IOP Journals User Guide

For UGC-Infonet Consortia Members

Welcome to the IOP Journals User Guide

A great introduction if you are new to our website and also a useful refresher. Our User Guide provides an overview of the site and highlights key features including:

- Browsing
- Searching
- Multimedia files
- References
- Citing articles
- E-mail alerts

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IOP Journals

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More than just electronic versions of the printed titles, our online journals are used by researchers in universities, laboratories, corporations and organizations around the world. This User Guide will help you to make the most of our online service.

Turn over to get started!

journals.iop.org

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Full of useful links and information, it is a great page for you to bookmark.

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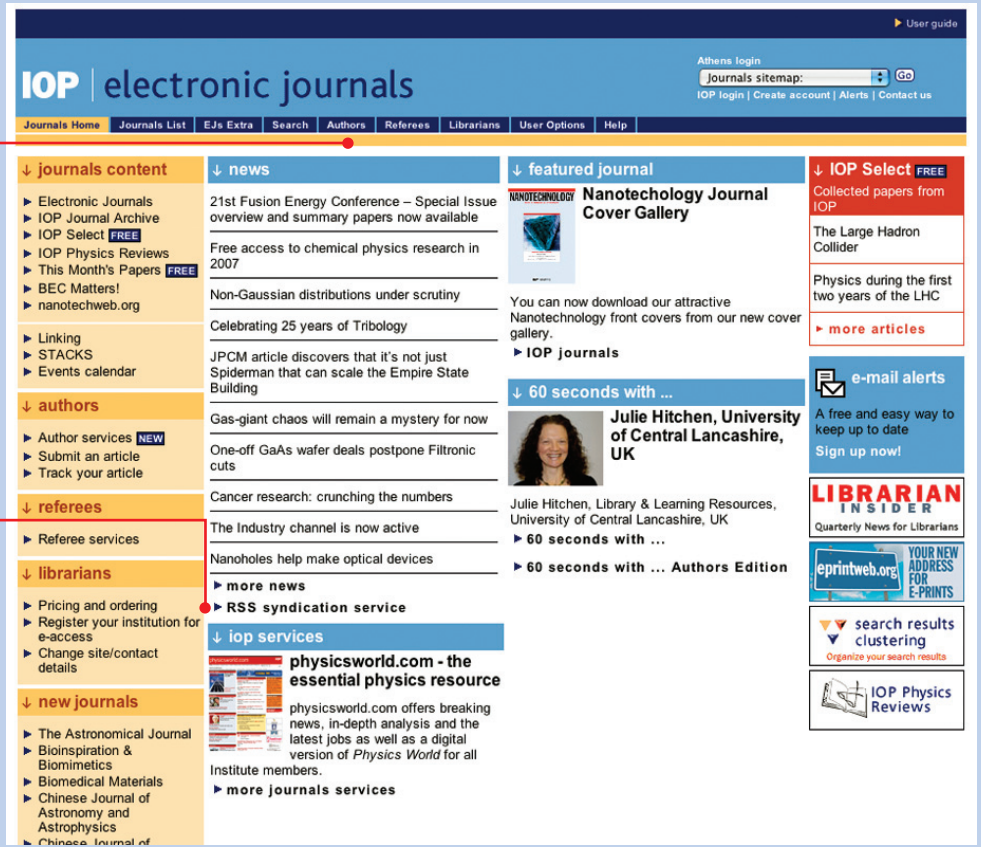

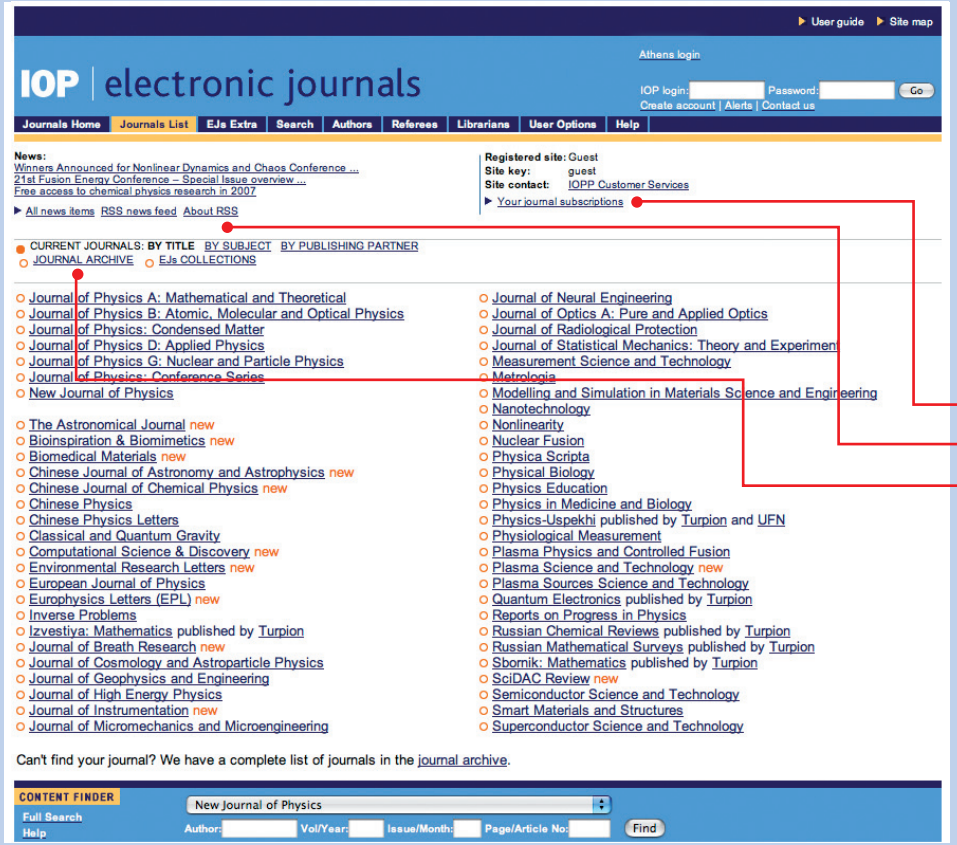

Journals list

This page provides links to all of our current journals, as well as some extra options.

To find the journals to which you have full access, select the 'Journal subscriptions' link. If you don't have access to desired titles, pricing and ordering information is available in the Librarians Channel.

Displays your journal subscriptions

Displays journals by subject

Links to all of the journals we've ever published – back to 1874!

Subject coverage

- Applied physics
- Astronomy and astrophysics
- Chemical physics
- Computational science
- Condensed matter and materials science
- High energy and nuclear physics
- Mathematics and applied mathematics
- Measurement science and sensors
- Medical and biological sciences
- Optical, atomic and molecular physics
- Physics education
- Plasma physics

Journal homepages

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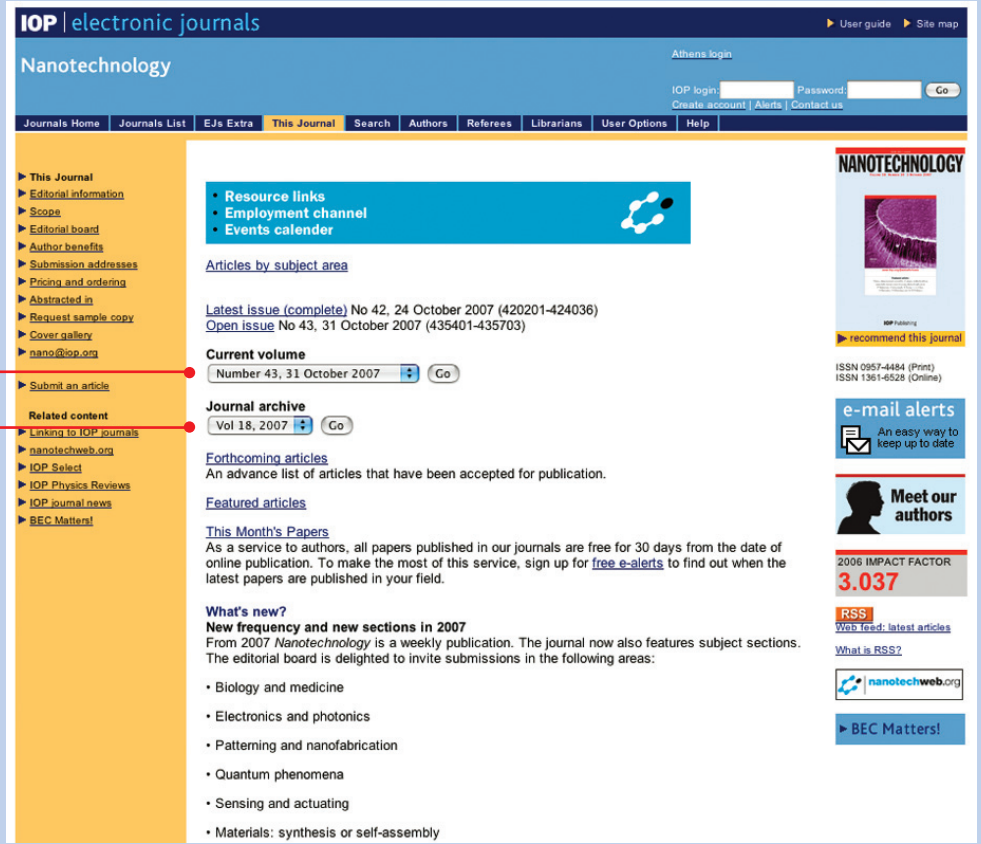
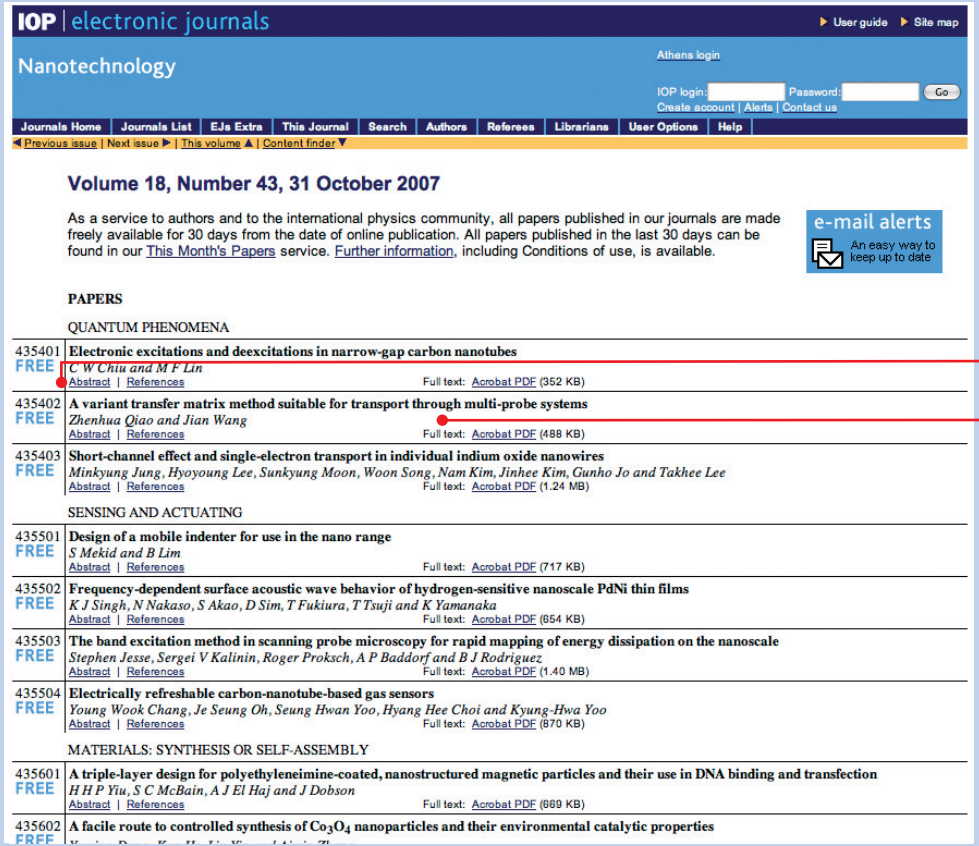
Access to Tables of Contents from the latest volume

Access to all back issues





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PAPERS

QUANTUM PHENOMENA

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C W Chiu and M F Lin
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435402 FREE **A variant transfer matrix method suitable for transport through multi-probe systems**
Zhenhua Qiao and Jian Wang
Abstract | References Full text: Acrobat PDF (488 KB)

435403 FREE **Short-channel effect and single-electron transport in individual indium oxide nanowires**
Minkyung Jung, Hyoyoung Lee, Sunkyung Moon, Woon Song, Nam Kim, Jinhee Kim, Gunho Jo and Takhee Lee
Abstract | References Full text: Acrobat PDF (1.24 MB)

SENSING AND ACTUATING

435501 FREE **Design of a mobile indenter for use in the nano range**
S Mekid and B Lim
Abstract | References Full text: Acrobat PDF (717 KB)

435502 FREE **Frequency-dependent surface acoustic wave behavior of hydrogen-sensitive nanoscale PdNi thin films**
K J Singh, N Nakaso, S Akao, D Sim, T Fukiura, T Tsuji and K Yamanaka
Abstract | References Full text: Acrobat PDF (654 KB)

435503 FREE **The band excitation method in scanning probe microscopy for rapid mapping of energy dissipation on the nanoscale**
Stephen Jesse, Sergei V Kalinin, Roger Proksch, A P Baddorf and B J Rodriguez
Abstract | References Full text: Acrobat PDF (1.40 MB)

435504 FREE **Electrically refreshable carbon-nanotube-based gas sensors**
Young Wook Chang, Je Seung Oh, Seung Hwan Yoo, Hyang Hee Choi and Kyung-Hwa Yoo
Abstract | References Full text: Acrobat PDF (870 KB)

MATERIALS: SYNTHESIS OR SELF-ASSEMBLY

435601 FREE **A triple-layer design for polyethyleneimine-coated, nanostructured magnetic particles and their use in DNA binding and transfection**
H H P Yiu, S C McBain, A J El Haj and J Dobson
Abstract | References Full text: Acrobat PDF (669 KB)

435602 FREE **A facile route to controlled synthesis of Co_3O_4 nanoparticles and their environmental catalytic properties**

View the abstract

...or access the full text

Tables of Contents pages

From the Tables of Contents, you can access the abstracts of our papers or go directly to their full text.

If you don't have full text access through a subscription, you can purchase papers online by selecting the full text PDF links.

Abstracts

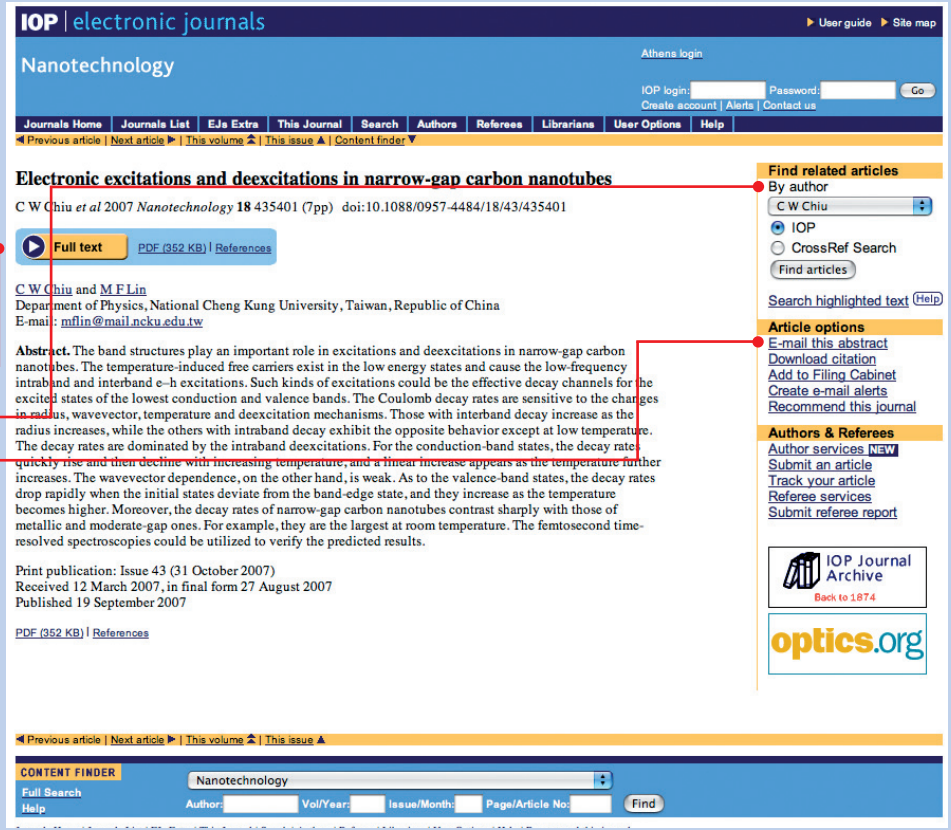
Not only do our Abstract pages contain summaries of each paper, they provide links to the full text and to a range of useful tools.

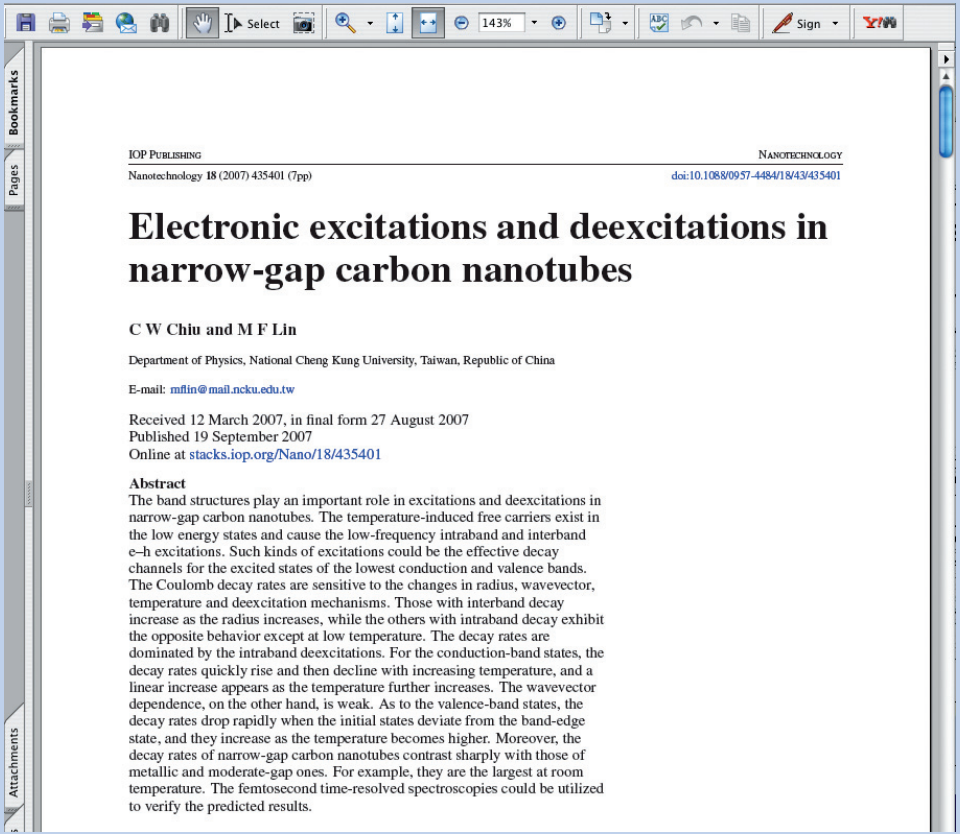
All options can be found on the right-hand side of the page.

Access the full text

Find related articles

E-mail the abstract or download the citation





IOP Publishing Nanotechnology

Nanotechnology **18** (2007) 435401 (7pp) doi:10.1088/0957-4484/18/43/435401

Electronic excitations and deexcitations in narrow-gap carbon nanotubes

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Abstract
The band structures play an important role in excitations and deexcitations in narrow-gap carbon nanotubes. The temperature-induced free carriers exist in the low energy states and cause the low-frequency intraband and interband e–h excitations. Such kinds of excitations could be the effective decay channels for the excited states of the lowest conduction and valence bands. The Coulomb decay rates are sensitive to the changes in radius, wavevector, temperature and deexcitation mechanisms. Those with interband decay increase as the radius increases, while the others with intraband decay exhibit the opposite behavior except at low temperature. The decay rates are dominated by the intraband deexcitations. For the conduction-band states, the decay rates quickly rise and then decline with increasing temperature, and a linear increase appears as the temperature further increases. The wavevector dependence, on the other hand, is weak. As to the valence-band states, the decay rates drop rapidly when the initial states deviate from the band-edge state, and they increase as the temperature becomes higher. Moreover, the decay rates of narrow-gap carbon nanotubes contrast sharply with those of metallic and moderate-gap ones. For example, they are the largest at room temperature. The femtosecond time-resolved spectroscopies could be utilized to verify the predicted results.

Accessing the full text

All of our papers are available as PDFs, and some also have HTML and Postscript options.

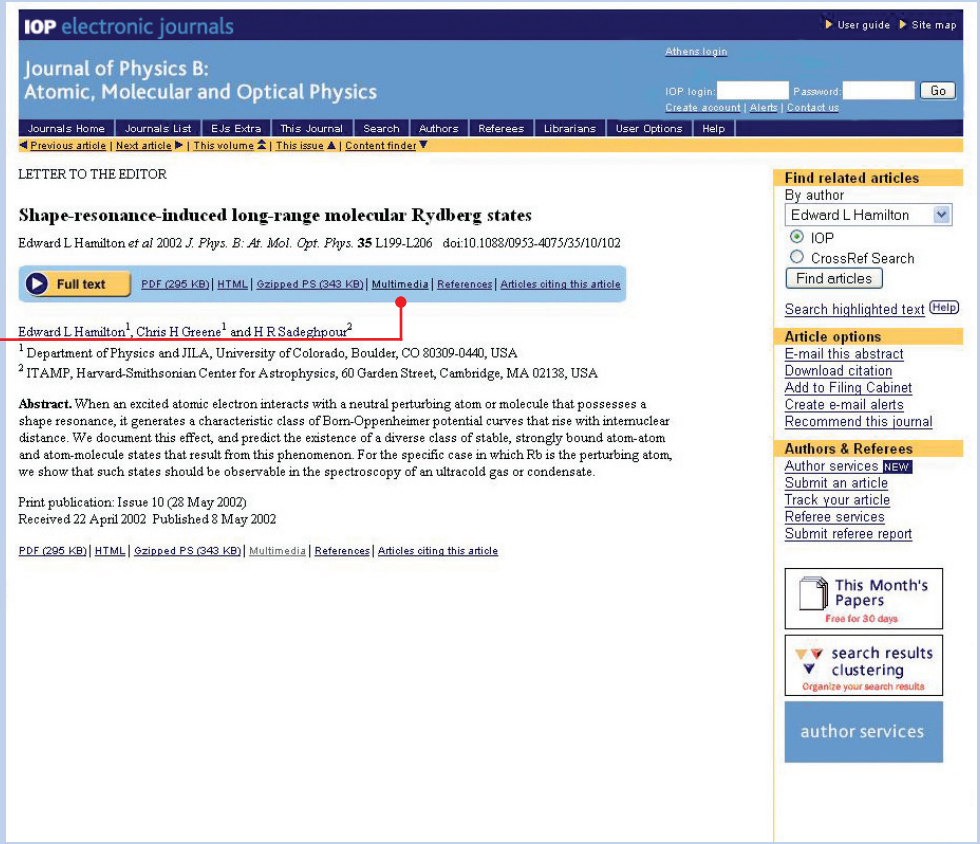
If you don't have full text access through a subscription, you will be invited to purchase the papers online.

Multimedia files

If a multimedia file has been submitted with an article, you will see a link to it on the Abstract page.

Multimedia links are also shown on our Tables of Contents pages.

Multimedia files



More and more authors supply multimedia files with their papers, including:

- video clips
- animations
- experimental data
- supplementary figures

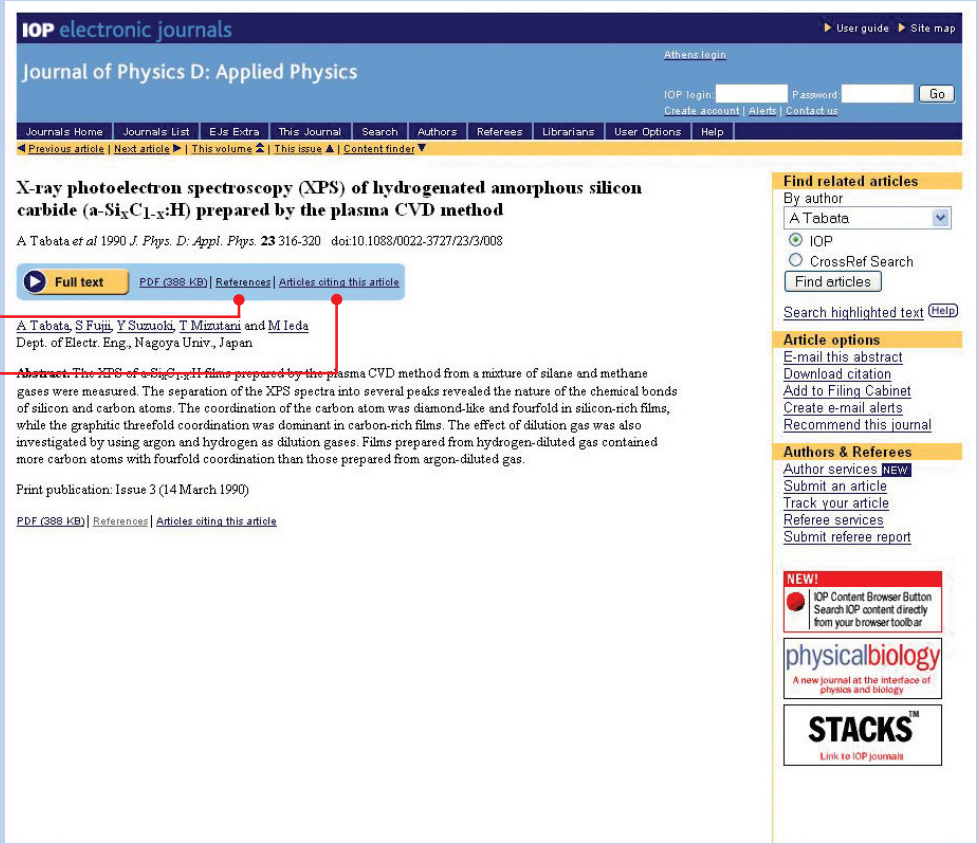
Look out for multimedia links on our Tables of Contents and Abstract pages.

Links to references and citing articles

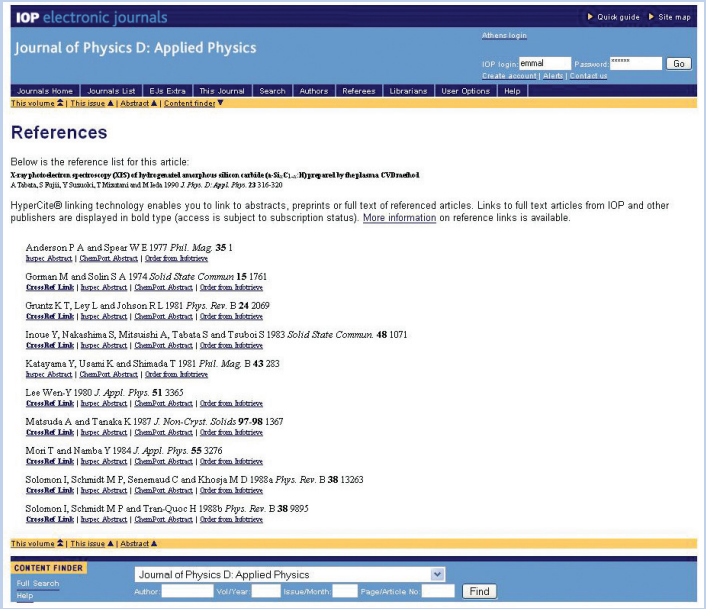
You can link to each paper's references and also to papers that have cited it since it was published.

References

Citing articles

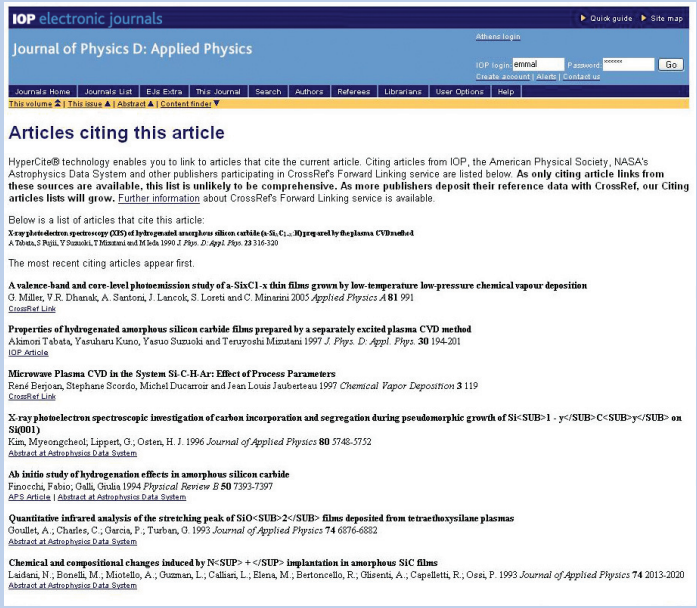


Links to references



Links to references and citing articles are enabled through CrossRef, a cross-publisher linking initiative. As more publishers deposit their abstracts and references with CrossRef, these links will grow.

Links to citing articles



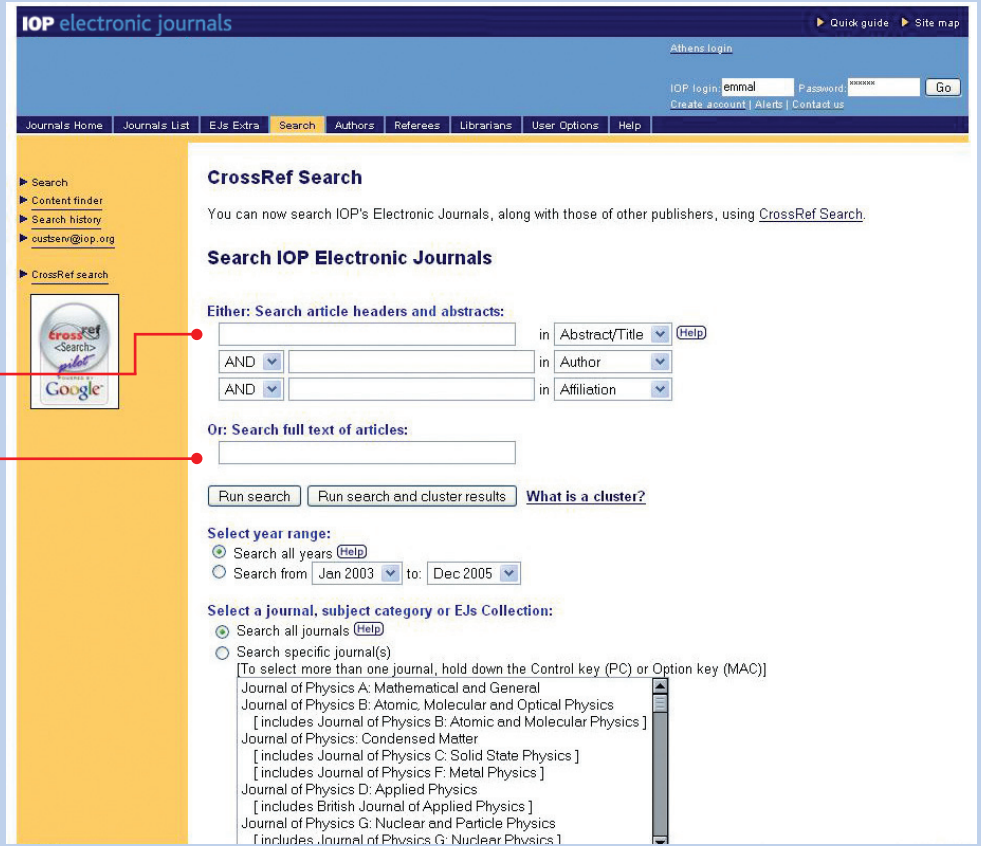
Searching

You can search our papers' abstracts (including titles, author names, etc.) – or search the full text.

There are options to limit your search by year range (this is useful as IOP journals go back to 1874) and also by journal.

Enter search terms here to search headers and abstracts

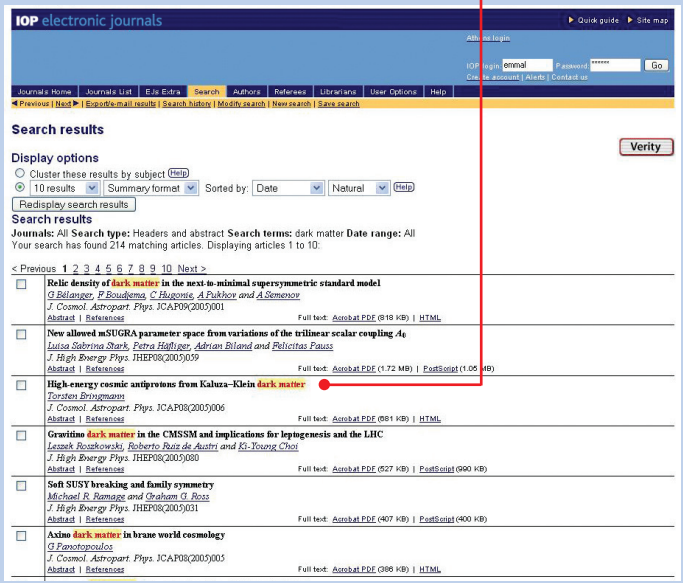
...or here to search the full text



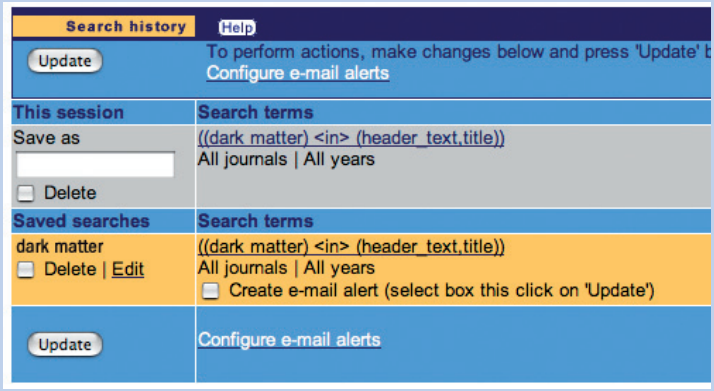
Search results

When you run a search, the search results are displayed in date order (the default setting). From your search results, you can access the papers.

Your search term is highlighted in the results



At the end of the Search results page there are tools for exporting or e-mailing your search results, so you can keep a permanent record. You can also save your searches for later visits.

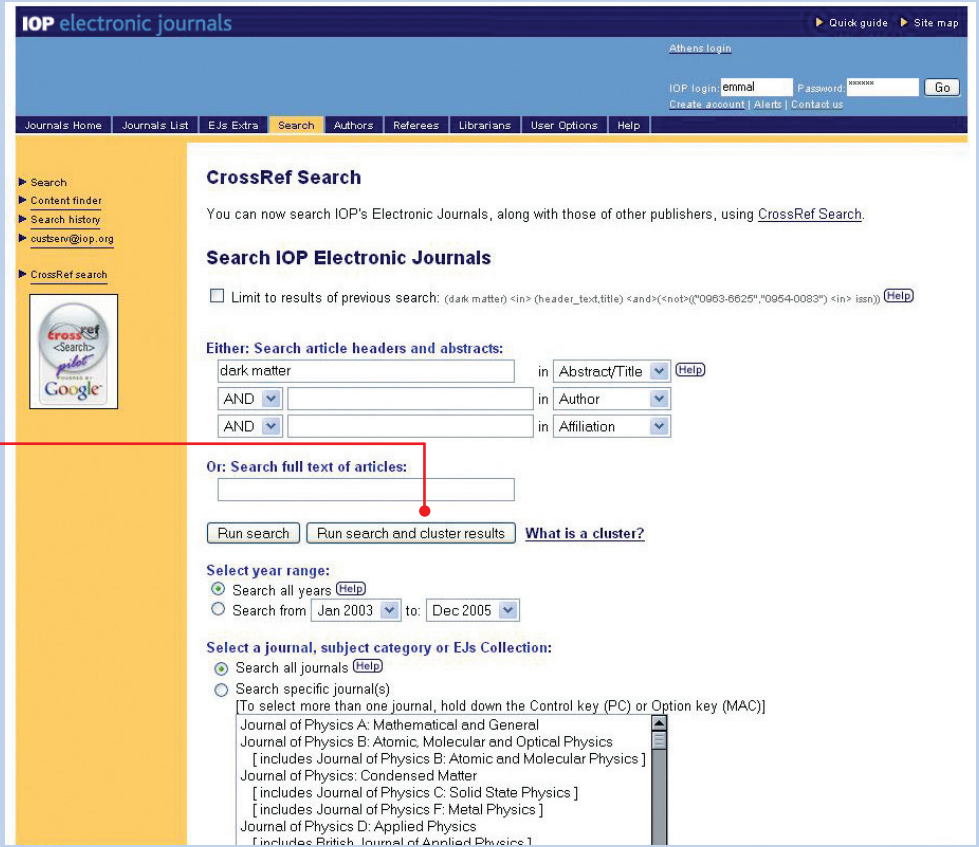


Clustering your search results by subject

You can cluster your search results by subject to find articles of interest easily.

Our clustering option is powered by a search engine from Vivisimo. It uses sophisticated algorithms to cluster papers into meaningful subject categories based on words in the abstracts and titles.

Simply select 'Run search and cluster'



Search results clustered by subject

When you cluster your search results, subject folders are shown on the left-hand side of the Search results page.

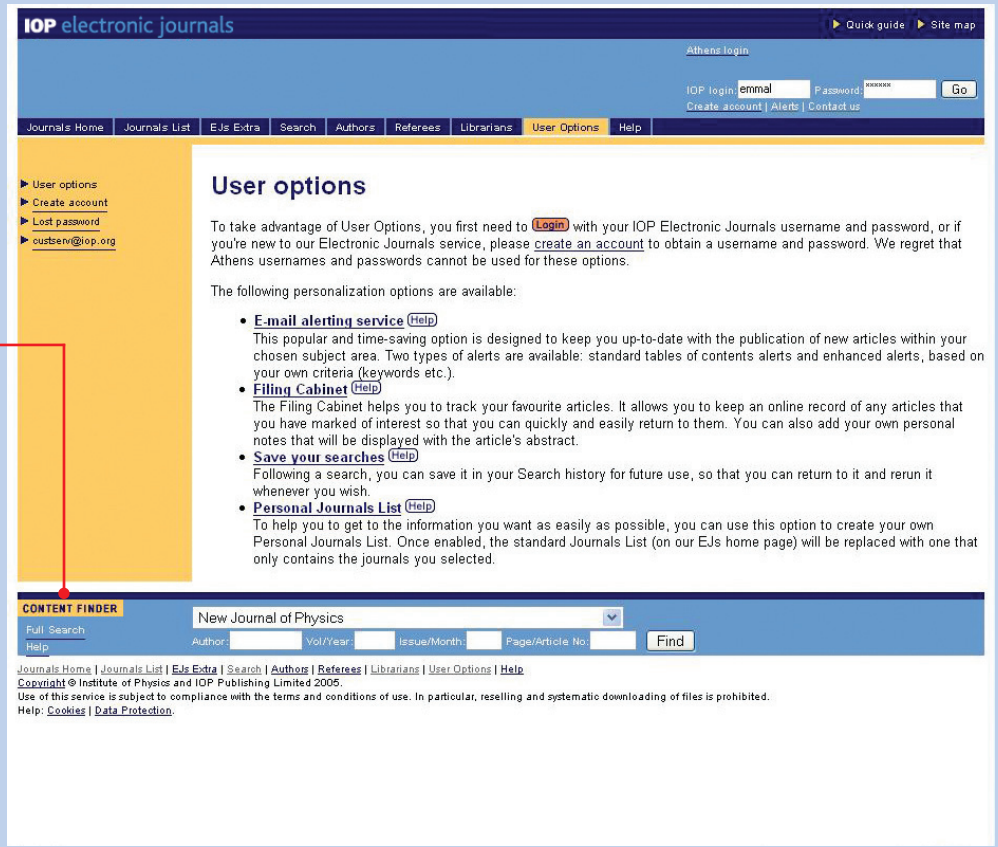
Simply select the folder and view the papers in that subject.

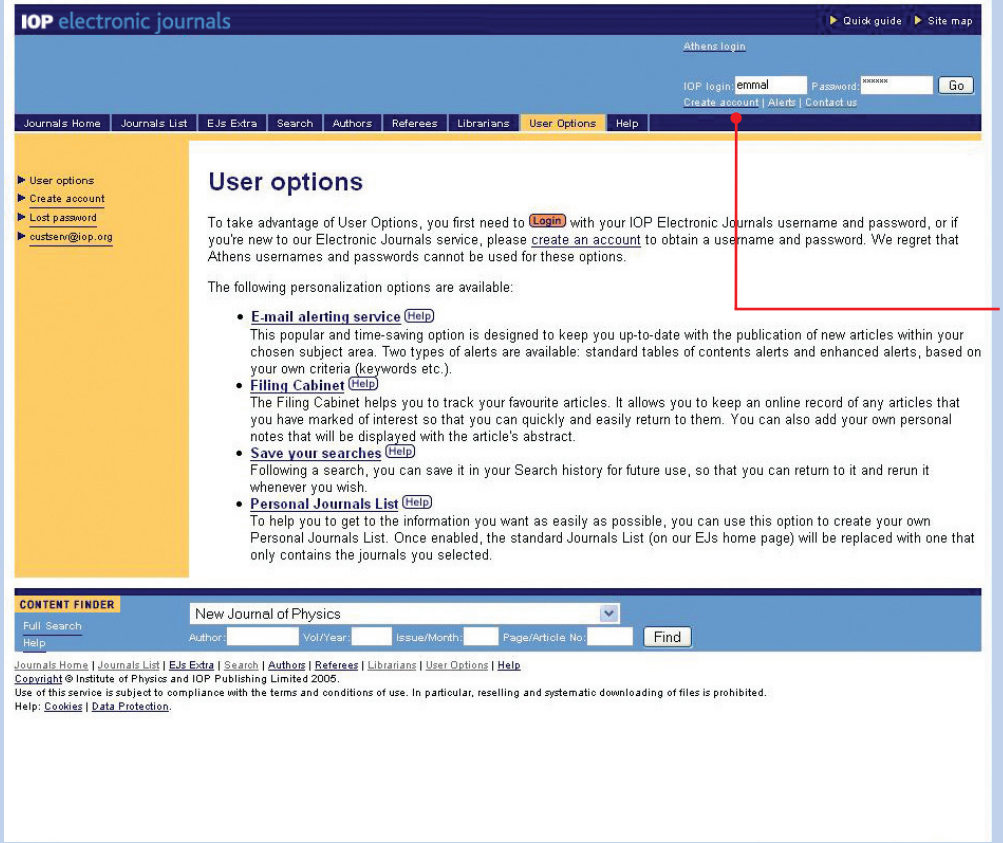
Finding specific papers

If you want to find a specific paper you can use Content Finder to go directly to it. Enter the paper's details and select 'Find'.

Content Finder can be found at the bottom of every page in the service.

Use Content Finder for quick access to specific articles





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Create an account for these options

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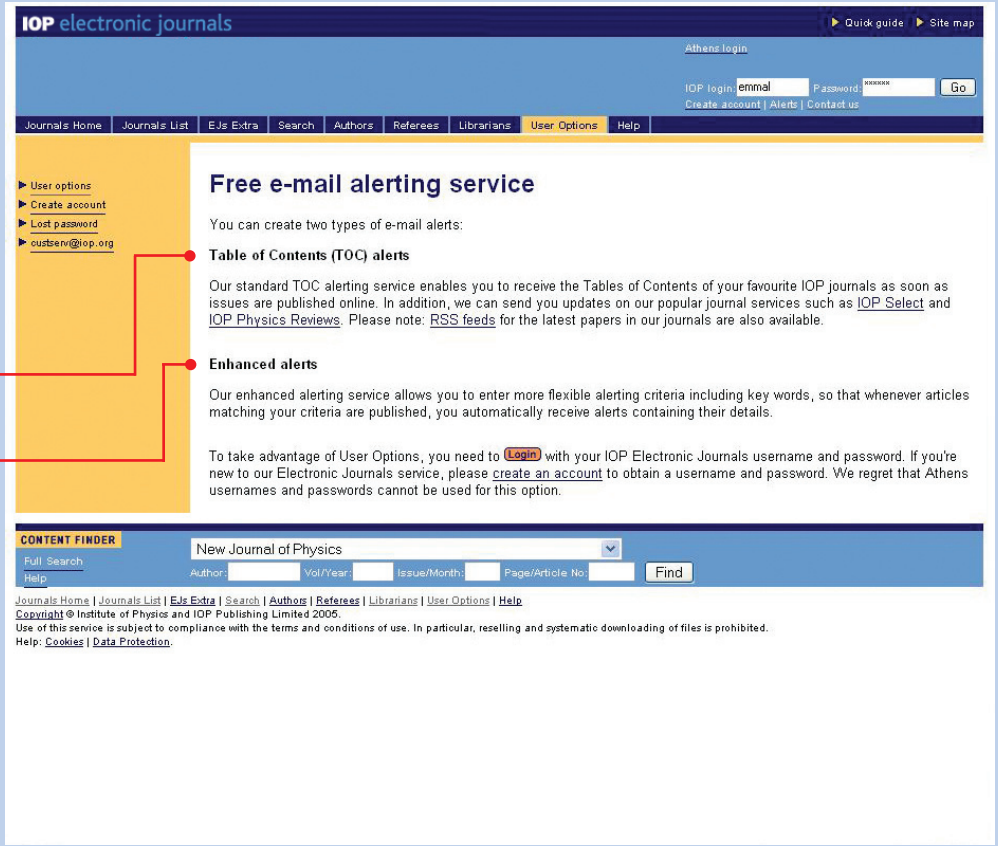
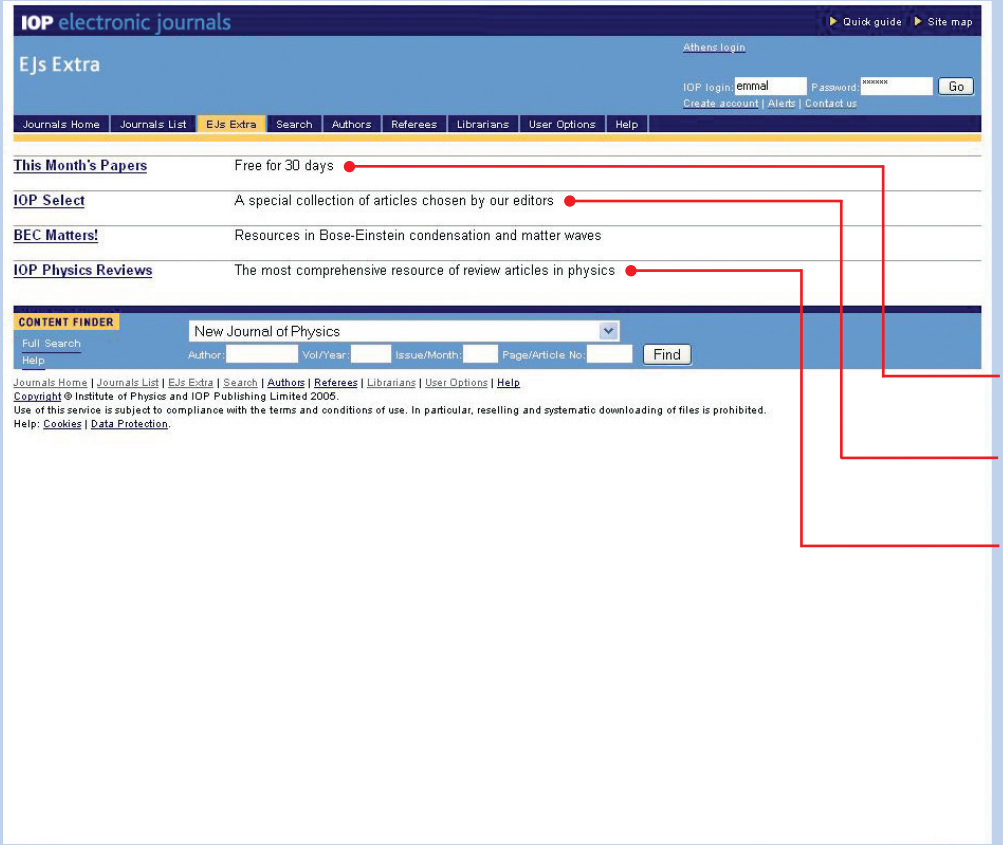
Receive the Tables of Contents as soon as issues are published online

...or create an alert based on your own criteria (author names or keywords)





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Free access to papers published in the last 30 days

Free access to our most significant and novel papers

Access to the review articles published in our journals

Other information

There are other areas of our site that you might find useful. These include our context-sensitive Help pages and 'Contact us' information.

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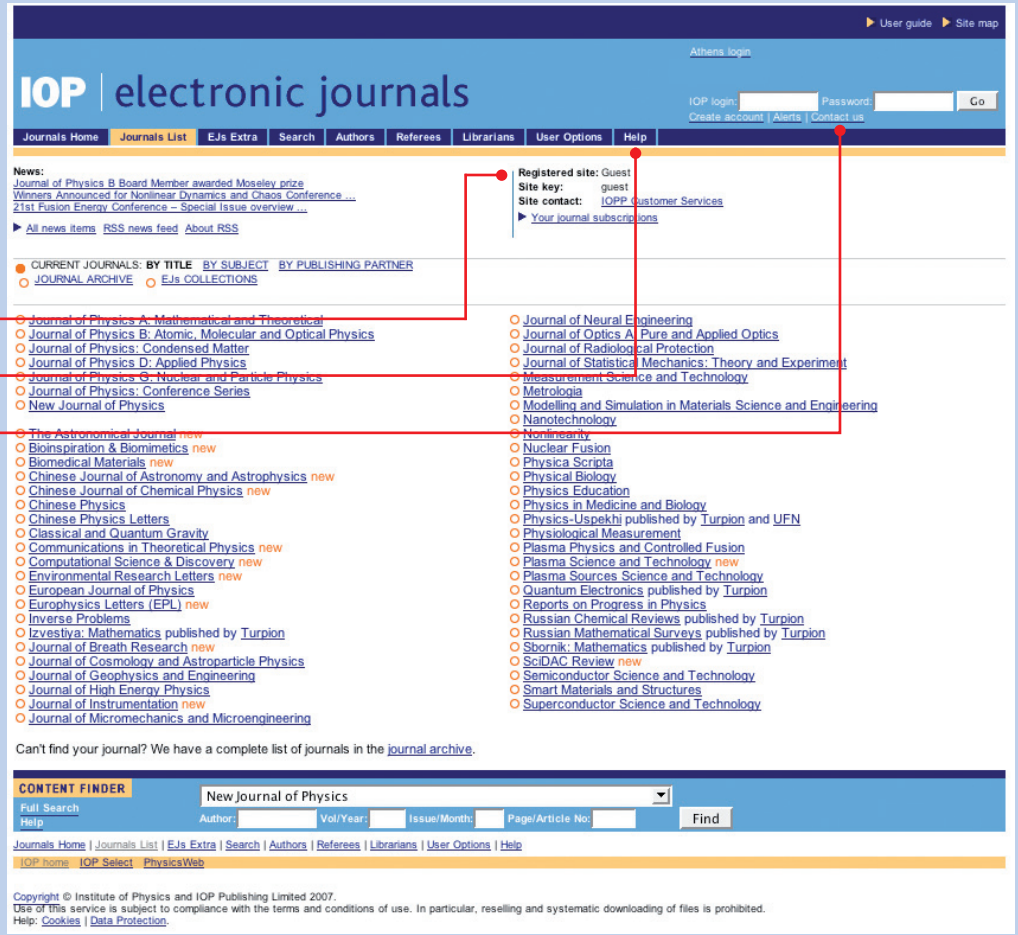
Context-sensitive Help pages

Contact information



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