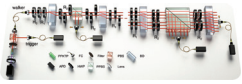

Single-photon interferometric network used in the demonstration of non-Bloch parity-time symmetry. Selected for a Synopsis in *Physics* and an Editors' Suggestion. [Lei Xiao *et al.*, Phys. Rev. Lett. **126**, 230402 (2021)]

NEWSPAPER

PHYSICAL REVIEW LETTERS

Contents

Articles published 5 June–11 June 2021

VOLUME 126, NUMBER 23 11 June 2021

General Physics: Statistical and Quantum Mechanics, Quantum Information, etc.

Experimental Demonstration of Instrument-Specific Quantum Memory Effects and Non-Markovian Process Recovery for Common-Cause Processes 230401
Yu Guo, Philip Taranto, Bi-Heng Liu, Xiao-Min Hu, Yun-Feng Huang, Chuan-Feng Li, and Guang-Can Guo

Observation of Non-Bloch Parity-Time Symmetry and Exceptional Points 230402
Lei Xiao, Tianshu Deng, Kunkun Wang, Zhong Wang, Wei Yi, and Peng Xue

Relativistic Bell Test within Quantum Reference Frames 230403
Lucas F. Streiter, Flaminia Giacomini, and Časlav Brukner

Observation of a Lee-Huang-Yang Fluid 230404
Thomas G. Skov, Magnus G. Skou, Nils B. Jørgensen, and Jan J. Arlt

Simulating Hydrodynamics on Noisy Intermediate-Scale Quantum Devices with Random Circuits 230501
Jonas Richter and Arijeet Pal

Simulating and Mitigating Crosstalk 230502
Adam Winick, Joel J. Wallman, and Joseph Emerson

Topologically Protected Valley-Dependent Quantum Photonic Circuits 230503
Yang Chen, Xin-Tao He, Yu-Jie Cheng, Hao-Yang Qiu, Lan-Tian Feng, Ming Zhang, Dao-Xin Dai, Guang-Can Guo, Jian-Wen Dong, and Xi-Feng Ren

Scheme for Universal High-Dimensional Quantum Computation with Linear Optics 230504
Stefano Paesani, Jacob F. F. Bulmer, Alex E. Jones, Raffaele Santagati, and Anthony Laing

Heating of a Trapped Ion Induced by Dielectric Materials 230505
Markus Teller, Dario A. Fioretto, Philip C. Holz, Philipp Schindler, Viktor Messerer, Klemens Schüppert, Yueyang Zou, Rainer Blatt, John Chiaverini, Jeremy Sage, and Tracy E. Northup

Quantum Repeater Node Demonstrating Unconditionally Secure Key Distribution 230506
S. Langenfeld, P. Thomas, O. Morin, and G. Rempe

Exactness of Mean-Field Equations for Open Dicke Models with an Application to Pattern Retrieval Dynamics 230601
Federico Carollo and Igor Lesanovsky

Interferometric Order Parameter for Excited-State Quantum Phase Transitions in Bose-Einstein Condensates 230602
Polina Feldmann, Carsten Klempt, Augusto Smerzi, Luis Santos, and Manuel Gessner

Gravitation and Astrophysics

Searching for Signals of Inhomogeneity Using Multiple Probes of the Cosmic Expansion Rate $H(z)$ 231101
S. M. Koksbang

Elementary Particles and Fields

Feynman Integrals and Scattering Amplitudes from Wilson Loops 231601
Song He, Zhenjie Li, Qinglin Yang, and Chi Zhang

Counting Yang-Mills Instantons by Surface Operator Renormalization Group Flow 231602
Giulio Bonelli, Fran Globlek, and Alessandro Tanzini

(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 2021 American Physical Society

0031-9007(20210611)126:23;1-L

Lattice QCD Equation of State at Finite Chemical Potential from an Alternative Expansion Scheme 232001
S. Borsányi, Z. Fodor, J. N. Guenther, R. Kara, S. D. Katz, P. Parotto, A. Pásztor, C. Ratti, and K. K. Szabó

Atomic, Molecular, and Optical Physics

Decoherence-Induced Universality in Simple Metal Cluster Photoelectron Angular Distributions 233201
Adam Piechaczek, Christof Bartels, Christian Hock, Jan-Michael Rost, and Bernd von Issendorff

Birth, Life, and Death of a Dipolar Supersolid 233401
Maximilian Sohmen, Claudia Politi, Lauritz Klaus, Lauriane Chomaz, Manfred J. Mark, Matthew A. Norcia, and Francesca Ferlaino

Quantum Entanglement and Modulation Enhancement of Free-Electron–Bound-Electron Interaction 233402
Zhexin Zhao, Xiao-Qi Sun, and Shanhui Fan

Toward Atomic-Resolution Quantum Measurements with Coherently Shaped Free Electrons 233403
Ron Ruimy, Alexey Gorlach, Chen Mechel, Nicholas Rivera, and Ido Kaminer

Exploring the Many-Body Dynamics Near a Conical Intersection with Trapped Rydberg Ions 233404
Filippo M. Gambetta, Chi Zhang, Markus Hennrich, Igor Lesanovsky, and Weibin Li

Bright Polarized Single-Photon Source Based on a Linear Dipole 233601
S. E. Thomas, M. Billard, N. Coste, S. C. Wein, Priya, H. Ollivier, O. Krebs, L. Tazaïrt, A. Harouri, A. Lemaitre, I. Sagnes, C. Anton, L. Lanco, N. Somaschi, J. C. Loredo, and P. Senellart

Coupling a Single Trapped Atom to a Whispering-Gallery-Mode Microresonator 233602
Elisa Will, Luke Masters, Arno Rauschenbeutel, Michael Scheucher, and Jürgen Volz

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, etc.

Solitons in a Box-Shaped Wave Field with Noise: Perturbation Theory and Statistics 234101
Rustam Mullyadzhanov and Andrey Gelash

Proprioceptive Mechanism for Bioinspired Fish Swimming 234501
J. Sánchez-Rodríguez, F. Celestini, C. Raufaste, and M. Argentina

Transient Solubility Gradients Mediate Oversaturation during Solvent Exchange 234502
Beng Hau Tan, Claus-Dieter Ohl, and Hongjie An

Horizontal Motion of a Superhydrophobic Substrate Affects the Drop Bouncing Dynamics 234503
Haiyang Zhan, Chenguang Lu, Cong Liu, Zuankai Wang, Cunjing Lv, and Yahua Liu

Plasma and Beam Physics

Generation of Ultrarelativistic Monoenergetic Electron Bunches via a Synergistic Interaction of Longitudinal Electric and Magnetic Fields of a Twisted Laser 234801
Yin Shi, David Blackman, Dan Stutman, and Alexey Arefiev

Condensed Matter: Structure, etc.

Surface Triple Junctions Govern the Strength of a Nanoscale Solid 235501
Ye-Yuan Zhang, Hui Xie, Ling-Zhi Liu, and Hai-Jun Jin

Phase Diagram of a Deep Potential Water Model 236001
Linfeng Zhang, Han Wang, Roberto Car, and Weinan E

Condensed Matter: Electronic Properties, etc.

Gap-Opening Transition in Dirac Semimetal $ZrTe_5$ 236401
Yefan Tian, Nader Ghassemi, and Joseph H. Ross

Systematic Investigation of the Coupling between One-Dimensional Edge States of a Topological Crystalline Insulator 236402
Johannes Jung, Artem Odobesko, Robin Boshuis, Andrzej Szczerbakow, Tomasz Story, and Matthias Bode

Chirality-Dependent Hall Effect and Antisymmetric Magnetoresistance in a Magnetic Weyl Semimetal 236601
Bingyan Jiang, Lujunyu Wang, Ran Bi, Juewen Fan, Jiaji Zhao, Dapeng Yu, Zhilin Li, and Xiaosong 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)

Observation of Nonlinear Spin-Charge Conversion in the Thin Film of Nominally Centrosymmetric Dirac Semimetal $SrIrO_3$ at Room Temperature 236801
Y. Kozuka, S. Isogami, K. Masuda, Y. Miura, Saikat Das, J. Fujioka, T. Ohkubo, and S. Kasai
Boundary Supersymmetry of $(1+1)$D Fermionic Symmetry-Protected Topological Phases 236802
Abhishodh Prakash and Juven Wang
Magnetic Field-Induced "Mirage" Gap in an Ising Superconductor 237001
Gaomin Tang, Christoph Bruder, and Wolfgang Belzig
Optical Responses of Chiral Majorana Edge States in Two-Dimensional Topological Superconductors 237002
James Jun He, Yukio Tanaka, and Naoto Nagaosa
Symmetry-Protected Topological Edge Modes and Emergent Partial Time-Reversal Symmetry Breaking in Open Quantum Many-Body Systems 237201
Zijian Wang, Qiaoyi Li, Wei Li, and Zi Cai
Polaron Masses in $CH_3NH_3PbX_3$ Perovskites Determined by Landau Level Spectroscopy in Low Magnetic Fields 237401
Yasuhiro Yamada, Hirofumi Mino, Takuya Kawahara, Kenichi Oto, Hidekatsu Suzuura, and Yoshihiko Kanemitsu

Polymer, Soft Matter, Biological, Climate, and Interdisciplinary Physics

Molecular Mass Dependence of Interfacial Tension in Complex Coacervation 237801
Debra J. Audus, Samim Ali, Artem M. Rumyantsev, Yuanchi Ma, Juan J. de Pablo, and Vivek M. Prabhu
Turing's Diffusive Threshold in Random Reaction-Diffusion Systems 238101
Pierre A. Haas and Raymond E. Goldstein

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.