

www.physicstoday.org

# physics today

June 2015

volume 68, number 6

A publication of the American Institute of Physics



## Fresh water from the ocean

also:

- Cyberwood feels the heat ◀
- Next-gen synchrotrons ◀
- Nature's school of optics ◀

# physicstoday

Volume 68, Issue 6, June 2015

## ARTICLES

***Biomimetics: Lessons on optics from nature's school***

Ross C. McPhedran and Andrew R. Parker  
Phys. Today **68**, 6, 32 (2015)

***On the belated discovery of fission***

J. Michael Pearson  
Phys. Today **68**, 6, 40 (2015)

***Iron-based superconductors, seven years later***

Andrey Chubukov and Peter J. Hirschfeld  
Phys. Today **68**, 6, 46 (2015)

## READERS' FORUM

**Commentary Study highlights ethical ambiguity in physics**

***Commentary: Study highlights ethical ambiguity in physics***

Elaine Howard Ecklund, David R. Johnson and Kirstin R. W. Matthews  
Phys. Today **68**, 6, 8 (2015)

**Ballistic motion of a Brownian particle**

***Ballistic motion of a Brownian particle***

Douglas J. Durian  
Phys. Today **68**, 6, 10 (2015)

***Ballistic motion of a Brownian particle***

Mark G. Raizen and Tongcang Li  
Phys. Today **68**, 6, 11 (2015)

**Historical note on fiber bundles**

***Historical note on fiber bundles***

John L. Friedman  
Phys. Today **68**, 6, 11 (2015)

## Correction

***Correction***

Phys. Today **68**, 6, 11 (2015)

## SEARCH AND DISCOVERY

***Laser beam remodels liquid crystals on the fly***

Ashley G. Smart  
Phys. Today **68**, 6, 12 (2015)

***Lawrencium's ionization potential, atom by atom***

Johanna L. Miller  
Phys. Today **68**, 6, 14 (2015)

***Tobacco cells infused with carbon nanotubes feel the heat***

R. Mark Wilson  
Phys. Today **68**, 6, 15 (2015)

***The neutron and proton weigh in, theoretically***

Sung Chang  
Phys. Today **68**, 6, 17 (2015)

***Remarkable gravitational lensing by the galaxy cluster Abell 3827***

Steven K. Blau  
Phys. Today **68**, 6, 18 (2015)

## Physics Update

### *The topography of ink on paper*

Stephen G. Benka  
Phys. Today **68**, 6, 19 (2015)

### *Galaxy clusters in formation*

Steven K. Blau  
Phys. Today **68**, 6, 20 (2015)

### *Bacterial viruses fuse membranes*

Charles Day  
Phys. Today **68**, 6, 20 (2015)

### *The many paths to underwater acoustic communication*

Richard J. Fitzgerald  
Phys. Today **68**, 6, 20 (2015)

## ISSUES AND EVENTS

### *Synchrotrons round the bend to make cheaper, better x rays*

Toni Feder  
Phys. Today **68**, 6, 21 (2015)

### *Poland replicates Swedish light source*

Toni Feder  
Phys. Today **68**, 6, 23 (2015)

### *Carbon-ion cancer therapy shows promise*

David Kramer  
Phys. Today **68**, 6, 24 (2015)

### *A disarmament agenda*

Toni Feder  
Phys. Today **68**, 6, 26 (2015)

## News notes

### *Researcher gender stats requested*

David Kramer  
Phys. Today **68**, 6, 30 (2015)

### *Astronomers at work*

Toni Feder  
Phys. Today **68**, 6, 30 (2015)

## BOOKS

### *Galactic Encounters: Our Majestic and Evolving Star-System, from the Big Bang to Time's End*

Louise Edwards  
Phys. Today **68**, 6, 54 (2015)

### *An Introduction to Lightning*

Robert C. Moore  
Phys. Today **68**, 6, 54 (2015)

### *An Introduction to Practical Laboratory Optics*

Robinson Kuis  
Phys. Today **68**, 6, 56 (2015)

### *What Does a Black Hole Look Like?*

Aaron Zimmerman  
Phys. Today **68**, 6, 56 (2015)

### *New books*

Phys. Today **68**, 6, 57 (2015)

## **NEW PRODUCTS**

### ***Focus on analytical equipment, sensors, and detectors***

Andreas Mandelis

Phys. Today **68**, 6, 60 (2015)

## **OBITUARIES**

### ***Tullio Eugenio Regge***

Mario Rasetti

Phys. Today **68**, 6, 63 (2015)

### ***Juerg Xaver Saladin***

Cyrus Baktash and I-Yang Lee

Phys. Today **68**, 6, 64 (2015)

### ***Charles Hard Townes***

Reinhard Genzel and Raymond Chiao

Phys. Today **68**, 6, 64 (2015)

## **QUICK STUDY**

### ***Salty solutions***

Gregory P. Thiel

Phys. Today **68**, 6, 66 (2015)

## **BACK SCATTER**

### ***“Accidental painting”***

Phys. Today **68**, 6, 72 (2015)