

Plot of an exact zero mode wave function in periodically strained graphene. [Q. Gao *et al.*, Phys. Rev. Lett. **131**, 096401 (2023)]

NEWSPAPER

PHYSICAL REVIEW LETTERS

Contents

Articles published 26 August–1 September 2023

VOLUME 131, NUMBER 9 1 September 2023

Quantum Information, Science, and Technology

Complete Characterization of Quantum Correlations by Randomized Measurements 090201
Nikolai Wyderka, Andreas Ketterer, Satoya Imai, Jan Lennart Bönsel, Daniel E. Jones, Brian T. Kirby, Xiao-Dong Yu, and Otfried Gühne

Universal Scaling Bounds on a Quantum Heat Current 090401
Shunsuke Kamimura, Kyo Yoshida, Yasuhiro Tokura, and Yuichiro Matsuzaki

Using Adaptiveness and Causal Superpositions Against Noise in Quantum Metrology 090801
Stanisław Kurdziałek, Wojciech Górecki, Francesco Albarelli, and Rafał Demkowicz-Dobrzański

Cosmology, Astrophysics, and Gravitation

Cosmological Bounces Induced by a Fermion Condensate 091001
Giorgi Tukhashvili and Paul J. Steinhardt

New Limits on Exotic Spin-Dependent Interactions at Astronomical Distances 091002
L. Y. Wu, K. Y. Zhang, M. Peng, J. Gong, and H. Yan

Cosmological Lithium Solution from Discrete Gauged *B-L* 091003
Seth Koren

Can LIGO Detect Nonannihilating Dark Matter? 091401
Sulagna Bhattacharya, Basudeb Dasgupta, Ranjan Laha, and Anupam Ray

Extremal Kerr Black Holes as Amplifiers of New Physics 091402
Gary T. Horowitz, Maciej Kolanowski, Grant N. Remmen, and Jorge E. Santos

Particles and Fields

Generalized Cuts of Feynman Integrals in Parameter Space 091601
Ruth Britto

First Measurement of the Nuclear-Recoil Ionization Yield in Silicon at 100 eV 091801
M. F. Albakry *et al.* (SuperCDMS Collaboration)

Measurement of the Time-Integrated *CP* Asymmetry in $D^0 \to K^-K^+$ Decays 091802
R. Aaij *et al.* (LHCb Collaboration)

Observation of Same-Sign WW Production from Double Parton Scattering in Proton-Proton Collisions at $\sqrt{s} = 13$ TeV 091803
A. Tumasyan *et al.* (CMS Collaboration)

Measurement of the Branching Fractions $\mathcal{B}(B^0 \to p\bar{p}p\bar{p})$ and $\mathcal{B}(B_s^0 \to p\bar{p}p\bar{p})$ 091901
R. Aaij *et al.* (LHCb Collaboration)

Deciphering the Long-Distance Penguin Contribution to $\bar{B}_{d,s} \to \gamma\gamma$ Decays 091902
Qin Qin, Yue-Long Shen, Chao Wang, and Yu-Ming Wang

Observation of the Rare Decay of the η Meson to Four Muons 091903
A. Hayrapetyan *et al.* (CMS Collaboration)

(Continued Inside)

This paper was highlighted in the APS publication *Physics* (physics.aps.org).
By suggesting a few manuscripts each week, we hope to promote reading across fields. Please see our Announcement Phys. Rev. Lett. 98, 010001 (2007).

Copyright 2023 American Physical Society

0031-9007(20230901)131:9;1-4

Nuclear Physics

$N = 16$ Magicity Revealed at the Proton Drip Line through the Study of ^{35}Ca 092501
L. Lalanne, O. Sorlin, A. Poves, M. Assié, F. Hammache, S. Koyama, D. Suzuki, F. Flavigny, V. Girard-Alcindor, A. Lemasson, A. Matta, T. Roger, D. Beaumel, Y Blumenfeld, B. A. Brown, F. De Oliveira Santos, F. Delaunay, N. de Séréville, S. Franchoo, J. Gibelin, J. Guillot, O. Kamalou, N. Kitamura, V. Lapoux, B. Mauss, P. Morfouace, J. Pancin, T. Y. Saito, C. Stodel, and J-C. Thomas

First Observation of Electron Scattering from Online-Produced Radioactive Target 092502
K. Tsukada, Y. Abe, A. Enokizono, T. Goke, M. Hara, Y. Honda, T. Hori, S. Ichikawa, Y. Ito, K. Kurita, C. Legris, Y. Maehara, T. Ohnishi, R. Ogawara, T. Suda, T. Tamae, M. Wakasugi, M. Watanabe, and H. Wauke

Atomic, Molecular, and Optical Physics

Absolute Frequency Measurements of the D Lines in $^{9}Be^{+}$ Using a Single Trapped Ion 093001
D. M. Fairbank, A. L. Banducci, R. W. Gunkelman, J. B. VanArsdale, M. L. Vildibill, and S. M. Brewer

Molecular Dynamics in Rydberg Tweezer Arrays: Spin-Phonon Entanglement and Jahn-Teller Effect 093002
Matteo Magoni, Radhika Joshi, and Igor Lesanovsky

Penning-Trap Mass Measurement of Helium-4 093201
S. Sasidharan, O. Bezrodnova, S. Rau, W. Quint, S. Sturm, and K. Blaum

Array of Individual Circular Rydberg Atoms Trapped in Optical Tweezers 093401
B. Ravon, P. Méhaignerie, Y. Machu, A. Durán Hernández, M. Favier, J. M. Raimond, M. Brune, and C. Sayrin

Formation of Rogue Waves and Modulational Instability with Zero-Wavenumber Gain in Multicomponent Systems with Coherent Coupling 093801
Lei Liu, Wen-Rong Sun, and Boris A. Malomed

Plasma and Solar Physics, Accelerators and Beams

Fast Particle Acceleration in 3D Hybrid Simulations of Quasiperpendicular Shocks 095201
Luca Orusa and Damiano Caprioli

Condensed Matter and Materials

Tunable Josephson Diode Effect on the Surface of Topological Insulators 096001
Bo Lu, Satoshi Ikegaya, Pablo Burset, Yukio Tanaka, and Naoto Nagaosa

Dynamic Crack-Front Deformations in Cohesive Materials 096101
Thibault Roch, Mathias Lebihain, and Jean-François Molinari

Structural Evolution Governs Reversible Heat Generation in Electrical Double Layers 096201
Liang Zeng, Ming Chen, Zhenxiang Wang, Rui Qiao, and Guang Feng

Photocurrent Induced by a Bicircular Light Drive in Centrosymmetric Systems 096301
Yuya Ikeda, Sota Kitamura, and Takahiro Morimoto

Electron Pairing of Interfering Interface-Based Edge Modes 096302
Sourav Biswas, Hemanta Kumar Kundu, Vladimir Umansky, and Moty Heiblum

Untwisting Moiré Physics: Almost Ideal Bands and Fractional Chern Insulators in Periodically Strained Monolayer Graphene 096401
Qiang Gao, Junkai Dong, Patrick Ledwith, Daniel Parker, and Eslam Khalaf

Coulomb Drag and Heat Transfer in Strange Metals 096501
A. L. Chudnovskiy, Alex Levchenko, and Alex Kamenev

Empowering Control of Antiferromagnets by THz-Induced Spin Coherence 096701
T. G. H. Blank, K. A. Grishunin, B. A. Ivanov, E. A. Mashkovich, D. Afanasiev, and A. V. Kimel

Abundance of Hard-Hexagon Crystals in the Quantum Pyrochlore Antiferromagnet 096702
Robin Schäfer, Benedikt Placke, Owen Benton, and Roderich Moessner

Atypical Sliding and Moiré Ferroelectricity in Pure Multilayer Graphene 096801
Liu Yang, Shiping Ding, Jinhua Gao, and Menghao Wu

(Continued on Preceding Page)

This paper was highlighted in the APS publication *Physics* (physics.aps.org).
By suggesting a few manuscripts each week, we hope to promote reading across fields. Please see our Announcement Phys. Rev. Lett. 98, 010001 (2007)

Disentangling the Competing Mechanisms of Light-Induced Anomalous Hall Conductivity in Three-Dimensional Dirac Semimetal 096901
Yuta Murotani, Natsuki Kanda, Tomohiro Fujimoto, Takuya Matsuda, Manik Goyal, Jun Yoshinobu, Yohei Kobayashi, Takashi Oka, Susanne Stemmer, and Ryusuke Matsunaga

Hyperbolic Polaritons in Topological Nodal Ring Semimetals 096902
Ashutosh Singh, Maria Sebastian, Yuanping Chen, Po-Yao Chang, and Alexey Belyanin

Spectroscopy of Spin-Split Andreev Levels in a Quantum Dot with Superconducting Leads 097001
Arno Bargerbos, Marta Pita-Vidal, Rok Žitko, Lukas J. Splitthoff, Lukas Grünhaupt, Jaap J. Wesdorp, Yu Liu, Leo P. Kouwenhoven, Ramón Aguado, Christian Kraglund Andersen, Angela Kou, and Bernard van Heck

Hole-Spin Driving by Strain-Induced Spin-Orbit Interactions 097002
José Carlos Abadillo-Uriel, Esteban A. Rodríguez-Mena, Biel Martinez, and Yann-Michel Niquet

Statistical Physics; Classical, Nonlinear, and Complex Systems

Optimal Time-Entropy Bounds and Speed Limits for Brownian Thermal Shortcuts 097101
Luís Barbosa Pires, Rémi Goerlich, Arthur Luna da Fonseca, Maxime Debiossac, Paul-Antoine Hervieux, Giovanni Manfredi, and Cyriaque Genet

Polymers, Chemical Physics, Soft Matter, and Biological Physics

Jetting and Droplet Formation Driven by Interfacial Electrohydrodynamic Effects Mediated by Solitons in Liquid Crystals 098101
Soumik Das, Noe Atzin, Xingzhou Tang, Ali Mozaffari, Juan de Pablo, and Nicholas L. Abbott

Anchoring Effect of an Obstacle in the Silo Unclogging Process 098201
Rodrigo Caitano, Angel Garcimartín, and Iker Zuriguel

Structural Transformation between a Nematic Loose Packing and a Randomly Stacked Close Packing of Granular Disks 098202
Yunhao Ding, Jing Yang, Chenyang Wang, Zhichao Wang, Jianqi Li, Bingwen Hu, and Chengjie Xia

How to Grow a Flat Leaf 098401
Salem al-Mosleh and L. Mahadevan

This paper was highlighted in the APS publication *Physics* (physics.aps.org).
By suggesting a few manuscripts each week, we hope to promote reading across fields. Please see our Announcement Phys. Rev. Lett. 98, 010001 (2007).

Physics
spotlighting exceptional research

The American Physical Society's free online publication, *Physics* (physics.aps.org), provides thought-provoking analysis and spotlights exceptional research.