

Buckling-induced crystalline surface patterns on a thin film adhered to a soft core (top) and dual hexagonal Voronoi tesselations (bottom) for different surface geometries: sphere (left), ellipsoid (center), torus (right). [F.J. Jiménez *et al.*, Phys. Rev. Lett. **116**, 104301 (2016)]

NEWSPAPER

PHYSICAL REVIEW LETTERS

Contents

Articles published 5 March–11 March 2016

VOLUME 116, NUMBER 10 11 March 2016

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

Multiparticle Correlations in Mesoscopic Scattering: Boson Sampling, Birthday Paradox, and Hong-Ou-Mandel Profiles 100401
Juan-Diego Urbina, Jack Kuipers, Sho Matsumoto, Quirin Hummel, and Klaus Richter

Optical Conductivity of Topological Surface States with Emergent Supersymmetry 100402
William Witczak-Krempa and Joseph Maciejko

Spatial Search by Quantum Walk is Optimal for Almost all Graphs 100501
Shantanav Chakraborty, Leonardo Novo, Andris Ambainis, and Yasser Omar

Fundamental Asymmetry in Quenches Between Integrable and Nonintegrable Systems 100601
Marcos Rigol

g Factor of Light Ions for an Improved Determination of the Fine-Structure Constant 100801
V. A. Yerokhin, E. Berseneva, Z. Harman, I. I. Tupitsyn, and C. H. Keitel

Metrology with Unknown Detectors 100802
Matteo Altorio, Marco G. Genoni, Fabrizia Somma, and Marco Barbieri

Can Anomalous Amplification be Attained without Postselection? 100803
Julián Martínez-Rincón, Wei-Tao Liu, Gerardo I. Viza, and John C. Howell

Gravitation and Astrophysics

Modeling Repeatedly Flaring δ Sunspots 101101
Piyali Chatterjee, Viggo Hansteen, and Mats Carlsson

Detectability of Gravitational Waves from High-Redshift Binaries 101102
Pablo A. Rosado, Paul D. Lasky, Eric Thrane, Xingjiang Zhu, Ilya Mandel, and Alberto Sesana

One-Shot Decoupling and Page Curves from a Dynamical Model for Black Hole Evaporation 101301
Kamil Brádler and Christoph Adami

Planckian Interacting Massive Particles as Dark Matter 101302
Mathias Garny, McCullen Sandora, and Martin S. Sloth

Elementary Particles and Fields

Measurement of the ZZ Production Cross Section in pp Collisions at $\sqrt{s} = 13$ TeV with the ATLAS Detector 101801
G. Aad *et al.* (ATLAS Collaboration)

Nuclear Physics

Implication of the Proton-Deuteron Radiative Capture for Big Bang Nucleosynthesis 102501
L. E. Marcucci, G. Mangano, A. Kievsky, and M. Viviani

Isospin Mixing Reveals $^{30}\mathrm{P}(p,\gamma)^{31}\mathrm{S}$ Resonance Influencing Nova Nucleosynthesis 102502
M. B. Bennett, C. Wrede, B. A. Brown, S. N. Liddick, D. Pérez-Loureiro, D. W. Bardayan, A. A. Chen, K. A. Chipps, C. Fry, B. E. Glassman, C. Langer, N. R. Larson, E. I. McNeice, Z. Meisel, W. Ong, P. D. O'Malley, S. D. Pain, C. J. Prokop, H. Schatz, S. B. Schwartz, S. Suchyta, P. Thompson, M. Walters, and X. Xu

Nucleus ^{26}O: A Barely Unbound System beyond the Drip Line 102503
Y. Kondo *et al.*

(Continued Inside)

Selected for a Viewpoint in *Physics*. Please visit http://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 2016 American Physical Society

0031-9007(20160311)116:10;1-N

Atomic, Molecular, and Optical Physics

Photoelectron Spectroscopy of Ions: Study of the Auger Decay of the $4d \rightarrow nf$ $(n = 4, 5)$ Resonances in Xe^{5+} Ion 103001
J.-M. Bizau, D. Cubaynes, S. Guilbaud, F. Penent, P. Lablanquie, L. Andric, J. Palaudoux, M. M. Al Shorman, and C. Blancard

Coherent Control of the Optical Absorption in a Plasmonic Lattice Coupled to a Luminescent Layer 103002
Giuseppe Pirruccio, Mohammad Ramezani, Said Rahimzadeh-Kalaleh Rodriguez, and Jaime Gómez Rivas

Dynamical Two-Mode Squeezing of Thermal Fluctuations in a Cavity Optomechanical System 103601
A. Pontin, M. Bonaldi, A. Borrielli, L. Marconi, F. Marino, G. Pandraud, G. A. Prodi, P. M. Sarro, E. Serra, and F. Marin

Enhanced Optical Cross Section via Collective Coupling of Atomic Dipoles in a 2D Array 103602
Robert J. Bettles, Simon A. Gardiner, and Charles S. Adams

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, etc.

Integrable Turbulence and Rogue Waves: Breathers or Solitons? 103901
J. M. Soto-Crespo, N. Devine, and N. Akhmediev

Raman Self-Frequency Shift of Dissipative Kerr Solitons in an Optical Microresonator 103902
Maxim Karpov, Hairun Guo, Arne Kordts, Victor Brasch, Martin H. P. Pfeiffer, Michail Zervas, Michael Geiselmann, and Tobias J. Kippenberg

Optimal Extraction of Collective Oscillations from Unreliable Measurements 104101
Justus T. C. Schwabedal and Holger Kantz

Curvature-Controlled Defect Localization in Elastic Surface Crystals 104301
Francisco López Jiménez, Norbert Stoop, Romain Lagrange, Jörn Dunkel, and Pedro M. Reis

Plasma and Beam Physics

X-Point Effect on Plasma Blob Dynamics 105001
F. Avino, A. Fasoli, I. Furno, P. Ricci, and C. Theiler

Direct Evidence of the Transition from Weak to Strong Magnetohydrodynamic Turbulence 105002
Romain Meyrand, Sébastien Galtier, and Khurom H. Kiyani

Magnetic Reconnection Onset via Disruption of a Forming Current Sheet by the Tearing Instability 105003
D. A. Uzdensky and N. F. Loureiro

Sudden Viscous Dissipation of Compressing Turbulence 105004
Seth Davidovits and Nathaniel J. Fisch

Condensed Matter: Structure, etc.

Practical Entanglement Estimation for Spin-System Quantum Simulators 105301
O. Marty, M. Cramer, and M. B. Plenio

Mesoscopic Rydberg Impurity in an Atomic Quantum Gas 105302
Richard Schmidt, H. R. Sadeghpour, and E. Demler

Efficient *Ab initio* Modeling of Random Multicomponent Alloys 105501
Chao Jiang and Blas P. Uberuaga

Engineered Unique Elastic Modes at a $BaTiO_3/(2 \times 1)$-Ge(001) Interface 106101
D. P. Kumah, M. Dogan, J. H. Ngai, D. Qiu, Z. Zhang, D. Su, E. D. Specht, S. Ismail-Beigi, C. H. Ahn, and F. J. Walker

Step Coalescence by Collective Motion at an Incommensurate Grain Boundary 106102
M. L. Bowers, C. Ophus, A. Gautam, F. Lançon, and U. Dahmen

β-NMR Investigation of the Depth-Dependent Magnetic Properties of an Antiferromagnetic Surface 106103
D. L. Cortie, T. Buck, M. H. Dehn, V. L. Karner, R. F. Kiefl, C. D. P. Levy, R. M. L. McFadden, G. D. Morris, I. McKenzie, M. R. Pearson, X. L. Wang, and W. A. MacFarlane

(Continued on Preceding Page)

Selected for a Viewpoint in *Physics*. Please visit http://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.

Jahn-Teller Effect in Systems with Strong On-Site Spin-Orbit Coupling 106401
Ekaterina M. Plotnikova, Maria Daghofer, Jeroen van den Brink, and Krzysztof Wohlfeld

Fermi Surface of Sr_2RuO_4: Spin-Orbit and Anisotropic Coulomb Interaction Effects 106402
Guoren Zhang, Evgeny Gorelov, Esmaeel Sarvestani, and Eva Pavarini

Tunable Magnetic Alignment between Trapped Exciton-Polariton Condensates 106403
H. Ohadi, Y. del Valle-Inclan Redondo, A. Dreismann, Y. G. Rubo, F. Pinsker, S. I. Tsintzos, Z. Hatzopoulos, P. G. Savvidis, and J. J. Baumberg

Carrier Multiplication in a Single Semiconductor Nanocrystal 106404
Fengrui Hu, Bihu Lv, Chunyang Yin, Chunfeng Zhang, Xiaoyong Wang, Brahim Lounis, and Min Xiao

Tunable Splitting of the Ground-State Degeneracy in Quasi-One-Dimensional Parafermion Systems 106405
Chun Chen and F. J. Burnell

Spin Manipulation in Graphene by Chemically Induced Pseudospin Polarization 106601
Dinh Van Tuan and Stephan Roche

Disorder-Induced Stabilization of the Quantum Hall Ferromagnet 106801
B. A. Piot, W. Desrat, D. K. Maude, D. Kazazis, A. Cavanna, and U. Gennser

Robust Phonon-Plasmon Coupling in Quasifreestanding Graphene on Silicon Carbide 106802
R. J. Koch, S. Fryska, M. Ostler, M. Endlich, F. Speck, T. Hänsel, J. A. Schaefer, and Th. Seyller

Nanoantenna for Electrical Generation of Surface Plasmon Polaritons 106803
Florian Bigourdan, Jean-Paul Hugonin, Francois Marquier, Christophe Sauvan, and Jean-Jacques Greffet

Ultrafast Dynamics Evidence of High Temperature Superconductivity in Single Unit Cell FeSe on $SrTiO_3$ 107001
Y. C. Tian, W. H. Zhang, F. S. Li, Y. L. Wu, Q. Wu, F. Sun, G. Y. Zhou, Lili Wang, Xucun Ma, Qi-Kun Xue, and Jimin Zhao

Spectroscopic Evidence of the Aharonov-Casher Effect in a Cooper Pair Box 107002
M. T. Bell, W. Zhang, L. B. Ioffe, and M. E. Gershenson

Exchange-Driven Spin Relaxation in Ferromagnet-Oxide-Semiconductor Heterostructures 107201
Yu-Sheng Ou, Yi-Hsin Chiu, N. J. Harmon, Patrick Odenthal, Matthew Sheffield, Michael Chilcote, R. K. Kawakami, M. E. Flatté, and E. Johnston-Halperin

NMR Evidence for Inhomogeneous Nematic Fluctuations in $BaFe_2(As_{1-x}P_x)_2$ 107202
A. P. Dioguardi, T. Kissikov, C. H. Lin, K. R. Shirer, M. M. Lawson, H.-J. Grafe, J.-H. Chu, I. R. Fisher, R. M. Fernandes, and N. J. Curro

Spin Liquid State in the 3D Frustrated Antiferromagnet $PbCuTe_2O_6$: NMR and Muon Spin Relaxation Studies 107203
P. Khuntia, F. Bert, P. Mendels, B. Koteswararao, A. V. Mahajan, M. Baenitz, F. C. Chou, C. Baines, A. Amato, and Y. Furukawa

Polymer, Soft Matter, Biological, and Interdisciplinary Physics

Signal-Coupled Subthreshold Hopf-Type Systems Show a Sharpened Collective Response 108101
Florian Gomez, Tom Lorimer, and Ruedi Stoop

Transition from a Linear to a Harmonic Potential in Collective Dynamics of a Multifilament Actin Bundle 108102
Jörg Schnauß, Tom Golde, Carsten Schuldt, B. U. Sebastian Schmidt, Martin Glaser, Dan Strehle, Tina Händler, Claus Heussinger, and Josef A. Käs

Magnetoacoustic Sensing of Magnetic Nanoparticles 108103
Stephan Kellnberger, Amir Rosenthal, Ahne Myklatun, Gil G. Westmeyer, George Sergiadis, and Vasilis Ntziachristos

Preferential Sampling and Small-Scale Clustering of Gyrotactic Microswimmers in Turbulence 108104
K. Gustavsson, F. Berglund, P. R. Jonsson, and B. Mehlig

Shape-Shifting Droplet Networks 108301
T. Zhang, Duanduan Wan, J. M. Schwarz, and M. J. Bowick

Congestion Induced by the Structure of Multiplex Networks 108701
Albert Solé-Ribalta, Sergio Gómez, and Alex Arenas

(Continued on Preceding Page)

Selected for a Viewpoint in *Physics*. Please visit http://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)

Errata

Erratum: Emergent Supersymmetry from Strongly Interacting Majorana Zero Modes
[Phys. Rev. Lett. **115**, 166401 (2015)] 109901
Armin Rahmani, Xiaoyu Zhu, Marcel Franz, and Ian Affleck

Selected for a Viewpoint in *Physics*. Please visit http://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* (http://physics.aps.org/), provides thought-provoking analysis and spotlights exceptional research.