



Light excitation of germanium islands embedded in split ring resonators results in dissipation losses. Selected for a Synopsis in *Physics Magazine* and for an Editors' Suggestion. [W. He *et al.*, Phys. Rev. Lett. **134**, 106901 (2025)]

NEWSPAPER

PHYSICAL REVIEW LETTERS

Contents

Articles published 8 March–14 March 2025

VOLUME 134, NUMBER 10

14 March 2025

Quantum Information, Science, and Technology

Optimally Fast Qubit Reset	100401
Yue Liu, Chenlong Huang, Xingyu Zhang, and Dahai He	
Benchmarking the Readout of a Superconducting Qubit for Repeated Measurements	100601
S. Hazra, W. Dai, T. Connolly, P. D. Kurilovich, Z. Wang, L. Frunzio, and M. H. Devoret	
Linear-Optical Quantum Computation with Arbitrary Error-Correcting Codes	100602
Blayne W. Walshe, Ben Q. Baragiola, Hugo Ferretti, José Gefaell, Michael Vasmer, Ryohei Weil, Takaya Matsuura, Thomas Jaeken, Giacomo Pantaleoni, Zhihua Han, Timo Hillmann, Nicolas C. Menicucci, Ilan Tzitrin, and Rafael N. Alexander	

Cosmology, Astrophysics, and Gravitation

Anomalous Ionization in the Central Molecular Zone by Sub-GeV Dark Matter	101001
Pedro De la Torre Luque, Shyam Balaji, and Joseph Silk	
New Method to Determine the Hubble Parameter from Cosmological Energy-Density Measurements	101002
Alex Krolewski, Will J. Percival, and Alex Woodfinden	
Primordial Neutrinos and New Physics: Novel Approach to Solving the Neutrino Boltzmann Equation	101003
Maksym Ovchinnikov and Vsevolod Syvolap	
Cosmological Spatial Curvature with the Alcock-Paczyński Effect	101004
Luca Amendola, Marco Marinucci, and Miguel Quartín	
Stochastic Dark Matter from Curvature Perturbations	101005
Raghuvir Garani, Michele Redi, and Andrea Tesi	
Black Hole Singularity Resolution in Unimodular Gravity from Unitarity	101501
Steffen Gielen and Lucía Menéndez-Pidal	

Particles and Fields

T Duality and $T\bar{T}$ -like Deformations of Sigma Models	101601
Daniele Bielli, Christian Ferko, Liam Smith, and Gabriele Tartaglino-Mazzucchelli	
Conservative Spin-Magnitude Change in Orbital Evolution in General Relativity	101602
Mark Alavverdian, Zvi Bern, Dimitrios Kosmopoulos, Andres Luna, Radu Roiban, Trevor Scheopner, and Fei Teng	
$T\bar{T}$ -like Flows of Yang-Mills Theories	101603
Christian Ferko, Jue Hou, Tommaso Morone, Gabriele Tartaglino-Mazzucchelli, and Roberto Tateo	
First Evidence for Direct CP Violation in Beauty to Charmonium Decays	101801
R. Aaij <i>et al.</i> (LHCb Collaboration)	
Study of Λ_b^0 and Ξ_b^0 Decays to $\Lambda h^+ h'^-$ and Evidence for CP Violation in $\Lambda_b^0 \rightarrow \Lambda K^+ K^-$ Decays	101802
R. Aaij <i>et al.</i> (LHCb 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 2025 American Physical Society



0031-9007(20250314)134:10;1-K

	Observation of the Open-Charmed Tetraquark Candidate $T_{cs0}^*(2870)^0$ in the $B^- \rightarrow D^- D^0 K_S^0$ Decay R. Aaij <i>et al.</i> (LHCb Collaboration)	101901
Atomic, Molecular, and Optical Physics		
	Amplified Collective Auger Decay of Double Inner-Shell Vacancy in Xe Yasumasa Hikosaka and Stephan Fritzsche	103001
	Zero-Energy Photoelectric Effect Sajad Azizi, Ulf Saalmann, and Jan M. Rost	103201
	Observation of Photonic Chiral Flatbands Minho Choi, Andrea Alù, and Arka Majumdar	103801
	Exceptional Bound States in the Continuum Adrià Canós Valero, Zoltan Sztranyovszky, Egor A. Muljarov, Andrey Bogdanov, and Thomas Weiss	103802
	Reconfigurable Self-Phase Modulation Enabled by Cascaded Nonlinear Backaction in Integrated Photonics Chaohan Cui, Liang Zhang, and Linran Fan	103803
Physics of Fluids, Earth & Planetary Science, and Climate		
	Rayleigh-Bénard Convection with Phase Change Close to the Critical Point Valentin Mouet, Guillaume Michel, François Pétrélis, and Stephan Fauve	104001
	Irreversible Charging Caused by Energy Dissipation from Depinning of Droplets on Polymer Surfaces Shuaijia Chen, Ronald T. Leon, Rahmat Qambari, Yan Yan, Menghan Chen, Peter C. Sherrell, Amanda V. Ellis, and Joseph D. Berry	104002
	Unifying Theory of Scaling in Drop Impact: Forces and Maximum Spreading Diameter Vatsal Sanjay and Detlef Lohse	104003
	3D Periodic Orbiting of a Photothermal Bubble Man Hu, Feng Wang, Yuqi Li, Li Chen, Wenna Wu, Peng Huo, and Daosheng Deng	104004
Condensed Matter and Materials		
	Fermiology and Band Structure of Oxygen-Terminated $\text{Ti}_3\text{C}_2\text{T}_x$ MXene Martin Magnuson, Per Eklund, and Craig Polley	106201
	Giant Gate-Controlled Odd-Parity Magnetoresistance in Magnetized Bilayer Graphene at Room Temperature Divya Sahani, Sunit Das, Kenji Watanabe, Takashi Taniguchi, Amit Agarwal, and Aveek Bid	106301
	Diverse Manifestations of Electron-Phonon Coupling in a Kagome Superconductor Jing-Yang You, Chih-En Hsu, Mauro Del Ben, and Zhenglu Li	106401
	Meta-Generalized Gradient Approximation Made Magnetic Jacques K. Desmarais, Alessandro Erba, Giovanni Vignale, and Stefano Pittalis	106402
	Framework to Measure Quantum Metric from Step Response Nishchhal Verma and Raquel Queiroz	106403
	Dynamical Scaling and Planckian Dissipation due to Heavy-Fermion Quantum Criticality Andreas Gleis, Seung-Sup B. Lee, Gabriel Kotliar, and Jan von Delft	106501
	Higher Vortexability: Zero-Field Realization of Higher Landau Levels Manato Fujimoto, Daniel E. Parker, Junkai Dong, Eslam Khalaf, Ashvin Vishwanath, and Patrick Ledwith	106502
	Emergent Chiral Metal near a Kondo Breakdown Quantum Phase Transition Tom Drechsler and Matthias Vojta	106503
	Exploring a New Regime of Molecular Orbital Physics in $4d$ Cluster Magnets with Resonant Inelastic X-Ray Scattering Bo Yuan, Beom Hyun Kim, Qiang Chen, Daniel Dobrowolski, Monika Azmanska, G. M. Luke, Shiyu Fan, Valentina Bisogni, Jonathan Pellicciari, and J. P. Clancy	106504
	Topological Degeneracy Induced by Twisting Han Peng, Qiang Wang, Meng Xiao, Xiayi Wang, Shining Zhu, and Hui Liu	106601
	Field-Angle-Resolved Specific Heat in $\text{Na}_2\text{Co}_2\text{TeO}_6$: Evidence against Kitaev Quantum Spin Liquid Shengjie Fang, Kumpei Imamura, Yuta Mizukami, Ryuichi Namba, Kota Ishihara, Kenichiro Hashimoto, and Takasada Shibauchi	106701

(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)

Contents (Continued)

	Fluctuations in Spin Dynamics Excited by Pulsed Light	106702
	Tetsuya Sato, Shinichi Watanabe, Mamoru Matsuo, and Takeo Kato	
	Revealing Quadrupolar Excitations with Nonlinear Spectroscopy	106703
	Yoshito Watanabe, Simon Trebst, and Ciarán Hickey	
	Antiferroelectric Altermagnets: Antiferroelectricity Alters Magnets	106801
	Xunkai Duan, Jiayong Zhang, Ziyue Zhu, Yuntian Liu, Zhenyu Zhang, Igor Žutić, and Tong Zhou	
	Ferroelectric Switchable Altermagnetism	106802
	Mingqiang Gu, Yuntian Liu, Haiyuan Zhu, Kunihiro Yananose, Xiaobing Chen, Yongkang Hu, Alessandro Stroppa, and Qihang Liu	
	Loss-Enabled Chirality Inversion in Terahertz Metasurfaces	106901
	Weibao He, Shun Wan, Yunlan Zuo, Siyang Hu, Ziheng Ren, Zhongyi Yu, Dongsheng Yang, Xiang'ai Cheng, Keyu Xia, Yuze Hu, Hui Jing, and Tian Jiang	
	Using Light to Polarize and Detect Electron Spins in Silicon	106902
	Xavier Marie, Delphine Lagarde, Andrea Balocchi, Cédric Robert, Laurent Lombez, Pierre Renucci, Thierry Amand, and Fabian Cadiz	
	Statistical Physics; Classical, Nonlinear, and Complex Systems	
	Thermomajorization Mpemba Effect	107101
	Tan Van Vu and Hisao Hayakawa	
	Phase Locking and Fractional Shapiro Steps in Collective Dynamics of Microparticles	107102
	Seemant Mishra, Artem Ryabov, and Philipp Maass	
	Self-Injection Locked and Phase Offset-Free Micromechanical Frequency Combs	107201
	Jiahao Wu, Penghui Song, Shuke Zang, Zian Mao, Wenming Zhang, and Lei Shao	
	Metadensity Functional Theory for Classical Fluids: Extracting the Pair Potential	107301
	Stefanie M. Kampa, Florian Sammüller, Matthias Schmidt, and Robert Evans	
	Polymers, Chemical Physics, Soft Matter, and Biological Physics	
	Defects Enhance Stability in 12-fold Symmetric Soft-Matter Quasicrystals	108201
	Alptuğ Ulugöl, Robert J. Hardeman, Frank Smallenburg, and Laura Filion	
	Biased Lévy Walk Enables Light Gradient Sensing in <i>Euglena gracilis</i>	108301
	Yu'an Li, Yongfeng Zhao, Siyuan Yang, Min Tang, and H. P. Zhang	
	Errata	
	Erratum: Non-Hermitian Random Matrices and the Calogero-Sutherland Model	
	[Phys. Rev. Lett. 87 , 194102 (2001)]	109901
	Pragya Shukla	



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.