

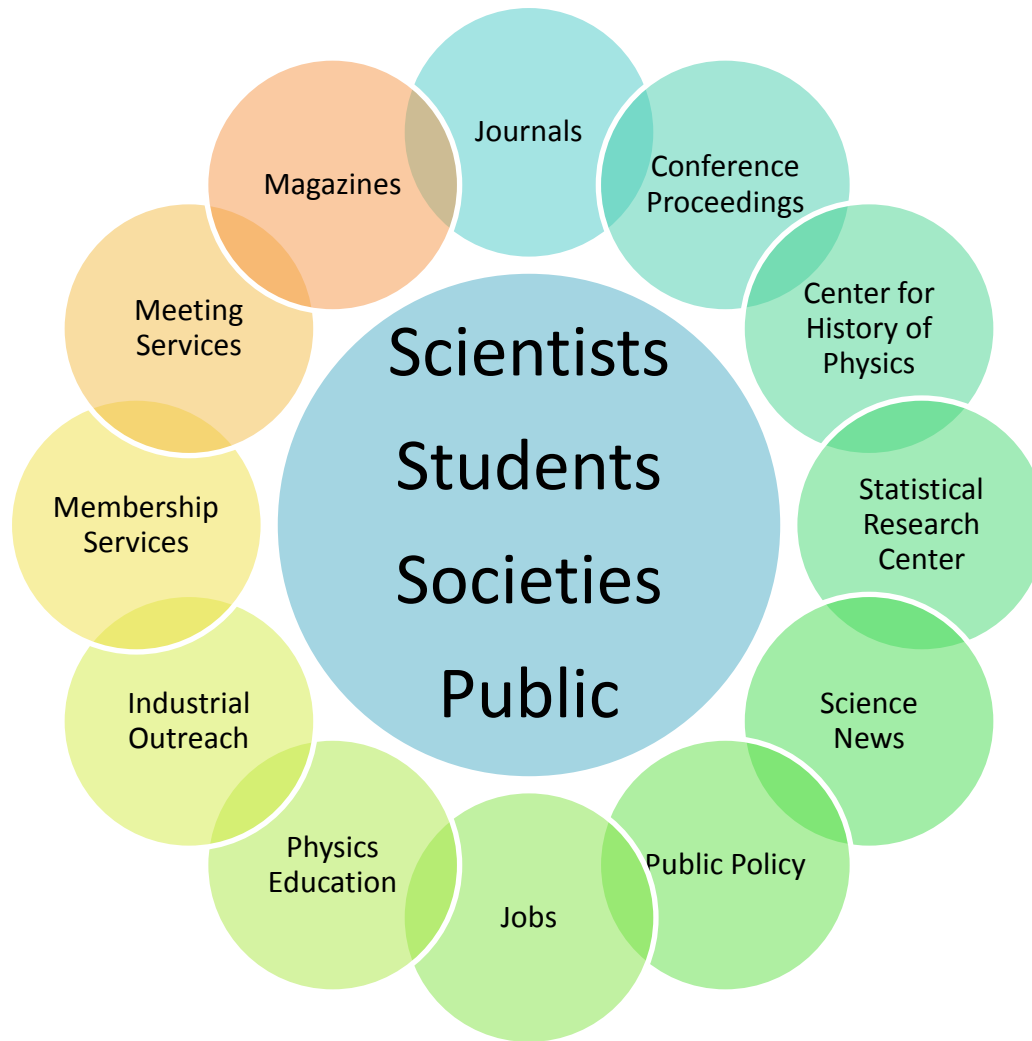
AIP Update

Alison Loudon Ph.D.
Director, Editorial Development
American Institute of Physics

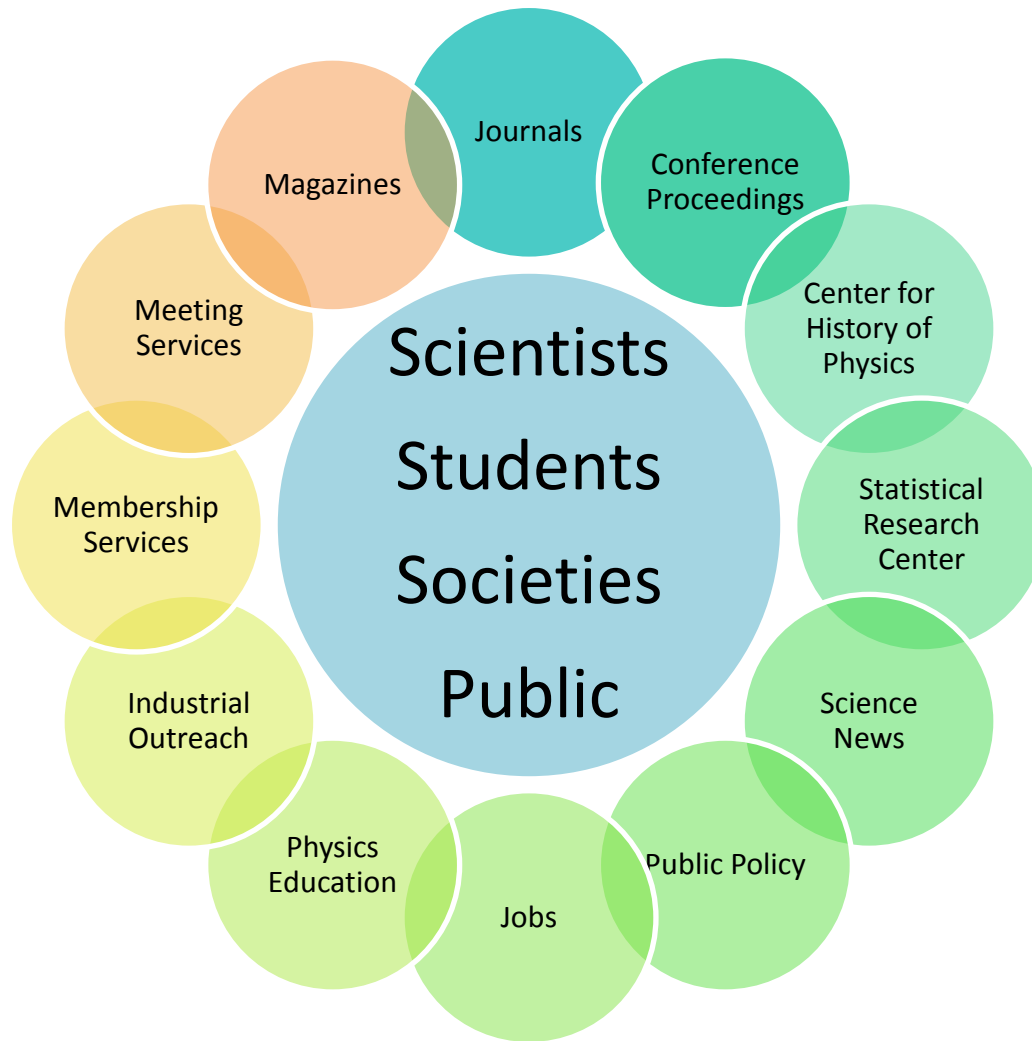
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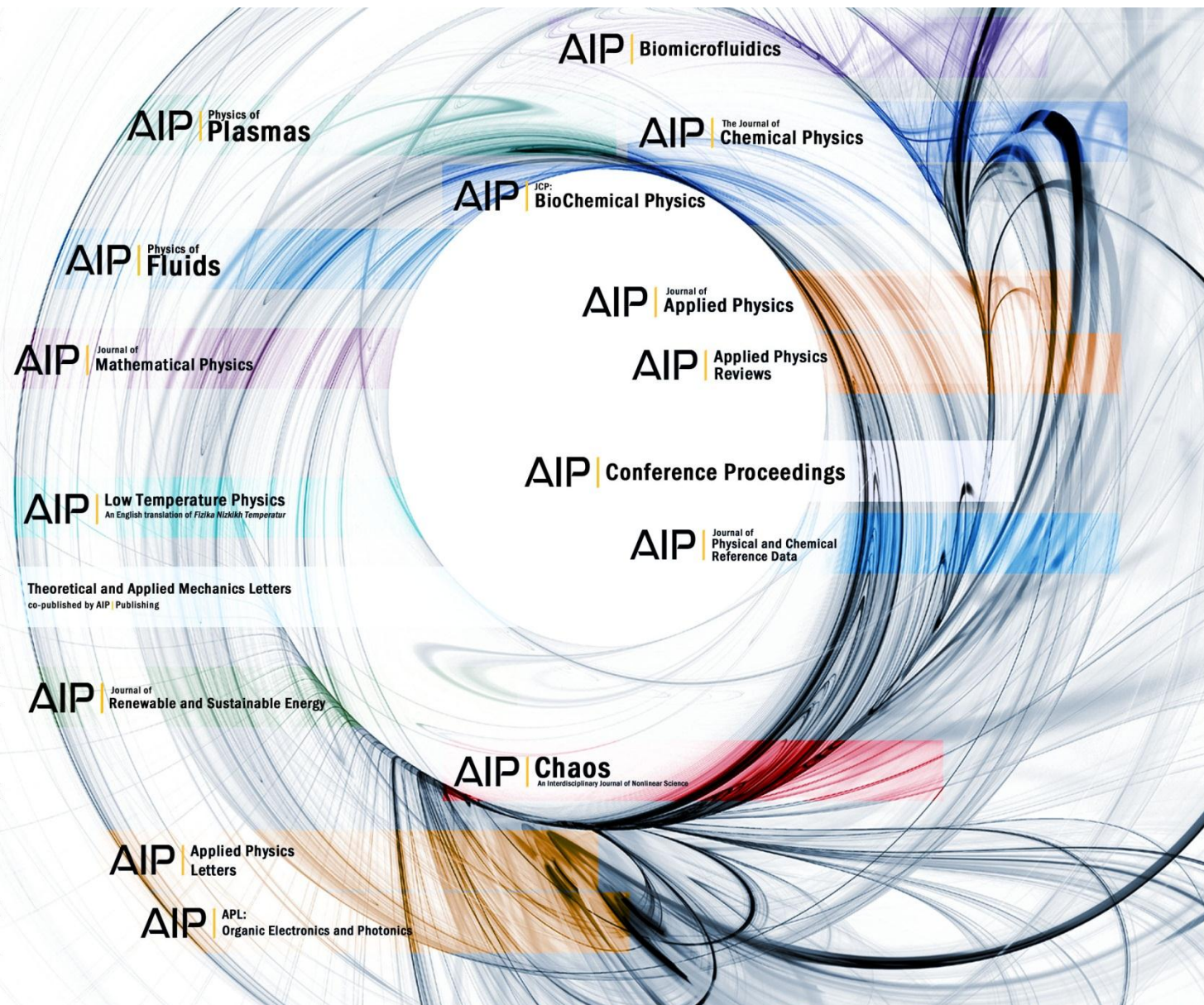
...created for the purpose of promoting the advancement and diffusion of the knowledge of physics and its application to human welfare. It is the mission of the Institute to serve the sciences of physics and astronomy by serving its Member Societies, individual scientists, students and the general public.

AIP Services and Content



AIP Services and Content





AIP | Biomicrofluidics

AIP | Physics of Plasmas

AIP | The Journal of Chemical Physics

AIP | JCP: BioChemical Physics

AIP | Physics of Fluids

AIP | Journal of Applied Physics

AIP | Journal of Mathematical Physics

AIP | Applied Physics Reviews

AIP | Low Temperature Physics
An English translation of *Fizika Nizkikh Temperatur*

AIP | Conference Proceedings

AIP | Journal of Physical and Chemical Reference Data

Theoretical and Applied Mechanics Letters
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AIP | Journal of Renewable and Sustainable Energy

AIP | Chaos
An Interdisciplinary Journal of Nonlinear Science

AIP | Applied Physics Letters

AIP | APL: Organic Electronics and Photonics

I'm most interested in journals...

AIP | Review of
Scientific Instruments

AIP | Physics of
Plasmas

AIP | Journal of
Mathematical Physics

AIP | **Conference Proceedings**



Journal Update



A Major New Innovation in Physical Science Publishing

- Fast-track, community-based, open access journal
- Covers all applied physical science
- Unique pre- and post-publication evaluation
- Article-level metrics
- Creative Commons licensing

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Article-Level Metrics

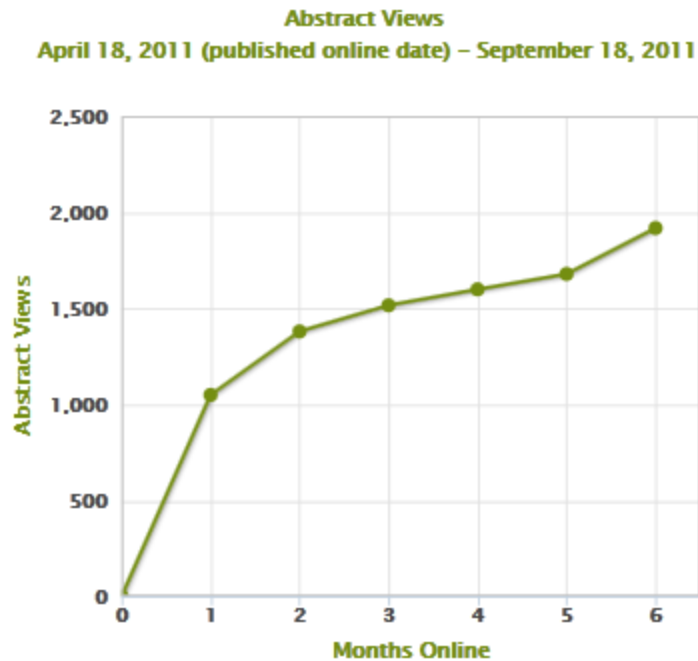
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Breakdown by Type

Abstract Views: 1918

Article Views: 2856



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Samuel M. Khamis on Why He Published His Research in *AIP Advances*

Adamant Technologies' Samuel M. Khamis talks about his decision to publish his research in *AIP Advances*. He cites the commenting functionality as well as the accessibility of the journal's articles as the main reasons he looked to this new journal to publish in.

Published: 4 August 2011



Samuel M. Khamis Discusses His Recent *AIP Advances* Article

Samuel M. Khamis discusses his *AIP Advances* article, which discusses a process that produces large arrays of nanotube transistors for applications ranging from chemical sensors to integrated circuit components. The breakthrough procedure comes about thanks to a fast and efficient fabrication method, which allows thousands of devices to be made each second—a couple of orders of magnitude faster than current technologies. The research represents a significant step in the direction of nanotube-based electronic devices.

Published: 4 August 2011



Interview with Executive Editor Robert H. Austin

Robert H. Austin is an Executive Editor for *AIP Advances*, an open access journal for the physical sciences.

Professor Austin discusses the peer review process and standards for this new journal. The more open reviewing process allows for more variety in the published articles' scope and reach. *AIP Advances* is not your standard physics journal.

Published: 13 July 2011



Interview with Executive Editor Vincent H. Crespi

In this video interview, Vincent H. Crespi, Executive Editor, discusses AIP's newest open-access journal, *AIP Advances*. Professor Crespi talks about the importance of information discovery, and how, through AIP's rating and commenting modules, the most crucial and important work can be found by the scientific community.

Published: 13 July 2011



Interview with Executive Editor A. T. Charlie Johnson

Previous Platform Updates

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063/1.3266840 (3 pages)

ration and damping lengths in photonic crystal mirrors

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ional photonic crystal slabs are studied with fully
optical properties and, in particular, we show that,
length associated with the delay induced by
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g reflectors can be overcome with carefully

the EU-FP6 "SPLASH" project and the French
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Figure Browser

High-speed tuning of visible laser wavelength using a nanoimprinted tunable filter

Nien-Tsu Huang¹, Steven Truxal¹, Yi-Chung Tung², Amy Hsiao², Shuichi Takayama², and Katsuo Kurabayashi³

¹ Department of Mechanical Engineering, University of Michigan, Ann Arbor, Michigan 48109, USA [map](#)

² Department of Biomedical Engineering, University of Michigan, Ann Arbor, Michigan 48109, USA [map](#)

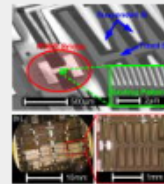
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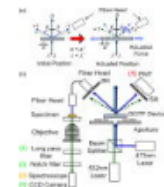
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Figures (click on thumbnails to view enlargements)



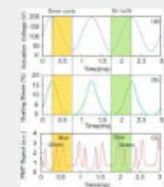
Images of the nanoimprinted grating optical tunable filter (GOTF) device. (a) SEM image consisting of a 250 μm long, 150 μm wide, 15 μm thick PDMS grating microbridge, and MEMS silicon comb drive electrostatic actuators. (b) Optical image of 1 cm^2 die area. (c) Optical image of the whole device unit.

[FIG. 1 View Enlargement](#) | [Download High Resolution Image](#)



Device operation and characterization. (a) Working principle of the GOTF device. The wavelength of the same diffraction angle θ shifts from λ to λ' . The wavelength shift of the first order is tuned by the actuation voltage V_2 applied to the comb drives. (b) Experimental setup for (1) dynamic optical switching bandwidth measurement, (2) excitation spectrum measurement, and (3) live/dead PC3 cell two-color imaging.


[FIG. 2 View Enlargement](#) | [Download High Resolution Image](#)



Results for high-speed ALEX using the GOTF device. (a) Sinusoidal actuation voltage drives of the GOTF device. (b) Grating strain. (c) PMT signal.

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Open-circuit voltage induced by thermal annealing on silicon solar cells

Philipp Becker¹, Dominik Suwito¹, Stefan W. Glunz¹, Stefan W. Glunz¹, and Martin Hermle¹
¹ Fraunhofer Institute for Solar Energy Systems (ISE), Heidenhofstrasse 2, D-79110 Freiburg, Germany

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The open-circuit voltage improvement of *n*-doped silicon solar cells is investigated in detail. We present an improvement of more than 100 mV up to a factor of 1.5 by thermal annealing on a hotplate. The observations are described very well by a stretched-exponential function in complex systems. Therefore, we suggest that the annealing, which saturates during the annealing process, is responsible for the improvement of the open-circuit voltage at the heterojunction interface, to be responsible for the improvement of the open-circuit voltage.



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Optical description of silicon solar cells. II. Device optical modeling with implications for improving efficiency

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Figures



Fig 1.

Schematic illustration of a bilayer with an applied electrostatic modulation periodic in the x -direction. The surface at $z = 0$ is covered by a grating with period d , and the width of the grating is assumed small compared to period d . The doped barriers (AlGaAs) are the unshaded areas, and quantum wells (GaAs, blue areas) in the z -direction are indicated as the 2DEG layers. The system is embedded in a dielectric medium.

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Fig 2.

Plots of the real (left scale) and imaginary (right scale) parts of the plasmon frequency for a bilayer 2DEG system with spacing $a = 100 \text{ \AA}$ between the layers. The frequencies are expressed in units of ω_F and are plotted as functions of the in-plane wave vector $q_{||}$ in units of k_F . The real solutions, shown in black and labeled by $\omega_R^{(1)}$ and $\omega_R^{(2)}$, have branches that bifurcate. The imaginary solutions, labeled correspondingly by $\omega_I^{(1)}$ and $\omega_I^{(2)}$, are shown in red. No modulating potential was applied in these calculations. Only those plasmon frequencies with nonzero imaginary parts are presented.

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Properties of current-driven coupled quantum wells

Athanasios Balassis^{1,a} and Godfrey Gumbs²

¹*Yeshiva University, 441 East Fordham Road, Bronx, New York 10458, USA*
²*College of the City University of New York, 695 Park Avenue, New York, New York 10065, USA*

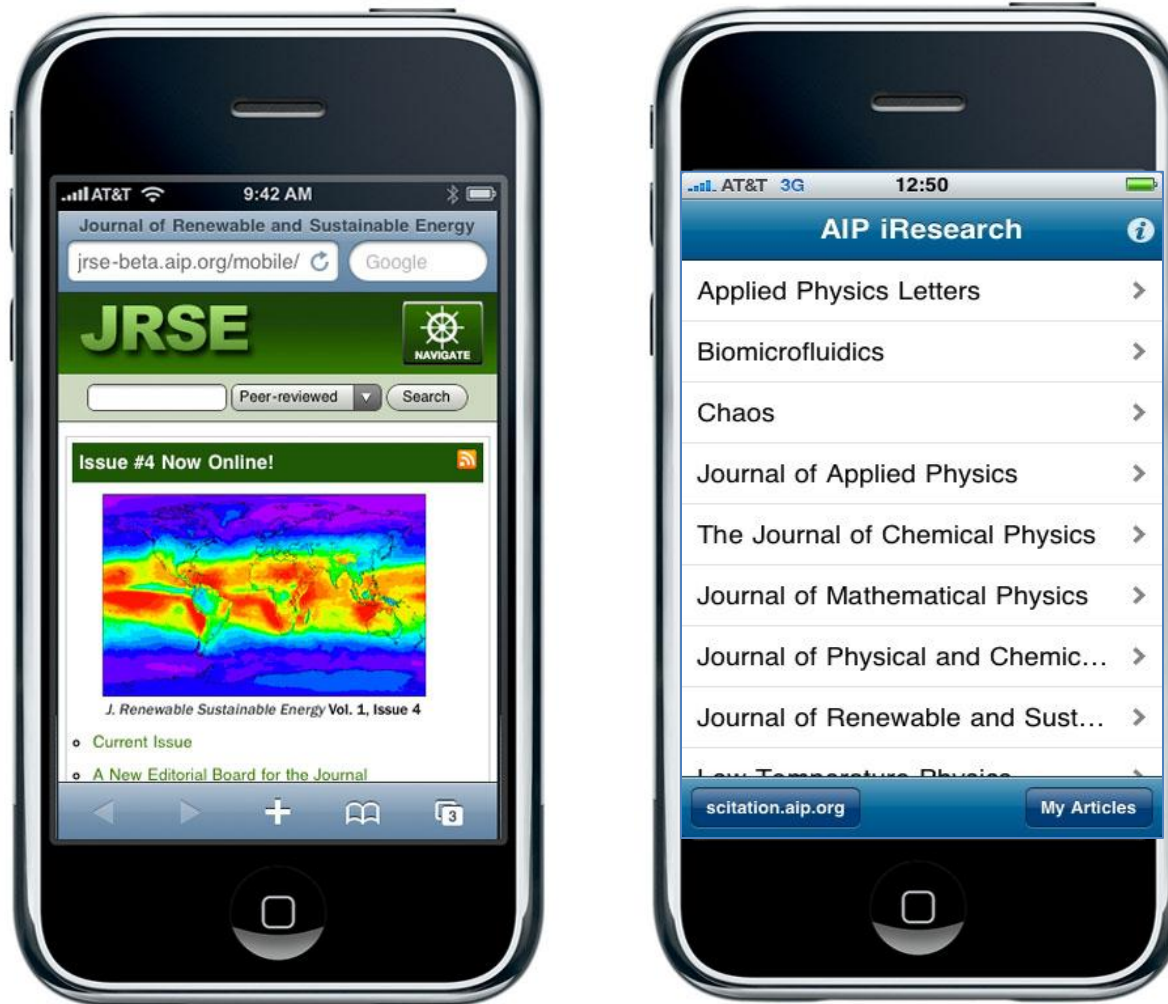
(Received 2 June 2009; Accepted 1 October 2009; Published 17 November 2009)

...lay is both a challenge and a blessing to physicists interested in studying sources of terahertz radiation in the electromagnetic spectrum, lying between microwave and infrared. Gone are the days of bulky and more uniform sources of radiation. Instead, today's experimentalists are surrounded by a wealth of knowledge and using it to inform and improve this area of research presents a challenge for researchers. Translating scientific findings to effective quality outcomes. One active field being pursued is that of terahertz semiconductor lasers obtained by epitaxially growing a sequence of layers of different semiconductors. A periodic, one-dimensional potential that varies on the nanometer scale. So far, the focus has been on quantum wells (QWs) emitting across a broad frequency range. The work reported up to this point covers several applications including mode locking, multiple color generation, photonic crystal structures, and improved laser performance. The work reported up to this point covers several applications including mode locking, multiple color generation, photonic crystal structures, and improved laser performance. The work reported up to this point covers several applications including mode locking, multiple color generation, photonic crystal structures, and improved laser performance. The work reported up to this point covers several applications including mode locking, multiple color generation, photonic crystal structures, and improved laser performance.

Social Media Tools



Mobile Views/App



Organizational Update

Recent Changes

AIP

NEWS RELEASE

American Institute of Physics to Refocus its Publishing Resources

Melville, NY, June 12, 2011 — The American Institute of Physics (AIP) announces that it will refocus its publishing portfolio on its original and core mission for its scholarly publishing enterprise: the publishing of AIP's suite of journals and those of its Member Societies. This strategic move will allow the organization to allocate its resources more effectively—to publish the very best research in the physical sciences, deliver greater value to AIP stakeholders, and serve the physical science community worldwide. AIP will continue to serve the community through its extensive outreach, public policy, and education programs.

- Results
 - Focus on journals/content
 - i.e. all of AIP also now focused on journals!

Future Developments

Foundations for Continuing Development

- Content Management System
- Thesaurus
- Growth of Editorial Development team

Continuing Development

- Semantic tagging/enrichment
- Mobile access and other products
- **Growth of journal program and focus on content**

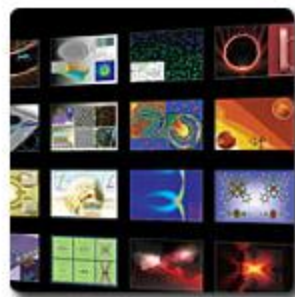
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