Kitajima, and Noriyuki Kouchi	
Nonperturbative effects in attosecond four-wave-mixing spectra (<i>7 pages</i>)	013107
Sergio Yanez-Pagans, Nathan Harkema, Arvinder Sandhu, Coleman Cariker, and Luca Argenti	
All-optical Raman control of ultracold atomic hyperfine states using the pulsed jump protocol (<i>13 pages</i>)	013108
Xin-Xia Jian, Zhi-Jian Zheng, Jun-Jie Jiang, Lin Zhou, Chuan-Cun Shu, and Jun He	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A	THIRD SERIES, VOLUME 112, NUMBER 1	JULY 2025
Purcell effect in chiral environments: A macroscopic QED perspective (<i>14 pages</i>)		013109
C. S. Rapp, Janine C. Franz, Stefan Yoshi Buhmann, and O. J. Franca		
Quantum state engineering of light using intensity measurements and postselection (<i>13 pages</i>)		013110
J. Rivera-Dean, Th. Lamprou, E. Pisanty, M. F. Ciappina, P. Tzallas, M. Lewenstein, and P. Stammer		
Quantum versus semiclassical signatures of correlated triple ionization in Dalitz plots (<i>12 pages</i>)		013111
Dmitry K. Efimov, Georgios P. Katsoulis, Tymoteusz Rozpętkowski, Sergiusz Chwałowski, Agapi Emmanouilidou, and Jakub S. Prauzner-Bechcicki		
Phase-dependent Coulomb focusing effect in orthogonally polarized two-color laser fields (<i>9 pages</i>)		013112
Peng Qin, Yidian Tian, Long Xu, Min Gong, Kunlong Liu, Lingling Zheng, Xufei Sun, and Zhanghai Chen		
Semiclassical Floquet-Markov master equation for Monte Carlo spin integration (<i>11 pages</i>)		013113
Raymond Tat		
Generation of Bessel vortex electrons via atomic photoionization (<i>13 pages</i>)		013114
B. Kumar Das, C. Granados, L. Wang, and M. F. Ciappina		
Radio-frequency pseudonull induced by light in an ion trap (<i>12 pages</i>)		013115
Daun Chung, Yonghwan Cha, Hosung Shon, Jeonghyun Park, Woojun Lee, Kyungmin Lee, Beomgeun Cho, Kwangyeul Choi, Chiyeon Kim, Seungwoo Yu, Suhan Kim, Uihwan Jeong, Jiyong Kang, Jaehun You, and Taehyun Kim		
Dissipation-induced transition between optical reciprocity and nonreciprocity (<i>7 pages</i>)		013116
Lifan Chen, Jiale Li, Zhan Zheng, Jin Yan, Feng Li, Yanpeng Zhang, and Yin Cai		
Formation of a Schrödinger cat state of a strong circularly polarized laser field due to Thomson scattering by free electrons (<i>9 pages</i>)		013117
Evgeny S. Andrianov and Oleg I. Tolstikhin		
Reconstruction of attosecond beating by interference of two-photon transitions with higher-order processes (<i>12 pages</i>)		013118
L. Roantree, H. W. van der Hart, and A. C. Brown		
Photodissociation dynamics of XH^+ ($X = Na, K, Rb, Cs$): Rovibrationally resolved shape resonances driven by potential barriers in the ultraviolet spectrum (<i>9 pages</i>)		013119
Kun Wang, Xing Guang Su, Dong Liu, Yu Wang, Yongjun Cheng, Yong Wu, Jian Guo Wang, Yi Zhi Qu, Ke Dong Wang, Song Bin Zhang, and Yu Kun Yang		
Coherent and incoherent control of ionization-fragmentation dynamics in H_2 driven by a two-color laser field (<i>10 pages</i>)		013120
JinPeng Ma, CongCong Jia, Ting Xu, SiQi Pei, YinSong Tang, HaoDong Ju, XiaoQing Hu, Yong Wu, and JianGuo Wang		
Role of mechanical effects on the excitation spectra of microwave-dressed Rydberg states in a cold atomic cloud (<i>12 pages</i>)		013121
H. Failache, J. A. Muniz, L. Velazco, D. Talento, and A. Lezama		
Long-range electron correlation in dissociative double ionization of argon dimers (<i>9 pages</i>)		013122
Hao Huang, Hongcheng Ni, Jian Wu, Yan Yang, Junyang Ma, and Zhenrong Sun		

(Continued)

Anomalous suppression of spin-exchange relaxation in alignment signals in cesium in ultraweak magnetic fields (<i>12 pages</i>)	013123
M. V. Petrenko and A. K. Vershovskii	
Ultracold systems and matter waves	
Strongly repulsive one-dimensional gases at higher branches: Spin-charge correlation and coupled spin-chain model (<i>10 pages</i>)	013301
Yu Chen and Xiaoling Cui	
Tunneling control of dipolar bosons in triple-well circuits via dipole polarization orientation and quantum sensing application (<i>10 pages</i>)	013302
Leandro H. Ymai and Arlei P. Tonel	
Nonintegrability of driven-dissipative one-dimensional hard-core bosons (<i>7 pages</i>)	013303
M. Zündel	
Condensation of vanishing photon emission rates in random atomic clouds (<i>9 pages</i>)	013304
Viviana Viggiano, Romain Bachelard, Fabio Deelan Cunden, Paolo Facchi, Robin Kaiser, Saverio Pascazio, Francesco V. Pepe, and Antonello Scardicchio	
Quantum tomography of the superfluid-insulator transition for a mesoscopic atomtronic ring (<i>21 pages</i>)	013305
Yehoshua Winsten and Doron Cohen	
Beyond mean-field effects in dynamics of Bose-Einstein condensate in two-core trap (<i>8 pages</i>)	013306
Fatkhulla Kh. Abdullaev, Ravil M. Galimzyanov, and Akbar M. Shermakhmatov	
Competing bosonic reactions: Insight from exactly solvable time-dependent models (<i>17 pages</i>)	013307
Fumika Suzuki, Rajesh K. Malla, and Nikolai A. Sinitsyn	
Topological phases in two-dimensional Rydberg lattices (<i>8 pages</i>)	013308
Mathias B. M. Svendsen and Beatriz Olmos	
Droplets of bosons at a narrow resonance (<i>8 pages</i>)	013309
Ke Wang, Thimo Preis, and Dam Thanh Son	
Rotational decoherence dynamics in ultracold molecules induced by a tunable spin environment: The central rotor model (<i>10 pages</i>)	013310
Timur V. Tscherbul and Lincoln D. Carr	
Condensation of composite bosonic trions in interacting Bose-Fermi mixtures (<i>11 pages</i>)	013311
Qi Song, Jie Lou, and Yan Chen	
☞ Microwave spectroscopy of ultracold-sodium least-bound molecular states (<i>15 pages</i>)	013312
M. Ballu, Z. Yao, B. Mirmand, D. J. Papoular, H. Perrin, and A. Perrin	
Out-of-equilibrium behavior of quantum vortices: A comparison of point vortex dynamics and Fokker-Planck evolution (<i>13 pages</i>)	013313
R. J. Tattersall, A. W. Baggaley, and T. P. Billam	
☞ Hybrid-pair superfluidity in a strongly driven Fermi gas (<i>23 pages</i>)	013314
Brendan C. Mulkerin, Olivier Bleu, Cesar R. Cabrera, Meera M. Parish, and Jesper Levinsen	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 112, NUMBER 1

JULY 2025

Gyroscopic stability for nanoparticles in Stern-Gerlach interferometry and spin contrast (<i>13 pages</i>)	013315
Tian Zhou, Sougato Bose, and Anupam Mazumdar	
☞ Narrowline cooling of dysprosium atoms in an optical tweezer array (<i>10 pages</i>)	013316
Giulio Biagioni, Britton Hofer, Nathan Bonvalet, Damien Bloch, Antoine Browaeys, and Igor Ferrier-Barbut	
Shortcuts to adiabatic topological pumping (<i>12 pages</i>)	013317
Wenjie Liu, Yongguan Ke, and Chaohong Lee	
Elongated vortex quantum droplets in binary Bose-Einstein condensates (<i>8 pages</i>)	013318
Guilong Li, Zibin Zhao, Rui Zhang, Zhaopin Chen, Bin Liu, Boris A. Malomed, and Yongyao Li	
Bound-like states in a one-dimensional self-similar δ -barrier array (<i>11 pages</i>)	013319
Jia-Chen Tang, Xu-Yang Hou, Yan He, and Hao Guo	
Mobility rings in a non-Hermitian non-Abelian quasiperiodic lattice (<i>8 pages</i>)	013320
Rui-Jie Chen, Guo-Qing Zhang, Zhi Li, and Dan-Wei Zhang	
Photonics, nonlinear optics, and optomechanics	
Dissipative structures in one- and two-dimensional Kerr cavities with a spatially periodic pump (<i>7 pages</i>)	013501
Wen-Rong Sun, Wei-Chao Ma, and Boris A. Malomed	
Extreme electrodynamics in time-varying media (<i>13 pages</i>)	013502
M. Scalora, M. A. Vincenti, D. de Ceglia, N. Akozbek, M. Ferrera, C. Rizza, A. Alù, N. Litchinitser, C. Cojocaru, and J. Trull	
Directional intense terahertz emission by abruptly autofocusing lasers (<i>9 pages</i>)	013503
Xiao-Ran Zheng, Nan Li, Wei-Min Wang, Rui Zhang, Cun-Lin Zhang, and Liang-Liang Zhang	
Engineering polariton states through liquid-crystal-induced anisotropy and topology optimization (<i>9 pages</i>)	013504
E. Sedov and A. Kavokin	
High-order harmonic generation with radially chirped annular beams in the overdriven regime: Spectral extension and coherent high-flux radiation (<i>14 pages</i>)	013505
Mohamad Dashcasan and Atamalek Ghorbanzadeh	
Observation of distinct first-order and second-order topological insulators in photonic martini lattices (<i>10 pages</i>)	013506
Weizhao Cheng, Ruichang Chen, Haixiang Wu, Weijie Liu, Menghan Zhang, Bin Zhang, Wenchao Yan, and Feng Chen	
Crossed ponderomotive lenses for spherical aberration correction in electron optics (<i>10 pages</i>)	013507
Yuuki Uesugi and Yuichi Kozawa	
Goos-Hänchen shift and photonic spin Hall effect in semi-Dirac material heterostructures (<i>10 pages</i>)	013508
Hong-Liang Cheng and Yong-Mei Zhang	
Room-temperature exciton-vibration-photon entanglement in polariton optomechanics (<i>10 pages</i>)	013509
Jian Huang and Zhedong Zhang	
Deep-sub-cycle ultrafast optical pulses (<i>10 pages</i>)	013510
Hongliang Dang, Jiaxin Gao, Hao Wu, Yudong Zhang, Xin Guo, and Limin Tong	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 112, NUMBER 1

JULY 2025

Mechanical squeezed Kerr oscillator based on a tapered ion trap (8 pages)	013511
Bogomila S. Nikolova, Moritz Göb, Kilian Singer, and Peter A. Ivanov	
Probing the topological Anderson transition in quasiperiodic photonic lattices via chiral displacement and wavelength tuning (10 pages)	013512
Abhinav Sinha, Trideb Shit, Avinash Tatarwal, Diptiman Sen, and Seababrata Mukherjee	
Topologically enabled high- Q chiral electromagnetically induced transparency in all-dielectric metasurfaces (9 pages)	013513
Yingfang Zhang, Tao Hu, Penglai Guo, and Jianqing Li	
Light propagation in magnetoelectric materials: The role of optical coefficients in refractive index modulation (11 pages)	013514
Vitorio A. De Lorenci and Lucas T. de Paula	
Induced Berry connection and photonic spin Hall effect in optical Dirac theory (12 pages)	013515
Lili Yang and Longlong Feng	
Programmable interferometer: An application in quantum channels (10 pages)	013516
J. S. Araújo, K. Khan, and A. S. Coelho	
Transverse momentum exchange in optical vector beam propagation: Theory and experiment (10 pages)	013517
J. M. Nichols, D. V. Nickel, and F. Bucholtz	
Scalar product for the radiation of resonant modes (11 pages)	013518
Maria Paszkiewicz-Idzik, Lukas Rebholz, Carsten Rockstuhl, and Ivan Fernandez-Corbaton	
Nonreciprocal optical metasurface based on spinning cylinders (11 pages)	013519
Zheng Yang, Wanyue Xiao, Hengzhi Li, Hao Pan, and Shubo Wang	
Band structures of generalized eigenvalue equations and conic sections (7 pages)	013520
Takuma Isobe, Tsuneya Yoshida, and Yasuhiro Hatsugai	
Plasmon hybridization and the charge-transfer plasmon in a nanoparticle complex: An equivalent circuit model approach (11 pages)	013521
Yifan Zhi and Wei Zhang	
Cooperative absorption model for photon avalanche upconversion (6 pages)	013522
Glauro S. Maciel, Anderson S. L. Gomes, and Cid B. de Araújo	
Time-reversed Landau-Zener tunneling in synthetic temporal lattices (7 pages)	013523
Lange Zhao, Shulin Wang, Chengzhi Qin, Zhuoxiong Liu, Lingzhi Zheng, Bing Wang, and Peixiang Lu	
Diffraction-resistant arbitrary-trajectory plasmon with multitunability (9 pages)	013524
Zhang Ruan, Junxi Zhang, Yanru Chen, Shibin Wen, Meixia Ma, and Dongmei Deng	
Nanomechanical squeezing: Toward quantum imaging with atomic force microscopy (15 pages)	013525
Wael M. Al-Sawai and Ali Passian	
Noise avalanche and its quantum quenching in bosonic chains with random off-diagonal disorder (11 pages)	013526
Vladislav Stefanov, Andre Stefanov, Lea Sirota, Gregory Slepian, and Dmitri Mogilevtsev	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 112, NUMBER 1

JULY 2025

Local perfect chirality at reflection zeros away from exceptional points in optical whispering-gallery microcavities (<i>12 pages</i>)	013527
Junda Zhu, Haitao Liu, Fang Bo, Can Tao, Guoquan Zhang, and Jingjun Xu	
Supercorrelated decay in a quasiperiodic nonlinear waveguide: From Markovian to non-Markovian transitions (<i>13 pages</i>)	013528
Jia-Qi Li, Tian-Yu Zhou, and Xin Wang	
Chiral solitons in quadratic quasi-phase-matched photonic crystals (<i>11 pages</i>)	013529
Yuxin Guo, Xuening Wang, Zhiwei Fan, Zhaopin Chen, Qiuyi Ning, Hexiang He, Wei Pang, Li Zhang, and Yongyao Li	
☞ Electromagnetic helicity in twisted cavity resonators (<i>12 pages</i>)	013530
E. C. I. Paterson, J. Bourhill, M. E. Tobar, and M. Goryachev	
Coupled two-dye gain-medium-based photonic nanolasers for short-pulse generation (<i>18 pages</i>)	013531
Shadman Shahid and Muhammad Anisuzzaman Talukder	
☞ Gain-modified emission dynamics between two quantum emitters in a plasmonic gain cavity system (<i>23 pages</i>)	013532
Becca VanDrunen, Juanjuan Ren, Sebastian Franke, and Stephen Hughes	
Increased output of superradiant light-emitting diodes due to population fluctuations (<i>9 pages</i>)	013533
Igor E. Protsenko and Alexander V. Uskov	
Cross-Kerr nonlinearity and four-wave mixing in an N -type four-level coherent system (<i>9 pages</i>)	013534
Jiaxin Ou, Yupeng Duan, and Yingjie Du	
Phase-controlled robust tripartite quantum entanglement in cavity-magnon optomechanics (<i>10 pages</i>)	013535
Jing-Xue Liu, Ya-Feng Jiao, Bin Yin, Hong-Yun Yu, Ruo-Chen Wang, and Hui Jing	
Single solitons and intermode breathing solitons in MgF_2 microresonators (<i>7 pages</i>)	013536
Alioune Niang, Logan Courtright, Gary Carter, and Curtis R. Menyuk	
Self-phase-modulation of non-Gaussian pulses in multiple quantum wells by a tunneling mechanism (<i>10 pages</i>)	013537
Rohit Mukherjee, Nitu Borgohain, Rohit Hazra, Kingshuk Bose, and Arindam Kumar Chatterjee	

Quantum optics

Controlling the polarization of superfluorescence in a degenerate system using a continuous resonant laser field (<i>8 pages</i>)	013701
K. Kitano, T. Kobayashi, and H. Maeda	
Single-atom optical gate and single-photon source based on magneto-optical effects in a waveguide (<i>6 pages</i>)	013702
A. S. Kuraptsev and I. M. Sokolov	
Analytic solution to degenerate biphoton states generated in arrays of nonlinear waveguides (<i>21 pages</i>)	013703
Jefferson Delgado-Quesada, David Barral, Kamel Bencheikh, and Edgar A. Rojas-González	
Quantum-optical scattering by macroscopic lossy objects: A general approach (<i>37 pages</i>)	013704
A. Ciattoni	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A

THIRD SERIES, VOLUME 112, NUMBER 1

JULY 2025

Coupled states of cold ^{174}Yb atoms in a high-finesse cavity (<i>8 pages</i>)	013705
Saran Shaju, Dmitry Sholokhov, Simon B. Jäger, and Jürgen Eschner	
Triphoton generation and heralded biphotons via spontaneous six-wave mixing in coherently driven cold atoms (<i>11 pages</i>)	013706
Xin-Yi Ling, Hui-Min Zhao, Xiao-Jun Zhang, and Jin-Hui Wu	
Non-Hermitian optical scattering in cold atoms via four-wave mixing (<i>14 pages</i>)	013707
Xiao Liu, M. Artoni, G. C. La Rocca, and Jin-Hui Wu	
Robustness of entanglement in a non-Hermitian cavity-optomechanical system even away from exceptional points (<i>11 pages</i>)	013708
Jia-Jia Wang, Yu-Hong He, Chang-Geng Liao, Rong-Xin Chen, and Jacob A. Dunningham	
High-efficiency telecom frequency conversion via a diamond-type atomic ensemble (<i>7 pages</i>)	013709
Ling-Chun Chen, Meng-Yi Lin, Jiun-Shiuan Shiu, Xuan-Qing Zhong, Po-Han Tseng, and Yong-Fan Chen	
Modeling and optimization of pulsed-squeezed-state generation in a ring-resonator system (<i>10 pages</i>)	013710
Marc M. Dignam and Marco Liscidini	
Excitation of narrow x-ray transitions in thin-film cavities by focused pulses (<i>17 pages</i>)	013711
Dominik Lentrodt, Christoph H. Keitel, and Jörg Evers	
Magnon blockade in spin-magnon systems with frequency detuning (<i>11 pages</i>)	013712
Sheng Zhao, Ya-Long Ren, Xin-Lei Hei, Xue-Feng Pan, and Peng-Bo Li	
Stochastic-Chebyshev-expansion approach for the simulation of linear polariton spectroscopy in the collective-coupling regime (<i>12 pages</i>)	013713
Braden M. Weight and Pengfei Huo	
Persistent quantum advantage with definite photon-number states in lossy multiple-phase estimation (<i>11 pages</i>)	013714
Min Namkung, Dong-Hyun Kim, Seongjin Hong, Changhyoup Lee, and Hyang-Tag Lim	
Wigner-negative states in the steady-state emission of a two-level system driven by squeezed light (<i>8 pages</i>)	013715
Miriam J. Leonhardt and Scott Parkins	
Optimizing the brightness of a spontaneous parametric down-conversion source in Laguerre-Gaussian modes using a type-0 periodically poled nonlinear crystal (<i>12 pages</i>)	013716
Jungmo Lee, Kyungdeuk Park, Dongkyu Kim, Yonggi Jo, Dong-Gil Im, and Yong Sup Ihn	
Many-body enhancement of energy storage in a waveguide QED quantum battery (<i>9 pages</i>)	013717
Salvatore Tirone, Gian Marcello Andolina, Giuseppe Calajò, Vittorio Giovannetti, and Davide Rossini	
Vacuum-induced Goos-Hänchen shift (<i>10 pages</i>)	013718
Zareen A. Khan, Anwar Ali Khan, Zeeshan Ali, Rahmatullah, Ziauddin, and Shi-Hai Dong	
Quantum beat of two single photons in the transverse momentum space (<i>12 pages</i>)	013719
Bixiang Guo, Ziyi Chen, Luca Maggio, Wenbo Wu, Shiting Liu, Vincenzo Tamma, and Jingyun Fan	
Stark-induced tunable phase transition in the two-photon Dicke-Stark model (<i>7 pages</i>)	013720
Cui-Lu Zhai, Wei Wu, Chun-Wang Wu, and Ping-Xing Chen	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW A	THIRD SERIES, VOLUME 112, NUMBER 1	JULY 2025
Efficient tensor-network simulation of multiemitter non-Markovian systems (<i>13 pages</i>)		013721
Irene Papaefstathiou, Daniel Malz, J. Ignacio Cirac, and Mari Carmen Bañuls		
Many-body quantum dimerization in two-dimensional atomic arrays (<i>12 pages</i>)		013722
Giuseppe Calajó, Matija Tečer, Simone Montangero, Pietro Silvi, and Marco Di Liberto		
Heralded generation of entangled states based on N -bundle emission in a waveguide magnonics system (<i>13 pages</i>)		013723
Chengsong Zhao, Wenlin Li, Biao Xiong, Jia-Xin Peng, Ling Zhou, and Wei-jiang Gong		
COMMENTS		
Comment on “Hermitian stochastic methodology for x-ray superfluorescence” (<i>2 pages</i>)		017701
Jeong-Wan Park, Kwang-Je Kim, and Ryan Lindberg		
Reply to “Comment on ‘Hermitian stochastic methodology for x-ray superfluorescence’ ” (<i>5 pages</i>)		017702
Stasis Chuchurka, Vladislav Sukharnikov, and Nina Rohringer		
ERRATA		
Erratum: Quantum Langevin theory for two coupled phase-conjugated electromagnetic waves [Phys. Rev. A 107 , 053703 (2023)] (<i>2 pages</i>)		019901(E)
Yue Jiang, Yefeng Mei, and Shengwang Du		
Erratum: Superradiance-driven optomechanical entanglement [Phys. Rev. A 111 , 053713 (2025)] (<i>2 pages</i>)		019902(E)
Kai-Wei Huang, Xin Wang, Yi Ren, and Hao Xiong		
Erratum: Low-depth phase oracle using a parallel piecewise circuit [Phys. Rev. A 111 , 062420 (2025)] (<i>2 pages</i>)		019903(E)
Zhu Sun, Gregory Boyd, Zhenyu Cai, Hamza Jnane, Bálint Koczor, Richard Meister, Romy Minko, Benjamin Pring, Simon C. Benjamin, and Nikitas Stamatopoulos		
Erratum: Forces on alkali Rydberg atoms due to nonlinearly polarized light [Phys. Rev. A 111 , 053120 (2025)] (<i>1 page</i>)		019904(E)
A. Bhowmik and D. Blume		
Erratum: Two-dimensional non-Hermitian fermionic superfluidity with spin imbalance [Phys. Rev. A 109 , 063306 (2024)] (<i>1 page</i>)		019905(E)
Tingting Shi, Siqi Wang, Zhiyue Zheng, and Wei Zhang		
Erratum: Generic optical singularities in Brewster-reflected postparaxial beam fields [Phys. Rev. A 103 , 013510 (2021)] (<i>2 pages</i>)		019906(E)
Anirban Debnath and Nirmal K. Viswanathan		