PHYSICAL REVIEW B™

For editorial and subscription correspondence, please see inside front cover
(ISSN: 2469-9950)

PERIODICALS
Postmaster send address changes to:

APS Subscription Services
P.O. Box 41
Annapolis Junction, MD 20701

THIRD SERIES, VOLUME 102, NUMBER 24 *CONTENTS* **DECEMBER 2020-15(II)**

RAPID COMMUNICATIONS

Electronic structure and strongly correlated systems

Benchmarking global $SU(2)$ symmetry in two-dimensional tensor network algorithms *(6 pages)* . . . . . 241101(R)
Philipp Schmoll and Román Orús

Higher-order topological insulator in a dodecagonal quasicrystal *(7 pages)* . . . . . 241102(R)
Chun-Bo Hua, Rui Chen, Bin Zhou, and Dong-Hui Xu

Nonthermal excitonic condensation near a spin-state transition *(6 pages)* . . . . . 241103(R)
Philipp Werner and Yuta Murakami

℘ Hyperbolicity in two-dimensional transition metal ditellurides induced by electronic bands nesting *(5 pages)* . . . . 241104(R)
Hongwei Wang and Tony Low

In-plane Hall effect in two-dimensional helical electron systems *(5 pages)* . . . . . 241105(R)
Vladimir A. Zyuzin

Tunability of multiple ultraflat bands and effect of spin-orbit coupling in twisted bilayer transition metal dichalcogenides *(6 pages)* . . . . . 241106(R)
Zhen Zhan, Yipei Zhang, Pengfei Lv, Hongxia Zhong, Guodong Yu, Francisco Guinea, José Ángel Silva-Guillén, and Shengjun Yuan

Emergence of skyrmionium in a two-dimensional $CrGe(Se,Te)_3$ Janus monolayer *(5 pages)* . . . . . 241107(R)
Yun Zhang, Changsong Xu, Peng Chen, Yousra Nahas, Sergei Prokhorenko, and Laurent Bellaiche

Correlation driven phonon anomalies in bulk FeSe *(5 pages)* . . . . . 241108(R)
Ghanashyam Khanal and Kristjan Haule

Unusual ^{27}Al NMR shift in the Weyl-fermion systems LaAlGe and PrAlGe *(5 pages)* . . . . . 241109(R)
D. Tay, T. Shang, P. Puphal, E. Pomjakushina, H.-R. Ott, and T. Shiroka

Strongly coupled charge, orbital, and spin order in $TbTe_3$ *(6 pages)* . . . . . 241110(R)
S. Chillal, E. Schierle, E. Weschke, F. Yokaichiya, J.-U. Hoffmann, O. S. Volkova, A. N. Vasiliev, A. A. Sinchenko, P. Lejay, A. Hadj-Azzem, P. Monceau, and B. Lake

Exact solution of electronic transport in semiconductors dominated by scattering on polaronic impurities *(6 pages)* 241111(R)
J. Krsnik, I. Batistić, A. Marunović, E. Tutiš, and O. S. Barišić

Electronic correlations and magnetic interactions in infinite-layer $NdNiO_2$ *(7 pages)* . . . . . 241112(R)
Vamshi M. Katukuri, Nikolay A. Bogdanov, Oskar Weser, Jeroen van den Brink, and Ali Alavi

Copyright 2020 by American Physical Society

(Continued)

2469-9950(20201215)102:24;1-F

℘ The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 102, NUMBER 24** **DECEMBER 2020-15(II)**

Linear magnetoresistance with a universal energy scale in the strong-coupling superconductor Mo_8Ga_{41} without quantum criticality *(6 pages)* . . . . . 241113(R)
W. Zhang, Y. J. Hu, C. N. Kuo, S. T. Kuo, Yue-Wen Fang, Kwing To Lai, X. Y. Liu, K. Y. Yip, D. Sun, F. F. Balakirev, C. S. Lue, Hanghui Chen, and Swee K. Goh

Flat band quantum scar *(5 pages)* . . . . . 241115(R)
Yoshihito Kuno, Tomonari Mizoguchi, and Yasuhiro Hatsugai

Semiconductors I: bulk

Ab initio determination of pseudospin for paramagnetic defects in SiC *(5 pages)* . . . . . 241201(R)
András Csóré and Adam Gali

Second-order topological non-Hermitian skin effects *(6 pages)* . . . . . 241202(R)
Ryo Okugawa, Ryo Takahashi, and Kazuki Yokomizo

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

Impact of novel electron-phonon coupling mechanisms on valley physics in two-dimensional materials *(5 pages)* . . . . . 241301(R)
Wen-Yu Shan

Nonlocal thermoelectricity in a topological Andreev interferometer *(6 pages)* . . . . . 241302(R)
Gianmichele Blasi, Fabio Taddei, Liliana Arrachea, Matteo Carrega, and Alessandro Braggio

Surface physics, nanoscale physics, low-dimensional systems

Axial anomaly generation by domain wall motion in Weyl semimetals *(6 pages)* . . . . . 241401(R)
Julia D. Hannukainen, Yago Ferreiros, Alberto Cortijo, and Jens H. Bardarson

Quantum thermoelectric and heat transport in the overscreened Kondo regime: Exact conformal field theory results *(6 pages)* . . . . . 241402(R)
D. B. Karki and Mikhail N. Kiselev

Imaging of nearly flat band induced atomic-scale negative differential conductivity in *ABC*-stacked trilayer graphene *(6 pages)* . . . . . 241403(R)
Long-Jing Yin, Li-Zhen Yang, Li Zhang, Qilong Wu, Xiaoshuai Fu, Ling-Hui Tong, Guang Yang, Yuan Tian, Lijie Zhang, and Zhihui Qin

Discovery of topological metamaterials by symmetry relaxation and smooth topological indicators *(6 pages)* . . . . 241404(R)
Cyrill Bösch, Tena Dubček, Frank Schindler, Andreas Fichtner, and Marc Serra-Garcia

Phase-matched optical second harmonic generation in a hyperbolic metamaterial based on silver nanorods *(6 pages)* . . . . . 241405(R)
I. A. Kolmychek, I. V. Malysheva, V. B. Novikov, A. P. Leontiev, K. S. Napolskii, and T. V. Murzina

Analytical solution for the surface states of the antiferromagnetic topological insulator $MnBi_2Te_4$ *(6 pages)* . . . . . 241406(R)
Hai-Peng Sun, C. M. Wang, Song-Bo Zhang, Rui Chen, Yue Zhao, Chang Liu, Qihang Liu, Chaoyu Chen, Hai-Zhou Lu, and X. C. Xie

Higher harmonic generation from bilayer nanostructures assisted by electron backscattering *(6 pages)* . . . . . 241407(R)
Chao Yu, Shicheng Jiang, Tong Wu, Guanglu Yuan, Yigeng Peng, Cheng Jin, and Ruifeng Lu

Charge density waves and Fermi level pinning in monolayer and bilayer $SnSe_2$ *(5 pages)* . . . . . 241408(R)
Shu-Ze Wang, Yi-Min Zhang, Jia-Qi Fan, Ming-Qiang Ren, Can-Li Song, Xu-Cun Ma, and Qi-Kun Xue

(Continued)

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B THIRD SERIES, VOLUME 102, NUMBER 24 DECEMBER 2020-15(II)

Viscosity of two-dimensional electrons *(5 pages)* . . . . . 241409(R)
P. S. Alekseev and A. P. Dmitriev

ARTICLES

Electronic structure and strongly correlated systems

Temperature-dependent band structure evolution determined by surface geometry in organic halide perovskite single crystals *(6 pages)* 245101
Jinpeng Yang, Matthias Meissner, Takuma Yamaguchi, Bin Xi, Keishi Takahashi, Shed Abdullah, Xianjie Liu, Hiroyuki Yoshida, Mats Fahlman, and Satoshi Kera

Hierarchy of energy scales and field-tunable order by disorder in dipolar-octupolar pyrochlores *(22 pages)* 245102
Benedikt Placke, Roderich Moessner, and Owen Benton

Calculations of electronic excitation by protons and α particles in silicon *(11 pages)* 245103
Luke W. Campbell

℘ Efficient lattice dynamics calculations for correlated materials with DFT + DMFT *(8 pages)* 245104
Can P. Koçer, Kristjan Haule, G. Lucian Pascut, and Bartomeu Monserrat

Semimetal–Mott insulator quantum phase transition of the Hubbard model on the honeycomb lattice *(16 pages)* 245105
Johann Ostmeyer, Evan Berkowitz, Stefan Krieg, Timo A. Lähde, Thomas Luu, and Carsten Urbach

Real-space multiple scattering theory for superconductors with impurities *(9 pages)* 245106
Tom G. Saunderson, Zsolt Győrgypál, James F. Annett, Gábor Csire, Balázs Újfalussy, and Martin Gradhand

Bubble phase at $\nu = \frac{1}{3}$ for spinless hollow-core interaction *(14 pages)* 245107
Grégoire Misguich, Thierry Jolicoeur, and Takahiro Mizusaki

Equivalence of reflection paths of light and Feynman paths in stacked metasurfaces *(8 pages)* 245108
Jan Sperrhake, Matthias Falkner, Stefan Fasold, Thomas Kaiser, and Thomas Pertsch

Anomalous Shubnikov-de Haas quantum oscillations in rare-earth tritelluride $NdTe_3$ *(9 pages)* 245109
Kirstine J. Dalgaard, Shiming Lei, Steffen Wiedmann, Martin Bremholm, and Leslie M. Schoop

Expeditious computation of nonlinear optical properties of arbitrary order with native electronic interactions in the time domain *(19 pages)* 245110
Emilia Ridolfi, Paolo E. Trevisanutto, and Vitor M. Pereira

Correlation strength and orbital differentiation across the phase diagram of plutonium metal *(10 pages)* 245111
W. H. Brito and G. Kotliar

Impact of next-nearest-neighbor hopping on ferromagnetism in diluted magnetic semiconductors *(9 pages)* 245112
Sourav Chakraborty, Subrat K. Das, and Kalpataru Pradhan

℘ Berry phase in quantum field theory: Diabolical points and boundary phenomena *(23 pages)* 245113
Po-Shen Hsin, Anton Kapustin, and Ryan Thorngren

Ultrabosonic behavior in photoexcited one-dimensional Mott insulators in the region of weak intersite Coulomb interaction *(10 pages)* 245114
K. Iwano, T. Yamaguchi, and H. Okamoto

(Continued)

℘ The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 102, NUMBER 24** **DECEMBER 2020-15(II)**

Memory-critical dynamical buildup of phonon-dressed Majorana fermions *(8 pages)* 245115
Oliver Kaestle, Yue Sun, Ying Hu, and Alexander Carmele

Second-order nonlinear Hall effect in Weyl semimetals *(9 pages)* 245116
Yang Gao, Furu Zhang, and Wei Zhang

Role of electron-electron collisions for magnetotransport at intermediate temperatures *(10 pages)* 245117
Woo-Ram Lee, Alexander M. Finkel'stein, and Georg Schwiete

Geometric criterion for solvability of lattice spin systems *(13 pages)* 245118
Masahiro Ogura, Yukihisa Imamura, Naruhiko Kameyama, Kazuhiko Minami, and Masatoshi Sato

Van Vleck excitons in Ca_2RuO_4 *(16 pages)* 245119
P. M. Sarte, C. Stock, B. R. Ortiz, K. H. Hong, and S. D. Wilson

Site substitution in $GdMnO_3$: Effects on structural, electronic, and magnetic properties *(11 pages)* 245120
Sudipta Mahana, Shishir Kumar Pandey, Bipul Rakshit, Pronoy Nandi, Raktima Basu, Sandip Dhara, S. Turchini, N. Zema, U. Manju, Subhendra D. Mahanti, and D. Topwal

Excitonic insulator phase and condensate dynamics in a topological one-dimensional model *(12 pages)* 245121
Zahra Khatibi, Roya Ahemeh, and Mehdi Kargarian

Parquet renormalization group analysis of weak-coupling instabilities with multiple high-order Van Hove points inside the Brillouin zone *(22 pages)* 245122
Yu-Ping Lin and Rahul M. Nandkishore

Nonlinear optical control of chiral charge pumping in a topological Weyl semimetal *(7 pages)* 245123
M. Mehdi Jadidi, Mehdi Kargarian, Martin Mittendorff, Yigit Aytac, Bing Shen, Jacob C. König-Otto, Stephan Winnerl, Ni Ni, Alexander L. Gaeta, Thomas E. Murphy, and H. Dennis Drew

Orbitally selective breakdown of the Fermi liquid and simultaneous enhancement of metallic and insulating states in correlated multiband systems with spin-orbit coupling *(11 pages)* 245124
Ze-Yi Song, Xiu-Cai Jiang, and Yu-Zhong Zhang

Enhancement of impact ionization in Hubbard clusters by disorder and next-nearest-neighbor hopping *(13 pages)* 245125
Anna Kauch, Paul Worm, Paul Prauhart, Michael Innerberger, Clemens Watzenböck, and Karsten Held

Magneto-optical Kerr effect and signature of the chiral anomaly in a Weyl semimetal in magnetic field *(17 pages)* 245126
Jean-Michel Parent, René Côté, and Ion Garate

Influence of Pr substitution on the physical properties of the $Ce_{1-x}Pr_xCoGe_3$ system: Combined experimental and first-principles study *(19 pages)* 245127
Przemysław Skokowski, Karol Synoradzki, Mirosław Werwiński, Tomasz Toliński, Anna Bajorek, and Grażyna Chełkowska

Dynamical functional renormalization group computation of order parameters and critical temperatures in the two-dimensional Hubbard model *(10 pages)* 245128
Demetrio Vilardi, Pietro M. Bonetti, and Walter Metzner

Comparative many-body study of $Pr_4Ni_3O_8$ and $NdNiO_2$ *(12 pages)* 245130
Jonathan Karp, Alexander Hampel, Manuel Zingl, Antia S. Botana, Hyowon Park, Michael R. Norman, and Andrew J. Millis

(Continued)

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 102, NUMBER 24** **DECEMBER 2020-15(II)**

Evolution of possible Weyl semimetal states across the Mott transition in pyrochlore iridates induced by hole doping *(8 pages)* 245131
K. Ueda, H. Fukuda, R. Kaneko, J. Fujioka, and Y. Tokura

Topological Hall effect in the Shastry-Sutherland lattice *(10 pages)* 245132
Munir Shahzad, Nyayabanta Swain, and Pinaki Sengupta

Flat bands and $\mathbb{Z}_2$ topological phases in a non-Abelian kagome lattice *(8 pages)* 245133
Zhenxiang Gao and Zhihao Lan

Sublattice symmetry breaking and ultralow energy excitations in graphene-on-*h*BN heterostructures *(5 pages)* . . . 245134
U. R. Singh, M. Prada, V. Strenzke, B. Bosnjak, T. Schmirander, L. Tiemann, and R. H. Blick

Reconstruction of the Fermi surface induced by high magnetic field in the quasi-two-dimensional charge density wave conductor η-Mo_4O_{11} *(8 pages)* 245135
J. Z. Ke, M. Yang, H. P. Zhu, C. B. Liu, C. Dong, W. X. Liu, M. Y. Shi, and J. F. Wang

Hybridization-induced gapped and gapless states on the surface of magnetic topological insulators *(11 pages)* 245136
Xiao-Ming Ma, Zhongjia Chen, Eike F. Schwier, Yang Zhang, Yu-Jie Hao, Shiv Kumar, Ruie Lu, Jifeng Shao, Yuanjun Jin, Meng Zeng, Xiang-Rui Liu, Zhanyang Hao, Ke Zhang, Wumiti Mansuer, Chunyao Song, Yuan Wang, Boyan Zhao, Cai Liu, Ke Deng, Jiawei Mei, Kenya Shimada, Yue Zhao, Xingjiang Zhou, Bing Shen, Wen Huang, Chang Liu, Hu Xu, and Chaoyu Chen

$\mathbb{Z}_n$ solitons in intertwined topological phases *(20 pages)* 245137
D. González-Cuadra, A. Dauphin, P. R. Grzybowski, M. Lewenstein, and A. Bermudez

Subbands in the doped two-orbital Kanamori-Hubbard model *(5 pages)* 245138
K. Hallberg and Y. Núñez-Fernández

Character of the outgoing wave in soft x-ray photoemission *(9 pages)* 245139
E. E. Krasovskii

Coexistence of antiferromagnetism and topological superconductivity on the honeycomb lattice Hubbard model *(8 pages)* 245140
Yang Qi, Liang Fu, Kai Sun, and Zhengcheng Gu

Current response of nonequilibrium steady states in the Landau-Zener problem: Nonequilibrium Green's function approach *(18 pages)* 245141
Sota Kitamura, Naoto Nagaosa, and Takahiro Morimoto

Electronic and magnetic properties of the Jahn-Teller active fluoride $NaCrF_3$ from first-principles calculations *(6 pages)* 245142
Jianghan Bao, Di Wang, Hai-Zhou Lu, and Xiangang Wan

Coupled dimer and bond-order-wave order in the quarter-filled one-dimensional Kondo lattice model *(6 pages)* 245143
Yixuan Huang, D. N. Sheng, and C. S. Ting

Exceptional points make an astroid in non-Hermitian Lieb lattice: Evolution and topological protection *(11 pages)* 245144
Yi-Xin Xiao, Kun Ding, Ruo-Yang Zhang, Zhi Hong Hang, and C. T. Chan

Unconventional scaling at non-Hermitian critical points *(17 pages)* 245145
R. Arouca, C. H. Lee, and C. Morais Smith

(Continued)

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B THIRD SERIES, VOLUME 102, NUMBER 24 DECEMBER 2020-15(II)

℘ Possible multiorbital ground state in $CeCu_2Si_2$ *(8 pages)* 245146
Andrea Amorese, Andrea Marino, Martin Sundermann, Kai Chen, Zhiwei Hu, Thomas Willers, Fadi Choukani, Philippe Ohresser, Javier Herrero-Martin, Stefano Agrestini, Chien-Te Chen, Hong-Ji Lin, Maurits W. Haverkort, Silvia Seiro, Christoph Geibel, Frank Steglich, Liu Hao Tjeng, Gertrud Zwicknagl, and Andrea Severing

Berry connection induced anomalous wave-packet dynamics in non-Hermitian systems *(22 pages)* 245147
Navot Silberstein, Jan Behrends, Moshe Goldstein, and Roni Ilan

Undamped transverse electric mode in undoped two-dimensional tilted Dirac cone materials *(8 pages)* 245148
Z. Jalali-Mola and S. A. Jafari

Fragile topology based helical edge states in two-dimensional moon-shaped photonic crystals *(7 pages)* 245149
Zhongfu Li, Hsun-Chi Chan, and Yuanjiang Xiang

Lattice instability coupled with valence degrees of freedom in valence fluctuation compound YbPd *(9 pages)* 245150
Satoshi Tsutsui, Takumi Hasegawa, Akihiro Mitsuda, Masaki Sugishima, Kohei Oyama, Masaichiro Mizumaki, Norio Ogita, Hirofumi Wada, and Masayuki Udagawa

Temperature-dependent angle-resolved photoemission spectroscopy study of the Ce $4f$ states in a possible topological Kondo insulator CeRhAs *(6 pages)* 245151
Seungho Seong, Kyoo Kim, Junwon Kim, B. I. Min, T. Takabatake, J. D. Denlinger, and J.-S. Kang

Influence of hydrostatic pressure on hidden order, the Kondo lattice, and magnetism in $URu_2Si_{2-x}P_x$ *(7 pages)* . . . 245152
Greta L. Chappell, A. Gallagher, D. E. Graf, Peter Riseborough, and Ryan E. Baumbach

Oxide Fermi liquid universality revealed by electron spectroscopy *(7 pages)* 245153
M. Horio, K. P. Kramer, Q. Wang, A. Zaidan, K. von Arx, D. Sutter, C. E. Matt, Y. Sassa, N. C. Plumb, M. Shi, A. Hanff, S. K. Mahatha, H. Bentmann, F. Reinert, S. Rohlf, F. K. Diekmann, J. Buck, M. Kalläne, K. Rossnagel, E. Rienks, V. Granata, R. Fittipaldi, A. Vecchione, T. Ohgi, T. Kawamata, T. Adachi, Y. Koike, A. Fujimori, M. Hoesch, and J. Chang

Semiconductors I: bulk

Evaluations of nonlocal electron-phonon couplings in tetracene, rubrene, and C_{10}-DNBDT-NW based on density functional theory *(17 pages)* 245201
Takashi Otaki, Tsubasa Terashige, Junto Tsurumi, Tatsuya Miyamoto, Noriaki Kida, Shun Watanabe, Toshihiro Okamoto, Jun Takeya, and Hiroshi Okamoto

Electron-phonon drag enhancement of transport properties from a fully coupled *ab initio* Boltzmann formalism *(14 pages)* 245202
Nakib H. Protik and Boris Kozinsky

Evolution of Fe $3d$ impurity band state as the origin of high Curie temperature in the *p*-type ferromagnetic semiconductor (Ga,Fe)Sb *(8 pages)* 245203
Takahito Takeda, Shoya Sakamoto, Kohsei Araki, Yuita Fujisawa, Le Duc Anh, Nguyen Thanh Tu, Yukiharu Takeda, Shin-ichi Fujimori, Atsushi Fujimori, Masaaki Tanaka, and Masaki Kobayashi

Hot carriers in mixed Pb-Sn halide perovskite semiconductors cool slowly while retaining their electrical mobility *(11 pages)* 245204
Maurizio Monti, K. D. G. Imalka Jayawardena, Edward Butler-Caddle, Rajapakshe M. I. Bandara, Jack M. Woolley, Michael Staniforth, S. Ravi P. Silva, and James Lloyd-Hughes

(Continued)

℘ The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B THIRD SERIES, VOLUME 102, NUMBER 24 DECEMBER 2020-15(II)

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

Origin of weak Fermi level pinning at the graphene/silicon interface *(14 pages)* 245301
J. Courtin, S. Tricot, G. Delhaye, P. Turban, B. Lépine, J.-C. Le Breton, and P. Schieffer

Edge localized Schrödinger cat states in finite lattices via periodic driving *(14 pages)* 245302
Asadullah Bhuiyan and Frank Marsiglio

Cluster correlation expansion for studying decoherence of clock transitions in spin baths *(9 pages)* 245303
Geng-Li Zhang, Wen-Long Ma, and Ren-Bao Liu

Interplay of anomalous strain relaxation and minimization of polarization changes at nitride semiconductor heterointerfaces *(9 pages)* 245304
Y. Wang, M. Schnedler, Q. Lan, F. Zheng, L. Freter, Y. Lu, U. Breuer, H. Eisele, J.-F. Carlin, R. Butté, N. Grandjean, R. E. Dunin-Borkowski, and Ph. Ebert

Approach to the analysis and synthesis of cylindrical metasurfaces with noncircular cross sections based on conformal transformations *(15 pages)* 245305
Gengyu Xu, George V. Eleftheriades, and Sean V. Hum

Surface relaxation and rumpling of Sn-doped β-Ga_2O_3(010) *(11 pages)* 245306
A. Pancotti, T. C. Back, W. Hamouda, M. Lachheb, C. Lubin, P. Soukiassian, J. Boeckl, D. Dorsey, S. Mou, T. Asel, G. Geneste, and N. Barrett

Surface physics, nanoscale physics, low-dimensional systems

Exactly solvable model of calorimetric measurements *(10 pages)* 245401
Brecht Donvil, Paolo Muratore-Ginanneschi, and Dmitry Golubev

Fano-Kondo resonance versus Kondo plateau in an Aharonov-Bohm ring with an embedded quantum dot *(16 pages)* 245402
Mikio Eto and Rui Sakano

Transport characterization of topological superconductivity in a planar Josephson junction *(8 pages)* 245403
Yu Zhang, Kaige Guo, and Jie Liu

Model of thermo-optic nonlinear dynamics of photonic crystal cavities *(15 pages)* 245404
S. Iadanza, M. Clementi, C. Hu, S. A. Schulz, D. Gerace, M. Galli, and L. O'Faolain

Probing the chirality of one-dimensional Majorana edge states around a two-dimensional nanoflake in a superconductor *(12 pages)* 245405
Andrzej Ptok, David J. Alspaugh, Szczepan Głodzik, Aksel Kobiałka, Andrzej M. Oleś, Pascal Simon, and Przemysław Piekarz

Polarization-controlled selective excitation of Mie resonances in a dielectric nanoparticle on a coated substrate *(7 pages)* 245406
D. A. Pidgayko, Z. F. Sadrieva, K. S. Ladutenko, and A. A. Bogdanov

Ultrafast charging in a two-photon Dicke quantum battery *(12 pages)* 245407
Alba Crescente, Matteo Carrega, Maura Sassetti, and Dario Ferraro

Selective noise resistant gate *(10 pages)* 245408
Jonatan Zimmermann, Paz London, Yaniv Yirmiyahu, Fedor Jelezko, Aharon Blank, and David Gershoni

(Continued)

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 102, NUMBER 24** **DECEMBER 2020-15(II)**

Carrier relaxation to quantum emitters in few-layer WSe_2 *(5 pages)* 245409
K. Oreszczuk, T. Kazimierczuk, T. Smoleński, K. Nogajewski, M. Grzeszczyk, A. Łopion, M. Potemski, and P. Kossacki

Valley- and spin-polarized broken-symmetry states of interacting electrons in gated MoS_2 quantum dots *(6 pages)* 245410
Ludmiła Szulakowska, Moritz Cygorek, Maciej Bieniek, and Paweł Hawrylak

Dynamical and current-induced Dzyaloshinskii-Moriya interaction: Role for damping, gyromagnetism, and current-induced torques in noncollinear magnets *(21 pages)* 245411
Frank Freimuth, Stefan Blügel, and Yuriy Mokrousov

Linear and nonlinear thermoelectric transport in a magnetic topological insulator nanoribbon with a domain wall *(11 pages)* 245412
Ning-Xuan Yang, Qing Yan, and Qing-Feng Sun

Topological quantum switch and controllable one-dimensional conducting paths in antimonene facilitated by breaking the inversion symmetry *(8 pages)* 245413
Santosh Kumar Radha and Walter R. L. Lambrecht

Nontrivial dynamics of a two-site system: Transient crystals *(10 pages)* 245414
M. Kurzyna and T. Kwapiński

Refined electron-spin transport model for single-element ferromagnetic systems: Application to nickel nanocontacts *(11 pages)* 245415
W. Dednam, C. Sabater, O. Tal, J. J. Palacios, A. E. Botha, and M. J. Caturla

Floquet engineering of multifold fermions *(10 pages)* 245416
Rimika Jaiswal and Awadhesh Narayan

Ferroelectric control of electron half-metallicity in *A*-type antiferromagnets and its application to nonvolatile memory devices *(9 pages)* 245417
Peng Jiang, Lili Kang, Hua Hao, Xiaohong Zheng, Zhi Zeng, and Stefano Sanvito

Resonant radiative heat transfer and many-body effects between nanoparticles and a multilayered slab *(14 pages)* 245418
Jie-Long Fang, Lei Qu, Yong Zhang, and Hong-Liang Yi

Highly anisotropic two-dimensional metal in monolayer $MoOCl_2$ *(8 pages)* 245419
Jianzhou Zhao, Weikang Wu, Jiaojiao Zhu, Yunhao Lu, Bin Xiang, and Shengyuan A. Yang

Pumped heat and charge statistics from Majorana braiding *(17 pages)* 245420
Thomas Simons, Dganit Meidan, and Alessandro Romito

Enhancement and active mediation of near-field radiative heat transfer through multiple nonreciprocal graphene surface plasmons *(10 pages)* 245421
Cheng-Long Zhou, Lei Qu, Yong Zhang, and Hong-Liang Yi

High laser harmonics induced by the Berry curvature in time-reversal invariant materials *(9 pages)* 245422
H. K. Avetissian and G. F. Mkrtchian

Fine structure of dark and bright excitons in vertical electric fields: Atomistic theory of alloyed self-assembled InGaAs quantum dots *(18 pages)* 245423
Michał Zieliński

(Continued)

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).

PHYSICAL REVIEW B **THIRD SERIES, VOLUME 102, NUMBER 24** **DECEMBER 2020-15(II)**

Quantum critical scaling for finite-temperature Mott-like metal-insulator crossover in few-layered MoS_2 *(9 pages)* 245424
Byoung Hee Moon, Gang Hee Han, Miloš M. Radonjić, Hyunjin Ji, and Vladimir Dobrosavljević

Confined electrons in effective plane fractals *(9 pages)* 245425
Xiaotian Yang, Weiqing Zhou, Peiliang Zhao, and Shengjun Yuan

Dissipative Berry phase effect in quantum tunneling *(13 pages)* 245426
Xiao-Xiao Zhang and Naoto Nagaosa

Band flattening in buckled monolayer graphene *(13 pages)* 245427
S. P. Milovanović, M. Anđelković, L. Covaci, and F. M. Peeters

Microscopic lattice for two-dimensional dipolar excitons *(5 pages)* 245428
Camille Lagoin, Stephan Suffit, Mathieu Bernard, Maxime Vabre, Kenneth West, Kirk Baldwin, Loren Pfeiffer, and François Dubin

Temperature-dependent diamagnetic-paramagnetic transitions in metal/semiconductor quantum rings *(8 pages)* 245429
Neal Blackman and Dentcho A. Genov

Coulomb blockade oscillations of heat conductance in the charge Kondo regime *(7 pages)* 245430
D. B. Karki

Pinning of Andreev bound states to zero energy in two-dimensional superconductor-semiconductor Rashba heterostructures *(7 pages)* 245431
Olesia Dmytruk, Daniel Loss, and Jelena Klinovaja

Twistons in graphene nanoribbons on a substrate *(10 pages)* 245432
A. V. Savin, E. A. Korznikova, and S. V. Dmitriev

Heat, particle, and chiral currents in a boundary driven bosonic ladder in the presence of a gauge field *(9 pages)* 245433
Bo Xing, Xiansong Xu, Vinitha Balachandran, and Dario Poletti

Nonlocal hydrodynamic transport and collective excitations in Dirac fluids *(25 pages)* 245434
Egor I. Kiselev and Jörg Schmalian

Inversion in a four-terminal superconducting device on the quartet line. I. Two-dimensional metal and the quartet beam splitter *(30 pages)* 245435
Régis Mélin

Inversion in a four-terminal superconducting device on the quartet line. II. Quantum dot and Floquet theory *(16 pages)* 245436
Régis Mélin and Benoît Douçot

The editors and referees of PRB find these papers to be of particular interest, importance, or clarity. Please see our Announcement Phys. Rev. B 77, 130001 (2008).