

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 113, NUMBER 11

MARCH 2026-15(I)

Interplay of spin-orbit interaction and Andreev reflection in proximized quantum dots (<i>12 pages</i>)	115430
Bogdan R. Buřka, Tadeusz Domański, and Karol I. Wysokiński	

PERSPECTIVE

Report on reproducibility in condensed matter physics (<i>13 pages</i>)	119601
A. Akrap, D. Bordelon, S. Chatterjee, E. D. Dahlberg, R. P. Devaty, S. M. Frolov, C. Gould, L. H. Greene, S. Guchhait, J. J. Hamlin, B. M. Hunt, M. J. A. Jardine, M. Kayyalha, R. C. Kurchin, V. Kozii, H. F. Legg, I. I. Mazin, V. Mourik, A. B. Özgüler, J. Peñuela-Parra, B. Seradjeh, B. Skinner, K. F. Quader, and J. P. Zwolak	

ERRATA

Erratum: Magnetic properties of monolayer, multilayer, and bulk CrTe ₂ [Phys. Rev. B 111 , 035118 (2025)] (<i>3 pages</i>)	119901(E)
A. A. Katanin and E. M. Agapov	

Impact of the valence band on Rydberg excitons in cuprous oxide quantum wells (<i>13 pages</i>)	115413
Niklas Scheuler, Jörg Main, Patric Rommel, Frieder Pfeiffer, Stefan Scheel, and Pavel A. Belov	
☞ Feynman paradox in a spherical axion insulator (<i>9 pages</i>)	115414
Anastasiia Chyzhykova, Jeroen van den Brink, and Flavio S. Nogueira	
Generation and manipulation of photon number wave packets in photonic cavities (<i>12 pages</i>)	115415
L. Nimmesgern, M. Cygorek, D. E. Reiter, and V. M. Axt	
Finite-size effects on metallization versus chiral Majorana fermions (<i>9 pages</i>)	115416
Xin Yue (岳鑫), Guo-Jian Qiao (乔国健), and C. P. Sun (孙昌璞)	
Ultrafast terahertz photoconductivity and near-field imaging of nanoscale inhomogeneities in multilayer epitaxial graphene nanoribbons (<i>13 pages</i>)	115417
Arvind Singh, Jan Kunc, Tinkara Troha, Hynek Němec, and Petr Kužel	
☞ Shubnikov–de Haas oscillations in two-dimensional hole gases with competing cyclotron and Zeeman energy (<i>5 pages</i>)	115418
Davide Costa, Lucas E. A. Stehouwer, Davide Degli Esposti, and Giordano Scappucci	
Magnetotransport properties of an unconventional Rashba spin-orbit coupled two-dimensional electronic system (<i>11 pages</i>)	115419
Aryan Pandita and SK Firoz Islam	
☞ Dispersion of collective modes in spinful fractional quantum Hall states on the sphere (<i>33 pages</i>)	115420
Rakesh K. Dora and Ajit C. Balram	
Electric spin and valley tunneling Hall effects (<i>8 pages</i>)	115421
W. Zeng	
Dynamically tunable chiral absorptance based on quasibound states in the continuum via Brillouin zone folding (<i>14 pages</i>)	115422
Jiangbin Li, Qilin Duan, Jiahao Zhi, Xin Dong, Yidan Hu, Bin Li, Shan Zhu, and Huanyang Chen	
Skin effect protected by custodial chiral symmetry (<i>9 pages</i>)	115423
Xiaoran Jing, Tian Chen, and Xiangdong Zhang	
Higher-order hyperbolic topological solitonic insulators (<i>14 pages</i>)	115424
Yingxu Zong, Weixuan Zhang, Lei Huang, and Xiangdong Zhang	
Nonvolatile electrically controlled spin valve via homojunction engineering (<i>13 pages</i>)	115425
Yinggan Zhang, Baisheng Sa, Jian Zhou, and Zhimei Sun	
Ballistic transport in one-dimensional Rashba systems in the context of Majorana nanowires (<i>12 pages</i>)	115426
Haining Pan, Jacob R. Taylor, Jay D. Sau, and Sankar Das Sarma	
Tunneling Hall effects in a 1T'-MoS ₂ -based <i>n-p-n</i> junction under electric and light fields (<i>12 pages</i>)	115427
Xingfei Zhou, Mengying Li, Fenghua Qi, Yafang Xu, and Guojun Jin	
Linear thermal noise in a four-terminal system with a Berry curvature dipole (<i>7 pages</i>)	115428
Wenyu Chen, Miaomiao Wei, Yunjin Yu, Fuming Xu, and Jian Wang	
Andreev spin qubit protected by Franck-Condon blockade (<i>7 pages</i>)	115429
P. D. Kurilovich, T. Vakhel, T. Connolly, C. G. L. Böttcher, and B. van Heck	

(Continued)

Spin-photon entanglement dynamics under cavity-delayed feedback (<i>9 pages</i>)	115310
Noam Tur and Ido Schwartz	
Optical spectrum of excitonic complexes in InP/ZnSe quantum dots: Effect of tetrahedral shape, valence band coupling, and many-body interactions (<i>11 pages</i>)	115311
Josep Planelles and Juan I. Climente	
Surface physics, nanoscale physics, low-dimensional systems	
Fluctuation-dissipation bounds in time-dependently driven conductors (<i>14 pages</i>)	115401
Ludovico Tesser, José Balduque, and Janine Splettstoesser	
Quantifying humidity effects on commensurability-dependent friction in bilayer graphene: A generalized registry index model (<i>13 pages</i>)	115402
Binyang Shao, Xiaoyan Ren, Kun Liu, Lili Zhang, Yigang Cao, Xingju Zhao, and Shunfang Li	
Influence of magnon-magnon and magnon-phonon interactions on magnon relaxation under external strain and magnetic fields in monolayer MnSe ₂ (<i>10 pages</i>)	115403
Chang-Hao Ding, Wenwen Liu, Yuan Yao, Hao Chen, Nannan Luo, Jiang Zeng, Li-Ming Tang, Hui Pan, and Ke-Qiu Chen	
Theoretical study on the physical origin of room-temperature ferroelectricity in a Bi ₂ TeO ₅ monolayer (<i>7 pages</i>)	115404
Xiao-Feng Luo, Bo-Wen Huang, Xue Jiang, Jin-Zhu Zhao, and Ji-Jun Zhao	
Monolayer and bilayer 1T-TaSe ₂ in the star-of-David charge density wave phase: Insights from intra- and interlayer bonding and quasibonding (<i>8 pages</i>)	115405
Shi-Xuan Yuan, Yu-Meng Gao, Han Zhang, Mei-Yan Tian, Meng-Jia Huai, Jiang-Long Wang, and Xing-Qiang Shi	
Emergence of Hermitian topology from non-Hermitian knots (<i>12 pages</i>)	115406
Gaurav Hajong, Ranjan Modak, and Bhabani Prasad Mandal	
Unsupervised learning for non-Hermitian systems with higher-order hopping (<i>8 pages</i>)	115407
Taeyoon Kim, Yihao Xu, Yuxiao Li, Alexander Montes McNeil, Allen Zhang, Michael Moebius, Sunil Mittal, and Yongmin Liu	
Valley-selective linear dichroism and excitonic effects in Lieb-lattice altermagnets (<i>8 pages</i>)	115408
Haonan Wang, Xilong Xu, Du Li, and Li Yang	
Chiral anomaly induced nonlinear transverse planar transport phenomena in three-dimensional spin-orbit coupled metals (<i>17 pages</i>)	115409
Rishi G. Gopalakrishnan, Binayyak B. Roy, Gargee Sharma, and Sumanta Tewari	
Plasmonic nanocavity induced valley manipulation in monolayer transition metal dichalcogenides: A phenomenological description (<i>8 pages</i>)	115410
Jiawei Sun, Zhiwei Hu, Wen Chen, Yang Li, Huatian Hu, and Hongxing Xu	
One-dimensional moiré engineering in zigzag graphene nanoribbons on <i>h</i> -BN (<i>14 pages</i>)	115411
Ryosuke Okumura, Naoto Nakatsuji, Takuto Kawakami, and Mikito Koshino	
Evanescence mode assisted Klein tunneling in dual-gated bilayer graphene (<i>6 pages</i>)	115412
Yupeng Huang and W. Zeng	

(Continued)

Semiconductors I: bulk

- Photoluminescence study of hydrogen-passivated type-II silicon clathrate films (7 pages) 115201
Yinan Liu, Joseph P. Briggs, Reuben T. Collins, Meenakshi Singh, P. Craig Taylor, Khalid Mateen, Moussa Kane, and Carolyn A. Koh
- Unified theory of the photovoltaic Hall effect by field- and light-induced Berry curvatures (12 pages) 115202
Yuta Murotani, Tomohiro Fujimoto, and Ryusuke Matsunaga
- Significant first-principles electron-phonon coupling effects in the LiZnAs and ScAgC half-Heusler thermoelectrics (15 pages) 115203
Vinod Kumar Solet and Sudhir K. Pandey
- Ab initio* study of carrier mobility in Bi₂O₂Se (9 pages) 115204
Yubo Yuan, Ziyi Zhu, Jiaming Hu, and Wenbin Li
- Zero-phonon lines, electron-phonon coupling, and optically induced electron spin polarization of divacancies in *p*-type 4H-SiC: A low-temperature electron paramagnetic resonance study (10 pages) 115205
H. J. von Bardeleben, Timur Biktagirov, and Uwe Gerstmann

Semiconductors II: surfaces, interfaces, microstructures, and related topics

- Electric field induced spin and/or valley polarization in Weiss oscillations of monolayer 1T'-MoS₂ (10 pages) 115301
Yang Li, Wen Zeng, and Rui Shen
- Topological edge states in curved zigzag superlattices in nonlinear semiconductor microcavity exciton polaritons (8 pages) 115302
Jing Wang, Tobias Schneider, Wei Hu, Stefan Schumacher, and Xuekai Ma
- Andreev reflection anomaly in superconducting Weyl semimetal junctions (8 pages) 115303
Mou Yang, Yun-Peng Kong, Hou-Jian Duan, Ming-Xun Deng, and Rui-Qiang Wang
- Valley physics in the two-band $k \cdot p$ model for SiGe heterostructures and spin qubits (21 pages) 115304
Tancredi Salamone, Biel Martinez Diaz, Jing Li, Lukas Cvitkovich, and Yann-Michel Niquet
- Nonmagnetic vacancy engineering for enhanced spin-orbit and valley splitting in WS₂/CrBr₃ van der Waals heterostructures (10 pages) 115305
Danyang Guo, Yongsheng Zhao, Haishan Zhang, Juan Lyu, Jian Gong, and Shaoqiang Guo
- Spin-photon coupling using circular double quantum dots (13 pages) 115306
Ferdinand Omlor, Florinda Viñas Boström, and Martin Leijnse
- Quantifying mode-resolved coherence in phonon transport in GaN/AlN superlattices (13 pages) 115307
Li-Mu Wang, Hong-Ao Yang, and Bing-Yang Cao
- Realization of condensed moiré exciton polaritons with tunable coherence in twisted photonic lattices at room temperature (6 pages) 115308
Chunzi Xing, Yu Wang, Tobias Schneider, Xiaokun Zhai, Xinzhen Zhang, Haitao Dai, Xiao Wang, Anlian Pan, Zhenyu Xiong, Hao Wu, Yuan Ren, Stefan Schumacher, Xuekai Ma, and Tingge Gao
- Study of exciton-photon coupling in CuCl semiconductor microcavities with large decay of cavity photons (12 pages) 115309
Rintaro Miyanaga, Goro Oohata, Satoshi Tanaka, and Kohji Mizoguchi

(Continued)

Probing the critical behavior of a sign-problematic model with Monte Carlo simulations (<i>8 pages</i>)	115144
Ye Ling, Yuting Wang, Wenan Guo, and Yuhai Liu	
Ideal nodal-sphere semimetal in the three-dimensional boron allotrope CT-B ₂₄ (<i>8 pages</i>)	115145
Xiao-Jing Gao, Yanfeng Ge, and Yan Gao	
Higher-dimensional overscreened fixed points and their deformations (<i>8 pages</i>)	115146
Aleksandar Ljepoja, L. C. R. Wijewardhana, and Yashar Komijani	
Charge carrier relaxation dynamics in the one-dimensional Kondo lattice model (<i>16 pages</i>)	115147
Arturo Perez-Romero, Mica Schwarm, and Fabian Heidrich-Meisner	
☞ Spin-dependent quasiparticle lifetimes in altermagnets (<i>17 pages</i>)	115148
Kristoffer Leraand, Kristian Mæland, and Asle Sudbø	
Quantum phases in a two-dimensional generalized interacting Su-Schrieffer-Heeger model (<i>9 pages</i>)	115149
Rahul Ghosh	
Soft symmetries of topological orders (<i>17 pages</i>)	115150
Ryohei Kobayashi and Maissam Barkeshli	
Topological charge and bulk-surface correspondence for quad-helicoid surface states in topological semimetals with two glide-time-reversal symmetries (<i>18 pages</i>)	115151
Taiki Yukitake and Shuichi Murakami	
Near-flat-band-driven violation of the Pauli limit in heavy fermion superconductors (<i>11 pages</i>)	115152
Yan-Xiao Wang and Yin Zhong	
☞ Majorana braiding simulations with projective measurements (<i>12 pages</i>)	115153
Philipp Frey, Themba Hodge, Eric Mascot, and Stephan Rachel	
Buckling and flat bands in twisted bilayer graphene (<i>11 pages</i>)	115154
Jannes van Poppelen and Annica M. Black-Schaffer	
Transient dynamical phase diagram of the spin-boson model at finite temperature (<i>18 pages</i>)	115155
Olga Goulko, Hsing-Ta Chen, Moshe Goldstein, and Guy Cohen	
Correlation between entanglement and the negative sign problem (<i>6 pages</i>)	115156
Ping Xu, Yang Shen, Yuan-Yao He, and Mingpu Qin	
Real critical exponents from the ε -expansion in an interacting $U(1)$ model with non-Hermitian Z_4 anisotropy (<i>8 pages</i>)	115157
Eduard Naichuk, Jeroen van den Brink, and Flavio S. Nogueira	
Exceptional-point induced dynamic sensitivity to particle-number parity (<i>9 pages</i>)	115158
J. Y. Liu-Sun and Z. Song	
☞ Interlayer coupling in two-dimensional MoS ₂ and phosphorene bilayers: Benchmark quantum Monte Carlo study of interaction energies and quasiparticle band gaps (<i>7 pages</i>)	115159
Y. Huang, M. Manzoor, J. Brndiar, L. Mitas, P. R. C. Kent, and I. Štich	
☞ Metastability of the topological magnetic orders in the chiral antiferromagnet EuPtSi (<i>11 pages</i>)	115160
S. Rousseau, G. Seyfarth, G. Knebel, D. Aoki, Y. Ōnuki, and A. Pourret	

(Continued)

CONTENTS - *Continued*

PHYSICAL REVIEW B

THIRD SERIES, VOLUME 113, NUMBER 11

MARCH 2026-15(I)

Designing second-order topological insulators in heterobilayers via interlayer coupling and out-of-plane magnetic fields (<i>9 pages</i>)	115128
Xiaoliang Xiao, Weixiang Kong, Jiali Yang, Jin-Zhu Zhao, and Yuanjun Jin	
Compact representation and long-time extrapolation of real-time data for quantum systems using the ESPRIT algorithm (<i>23 pages</i>)	115129
André Erpenbeck, Yuanran Zhu, Yang Yu, Lei Zhang, Richard Gerum, Olga Goulko, Chao Yang, Guy Cohen, and Emanuel Gull	
Magnetic field and pressure tuning of the heavy fermion antiferromagnet CePdIn (<i>9 pages</i>)	115130
Bin Shen, Feng Du, Rui Li, Hang Su, Yasuyuki Shimura, Takahiro Onimaru, Kazunori Umeo, Xin Lu, Toshiro Takabatake, Michael Smidman, and Huiqiu Yuan	
Angular dependence and powder average of resonant inelastic x-ray scattering (<i>23 pages</i>)	115131
Timothy G. Burrow, Myrtille O. J. Y. Hunault, Fabien Besnard, Amélie Juhin, and Christian Brouder	
Generalized Nagaoka ferromagnetism accompanied by flavor-selective Mott states in an $SU(N)$ Fermi-Hubbard model (<i>11 pages</i>)	115132
Juntaro Fujii, Kazuki Yamamoto, and Akihisa Koga	
Correlated electronic structure of the alternating monolayer-bilayer nickelate $La_5Ni_3O_{11}$ (<i>10 pages</i>)	115133
Harrison LaBollita and Antia S. Botana	
Anisotropic scattering rates in strain-tuned Sr_2RuO_4 (<i>10 pages</i>)	115134
Ben Currie, David T. S. Perkins, Evgeny Kozik, Joseph J. Betouras, and Jörg Schmalian	
Non-Hermitian quantum geometric tensor and nonlinear electrical response (<i>13 pages</i>)	115135
Kai Chen and Jie Zhu	
Gradient-expansion of the inhomogeneous electron gas revisited (<i>24 pages</i>)	115136
Mario Benites, Angel Rosado, and Efstratios Manousakis	
$CaFe_2O(PO_4)_2$: A compound with $S = \frac{5}{2}$ corner sharing triangular sawtooth chains (<i>11 pages</i>)	115137
R. C. Moharana, Sk. Soyeab Ali, V. K. Sahu, J. Link, I. Heinmaa, S. Chattopadhyay, S. K. Panda, R. Stern, T. Chakrabarty, and B. Koteswararao	
Antiferromagnetism and Kekulé valence bond order in the honeycomb optical Su-Schrieffer-Heeger-Hubbard model (<i>7 pages</i>)	115138
Sohan Malkaruge Costa, Benjamin Cohen-Stead, and Steven Johnston	
Generalized Cutler-Mott relation in a crossover between Fermi and non-Fermi liquid regimes of two-site charge Kondo simulators (<i>10 pages</i>)	115140
T. K. T. Nguyen and M. N. Kiselev	
Multipolar fluctuations from localized $4f$ electrons in $CeRh_2As_2$ (<i>16 pages</i>)	115141
Koki Numa, Eri Matsuda, Akimitsu Kirikoshi, and Junya Otsuki	
Incommensurate twisted bilayer graphene: Emerging quasiperiodicity and stability (<i>19 pages</i>)	115142
Ian Jauslin and Vieri Mastropietro	
Theoretical study of the origin of x-ray atomic background anomalies by a full-potential multiple scattering approach (<i>16 pages</i>)	115143
Kazuki Yoshikawa, Fabio Iesari, Yoshiaki Tamura, Naoki Nakatani, Fukiko Ota, Andrea Di Cicco, and Keisuke Hatada	

(Continued)

Bound states and Pb 6 <i>p</i> orbital selectivity in orthorhombic CsPbI ₃ bulk crystal (<i>11 pages</i>)	115112
L. Craco, B. Oliveira, S. S. Carara, P. H. Z. de Arruda, and S. Leoni	
Dirac bilinears in condensed matter physics: Relativistic correction for observables and conjugate electromagnetic fields (<i>23 pages</i>)	115113
Shintaro Hoshino, Tatsuya Miki, Michi-To Suzuki, and Hiroaki Ikeda	
Phase diagram and Ashkin-Teller universality in the classical square-lattice Heisenberg-compass model (<i>8 pages</i>)	115114
Yuchen Fan	
Spin and charge transport mediated by fractionalized excitations (<i>21 pages</i>)	115115
Alexey Ermakov and Alessandro Principi	
Hybrid quantum-classical matrix product state and Lanczos methods for electron-phonon systems with strong electronic correlations: Application to disordered systems coupled to Einstein phonons (<i>16 pages</i>)	115116
Heiko Georg Menzler, Suman Mondal, and Fabian Heidrich-Meisner	
Lattice and orbital-resolved fermiology of metallenes (<i>13 pages</i>)	115117
Kameyab Raza Abidi, Mohammad Bagheri, and Pekka Koskinen	
Dynamic order of a quantum spin liquid at nonzero temperatures (<i>8 pages</i>)	115118
Minsu Park, Masafumi Udagawa, and Eun-Gook Moon	
Temperature-dependent nuclear quantum effects in muoniated benzene: A path integral molecular dynamics study (<i>8 pages</i>)	115119
Li Deng, Liangwen Chen, Lei Yang, and Zhiyu Sun	
Phase diagrams of $S = \frac{1}{2}$ bilayer models of SU(2) symmetric antiferromagnets (<i>10 pages</i>)	115120
Fan Zhang, Nisheeta Desai, Wenan Guo, and Ribhu K. Kaul	
Photodynamic melting of phase-reversed charge stripes and enhanced condensation (<i>15 pages</i>)	115121
Jianhao Sun, Richard T. Scalettar, and Rubem Mondaini	
Constructing a variational ground state of matter fermions coupled to a vison pair in Kitaev's honeycomb model (<i>9 pages</i>)	115122
Theo Grace and Alessandro Principi	
Quantum path-integral method for the fictitious-particle Hubbard model (<i>15 pages</i>)	115123
Zhijie Fan, Tianning Xiao, and Youjin Deng	
Interplay between antiferromagnetic spin fluctuations and electron-phonon coupling: Origin of the peak-dip-hump structure in the antinodal spectrum of high- T_c cuprate superconductors (<i>19 pages</i>)	115124
Xinyue Liu and Tao Li	
Origin of the distinct ground states in the two polymorphs of VSe ₂ (<i>9 pages</i>)	115125
Li-Ya Qiao, Xiu-Cai Jiang, Ming-Cui Ding, and Yu-Zhong Zhang	
Explicit formula for perturbation theory at any order with infinitely many perturbations (<i>9 pages</i>)	115126
J. M. Jones and M. W. Long	
Observation of magnetic polarons in EuB ₆ by small-angle neutron scattering (<i>8 pages</i>)	115127
Gabrielle Beaudin, Alexandre Désilets-Benoit, Andrea Daniele Bianchi, Robert Arnold, Stavros Samothrakis, Nikola Anna Galvan Leos, Jorge L. Gavilano, Michel Kenzelmann, Kilian D. Stenning, Mark Laver, Simon Gerber, Michael Nicklas, Robert Cubitt, and Charles Dewhurst	

(Continued)

EDITORIALS AND ANNOUNCEMENTS

Editorial: Introducing Perspectives (2 pages)	110001
Sarima Kancharla and Stephen Nagler	

ARTICLES

Electronic structure and strongly correlated systems

Approximate Markovianity in high-temperature hidden Markov networks (19 pages)	115101
Yifan F. Zhang and Sarang Gopalakrishnan	
Berry curvature of low-energy excitons in rhombohedral graphene (14 pages)	115102
Henry Davenport, Frank Schindler, and Johannes Knolle	
Ordering the topological order in the fractional quantum Hall effect (45 pages)	115103
Meng Cheng, Seth Musser, Amir Raz, Nathan Seiberg, and T. Senthil	
Wilson polygons and the topology of zero-dimensional systems (6 pages)	115104
Gen Yin, Rameswar Bhattacharjee, Thomas Wang, and Miklos Kertesz	
Bipartite fluctuations and charge fractionalization in quantum wires (11 pages)	115105
Magali Korolev and Karyn Le Hur	
☞ Gauge theory and mixed state criticality (11 pages)	115106
Takamasa Ando, Shinsei Ryu, and Masataka Watanabe	
Integrability of a family of clean SYK models from the critical Ising chain (15 pages)	115107
Kohei Fukai and Hosho Katsura	
☞ Knight shift measurements probing Fermi surface changes under pressure in CeRhIn ₅ (10 pages)	115108
Y.-H. Nian, C. Chaffey, P. Sherpa, L. Santillan, K. Nagashima, P. Klavins, V. Taufour, and N. J. Curro	
Interplay of Rashba spin-orbit coupling and Coulomb interaction in topological spin-triplet excitonic condensates (12 pages)	115109
Quoc-Huy Ninh, Huu-Nha Nguyen, and Van-Nham Phan	
Percolative instabilities and sparse-limit fractality in 1T-TaS ₂ (11 pages)	115110
Poulomi Maji, Md Aquib Molla, Koushik Dey, Bikash Das, Sambit Choudhury, Tanim Kunda, Pabitra Kumar Hazra, Mainak Palit, Sujan Maity, Bipul Karmakar, Kai Rosnagel, Sanjoy Kr Mahatha, Bhaskaran Muralidharan, Shamashis Sengupta, Sanchari Goswami, and Subhadeep Datta	
Marginal Fermi liquids from Fermi surfaces coupled via matrix boson gas (15 pages)	115111
Vibhu Mishra	



(Continued)



2469-9950(20260315)113:11;1-Y