



Pictorial representation of a quantum battery setup encoded in a 16-qubit lattice, with 12 cells activated in the system. [C.-K. Hu *et al.*, Phys. Rev. Lett. **136**, 060401 (2026)]

NEWSPAPER

PHYSICAL REVIEW LETTERS

Contents

Articles published 7 February–13 February 2026

VOLUME 136, NUMBER 6

13 February 2026

Quantum Information, Science, and Technology

Maximally Nonprojective Measurements Are Not Always Symmetric Informationally Complete	060201
Gabriele Cobucci, Raphael Brinster, Shishir Khandelwal, Hermann Kampermann, Dagmar Bruß, Nikolai Wyderka, and Armin Tavakoli	
Information-Theoretic Derivation of Energy, Speed Bounds, and Quantum Theory	060202
Lorenzo Giannelli and Giulio Chiribella	
Proper and Improper Mixed States Serve as Different Prior Beliefs for Quantum State Retrodiction	060203
Mingxuan Liu, Valerio Scarani, and Ge Bai	
Quantum Charging Advantage in Superconducting Solid-State Batteries	060401
Chang-Kang Hu, Chilong Liu, Jingchao Zhao, Liuzhu Zhong, Yuxuan Zhou, Mingze Liu, Haolan Yuan, Yongchang Lin, Yue Xu, Guantian Hu, Guixu Xie, Zixing Liu, Ruiyang Zhou, Yougui Ri, Wenxuan Zhang, Ruicheng Deng, Andreia Saguia, Xiayu Linpeng, Marcelo S. Sarandy, Song Liu, Alan C. Santos, Dian Tan, and Dapeng Yu	
Bosonization of Noise Effects in Nonlocal Quantum Dynamics	060402
Michele Fantechi and Marco Merkli	
Error-Resilient Reversal of Quantum Chaotic Dynamics Enabled by Scramblons	060403
Yu-Chen Li, Tian-Gang Zhou, Shengyu Zhang, Ze Wu, Liqiang Zhao, Haochuan Yin, Xiaoxue An, Hui Zhai, Pengfei Zhang, Xinhua Peng, and Jiangfeng Du	
Signatures of Quantum Phase Transitions in Driven Dissipative Spin Chains	060404
Mostafa Ali, Naushad A. Kamar, Alireza Seif, and Mohammad Maghrebi	
Optimal Quantum Algorithm for Gibbs State Preparation	060601
Cambyse Rouzé, Daniel Stilck França, and Álvaro M. Alhambra	
Chernoff Information Bottleneck for Covert Quantum Target Sensing	060801
Giuseppe Ortolano, Ivano Ruo-Berchera, and Leonardo Banchi	
Observation of Criticality-Enhanced Quantum Sensing in Nonunitary Quantum Walks	060802
Lei Xiao, Saubhik Sarkar, Kunkun Wang, Abolfazl Bayat, and Peng Xue	
Optical Sensing near the Quantum Limit with Enhanced Dynamic Range by Resolving the Spectra of Interfering Photons	060803
Russell M. J. Brooks, Luca Maggio, Thomas Jaeken, Joseph Ho, Erik M. Gauger, Vincenzo Tamma, and Alessandro Fedrizzi	
Experimental Certification of Ensembles of High-Dimensional Quantum States with Independent Quantum Devices	060804
Yong-Nan Sun, Meng-Yun Ma, Qi-Ping Su, Zhe Sun, Chui-Ping Yang, and Franco Nori	
Private Remote Phase Estimation over a Lossy Quantum Channel	060805
Farzad Kianvash, Marco Barbieri, and Matteo Rosati	
Entanglement-Enhanced Quantum Sensing via Optimal Global Control with Neutral Atoms in a Cavity	060806
Vineesha Srivastava, Sven Jandura, Gavin K. Brennen, and Guido Pupillo	
Role of Symmetry in Generalized Hong-Ou-Mandel Interference and Quantum Metrology	060807
Éloi Descamps, Arne Keller, and Pérola Milman	

(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 2026 American Physical Society



0031-9007(20260213)136:6;1-1

Contents (Continued)

Superconducting Integrated On-Demand Quantum Memory with Microwave Pulse Preservation	060808
Aleksei R. Matanin, Nikita S. Smirnov, Anton I. Ivanov, Victor I. Polozov, Daria A. Moskaleva, Elizaveta I. Malevannaya, Margarita V. Androschuk, Yulia A. Agafonova, Denis E. Shirokov, Aleksander V. Andriyash, and Ilya A. Rodionov	
Cosmology, Astrophysics, and Gravitation	
Ten-Dimensional Neural Network Emulator for the Nonlinear Matter Power Spectrum	061001
Yanhui Yang (杨焱辉), Simeon Bird, Ming-Feng Ho (何铭峰), and Mahdi Qezlou	
Explaining the PeV Neutrino Fluxes at KM3NeT and IceCube with Quasiextremal Primordial Black Holes	061002
Michael J. Baker, Joaquim Iguaz Juan, Aidan Symons, and Andrea Thamm	
Emergent Turbulence in Nonlinear Gravity	061401
Sizheng Ma, Luis Lehner, Huan Yang, Lawrence E. Kidder, Harald P. Pfeiffer, and Mark A. Scheel	
CMB and Energy Conservation Limits on Nanohertz Gravitational Waves	061402
David Wright, John T. Giblin, Jr, and Jeffrey Hazboun	
☞ Black Holes as Telescopes: Discovering Supermassive Binaries through Quasiperiodic Lensed Starlight	061403
Hanxi Wang, Miguel Zumalacárregui, and Bence Kocsis	
Coherent State Description of Gravitational Waves from Binary Black Holes	061404
Sugumi Kanno, Jiro Soda, and Akira Taniguchi	
Particles and Fields	
Exact Chiral Symmetries of 3 + 1D Hamiltonian Lattice Fermions	061601
Lei Gioia and Ryan Thorngren	
New Nonsupersymmetric Tachyon-Free Strings	061602
Zihni Kaan Baykara, Houri-Christina Tarazi, and Cumrun Vafa	
Bulk Spacetime Encoding via Boundary Ambiguities	061603
Zhenkang Lu, Cheng Ran, and Shao-Feng Wu	
Self-Similar Inverse Cascade from Generalized Symmetries	061604
Yuji Hirono, Kohei Kamada, Naoki Yamamoto, and Ryo Yokokura	
Superconducting Cloud Chamber	061801
Bo Gao, Jie Sheng, and Tsutomu T. Yanagida	
First Observation of the $\bar{B}_s^0 \rightarrow \Lambda_c^+ \bar{\Lambda}_c^-$ Decay and Evidence for the $\bar{B}^0 \rightarrow \Lambda_c^+ \bar{\Lambda}_c^-$ Decay	061802
R. Aaij <i>et al.</i> (LHCb Collaboration)	
Nuclear Physics	
Lattice Calculation of the Sn Isotopes near the Proton Dripline	062501
Fabian Hildenbrand, Serdar Elhatisari, Ulf-G. Meißner, Helen Meyer, Zhengxue Ren, Andreas Herten, and Mathis Bode	
Chern Theorem and Topological Matter in Fast-Rotating Atomic Nuclei	062502
Mike Guidry and Yang Sun	
Atomic, Molecular, and Optical Physics	
Isotope Shift Spectroscopy in Mercury Vapors: A Promising Alternative to Ytterbium for New Physics Search	063001
Stefania Gravina, Antonio Castrillo, and Livio Gianfrani	
Steering Reaction Flux by Coupling Product Channels	063401
Dominik Dorer, Shinsuke Haze, Jing-Lun Li, José P. D’Incao, Eberhard Tiemann, Paul S. Julienne, Markus Deiß, and Johannes Hecker Denschlag	
Emergence of Second-Order Coherence in Superfluorescence	063402
Constanze Bach, Felix Tebbenjohanns, Christian Liedl, Philipp Schneeweiss, and Arno Rauschenbeutel	
Cavity Controls Core-to-Core Resonant Inelastic X-Ray Scattering	063601
S.-X. Wang, Z.-Q. Zhao, X.-Y. Wang, T.-J. Li, Y. Su, Y. Uemura, F. Alves Lima, A. Khadiev, B.-H. Wang, J. M. Ablett, J.-P. Rueff, H.-C. Wang, O. J. L. Fox, W.-B. Li, L.-F. Zhu, and X.-C. Huang	

(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)

Exceptional Point Superradiant Lasing with Ultranarrow Linewidth	063602
Min Du, Qian Bin, Qing-Yang Qiu, Franco Nori, and Xin-You Lü	
All-Optically Operated Atto-Newton Force Sensing with a Centimeter-Milligram-Scale Torsion Pendulum	063603
Sheng-Guo Guan, Yan-Bei Cheng, Jing Sun, Zheng-Lu Duan, and Jian-Xin Le	
Kerr-Induced Noise Quenching in Pulse Pumped Microcavity Solitons	063801
Ziqi Wei, Daewon Suk, Changrui Liu, Changxi Yang, Hansuek Lee, and Chengying Bao	
On-Chip Laser-Driven Free-Electron Spin Polarizer	063802
Clarisse Woodahl, Melanie Murillo, Charles Roques-Carmes, Aviv Karnieli, David A. B. Miller, and Olav Solgaard	
 Physics of Fluids, Earth & Planetary Science, and Climate	
Separate Exact Laws of Kinetic and Magnetic Energy Cascade in Magnetohydrodynamic Turbulence	064001
C. Li, Y. Yang, W. H. Matthaeus, B. Jiang, Sean Oughton, M. Wan, and S. Chen	
Analytical and AI-Discovered Stable, Accurate, and Generalizable Subgrid-Scale Closure for Geophysical Turbulence	064201
Karan Jakhar, Yifei Guan, and Pedram Hassanzadeh	
 Plasma and Solar Physics, Accelerators and Beams	
Energy Bunching from Subcycle Ionization Injection in Laser Wakefield Acceleration	065001
A. Angella, E. Löfquist, C. Gustafsson, V. Poulain, F. D'Souza, C. Guo, A. Persson, P. Eng-Johnsson, C.-G. Wahlström, and O. Lundh	
 Condensed Matter and Materials	
Muon Knight Shift as a Precise Probe of the Superconducting Symmetry of Sr_2RuO_4	066001
Hisakazu Matsuki, Rustem Khasanov, Jonas A. Krieger, Thomas J. Hicken, Kosuke Yuchi, Jake S. Bobowski, Giordano Mattoni, Atsutoshi Ikeda, Ryutaro Okuma, Hubertus Luetkens, and Yoshiteru Maeno	
Superconducting Dome in $\text{La}_{3-x}\text{Sr}_x\text{Ni}_2\text{O}_{7-\delta}$ Thin Films	066002
Maosen Wang, Bo Hao, Wenjie Sun, Shengjun Yan, Shengwang Sun, Hongyi Zhang, Zhengbin Gu, and Yuefeng Nie	
Unified Model for the Solution of Interstitials in Refractory High-Entropy Alloys	066101
Qianxi Zhu, Wang Gao, and Qing Jiang	
Rate Equation for the Transfer of Interstitials across Interfaces between Equilibrated Crystals	066201
Jörg Weissmüller	
Frequency-Domain Berry Curvature Effect on Time Refraction	066301
Shiyue Deng, Yang Gao, and Qian Niu	
Quantum Storage with Flat Bands	066302
Carlo Danieli, Jie Liu, Rudolf A. Römer, and Rodrigo A. Vicencio	
Marginal Metals and Kosterlitz-Thouless-Type Phase Transition in Disordered Altermagnets	066303
Chang-An Li, Bo Fu, Huaiming Guo, Björn Trauzettel, and Song-Bo Zhang	
Anomalous Localization of Light in One-Dimensional Lévy Photonic Lattices	066304
Alejandro Ramírez-Yañez, Thomas Gorin, Rodrigo A. Vicencio, and Víctor A. Gopar	
Quantum versus Classical Thermal Transport at Low Temperatures	066305
Zhixing Zou, Jiangbin Gong, Jiao Wang, Giulio Casati, and Giuliano Benenti	
Intervalley-Coupled Twisted Bilayer Graphene from Substrate Commensuration	066401
Bo-Ting Chen, Michael G. Scheer, and Biao Lian	
Universal Crossover in the Three-Channel Charge Kondo Model at High Transparency	066501
Nicolas Paris, Nicolas Dupuis, and Christophe Mora	
Parity Breaking and Sublattice Dichotomy in Monolayer FeSe Superconductor	066502
Cui Ding, Zhipeng Xu, Xiaotong Jiao, Yinqi Hu, Wenxuan Zhao, Lexian Yang, Kun Jiang, Lili Wang, Jin-Feng Jia, Jiangping Hu, and Qi-Kun Xue	
Quasi-One-Dimensional Spin Excitations in the Iron Pnictide $\text{NaFe}_{0.53}\text{Cu}_{0.47}\text{As}$	066503
Yifan Wang, David W. Tam, Weiyi Wang, R. A. Ewings, J. Ross Stewart, Masaaki Matsuda, Chongde Cao, Changle Liu, Rong Yu, Pengcheng Dai, and Yu Song	

(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)

	Composite Fermion Theory of Fractional Chern Insulator Stability	066504	
	Xiaodong Hu, Ying Ran, and Di Xiao		
	Topology of Ultralocalized Insulators and Superconductors	066601	
	Bastien Lapierre, Luka Trifunovic, Titus Neupert, and Piet W. Brouwer		
	Realization of a Bulk-Insulating Ferromagnetic Topological Crystalline Insulator and Its Multicarrier Surface Dirac-Cone Transport	066602	
	Yoshihiro Fukushima, Satoru Ichinkura, Taisuke Sasaki, and Toru Hirahara		
	Ultrasensitive Magnetometer Based on Cusp Points of the Photon-Magnon Synchronization Mode	066701	
	Xinlin Mi, Jinwei Rao, Lijun Yan, Xudong Wang, Bingbing Lyu, Bimu Yao, Shishen Yan, and Lihui Bai		
	Magnetoelastic Coupling-Driven Chiral Spin Textures: A Skyrmion-Antiskyrmion-like Array	066702	
	Gyungchoon Go and Se Kwon Kim		
	Floquet Engineering Spin Triplet States in Unconventional Magnets	066703	
	Pei-Hao Fu, Sayan Mondal, Jun-Feng Liu, Yukio Tanaka, and Jorge Cayao		
	Bright Chiral Single-Photon Emission Underpinned by Independent Tailoring of Q and V	066901	
	Kai Liu, Qi-hang Zhang, Zi-hao Dong, Zhi-xiang Li, Chao Zhang, Shao-jie Fu, Xu-hao Hong, Yan-qing Lu, Yan-feng Chen, Jun Du, Xue-jin Zhang, and Yong-yuan Zhu		
	Pressure-Tunable Hyperbolic Plasmons in Black Phosphorus Films	066902	
	Yuwei Liu, Chong Wang, Junwei Ma, Yuqing Zheng, Wenqi Bi, Hao Sun, Xiangkai Meng, Shenyang Huang, Xiang Li, Hugen Yan, and Yugui Yao		
	Enhancement of Indistinguishable-Photon Emission from a GaAs Quantum Dot via Charge-Noise Suppression	066903	
	Priyabrata Mudi, Avijit Barua, Kartik Gaur, Steffen Wilksen, Alexander Steinhoff, Setthanat Wijitpatima, Sarthak Tripathi, Julian Ritzmann, Andreas D. Wieck, Sven Rodt, Christopher Gies, Arne Ludwig, and Stephan Reitzenstein		
	Cross-Process Interference in Single-Cycle Electron Emission from Metal Needle Tips	066904	
	Anne Herzig, Peter Hommelhoff, Eleftherios Goulielmakis, Thomas Fennel, and Lennart Seiffert		
	Phononic Casimir Effect in Planar Materials	066905	
	Pablo Rodriguez-Lopez, Dai-Nam Le, and Lilia M. Woods		
	Statistical Physics; Classical, Nonlinear, and Complex Systems		
	Entropic Balance with Feedback Control: Information Equalities and Tight Inequalities	067101	
	N. Ruiz-Pino and A. Prados		
	Macroscopic Fluctuation-Response Theory and Its Use for Gene Regulatory Networks	067102	
	Timur Aslyamov, Krzysztof Ptasiński, and Massimiliano Esposito		
	Gibbs Measures from Deep Shaped Multilayer Perceptrons	067301	
	Boris Hanin and Alexander Zlokapa		
	Polymers, Chemical Physics, Soft Matter, and Biological Physics		
	Radially Locked Sun-Ray Patterns in Reaction-Diffusion-Advection Systems	068001	
	S. N. Maharana, L. Negrojević, A. Comolli, and A. De Wit		
	Unlocking Hidden Topological Multistability via Biphasic Correlated Order Evolution	068101	
	Jin-Bing Wu, Zhenghao Guo, Baoming Shi, Daoxing Luo, Lei Zhang, Yan-Qing Lu, and Wei Hu		
	Experimental Measurement of Negative Grain-Boundary Triple Line Tension	068201	
	Xiuming Xiao and Ziren Wang		
	Determining the Chemical Potential via Universal Density Functional Learning	068202	
	Florian Sammüller and Matthias Schmidt		
	Shear-Rate Dependent Surface Tension of Glass-Forming Fluids	068203	
	Linnea Heitmeier and Thomas Voigtmann		
	Gravity-Driven Flux of Particles through Apertures	068204	
	Ram Sudhir Sharma, Alexandre Leonelli, Kevin Zhao, Eckart Meiburg, and Alban Sauret		
	Anomalous Diffusion in Driven Electrolytes due to Hydrodynamic Fluctuations	068301	
	Ramin Golestanian		

(Continued on Preceding Page)

Contents (Continued)

Entropy Production in Non-Gaussian Active Matter: A Unified Fluctuation Theorem and Deep Learning Framework	068302
Yuanfei Huang, Chengyu Liu, Bing Miao, and Xiang Zhou	
Unifying Constraints Linking Protein Folding and Native Dynamics Decoded from AlphaFold	068401
Zecheng Zhang, Weitong Ren, Liangxu Xie, Yuxiang Zheng, Xingyue Guan, Jun Wang, Wenfei Li, and Qian-Yuan Tang	
 Robust Scaling in Human Brain Dynamics Despite Correlated Inputs and Limited Sampling Distortions	068402
Rubén Calvo, Carles Martorell, Adrián Roig, and Miguel A. Muñoz	
 Diffusive and Enzymatic Modulation of the Dynamic Size Distribution of DNA Droplets	068403
Michio Tateno and Omar A. Saleh	
Reentrant Rigidity Transition in Planar Epithelia with Volume and Area Elasticity	068404
Tanmoy Sarkar and Matej Krajnc	
Comments	
Comment on “Evolution Operator Can Always Be Separated into the Product of Holonomy and Dynamic Operators”	068901
Adam Fredriksson and Erik Sjöqvist	
Yu and Tong Reply	068902
Xiao-Dong Yu and D. M. Tong	
Errata	
Erratum: Search for Light Dark Matter with 259 Days of Data in PandaX-4T [Phys. Rev. Lett. 135 , 211001 (2025)]	069901
Minzhen Zhang <i>et al.</i> (PandaX Collaboration)	

 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.