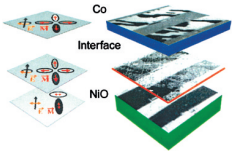

X-ray dichroism images of a nickel oxide film covered by cobalt monolayers. See article 247201.

PHYSICAL REVIEW LETTERS

Contents

VOLUME 87, NUMBER 24 10 December 2001

Editorial

Standards and Growth i

General Physics

Local Vortex Generation and the Surface Mode Spectrum of Large Bose-Einstein Condensates 240401
J. R. Anglin

Inequivalence of Pure State Ensembles for Open Quantum Systems: The Preferred Ensembles Are Those That Are Physically Realizable 240402
H. M. Wiseman and John A. Vaccaro

Degenerate Fermion Gas Heating by Hole Creation 240403
Eddy Timmermans

$1/f$ Noise and Extreme Value Statistics 240601
T. Antal, M. Droz, G. Györgyi, and Z. Rácz

Two-Time Green's Functions and the Spectral Density Method in Nonextensive Classical Statistical Mechanics 240602
A. Cavallo, F. Cosenza, and L. De Cesare

Gravitation and Astrophysics

Probing Neutron-Star Superfluidity with Gravitational-Wave Data 241101
N. Andersson and G. L. Comer

Elementary Particles and Fields

Measurement of the $B \to J/\psi K^*(892)$ Decay Amplitudes 241801
B. Aubert *et al.* (The BABAR Collaboration)

Observation of Diffractive J/ψ Production at the Fermilab Tevatron 241802
T. Affolder *et al.* (CDF Collaboration)

Search for the Decay $B^0 \to \gamma\gamma$ 241803
B. Aubert *et al.* (*BABAR* Collaboration)

Flavor-Spin Symmetry Estimate of the Nucleon Tensor Charge 242001
Leonard Gamberg and Gary R. Goldstein

Top-Quark Spin Correlations at Hadron Colliders: Predictions at Next-to-Leading Order QCD 242002
W. Bernreuther, A. Brandenburg, Z. G. Si, and P. Uwer

Nuclear Physics

Antilambda Production in Au + Au Collisions at 11.7A GeV/c 242301
B. B. Back, R. R. Betts, J. Chang, W. C. Chang, C. Y. Chi, Y. Y. Chu, J. B. Cumming, J. C. Dunlop, W. Eldredge, S. Y. Fung, R. Ganz, E. Garcia, A. Gillitzer, G. Heintzelman, W. F. Henning, D. J. Hofman, B. Holzman, J. H. Kang, E. J. Kim, S. Y. Kim, Y. Kwon, D. McLeod, A. C. Mignerey, M. Moulson, V. Nanal, C. A. Ogilvie, R. Pak, A. Ruangma, D. E. Russ, R. Seto, P. J. Stanskas, G. S. F. Stephans, H. Wang, F. L. H. Wolfs, A. H. Wuosmaa, H. Xiang, G. H. Xu, H. B. Yao, and C. M. Zou (The E917 Collaboration)

Precision Measurement of the Spin-Dependent Asymmetry in the Threshold Region of $^3\vec{\mathrm{He}}(\vec{e}, e')$ 242501
F. Xiong *et al.*

(Continued on Third Cover)

Copyright 2001 by The American Physical Society

PRL 87 (24), 240401–249903, 10 December 2001 (256 total pages)

Atomic, Molecular, and Optical Physics

Photodetachment of H^- in a Strong Infrared Laser Field 243001
Rainer Reichle, Hanspeter Helm, and Igor Yu. Kiyan

Photoionization of Metastable O^+ Ions: Experiment and Theory 243002
A. M. Covington, A. Aguilar, I. R. Covington, M. Gharaibeh, C. A. Shirley, R. A. Phaneuf, I. Álvarez, C. Cisneros, G. Hinojosa, J. D. Bozek, I. Dominguez, M. M. Sant'Anna, A. S. Schlachter, N. Berrah, S. N. Nahar, and B. M. McLaughlin

Observation of the Isomer Effect on Charge Transfer from C_3H_4 Molecules (Allene and Propyne) at keV Energies 243201
T. Kusakabe, S. Satoh, H. Tawara, and M. Kimura

Nonlinear Dynamics, Fluid Dynamics, Classical Optics, etc.

Dynamics of Semiconductor Lasers Subject to Delayed Optical Feedback: The Short Cavity Regime 243901
T. Heil, I. Fischer, W. Elsäßer, and A. Gavrielides

Coherent Control of High-Order Harmonics with Chirped Femtosecond Laser Pulses 243902
Dong Gun Lee, Jung-Hoon Kim, Kyung-Han Hong, and Chang Hee Nam

Effects of Interparticle Force on the Packing of Spherical Granular Material 244301
A. J. Forsyth, S. R. Hutton, C. F. Osborne, and M. J. Rhodes

Pattern-Dislocation-Type Dynamical Instability in 1D Optical Feedback Kerr Media with Gaussian Transverse Pumping 244501
E. Louvergneaux

Energy Budget in Rayleigh-Bénard Convection 244502
R. M. Kerr

Plasma and Beam Physics

Observation of Plasma Focusing of a 28.5 GeV Positron Beam 244801
J. S. T. Ng, P. Chen, H. Baldis, P. Bolton, D. Cline, W. Craddock, C. Crawford, F. J. Decker, C. Field, Y. Fukui, V. Kumar, R. Iverson, F. King, R. E. Kirby, K. Nakajima, R. Noble, A. Ogata, P. Raimondi, D. Walz, and A. W. Weidemann

Plasma Equilibrium and Confinement in a Tokamak with Nearly Zero Central Current Density in JT-60U 245001
T. Fujita, T. Oikawa, T. Suzuki, S. Ide, Y. Sakamoto, Y. Koide, T. Hatae, O. Naito, A. Isayama, N. Hayashi, and H. Shirai

MHD Stability of Advanced Tokamak Scenarios with Reversed Central Current: An Explanation of the "Current Hole" 245002
G. T. A. Huysmans, T. C. Hender, N. C. Hawkes, and X. Litaudon

Symmetry-Breaking Induced Transport in the Vicinity of a Magnetic Island 245003
K. C. Shaing

Condensed Matter: Structure, etc.

Transition between Orbital Orderings in YVO_3 245501
G. R. Blake, T. T. M. Palstra, Y. Ren, A. A. Nugroho, and A. A. Menovsky

Fluctuation and Dissipation in Liquid-Crystal Electroconvection 245502
Walter I. Goldburg, Yadin Y. Goldschmidt, and Hamid Kellay

Ultraslow Dynamics and Stress Relaxation in the Aging of a Soft Glassy System 245503
Laurence Ramos and Luca Cipelletti

Universal Scaling Laws of Diffusion in a Binary Fluid Mixture 245901
Alok Samanta, Sk. Musharaf Ali, and Swapan K. Ghosh

Mechanism of the Poisoning Action Of Sulfur on Catalytically Active Pd(100) 246101
M. Rutkowski, D. Wetzig, and H. Zacharias

Direct Observation of Surface Alloying and Interface Roughening: Growth of Au on Fe(001) 246102
M. M. J. Bischoff, T. Yamada, A. J. Quinn, R. G. P. van der Kraan, and H. van Kempen

Oxygen Abstraction from Dioxygen on the Al(111) Surface 246103
Andrew J. Komrowski, Jonathan Z. Sexton, Andrew C. Kummel, Marcello Binetti, Olaf Weiße, and Eckart Hasselbrink

(Continued on Preceding Page)

Spontaneous Nanoscale Corrugation of Ion-Eroded SiO_2: The Role of Ion-Irradiation-Enhanced Viscous Flow 246104
Christopher C. Umbach, Randall L. Headrick, and Kee-Chul Chang

Condensed Matter: Electronic Properties, etc.

Exciton Rabi Oscillation in a Single Quantum Dot 246401
H. Kamada, H. Gotoh, J. Temmyo, T. Takagahara, and H. Ando

Origin of the Non-Fermi Liquid Behavior of $SrRuO_3$ 246402
M. S. Laad and E. Müller-Hartmann

Restrictions on the Coherence of the Ultrafast Optical Emission from an Electron-Hole-Pair Condensate 246403
A. Olaya-Castro, F. J. Rodríguez, L. Quiroga, and C. Tejedor

Close Correlation between the Magnetic Moments, Lattice Distortions, and Hybridization in $LaMnO_3$ and $La_{1-x}Sr_xMnO_{3+\delta}$: Doping-Dependent Magnetic Circular X-Ray Dichroism Study 246404
T. Koide, H. Miyauchi, J. Okamoto, T. Shidara, T. Sekine, T. Saitoh, A. Fujimori, H. Fukutani, M. Takano, and Y. Takeda

Anomalous Quasiparticle Lifetime in Graphite: Band Structure Effects 246405
Catalin D. Spataru, Miguel A. Cazalilla, Angel Rubio, Lorin X. Benedict, Pedro M. Echenique, and Steven G. Louie

Linear-Scaling Quantum Monte Carlo Calculations 246406
A. J. Williamson, Randolph Q. Hood, and J. C. Grossman

Rabi Oscillations in a Josephson-Junction Charge Two-Level System 246601
Y. Nakamura, Yu. A. Pashkin, and J. S. Tsai

Zero-Bias Anomaly in Disordered Wires 246801
E. G. Mishchenko, A. V. Andreev, and L. I. Glazman

Ghost Excitonic Insulator Transition in Layered Graphite 246802
D. V. Khveshchenko

Magnetoresistance of Carbon Nanotubes: From Molecular to Mesoscopic Fingerprints 246803
Stephan Roche and Riichiro Saito

Implications of Reflectance Measurements on the Mechanism for Superconductivity in MgB_2 247001
F. Marsiglio

Proximity Effects and Quantum Dissipation in the Chains of $YBa_2Cu_3O_{6+x}$ 247002
Dirk K. Morr and Alexander V. Balatsky

Superconductivity in the Filled Cage Compounds Ba_6Ge_{25} and $Ba_4Na_2Ge_{25}$ 247003
F. M. Grosche, H. Q. Yuan, W. Carrillo-Cabrera, S. Paschen, C. Langhammer, F. Kromer, G. Sparn, M. Baenitz, Yu. Grin, and F. Steglich

Longitudinal Spin Fluctuations and Superconductivity in Ferromagnetic $ZrZn_2$ from *Ab Initio* Calculations 247004
G. Santi, S. B. Dugdale, and T. Jarlborg

Hydrodynamic Instability of the Flux-Antiflux Interface in Type-II Superconductors 247005
L. M. Fisher, P. E. Goa, M. Baziljevich, T. H. Johansen, A. L. Rakhmanov, and V. A. Yampol'skii

Phase Diagram of a Disordered Boson Hubbard Model in Two Dimensions 247006
Ji-Woo Lee, Min-Chul Cha, and Doochul Kim

Shapiro Step Response in the Coherent Josephson Flux Flow State of $Bi_2Sr_2CaCu_2O_{8+\delta}$ 247007
Yu. I. Latyshev, M. B. Gaifullin, T. Yamashita, M. Machida, and Yuji Matsuda

Spectroscopic Identification and Direct Imaging of Interfacial Magnetic Spins 247201
H. Ohldag, T. J. Regan, J. Stöhr, A. Scholl, F. Nolting, J. Lüning, C. Stamm, S. Anders, and R. L. White

^{17}O NMR Study of $q = 0$ Spin Excitations in a Nearly Ideal $S = \frac{1}{2}$ 1D Heisenberg Antiferromagnet, Sr_2CuO_3, up to 800 K 247202
K. R. Thurber, A. W. Hunt, T. Imai, and F. C. Chou

Interdisciplinary Physics: Biological Physics, Quantum Information, etc.

Telecloning of Continuous Quantum Variables 247901
P. van Loock and Samuel L. Braunstein

Coherence-Preserving Quantum Bits 247902
Dave Bacon, Kenneth R. Brown, and K. Birgitta Whaley

(Continued on Preceding Page)

Quantum Cloning Machines with Phase-Conjugate Input Modes 247903
N. J. Cerf and S. Iblisdir
Temporal Map Formation in the Barn Owl's Brain 248101
Christian Leibold, Richard Kempter, and J. Leo van Hemmen
Picometer-Scale Dynamical X-Ray Imaging of Single DNA Molecules 248102
Yuji C. Sasaki, Yasuaki Okumura, Shinichi Adachi, Hitoshi Suda, Yoshio Taniguchi, and Naoto Yagi
Extracting Hidden Information from Knowledge Networks 248701
Sergei Maslov and Yi-Cheng Zhang

Comments

Comment on "Photoalignment of Liquid Crystals by Liquid Crystals" 249601
Byoungchoo Park, J. W. Wu, and Hideo Takezoe
Reznikov *et al.* Reply 249602
Yuriy Reznikov, Oksana Ostroverkhova, Kenneth D. Singer, Jae-Hoon Kim, Satyendra Kumar, Oleg Lavrentovich, Bin Wang, and John L. West
Comment on "Negative Refraction Makes a Perfect Lens" 249701
G. W. 't Hooft
Pendry Replies 249702
John Pendry
Some Problems with Negative Refraction 249703
John Michael Williams
Pendry Replies 249704
John Pendry

Errata

Publisher's Note: Solution of the Relativistic Dirac-Morse Problem [Phys. Rev. Lett. **87**, 210405 (2001)] 249901
A. D. Alhaidari
Erratum: Shape of a Liquid Front upon Dewetting [Phys. Rev. Lett. **87**, 196101 (2001)] 249902
R. Seemann, S. Herminghaus, and K. Jacobs
Erratum: Fermi-Edge Singularities in $Al_xGa_{1-x}As$ Quantum Wells: Extrinsic Versus Many-Body Scattering Processes [Phys. Rev. Lett. **85**, 852 (2000)] 249903
T. Mélin and F. Laruelle