

Scanning tunneling microscopy image of the edge of a self-assembled tetracyanoquinodimethane island (lower half) on a Cu(111) surface (upper half). Selected for a Synopsis in *Physics* and an Editors' Suggestion. [A. Martín-Jiménez *et al.*, Phys. Rev. Lett. **122**, 176801 (2019)]

NEWSPAPER

PHYSICAL REVIEW LETTERS

Contents

Articles published 27 April–3 May 2019

VOLUME 122, NUMBER 17 3 May 2019

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

Quantum Spin Dynamics in Fock Space Following Quenches: Caustics and Vortices 170402
J. Mumford, E. Turner, D. W. L. Sprung, and D. H. J. O'Dell

Observation of Many-Body Localization in a One-Dimensional System with a Single-Particle Mobility Edge 170403
Thomas Kohlert, Sebastian Scherg, Xiao Li, Henrik P. Lüschen, Sankar Das Sarma, Immanuel Bloch, and Monika Aidelsburger

Prescaling in a Far-from-Equilibrium Bose Gas 170404
Christian-Marcel Schmied, Aleksandr N. Mikheev, and Thomas Gasenzer

Demonstration of Controlled Quantum Teleportation for Discrete Variables on Linear Optical Devices 170501
Artur Barasiński, Antonín Černoch, and Karel Lemr

Optimal Probabilistic Storage and Retrieval of Unitary Channels 170502
Michal Sedlák, Alessandro Bisio, and Mário Ziman

Gravitation and Astrophysics

Cosmological Constraints from Multiple Probes in the Dark Energy Survey 171301
T. M. C. Abbott *et al.* (DES Collaboration)

Elementary Particles and Fields

Kink-Kink and Kink-Antikink Interactions with Long-Range Tails 171601
Ivan C. Christov, Robert J. Decker, A. Demirkaya, Vakhid A. Gani, P. G. Kevrekidis, Avinash Khare, and Avadh Saxena

Novel Direct Detection Constraints on Light Dark Matter 171801
Torsten Bringmann and Maxim Pospelov

Parton Distribution Functions from a Light Front Hamiltonian and QCD Evolution for Light Mesons 172001
Jiangshan Lan, Chandan Mondal, Shaoyang Jia, Xingbo Zhao, and James P. Vary (BLFQ Collaboration)

Nuclear Physics

Azimuthal Harmonics in Small and Large Collision Systems at RHIC Top Energies 172301
J. Adam *et al.* (STAR Collaboration)

Elliptic Flow of Heavy Quarkonia in *pA* Collisions 172302
Cheng Zhang, Cyrille Marquet, Guang-You Qin, Shu-Yi Wei, and Bo-Wen Xiao

Baryon-Number Violation by Two Units and the Deuteron Lifetime 172501
F. Oosterhof, B. Long, J. de Vries, R. G. E. Timmermans, and U. van Kolck

Direct Observation of Proton-Neutron Short-Range Correlation Dominance in Heavy Nuclei 172502
M. Duer *et al.* (CLAS 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 2019 American Physical Society

0031-9007(20190503)122:17;1-7

Atomic, Molecular, and Optical Physics

Flemish Strings of Magnetic Solitons and a Nonthermal Fixed Point in a One-Dimensional Antiferromagnetic Spin-1 Bose Gas 173001
Kazuya Fujimoto, Ryusuke Hamazaki, and Masahito Ueda

2000-Times Repeated Imaging of Strontium Atoms in Clock-Magic Tweezer Arrays 173201
Jacob P. Covey, Ivaylo S. Madjarov, Alexandre Cooper, and Manuel Endres

Highly Efficient Detection and Separation of Chiral Molecules through Shortcuts to Adiabaticity 173202
Nikolay V. Vitanov and Michael Drewsen

Exact Quantum Many-Body Scar States in the Rydberg-Blockaded Atom Chain 173401
Cheng-Ju Lin and Olexei I. Motrunich

Enhanced Magnetic Sensitivity with Non-Gaussian Quantum Fluctuations 173601
Alexandre Evrard, Vasiliy Makhalov, Thomas Chalopin, Leonid A. Sidorenkov, Jean Dalibard, Raphael Lopes, and Sylvain Nascimbene

Near-Unity Indistinguishability Single Photon Source for Large-Scale Integrated Quantum Optics 173602
Łukasz Dusanowski, Soon-Hong Kwon, Christian Schneider, and Sven Höfling

Tunable Photon Statistics Exploiting the Fano Effect in a Waveguide 173603
A. P. Foster, D. Hallett, I. V. Iorsh, S. J. Sheldon, M. R. Godsland, B. Royall, E. Clarke, I. A. Shelykh, A. M. Fox, M. S. Skolnick, I. E. Itskevich, and L. R. Wilson

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, etc.

Observation of Anomalous π Modes in Photonic Floquet Engineering 173901
Qingqing Cheng, Yiming Pan, Huaiqiang Wang, Chaoshi Zhang, Dong Yu, Avi Gover, Haijun Zhang, Tao Li, Lei Zhou, and Shining Zhu

Anisotropy and Controllable Band Structure in Suprawavelength Polaritonic Metasurfaces 173902
K. Chevrier, J. M. Benoit, C. Symonds, S. K. Saikin, J. Yuen-Zhou, and J. Bellessa

Broadband Quasi-Phase-Matched Harmonic Generation in an On-Chip Monocrystalline Lithium Niobate Microdisk Resonator 173903
Jintian Lin, Ni Yao, Zhenzhong Hao, Jianhao Zhang, Wenbo Mao, Min Wang, Wei Chu, Rongbo Wu, Zhiwei Fang, Lingling Qiao, Wei Fang, Fang Bo, and Ya Cheng

Anomalous Diffusion in Random Dynamical Systems 174101
Yuzuru Sato and Rainer Klages

Excitable Wave Patterns in Temporal Systems with Two Long Delays and their Observation in a Semiconductor Laser Experiment 174102
Francesco Marino and Giovanni Giacomelli

Conical Interfaces between Two Immiscible Fluids Induced by an Optical Laser Beam 174501
A. Girot, J. Petit, R. Saiseau, T. Guérin, H. Chraibi, U. Delabre, and J. P. Delville

Dynamics of the Vortex-Particle Complexes Bound to the Free Surface of Superfluid Helium 174502
P. Moroshkin, P. Leiderer, K. Kono, S. Inui, and M. Tsubota

Condensed Matter: Structure, etc.

q-Independent Slow Dynamics in Atomic and Molecular Systems 175501
Philip H. Handle, Lorenzo Rovigatti, and Francesco Sciortino

Role of Noether's Theorem at the Deconfined Quantum Critical Point 175701
Nvsen Ma, Yi-Zhuang You, and Zi Yang Meng

Melting Line of Graphite 175702
A. M. Kondratyev and A. D. Rakhel

Discharge of the Nanopore Confinement Effect on the Glass Transition Dynamics via Viscous Flow 176101
K. Adrjanowicz and M. Paluch

(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)

Condensed Matter: Electronic Properties, etc.

Gapless Coulomb State Emerging from a Self-Dual Topological Tensor-Network State 176401
Guo-Yi Zhu and Guang-Ming Zhang

Observation of Weyl Nodes in Robust Type-II Weyl Semimetal WP_2 176402
M.-Y. Yao, N. Xu, Q. S. Wu, G. Autès, N. Kumar, V. N. Strocov, N. C. Plumb, M. Radovic, O. V. Yazyev, C. Felser, J. Mesot, and M. Shi

Mode-Selective Coupling of Coherent Phonons to the Bi2212 Electronic Band Structure 176403
S.-L. Yang, J. A. Sobota, Y. He, D. Leuenberger, H. Soifer, H. Eisaki, P. S. Kirchmann, and Z.-X. Shen

Discrete Electronic Subbands due to Bragg Scattering at Molecular Edges 176801
A. Martín-Jiménez, J. M. Gallego, R. Miranda, and R. Otero

Coupling between Rydberg States and Landau Levels of Electrons Trapped on Liquid Helium 176802
K. M. Yunusova, D. Konstantinov, H. Bouchiat, and A. D. Chepelianskii

Nontrivial Triplon Topology and Triplon Liquid in Kitaev-Heisenberg-type Excitonic Magnets 177201
Pavel S. Anisimov, Friedemann Aust, Giniyat Khaliullin, and Maria Daghofer

Observation of the Nuclear Barnett Effect 177202
Mohsen Arabgol and Tycho Sleator

Spin-Triplet-Mediated Up-Conversion and Crossover Behavior in Single-Molecule Electroluminescence 177401
Gong Chen, Yang Luo, Hongying Gao, Jun Jiang, Yunjie Yu, Li Zhang, Yang Zhang, Xiaoguang Li, Zhenyu Zhang, and Zhenchao Dong

Emergent Vibronic Excitations in the Magnetodielectric Regime of Ce_2O_3 177601
A. Sethi, J. E. Slimak, T. Kolodiazhnyi, and S. L. Cooper

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

Universality Class of Nanocrystal Plasticity: Localization and Self-Organization in Discrete Dislocation Dynamics 178001
Hengxu Song, Dennis Dimiduk, and Stefanos Papanikolaou

Universal Scaling Law for Colloidal Diffusion in Complex Media 178002
Luhui Ning, Peng Liu, Yiwu Zong, Rui Liu, Mingcheng Yang, and Ke Chen

Rapid Stabilization of Immiscible Fluids using Nanostructured Interfaces via Surfactant Association 178003
Zahra Niroobakhsh, Jacob A. LaNasa, Andrew Belmonte, and Robert J. Hickey

Errata

Erratum: Structural and Valence Changes of Europium Hydride Induced by Application of High-Pressure H_2 [Phys. Rev. Lett. **107**, 025501 (2011)] 179901
T. Matsuoka, H. Fujihisa, N. Hirao, Y. Ohishi, T. Mitsui, R. Masuda, M. Seto, Y. Yoda, K. Shimizu, A. Machida, and K. Aoki

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.