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Database Spotlight

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Fall 9-1-2014

## Database Spotlight: Science Fall 2014

The University of Alabama in Huntsville

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## Outside the Box : Frost & Sullivan

At some point you have to move from theory to practical application when developing a new technology, or improving upon an older one. It's important to become aware of the state of an industry or market for what you're working on, and Salmon Library has the tools for that! While listed as a business database, members of the College of Science should be aware of *Frost & Sullivan's* database. This resource provides market and industry data to inform a global perspective for a given product idea or application. With a brand new layout in 2014, you can browse industries such as **Aerospace & Defense** or **Energy Systems**, or technologies by categories like **microelectronics** or **materials & coatings**. There are handy categories as well to allow customization in finding just industry research versus press releases, or for finding forecasts based on country. Be informed about the global application potential of your

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## DATABASE SPOTLIGHT :

### SCIENCE

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FALL 2014



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**Quick Tip:** When using the *Journal Citation Reports* database, select "Science Edition," search by "subject category," then by categories like "Optics" or "Computer Science, Cybernetics." The results can be sorted by total cites or impact ratings, granting insights into leading journals in several fields of study!



AMERICAN MATHEMATICAL SOCIETY Indexing over 60 years of *Mathematical Reviews*, this is a database filled with reviews, abstracts, and bibliographic information for literature in mathematical sciences, with over 100,000 new items added annually. The content is mostly classified according to the **Mathematics Subject Classification** guide, which can be viewed on the *American Mathematical Society's* website to get a sense of the logic behind the codification scheme. A staff of professional mathematicians select individuals to write reviews of current published literature, with over 80,000 reviews added annually. Reference lists create a web of citations that allow users to track the history and influence of research publications in the mathematical sciences. Authors are each classified with an **MR Author ID** to make finding an author's work easier, such as being published under various names. There is also a tool to see the publishing relationships between authors, called **Collaboration Distance**, in which you search authors in pairs to view such things as coauthored projects.



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*The Astrophysical Journal* was cited 193,430 times in 2013, according to *Journal Citation Reports*, leading the field of astronomy & astrophysics in this category. Hint: We have this journal. Check it out!

## ScienceDirect

Salmon Library provides access to a few thousand titles from *ScienceDirect*. This is a key resource for our College of Science, as we have over 1,500 titles under the **Physical and Life Science** categories that offer full text, as well as hundreds of abstracts. While our subscription is robust, take advantage of their Open Access collections as well! The database's homepage has a link near the bottom left that will take you to a directory of open access content which can also be browsed by subject area.

Another great feature is *ScienceDirect's* **Top 25 Hottest Articles**, located near the center of the page. This is a quick way to see a listing of some of the most relevant and highly cited content in a given year. Limit by **Earth and Planetary Science**, for example, to get a top 25 list which you can sort by year all the way back to 2004. In many cases, you can even view the most read articles from a particular journal! Elsevier uses data from a sister database, *Scopus*, to indicate how many times a given article has been cited. You can see that information under each article on this list, granting insights into an article's practical applications over time. As a bonus, there is an easy "Blog this" button on each article listed, providing an embedded link to copy and paste this article's data into a web application or program.



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We provide access to over 700 e-books covering life sciences fields via our Springer collections.

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**Quick tip:** Check out this Fall's edition of Salmon Library's primary newsletter, *The Call Number*, for a glimpse into the Timelines found in the *Oxford Reference Series*. The series covers over 50 reference books in science and technology, including 6 devoted to the earth sciences!



The library provides access to a suite of *Nature Publishing* publications. While not technically a database, you'll find a link to *Nature Publishing Journals* under the **Science** database tab. This will take you to a journal list which you can browse by title. You'll find titles such as *Cell Death and Differentiation*, *Journal of Human Genetics*, *Vital*, *Scientific Reports*, and of course the flagship *Nature* publication itself. Additionally, Salmon Library's collection includes a number of *Nature* sister titles such as *Nature Chemistry*, *Nature Materials*, *Nature Photonics*, and more. We have varying degrees of coverage for these titles, so make sure to check out those coverage dates and embargo details as you browse. We also provide several popular titles in the *Nature Reviews* series. Most of these are also found in our *Health Reference Center Academic* database, since several of these titles are useful to the health sciences as well. You'll find entries in the *Reviews* series such as *Genetics*, *Neuroscience*, *Cardiology*, and *Molecular Cell Biology*.



The *SciFinder Scholar* collection is a database of references, substances, and reactions in chemistry and related sciences. Hosted by the *American Chemical Society*, this resource is limited to UAH students, staff, and faculty. To access it you must create an account at the *SciFinder* landing page, where you will be asked to register as a current student, staff, or faculty member. We are currently limited to three simultaneous users, so please logout of *SciFinder Scholar* when you are done to allow others to access the database! The search interface allows you to look up research topics, such as the **catalytic decomposition of hydrogen peroxide**. From there you can limit by publication years, document types (book, patent, journal, dissertation), language, author, and company. From there you will view several references, often with granular information such as **Substance** or **Reaction Details**, whether a substance is commercially available, and even search for specific molecular formulas.



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