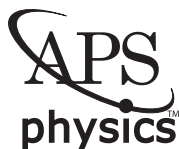


ARTICLES

Electronic structure and strongly correlated systems

- Foliated order parameter in a fracton phase transition (9 pages) 035101
 Mohammad Hossein Zarei and Mohammad Nobakht
- Nonlinear nonreciprocal photocurrents under phonon dressing (7 pages) 035102
 Haowei Xu, Hua Wang, and Ju Li
- Elastically induced magnetization at ultrafast time scales in a chiral helimagnet (9 pages) 035103
 Hengzhou Liu, M. Tuan Trinh, Eleanor M. Clements, Deepak Sapkota, Ling Li, Zachary Romestan,
 Soumya Bhat, Varun Mapara, Arup Barua, Samuel Langelund Carrera, Manh-Huong Phan, Dario Arena,
 Hariharan Srikanth, David Mandrus, Aldo H. Romero, and Denis Karaiskaj
- Excited-state exchange interaction in NiO determined by high-resolution resonant inelastic x-ray scattering
 at the Ni $M_{2,3}$ edges (7 pages) 035104
 Chun-Yu Liu, Kari Ruotsalainen, Karl Bauer, Régis Decker, Annette Pietzsch, and Alexander Föhlisch
- Higher-order topological semimetals and nodal superconductors with an order-two crystalline
 symmetry (16 pages) 035105
 Sophia Simon, Max Geier, and Piet W. Brouwer
- Bloch's theorem in orbital-density-dependent functionals: Band structures from Koopmans spectral
 functionals (14 pages) 035106
 Riccardo De Gennaro, Nicola Colonna, Edward Linscott, and Nicola Marzari
- Temperature-linear resistivity in twisted double bilayer graphene (7 pages) 035107
 Yanbang Chu, Le Liu, Cheng Shen, Jinpeng Tian, Jian Tang, Yanchong Zhao, Jieying Liu, Yalong Yuan,
 Yiru Ji, Rong Yang, Kenji Watanabe, Takashi Taniguchi, Dongxia Shi, Fengcheng Wu,
 Wei Yang, and Guangyu Zhang
- Extremely correlated Fermi liquid theory for the $U = \infty$, $d = \infty$ Hubbard model to $O(\lambda^3)$ (11 pages) 035108
 S. Shears, E. Perepelitsky, M. Arciniaga, and B. S. Shastry
- Locality optimization for parent Hamiltonians of tensor networks (12 pages) 035109
 Giuliano Giudici, J. Ignacio Cirac, and Norbert Schuch
- Susceptibility synthesis of arbitrary shaped metasurfaces (7 pages) 035110
 N. Lebbe, S. Lanteri, S. Y. Golla, and P. Genevet
- Microscopic theory of superconducting phase diagram in infinite-layer nickelates (15 pages) 035111
 T. Y. Xie, Z. Liu, Chao Cao, Z. F. Wang, J. L. Yang, and W. Zhu



Competing emergent Potts orders and possible nematic spin liquids in the kagome J_1 - J_3 Heisenberg model (15 pages)	035112
Hong Li and Tao Li	
Thermal Hall responses in frustrated honeycomb spin systems (15 pages)	035113
Kosuke Fujiwara, Sota Kitamura, and Takahiro Morimoto	
Magnetic moiré surface states and flat Chern bands in topological insulators (9 pages)	035114
Zhaochen Liu, Huan Wang, and Jing Wang	
Strong modulation limit of excitons and trions in moiré materials (15 pages)	035115
Yongxin Zeng and Allan H. MacDonald	
Origin of circular dichroism in resonant elastic x-ray scattering from magnetic and polar chiral structures (15 pages)	035116
Kook Tae Kim, Jung Yun Kee, Margaret R. McCarter, Gerrit van der Laan, Vladimir A. Stoica, John W. Freeland, Ramamoorthy Ramesh, Se Young Park, and Dong Ryeol Lee	
Elementary derivation of the stacking rules of invertible fermionic topological phases in one dimension (22 pages)	035117
Ömer M. Aksoy and Christopher Mudry	
Bulk and surface electronic structure of MnPSe ₃ revealed by photoemission and x-ray absorption spectroscopy (6 pages)	035118
Masato Fujii, Tomoyuki Yamaguchi, Takuo Ohkochi, Chandan De, Sang-Wook Cheong, and Takashi Mizokawa	
Controlling the hybridization gap and transport in a thin-film topological insulator: Effect of strain, and electric and magnetic field (7 pages)	035119
Mohammad Shafiei, Farhad Fazileh, François M. Peeters, and Milorad V. Milošević	
Low-energy excitonic condensate excitations in semimetal and semiconducting materials (7 pages)	035120
Thi-Hong-Hai Do, Minh-Tien Tran, and Van-Nham Phan	
Fermion sign bounds theory in quantum Monte Carlo simulation (9 pages)	035121
Xu Zhang, Gaopei Pan, Xiao Yan Xu, and Zi Yang Meng	
Theoretical analysis of single-ion anisotropy in d^3 Mott insulators (10 pages)	035122
Xiaoyu Liu, Derek Churchill, and Hae-Young Kee	
Weak ergodicity breaking in Josephson-junction arrays (17 pages)	035123
Angelo Russomanno, Michele Fava, and Rosario Fazio	
Surface and electronic structure at atomic length scales of the nonsymmorphic antiferromagnet Eu ₅ In ₂ Sb ₆ (10 pages)	035124
M. Victoria Ale Crivillero, Sahana Rößler, Priscila F. S. Rosa, J. Müller, U. K. Rößler, and S. Wirth	
Electric field and strain-induced band-gap engineering and manipulation of the Rashba spin splitting in Janus van der Waals heterostructures (15 pages)	035125
Shubham Patel, Urmimala Dey, Narayan Prasad Adhikari, and A. Taraphder	
Enhanced tunneling magnetoresistance and spin filtering in perovskite magnetic tunnel junctions via oxygen octahedral tilting (10 pages)	035126
Hongfang Li, Weijin Chen, Xin Luo, and Yue Zheng	

(Continued)

Modeling magnetic multipolar phases in density functional theory (7 pages)	035127
Dario Fiore Mosca, Leonid V. Pourovskii, and Cesare Franchini	
Ferromagnetism and doublon localization in a Wannier-Hubbard chain (8 pages)	035128
Samuel Milner, Phillip Weinberg, and Adrian Feiguin	
Persistent exchange splitting in the chiral helimagnet $\text{Cr}_{1/3}\text{NbS}_2$ (7 pages)	035129
Na Qin, Cheng Chen, Shiqiao Du, Xian Du, Xin Zhang, Zhongxu Yin, Jingsong Zhou, Runzhe Xu, Xu Gu, Qinqin Zhang, Wenxuan Zhao, Yidian Li, Sung-Kwan Mo, Zhongkai Liu, Shilei Zhang, Yanfeng Guo, Peizhe Tang, Yulin Chen, and Lexian Yang	
Multiplet effects in the electronic correlation of one-dimensional magnetic transition metal oxides on metals (9 pages)	035130
J. Goikoetxea, C. Friedrich, G. Bihlmayer, S. Blügel, A. Arnau, and M. Blanco-Rey	
Machine learning predictions for local electronic properties of disordered correlated electron systems (12 pages)	035131
Yi-Hsuan Liu, Sheng Zhang, Puhua Zhang, Ting-Kuo Lee, and Gia-Wei Chern	
Small moments without long-range magnetic ordering in the zero-temperature ground state of the double perovskite iridate Ba_2YIrO_6 (10 pages)	035132
Hermann Schnait, Daniel Bauernfeind, Tanusri Saha-Dasgupta, and Markus Aichhorn	
Role of long-range coupling in the properties of single polarons in models with dual electron-phonon couplings (10 pages)	035133
Monodeep Chakraborty, Sankeerth S. Narayan, Vigneshwaran R., and Mona Berciu	
Planar magnetic texture on the surface of a topological insulator (6 pages)	035134
Zhaochen Liu, Jing Wang, and Congjun Wu	
First-principles perspective on full-spectrum infrared photodetectors from doping an excitonic insulator (6 pages)	035135
Jing Liu and Yuanchang Li	
First-principles study on the magnetic and electronic properties of the high-pressure orthorhombic phase of MnSe (7 pages)	035136
Xiao-Xiao Man, Ben-Chao Gong, Pei-Han Sun, Kai Liu, and Zhong-Yi Lu	
Proximity effects in graphene on monolayers of transition-metal phosphorus trichalcogenides MPX_3 (M : Mn, Fe, Ni, Co, and X : S, Se) (14 pages)	035137
Klaus Zollner and Jaroslav Fabian	
Generalized Gibbs ensemble description of real-space entanglement spectra of $(2 + 1)$ -dimensional chiral topological systems with $\text{SU}(2)$ symmetry (20 pages)	035138
Mark J. Arildsen and Andreas W. W. Ludwig	
Robust propagating in-gap modes due to spin-orbit domain walls in graphene (12 pages)	035139
Jean-Baptiste Touchais, Pascal Simon, and Andrej Mesaros	
Quantum-critical electrodynamics of Luttinger fermions (15 pages)	035140
Santanu Dey and Joseph Maciejko	
Cluster quantum Monte Carlo study of two-dimensional weakly coupled frustrated trimer antiferromagnets (10 pages)	035141
Lukas Weber, Nils Caci, and Stefan Wessel	

(Continued)

Strength of correlations in a silver-based cuprate analog (<i>12 pages</i>)	035142
Riccardo Pioambo, Daniel Jezierski, Henrique Perin Martins, Tomasz Jaroń, Maria N. Gastiasoro, Paolo Barone, Kamil Tokár, Przemysław Piekarz, Mariana Derzsi, Zoran Mazej, Miguel Abbate, Wojciech Grochala, and José Lorenzana	
Kolmogorov complexity as intrinsic entropy of a pure state: Perspective from entanglement in free fermion systems (<i>6 pages</i>)	035143
Ken K. W. Ma and Kun Yang	
Quantum phases of dipolar bosons in one-dimensional optical lattices (<i>10 pages</i>)	035144
Rebecca Kraus, Titas Chanda, Jakub Zakrzewski, and Giovanna Morigi	
One- and two-particle properties of the weakly interacting two-dimensional Hubbard model in proximity to the van Hove singularity (<i>9 pages</i>)	035145
B. D. E. McNiven, Hanna Terletska, G. T. Andrews, and J. P. F. LeBlanc	
Topological states in Chevrel phase materials from first principles calculations (<i>10 pages</i>)	035146
Shuai Zhang, Shiyu Peng, Xi Dai, and Hongming Weng	
Localized orbital scaling correction for periodic systems (<i>11 pages</i>)	035147
Aaron Mahler, Jacob Williams, Neil Qiang Su, and Weitao Yang	
Quantum theory of nonlinear thermal response (<i>26 pages</i>)	035148
YuanDong Wang, Zhen-Gang Zhu, and Gang Su	
Signature of parity anomaly in the measurement of optical Hall conductivity in quantum anomalous Hall systems (<i>8 pages</i>)	035149
Zi-Ang Hu, Huan-Wen Wang, Bo Fu, Jin-Yu Zou, and Shun-Qing Shen	
Magnetic band representations, Fu-Kane-like symmetry indicators, and magnetic topological materials (<i>6 pages</i>)	035150
Jiacheng Gao, Zhaopeng Guo, Hongming Weng, and Zhijun Wang	
Evidence for electronic signature of a magnetic transition in the topological magnet HoSbTe (<i>6 pages</i>)	035151
Nana Shumiya, Jia-Xin Yin, Guoqing Chang, Meng Yang, Sougata Mardanya, Tay-Rong Chang, Hsin Lin, Md Shafayat Hossain, Yu-Xiao Jiang, Tyler A. Cochran, Qi Zhang, Xian P. Yang, Yonguo Shi, and M. Zahid Hasan	
Anisotropic field response of specific heat for a ferromagnetic superconductor UCoGe in magnetic fields (<i>9 pages</i>)	035152
Shota Nakamura, Shunichiro Kittaka, Kazushige Machida, Yusei Shimizu, Ai Nakamura, Dai Aoki, and Toshiro Sakakibara	
Second-order and real Chern topological insulator in twisted bilayer α -graphyne (<i>9 pages</i>)	035153
Bin-Bin Liu, Xu-Tao Zeng, Cong Chen, Ziyu Chen, and Xian-Lei Sheng	
Phonon-induced modification of quantum criticality (<i>12 pages</i>)	035154
Abhisek Samanta, Efrat Shimshoni, and Daniel Podolsky	
Synthetic dimensions in optical cavities and their analogies to two-dimensional materials (<i>10 pages</i>)	035155
Giuseppe Pirruccio and Gerardo G. Naumis	
Microscopic origin of magnetism in monolayer 3d transition metal dihalides (<i>15 pages</i>)	035156
Kira Riedl, Danila Amoroso, Steffen Backes, Aleksandar Razpopov, Thi Phuong Thao Nguyen, Kunihiko Yamauchi, Paolo Barone, Stephen M. Winter, Silvia Picozzi, and Roser Valentí	

(Continued)

Semiconductors I: bulk

Theory of the dark state of polyenes and carotenoids (<i>11 pages</i>)	035201
William Barford	
Unveiling the electron-nuclear spin dynamics in an <i>n</i> -doped InGaAs epilayer by spin noise spectroscopy (<i>12 pages</i>)	035202
C. Rittmann, M. Yu. Petrov, A. N. Kamenskii, K. V. Kavokin, A. Yu. Kuntsevich, Yu. P. Efimov, S. A. Eliseev, M. Bayer, and A. Greilich	
Phonon-assisted broadening in Bernal boron nitride: A comparison between indirect and direct excitons (<i>6 pages</i>)	035203
A. Rousseau, P. Valvin, L. Xue, J. Li, J. H. Edgar, B. Gil, and G. Cassabois	
Doping and gap size dependence of high-harmonic generation in graphene: Importance of consistent formulation of light-matter coupling (<i>13 pages</i>)	035204
Yuta Murakami and Michael Schüler	
Nuclear magnetic resonance of ^8Li ions implanted in ZnO (<i>14 pages</i>)	035205
Jonah R. Adelman, Derek Fujimoto, Martin H. Dehn, Sarah R. Dunsiger, Victoria L. Karner, C. D. Philip Levy, Ruohong Li, Iain McKenzie, Ryan M. L. McFadden, Gerald D. Morris, Matthew R. Pearson, Monika Stachura, Edward Thoeng, John O. Ticknor, Naoki Ohashi, Kenji M. Kojima, and W. Andrew MacFarlane	
Photoluminescence related to Ca in GaN (<i>12 pages</i>)	035206
M. A. Reshchikov, D. O. Demchenko, M. Vorobiov, O. Andrieiev, B. McEwen, F. Shahedipour-Sandvik, K. Sierakowski, P. Jaroszynski, and M. Bockowski	
Two-fluid plasma model for ultrashort laser-induced electron-hole nanoplasmas (<i>12 pages</i>)	035207
B. Morel, R. Giust, K. Ardaneh, and F. Courvoisier	

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

Biaxial strain modulated valence-band engineering in III-V digital alloys (<i>11 pages</i>)	035301
Sheikh Z. Ahmed, Yaohua Tan, Jiyuan Zheng, Joe C. Campbell, and Avik W. Ghosh	
Valley polarization fluctuations, bistability, and switching in two-dimensional semiconductors (<i>10 pages</i>)	035302
M. A. Semina, M. M. Glazov, C. Robert, L. Lombez, T. Amand, and X. Marie	
Impact of anisotropy in spin-orbit coupling on the magneto-optical properties of bulk lead halide perovskites (<i>12 pages</i>)	035303
Alyssa Kostadinov-Mutzafti, Jenya Tilchin, Arthur Shapiro, Dmitry N. Dirin, Maksym V. Kovalenko, Liang Z. Tan, and Efrat Lifshitz	
Optical interface engineering with on-demand magnetic surface conductivities (<i>7 pages</i>)	035304
Yuhan Zhong, Tong Cai, Tony Low, Hongsheng Chen, and Xiao Lin	
Dark-exciton giant Rabi oscillations with no external magnetic field (<i>9 pages</i>)	035305
Vladimir Vargas-Calderón, Herbert Vinck-Posada, and J. M. Villas-Boas	
Light-matter interactions in van der Waals photodiodes from first principles (<i>13 pages</i>)	035306
Jiang Cao, Sara Fiore, Cedric Klinkert, Nicolas Vetsch, and Mathieu Luisier	
Quantum third-order nonlinear Hall effect of a four-terminal device with time-reversal symmetry (<i>7 pages</i>)	035307
Miaomiao Wei, Longjun Xiang, Luyang Wang, Fuming Xu, and Jian Wang	

(Continued)

Topoelectrical circuit realization of quadrupolar surface semimetals (<i>8 pages</i>)	035308
Xingen Zheng, Tian Chen, and Xiangdong Zhang	
Microscopic identification of stepped SiC(0001) and the reaction site of hydrogen-rich epitaxial growth (<i>11 pages</i>)	035309
Tomoya Kimura, Kenta Chokawa, Kenji Shiraishi, and Atsushi Oshiyama	
Surface physics, nanoscale physics, low-dimensional systems	
Optotwistronics of bilayer graphene (<i>8 pages</i>)	035401
Leone Di Mauro Villari and Alessandro Principi	
Local inversion of the chemical environment representations (<i>6 pages</i>)	035402
Matteo Cobelli, Paddy Cahalane, and Stefano Sanvito	
Intrinsic valley-related multiple Hall effect in the two-dimensional organometallic lattice of NbTa-benzene (<i>7 pages</i>)	035403
Rui Peng, Zhonglin He, Ying Dai, Baibiao Huang, and Yandong Ma	
4π -periodic anomalous Josephson effect between Majorana zero modes (<i>6 pages</i>)	035404
Jun-Feng Liu, Hui Tan, Pei-Hao Fu, Jun Wang, and Zhongshui Ma	
 Geometric energy transport and refrigeration with driven quantum dots (<i>34 pages</i>)	035405
Juliette Monsel, Jens Schulenburg, Thibault Baquet, and Janine Splettstoesser	
Nonlocal interactions and supersolidity of moiré excitons (<i>6 pages</i>)	035406
Aleksi Julku	
Electronic confinement of surface states in a topological insulator nanowire (<i>9 pages</i>)	035407
Ruchi Saxena, Eytan Grosfeld, Sebastian E de Graaf, Tobias Lindstrom, Floriana Lombardi, Oindrila Deb, and Eran Ginossar	
Topological phases protected by shifted sublattice symmetry in dissipative quantum systems (<i>9 pages</i>)	035408
Makio Kawasaki, Ken Mochizuki, and Hideaki Obuse	
Changes in electric field noise due to thermal transformation of a surface ion trap (<i>19 pages</i>)	035409
Maya Berlin-Udi, Clemens Matthiesen, P. N. Thomas Lloyd, Alberto M. Alonso, Crystal Noel, Benjamin Saarel, Christine A. Orme, Chang-Eun Kim, Art J. Nelson, Keith G. Ray, Vincenzo Lordi, and Hartmut Häffner	
Switching from electromagnetic to chemical mechanism in quantum plasmonic tip-induced graphene oxide enhanced Raman scattering (<i>10 pages</i>)	035410
Hana N. Hrim, Sharad Ambardar, Abdullah Albagami, Simon Mendenhall, M. Tuan Trinh, and Dmitri V. Voronine	
Pure valley current and negative differential resistance in optoelectronic superlattices based on monolayer transition metal dichalcogenides (<i>7 pages</i>)	035411
Dan-Na Liu and Yong Guo	
Quasitrapped modes in metasurfaces of anisotropic MoS ₂ nanoparticles for absorption and polarization control in the telecom wavelength range (<i>12 pages</i>)	035412
Alexei V. Prokhorov, Alexander V. Shesterikov, Mikhail Yu. Gubin, Valentin S. Volkov, and Andrey B. Evlyukhin	
Identifying Majorana vortex modes via nonlocal transport (<i>11 pages</i>)	035413
Björn Sbierski, Max Geier, An-Ping Li, Matthew Brahlek, Robert G. Moore, and Joel E. Moore	

(Continued)

Probing Majorana modes via local spin dynamics (<i>15 pages</i>)	035414
Johannes Bjerlin, Anders S. Sørensen, and Stephan Haas	
Single and double In atomic layers grown on top of a single atomic NiSi ₂ layer on Si(111) (<i>8 pages</i>)	035415
L. V. Bondarenko, A. Y. Tupchaya, Y. E. Vekovshinin, D. V. Gruznev, A. N. Mihalyuk, N. V. Denisov, A. V. Matetskiy, A. V. Zotov, and A. A. Saranin	
Graphene nanoelectromechanical systems as valleytronic devices (<i>11 pages</i>)	035416
Walter Ortiz, Nikodem Szpak, and Thomas Stegmann	
Electronic and spintronic properties of Janus MSi ₂ P _x As _y (<i>M</i> = Mo, W) monolayers (<i>10 pages</i>)	035417
Amirhossein Rezavand, Nayereh Ghobadi, and Behnaz Behnamghader	
Classical modeling of positronium cooling in silicon nanochannel plates (<i>13 pages</i>)	035418
Francesco Guatieri, Sebastiano Mariazzi, Christoph Hugenschmidt, and Roberto S. Brusa	
Coherent optical effects in a three-level quantum emitter near a periodic plasmonic nanostructure (<i>13 pages</i>)	035419
Hamid R. Hamed, Vassilios Yannopapas, Gediminas Juzeliūnas, and Emmanuel Paspalakis	
Magnus spin Hall and spin Nernst effects in gapped two-dimensional Rashba systems (<i>10 pages</i>)	035420
Priyadarshini Kapri, Bashab Dey, and Tarun Kanti Ghosh	
 Skyrmion superconductivity: DMRG evidence for a topological route to superconductivity (<i>19 pages</i>)	035421
Shubhayu Chatterjee, Matteo Ippoliti, and Michael P. Zaletel	
Electron emission from plasmonically induced Floquet bands at metal surfaces (<i>12 pages</i>)	035422
Branko Gumhalter, Dino Novko, and Hrvoje Petek	
Chiral anomaly and nonlinear magnetotransport in time reversal symmetric Weyl semimetals (<i>12 pages</i>)	035423
Debottam Mandal, Kamal Das, and Amit Agarwal	
Conductance of electrostatic wire junctions in bilayer graphene (<i>8 pages</i>)	035424
Sungguen Ryu, Rosa López, and Llorenç Serra	
Hybrid skin-topological modes without asymmetric couplings (<i>13 pages</i>)	035425
Weiwei Zhu and Jiangbin Gong	
Fully auxetic and multifunctional of two-dimensional δ -GeS and δ -GeSe (<i>8 pages</i>)	035426
Zhenqing Li, Yue Gu, Chaoyu He, and Xiaolong Zou	
Unified formulations for RKKY interaction, side Kondo behavior, and Fano antiresonance in a hybrid tripartite quantum dot device with filtered density of states (<i>15 pages</i>)	035428
Jia-Ning Wang, Wang-Huai Zhou, Yu-Xiong Yan, Wei Li, Nan Nan, Jun Zhang, Ya-Nan Ma, Peng-Chao Wang, Xiang-Rui Ma, Shi-Jun Luo, and Yong-Chen Xiong	
Effect of electric bias on trapping and release of excitons in GaN/(Al,Ga)N quantum wells (<i>12 pages</i>)	035429
R. Aristegui, F. Chiaruttini, B. Jouault, P. Lefebvre, C. Brimont, T. Guillet, M. Vladimirova, S. Chenot, Y. Cordier, and B. Damilano	
Electromotive force in driven topological quantum circuits (<i>13 pages</i>)	035430
Ahmed Kenawy, Fabian Hassler, and Roman-Pascal Riwar	
Optical response of two-dimensional systems: Insights from classical electromagnetism to <i>ab initio</i> calculations (<i>13 pages</i>)	035431
Stefano Mazzei and Christine Giorgetti	

(Continued)

Theory of scanning gate microscopy imaging of the supercurrent distribution in a planar Josephson junction (<i>10 pages</i>)	035432
K. Kaperek, S. Heun, M. Carrega, P. Wójcik, and M. P. Nowak	

ERRATA

Erratum: Comparing the influence of Floquet dynamics in various Kitaev-Heisenberg materials [Phys. Rev. B 105 , 085144 (2022)] (<i>1 page</i>)	039901(E)
Pascal Strobel and Maria Daghofer	
Erratum: Quantum dot attached to superconducting leads: Relation between symmetric and asymmetric coupling [Phys. Rev. B 95 , 195114 (2017)] (<i>1 page</i>)	039902(E)
A. Kadlecová, M. Žonda, and T. Novotný	