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# physics today

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## How does your chemical garden grow?

also:  
Altmetrics ▶  
Quantum black holes ▶  
The rise of the Southern Ocean ▶

## Volume 68, Issue 1, January 2015

### ARTICLES

#### *Upwelling in the Southern Ocean*

Adele K. Morrison, Thomas L. Frölicher and Jorge L. Sarmiento

Phys. Today **68**, 1, 27 (2015)

#### *The origin of quark color*

O. W. Greenberg

Phys. Today **68**, 1, 33 (2015)

#### *Quantum black holes*

Georgi Dvali

Phys. Today **68**, 1, 38 (2015)

### READERS' FORUM

#### *Commentary: Open access matters for researchers*

Gordon L. Nelson

Phys. Today **68**, 1, 8 (2015)

#### *Demilitarizing weapons-grade plutonium*

Alexander DeVolpi

Phys. Today **68**, 1, 9 (2015)

#### *Unusual wind effect on a lake-surface monolayer film*

Robert L. Grossman

Phys. Today **68**, 1, 10 (2015)

#### *Dusting off a comet*

Fred Bortz

Phys. Today **68**, 1, 10 (2015)

#### *Correction*

Phys. Today **68**, 1, 10 (2015)

### SEARCH AND DISCOVERY

#### *Plasma wakefield acceleration shows promise*

Johanna L. Miller

Phys. Today **68**, 1, 11 (2015)

#### *Rewriting the rules of kirigami*

Ashley G. Smart

Phys. Today **68**, 1, 13 (2015)

#### *Chemical gardens grown in flatland*

R. Mark Wilson

Phys. Today **68**, 1, 14 (2015)

## **Physics Update**

### ***The cost and benefit of deception***

Sung Chang

Phys. Today **68**, 1, 16 (2015)

### ***Quantitative causality***

Steven K. Blau

Phys. Today **68**, 1, 16 (2015)

### ***Detecting shielded uranium in the field***

Stephen G. Benka

Phys. Today **68**, 1, 16 (2015)

### ***Sound design for electric vehicles***

Richard J. Fitzgerald

Phys. Today **68**, 1, 17 (2015)

### ***Extragalactic Rydberg atoms***

Charles Day

Phys. Today **68**, 1, 17 (2015)

## **ISSUES AND EVENTS**

### ***Online metrics show who's saying what about scientists' research***

Jermey N. A. Matthews

Phys. Today **68**, 1, 18 (2015)

### ***Brilliant new x-ray source is up and running at Brookhaven***

David Kramer

Phys. Today **68**, 1, 20 (2015)

### ***China carves out larger role in underground science***

Toni Feder

Phys. Today **68**, 1, 23 (2015)

### ***DOE takes another step toward exascale computing***

David Kramer

Phys. Today **68**, 1, 24 (2015)

## **News notes**

### ***ESF regroups***

Toni Feder

Phys. Today **68**, 1, 25 (2015)

### ***Minorities in physics***

Toni Feder

Phys. Today **68**, 1, 26 (2015)

### ***Postdocs or permanent jobs?***

Toni Feder

Phys. Today **68**, 1, 26 (2015)

## **BOOKS**

## ***Discrete or Continuous?: The Quest for Fundamental Length in Modern Physics***

Luis J. Garay

Phys. Today **68**, 1, 44 (2015)

## ***Essentials of Econophysics Modelling***

Anirban Chakraborti

Phys. Today **68**, 1, 44 (2015)

## ***Magnificent "Principia": Exploring Isaac Newton's Masterpiece***

Dana Jalobeanu

Phys. Today **68**, 1, 45 (2015)

## ***Computing with Quantum Cats: From Colossus to Qubits***

Mile Gu

Phys. Today **68**, 1, 46 (2015)

## **New books**

Phys. Today **68**, 1, 47 (2015)

## **NEW PRODUCTS**

### ***Focus on bioinstrumentation and biotechnologies***

Andreas Mandelis

Phys. Today **68**, 1, 50 (2015)

## **OBITUARIES**

### ***Nina Byers***

Lindley Winslow, Roberto Peccei and Steven Moszkowski

Phys. Today **68**, 1, 54 (2015)

### ***Walter Eduard Thirring***

Elliott Lieb

Phys. Today **68**, 1, 55 (2015)

## **QUICK STUDY**

### ***The measurement Einstein deemed impossible***

Mark G. Raizen and Tongcang Li

Phys. Today **68**, 1, 56 (2015)

Particles undergoing Brownian motion move with constant velocity between Brownian kicks. Albert Einstein predicted the velocity distribution, but he wrongly thought his result would never be experimentally confirmed.

## **BACK SCATTER**

### ***An exploding supermassive star***

Phys. Today **68**, 1, 68 (2015)