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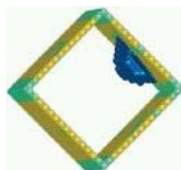
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Physical Review Letters

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**On the Cover**

Atomic configuration illustrating nucleation (blue) at the site of a partial dislocation in the surface layer of a square copper nanowire (yellow and green) under uniaxial stress.

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Essay: *Physical Review Letters*; Sam Goudsmit's Vision

January 18, 2008

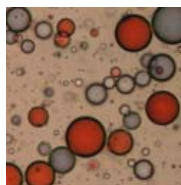
Sam Goudsmit implemented his vision of converting the Letters section of *Physical Review* into a distinct journal fifty years ago. *Physical Review Letters* was designed to publish "only papers that really deserve rapid communication." The new journal became so successful with physicists throughout the world that *Physical Review Letters* now publishes 3500 Letters per year.

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Editorial: *Physical Review Letters* at 50

January 2, 2008

During the course of the 50th year we will publish a series of Editorials on issues facing the journals as well as on scientific publishing. The first Editorial is more of an introduction to features and events we are planning for the year, and which we will announce frequently on this web site.

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Physical Review Focus: To Merge, Drops Must Separate

A pair of colliding water droplets merges on the rebound, rather than when they're squeezing against each other. The results should improve understanding of the separation process of oil-water mixtures important in industry.

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Milestone Letters

Edited by Martin Blume

Letters from the Past — A PRL Retrospective: As part of the celebration of PRL's 50th anniversary, we will be presenting throughout 2008 a series of milestone Letters that made long-lived contributions to physics. Starting the week of January 2, we will present a few important Letters from PRL in 1958, and the next week from 1959, etc., continuing up through the year 2000.

[Milestone Letters >](#)

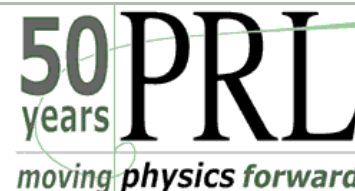
Timeline

The timeline features events related to the Physical Review and PRL, as well as seminal developments in physics after 1893. We also list a few important papers published by the journals. Each week, papers published in PRL will be highlighted separately as [Milestone Letters](#).


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 Citation:
Examples:

L 98 010001 (A, B, ..., RMP, PRSTAB, PRSTPER)
Phys. Rev. Lett. 98, 010001
10.1103/PhysRevLett.98.010001
PhysRevLett.98.010001



PRL Celebrates 50 Years

Join us as we commemorate 50 years of moving physics forward.

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Did you know?

In 2006 over 15,000 referees reviewed one or more papers for Physical Review Letters .

News, Announcements, and Editorials

- [Essay: *Physical Review Letters*; Sam Goudsmit's Vision \(January 18, 2008\)](#)
- [Editorial: *Physical Review Letters* at 50 \(January 2, 2008\)](#)
- [Editorial: Which Wei Wang? \(December 3, 2007\)](#)
- [APS seeks new PRB/PRL Assistant Editor \(September 1, 2007\)](#)
- [Announcement: New Prices and Payment Policy for Color Figures in the Print Journal \(June 23, 2007\)](#)

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Most cited Letters from 1985

- 1 [Unified Approach for Molecular Dynamics and Density-Functional Theory](#)
- 2 [Band gaps and electronic structure of transition-metal compounds](#)
- 3 [Universal Conductance Fluctuations in Metals](#)
- 4 [Observation of Squeezed States Generated by Four-Wave Mixing in an Optical Cavity](#)
- 5 [One-Atom Maser](#)
- 6 [Observation of Weak Localization of Light in a Random Medium](#)
- 7 [Weak Localization and Coherent Backscattering of Photons in Disordered Media](#)

- [1929: First *Reviews of Modern Physics*](#)
- [1947: Shelter Island Conference](#)
- [2007: Editors' Suggestions](#)

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- [8 Demonstration of a Soft X-Ray Amplifier](#)
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