

SCIENTIFIC NOTATIONS

1.23E+11 1.23 X 10¹¹ N_x10_x 2.3419 X 10⁴ 0.0000000000000000211 (N X 0_x)

Items of interest from the Science Libraries at Emory University



Volume 2, Issue 2
January 2006



150% of its previous capacity; this created a great amount of shelf space for both the Science collection (much of which lives in the Q-Z range, housed on the 4th floor) and for other materials which were shifted in the Stacks tower. We hope to convert more floors to compact shelving in the future; preparations are already underway for conversion of Level 5. What could possibly be wrong with this picture? (cont. pg.2)

Print vs. Online: The Serials Crunch

By Laura Kane McElfresh, Mathematics & Computer Science Librarian

The nature and behavior of scholarly serials are of great importance to researchers, teachers, and librarians everywhere and in all fields, but to none more than those of us in the sciences. Journals are expensive in subscription costs and in the staff time required to support them; they take up space in buildings which take up space on campus, which is a valuable and limited commodity; and at the same time, they are absolutely central to many scientists' work. In seeking to provide the necessary access to these essential publications, many universities are finding their resources squeezed ever tighter. Here, Emory is no exception.

CONSIDERATIONS OF SPACE

Almost two years ago, Woodruff Library had the grand reopening for the newly renovated 4th Floor. We unveiled the new movable compact shelving, which increased shelf capacity on that floor to over

In This Issue

- Print vs. Online (1-3)
- How to Cite a *Science* Express Paper (4)
- ScienceLinks (4)
- Emory Partners w/Google (4)
- Chemistry Journal News (5)
- Science Liaisons at Emory (5)
- Knovel News (6)
- Synlett, Synthesis & Synfacts (6)
- E-Print Network (7)
- New Biology Librarian (8)
- Looking for a Career? Become a Science Librarian (9)
- Emory Dissertations & Theses Online (10)

Simply put: we are filling as quickly as we can build. Currently, three floors of the Woodruff Stacks Tower are approaching 90% capacity [Spornick]. Many of the other floors are crowded as well, with study carrel space being reclaimed as additional shelving on the most crowded floors. Even if we are able to continue converting the stacks to compact shelving -- a big "if", since it depends on whether or not funding is granted -- by the time the proposed stacks conversion is completed up through Level 9, the stacks will once again be nearly full. Our off-site Storage facility is also approaching capacity. At the current rate of expansion of the print collection, we must run as fast as we can just to stay where we are. Moreover, the rate of production of scholarly printed materials has been increasing exponentially over the past two centuries [Odlyzko]; accordingly, we can expect an increase in the rate of expansion of the Emory Libraries' print collection.

Could we not just add more space to house our printed library materials? This prospect seems unlikely at this point. We have only recently completed the Candler Library renovation¹, and the Library's CLAIR (Center for Library and Information Resources) is less than 10 years old, having opened in 1997. Next on the library construction slate are new facilities for the Goizueta Business Library and for the Manuscripts, Archives, and Rare Books Library (MARBL). As developable land on campus becomes ever scarcer and more valuable, one cannot reasonably assume that unlimited space will be allocated for us to put up more buildings for books.

MATTERS OF FINANCE

Even if we had unlimited space on campus, new library buildings cost money. It costs money to build them; it costs money to maintain them; it costs money to shelve and preserve the print collections housed inside them. We in the sciences have become all too familiar with the rising subscription prices of scholarly journals, both in print and

¹ The Candler Library building was renovated and connected to the main Woodruff Library building in 2003. However, the Library reclaimed only a fraction of the space in this building for use as a reading room. The rest -- well over half of the building's interior space -- was given to the College for use as offices, classrooms, etc.

electronic formats. But subscription costs are only the beginning of a library's expenditure on serials; we must also receive and process print issues, put them out for use by patrons, and (if back issues are to be retained) bind and store them for posterity. Electronic journals are not free from post-subscription costs either; it still takes staff time to handle subscriptions (as with print serials) and to maintain the eJournals@Emory service, which is how we "shelve" our e-journals. However, e-journals require much lower expenditures for building space and physical infrastructure.

Studies have shown that the price of housing physical materials is definitely not insignificant; non-subscription costs for e-journals compare quite favorably to costs for their print counterparts. For example, Schonfeld, et al. compare projected long-term costs per title, print vs. electronic, over the course of 25 years at eleven different institutions [Schonfeld]. The average cost per title in electronic format was \$27.54/year -- much lower than the \$129.09/year average cost per title in print -- when they used remote, high-density storage of print volumes as their basis of comparison. Housing print volumes in a new, on-campus, ADA-compliant facility brought the average per-title cost for print up to \$295.09/year. Now, this data cannot be seen as an indicator of the cost of subscription journals at Emory, or of the amount of money that could be saved by a switch to electronic formats; each library has its own combination of subscriptions and its own set of library processes. However, Schonfeld's study does suggest that a preference for electronic formats could bring about significant savings. Furthermore, none of the libraries showed a higher projected cost for electronic journals than for print; thus, the study suggests that it is highly unlikely that e-journals will be costlier than print journals.

PATRONS' PREFERENCES AND THE PATH AHEAD

In 1995, Odlyzko predicted that within 10-20 years, traditional scholarly journals would disappear [Odlyzko]. While some parts of Odlyzko's vision have indeed come to pass -- the rise of electronic journals and the tendency of scholars to use electronic preprints, for example -- print has not yet

gone away². At our peer institutions, print is still very much in use; although many scientists search for articles online and read them online, print serials are still important in some areas in the sciences [Spornick]. Additionally, the social sciences and humanities still place much importance on print journals.

Convenience and ease of use are of great importance to patrons. Even a small barrier to quick, easy access -- such as the removal of the Science collection to remote storage during the Level 4 renovation -- can seriously curtail patrons' use of a resource. To contrast, electronic resources are available around the clock, almost instantly, and (with the assistance of our proxy server) from almost anywhere. It is little wonder, then, that e-journals are used so heavily. Now, there is definitely value present in printed materials. Print provides a reliable archive. It is independent of platform and is completely portable. Some patrons simply prefer print over reading on a screen (and e-journals don't really "save trees" anyway, since people tend to print their articles off for reading). However, we must weigh these benefits against the costs associated with retaining print formats. As mentioned above, we are running short on space for housing print archives of journals. A tightening budget means that allocations for serials might soon not even keep up with inflation [Spornick]; let alone subscription price increases, which exceed inflation rates by a considerable margin.

In any case, in today's environment of cost-containment and thoughtful frugality, we must seriously question the wisdom and the necessity of carrying both print and online subscriptions to a single title. The time may come when these duplicate subscriptions become an unaffordable, unsustainable luxury.

² In my admittedly biased opinion, some aspects of the system imagined by Odlyzko are less likely or desirable than others. In the publishing environment he describes, scholars might indeed be able to do quite well in their research without reference librarians. However, a university library must also support the university's teaching mission, and therefore must serve other patron populations -- undergraduate students, for example -- who could still use the help. Someone will still have to manage the subscriptions, too. Libraries have gotten quite good at this and are happy to keep it up.

REFERENCES

[Odlyzko] A. M. Odlyzko, *Tragic Loss or Good Riddance? The Impending Demise of Traditional Scholarly Journals*, Notices Amer. Math Soc. **40** (1995), 49-53.

[Spornick] C. Spornick and L. Macklin, *Science Journals at Emory: Use, Cost, and Other Considerations for Print and Electronic Format*, unpublished internal report, presented to the Emory Libraries' Science Council and the Woodruff Library Social Science Council, November 2005.

[Schonfeld] R. C. Schonfeld, D. W. King, A. Okerson, and E. G. Fenton, *The Nonsubscription Side of Periodicals: Changes in Library Operations and Costs between Print and Electronic Formats*, CLIR Reports, Pub. 127, <http://www.clir.org/pubs/abstract/pub127abst.html>, June 2004.



RESERVES DIRECT Tutorials:

<http://web.library.emory.edu/services/circulation/reserves/tutorials.html>

BOOKING VIDEOS/DVDs For Classes:

<http://musicmedia.library.emory.edu/services/booking1/html>

ENDNOTE: Introduction at Emory:

<http://web.library.emory.edu/services/ressvcs/howguides/endnote.html>

CONTACT YOUR LIBRARIAN or Request a Purchase:

<http://web.library.emory.edu/services/collmgt/request.php>



QUESTIONS OR PROBLEMS ABOUT E-JOURNALS:

Email: askejournal@listserv.cc.emory.edu

How to Cite a *Science* Express Paper

Papers posted in *Science* Express are considered published on the date that they are posted. The print version of a *Science* Express paper will indicate the date when the paper was published online and give access and citation information. Please cite papers that have been published in *Science* Express as follows:

For example,
W. Jones, B. Smith, *Science*, 20 December 2000
(10.1126/science.1054678).

After print publication of a *Science* Express paper, include the full print reference, the date, and the DOI of the electronic publication:

For example,
W. Jones, B. Smith, *Science* **252**, 1056 (2001);
published online 20 December 2000
(10.1126/science.
1054678).



Science Links is a two-year scholarship awarded to students from underrepresented groups interested in a career in science librarianship. In addition to earning a Master's degree from the School of Information Sciences at the University of Tennessee, Science Links scholars will gain practical professional experience by working at the Science Links partner institutions: the University of Tennessee Libraries; the Oak Ridge National Laboratory; the Office of Scientific and Technical Information at the Department of Energy; and Information International Associates.

<http://www.lib.utk.edu/sciencelinks>

Emory Partners with GOOGLE

<http://scholar.google.com>



Emory libraries have partnered with Google to provide direct access from Google Scholar to Emory library holdings. When accessed from the Emory campus, many items found by Google Scholar now contain a “Find it @ Emory” link.

Find It @ EMORY

When using Google Scholar from off campus, click on the “Scholar Preferences” link and check the box for “Emory University (Find it @ Emory)”. This only needs to be done once; clicking the “Save Preferences” button will save a cookie that sets this preference for your browser.

Even with this enhancement, please keep in mind that Google Scholar is not a comprehensive resource; for deeper searching, use one or more of the databases listed in Emory's Information Gateway, or contact a librarian for assistance.

Google Scholar (<http://scholar.google.com>) focuses on scholarly literature on the internet, and can locate articles, books, theses, preprints, abstracts, and technical reports from a wide variety of academic publishers, professional societies, preprint repositories and universities, as well as scholarly articles available across the web.

~This article was adapted from an article in the *Information for Social Scientists* newsletter, issue 30.

If you need a book, journal, database, or documentary for your research or a course, contact your librarian.

We always welcome your requests!



CHEMISTRY JOURNAL NEWS

The Royal Society of Chemistry Journals Archive is added to the Library's Electronic Resources

The Royal Society of Chemistry (RSC) Journals Archive has recently become available to members of the Emory University community. The archive contains all articles published by the RSC (and its forerunner societies) from 1841 (the first issue of *Memoirs and Proceedings of the Chemical Society*) to 1996. This extends the Library's previous electronic access to the RSC Journals (1996 – present) back to the first published volume for each of over 30 titles published by the Royal Society. Representative titles include: *Analyst*, *Annual Reports*, *Chemical Society Reviews*, *Chemical Communications*, *Faraday Transactions*, *Journal of Materials Chemistry*, *Journal of the Chemical Society*.

The two collections are presented in a single searchable integrated interface. To access articles browse the tables of contents of single issues or conduct a topic search. Click on the Digital Object Identifier (DOI) to link to the full text of an article in PDF format. Bibliographic export to Reference Manager, Endnote and Procite formats is available.

You can link to individual journal titles via **EUCLID** or the **eJournals** database. Access to the collection is found on **Databases @ Emory**.

***Chemical Biology* – New from the Royal Society**

Chemical Biology, a supplement highlighting the chemical biology content of RSC journals, has been launched. The publication draws together material from all RSC publications. It aims to provide a 'snapshot' of the latest developments from the biological aspects of research. Newsworthy articles and important scientific advances will be showcased. RSC reports that news and extra content will be added online 'as it happens', ensuring access to the most up-to-date information. Details on new books will be a publication feature. Unrestricted online access is provided to any journal article that has been highlighted in *Chemical Biology*. This new title is freely available online (<http://www.rsc.org/Publishing/ChemicalBiology/Index.asp>) and as a monthly supplement in the print issues of *Organic & Biomolecular Chemistry*, *Molecular BioSystems*, *Natural Product Reports* and *Photochemical & Photobiological Sciences*.

SCIENCE LIAISONS AT EMORY

Biology

Rachel Borchardt 404-727-0858
Arriving February 1, 2006

Chemistry & Physics

Donna Hudson 404-727-7897
libdth@emory.edu

Environmental Studies & General Science

Kristan Chilcoat-Majors 404-727-8932
kmajors@emory.edu

Health Sciences

Kathy Torrente 404-727-0301
libkjt@emory.edu

Math/Computer Science

Laura Kane McElfresh 404-727-1613
lmcelfr@emory.edu

Psychology

Sala Shierling 404-712-2833
smrhode@emory.edu

Knovel News:

E-Books for Biologists, Chemists, & Health Scientists

<http://www.knovel.com>

Emory's access to the powerful sci-tech database, *Knovel*, has recently been enhanced. Now, each of the over 700 full text engineering and scientific reference works, handbooks, and databases included in *Knovel*, are represented by an entry/record in EUCLID, the online catalog. Each *Knovel* title in EUCLID includes the URL which links the user directly with the online resource.

Knovel allows users to analyze and reorganize data by sorting, filtering, exporting data from 'live tables', resolving equations, plotting graphs, capturing values from existing graphs, and performing 'what if' experiments on the data.

Emory's subscription includes every title in the *Knovel Library*. For a listing of all subject areas and titles in the library visit:

<http://www.knovel.com/knovel2/library/default.jsp>

Examples of long standing reference works included are: *Chemical Tradename Dictionary*; *Hawley's Condensed Chemical Dictionary*; *Lange's Handbook of Chemistry*; and the *International Critical Tables of Numerical Data, Physics, Chemistry and Technology*.

Many other reference titles never previously owned by the library are now available through *Knovel*.

- *Molecular Modeling and Prediction of Bioactivity*
- *Encyclopedia of Molecular Biology*
- *Contemporary Biomaterials – Materials and Host Response, Clinical Applications, New Technology and Legal Aspects*
- *Mass Spectra of Physiologically Active Compounds*
- *Activation and Catalytic Reactions of Saturated Hydrocarbons in the Presence of Metal Complexes*
- *Polyoxometalate Chemistry From Topology via Self Assembly to Applications*
- *Encyclopedia of Chemical Physics and Physical Chemistry*
- *Encyclopedia of Controlled Drug Delivery*.

A full review of Knovel was published in **Scientific Notations**. Volume 1 (2004/2005), Issue One – Inaugural Issue, March 2004

<http://chemistry.library.emory.edu/scientificnotations.htm>

“In ultimate analysis everything is incomprehensible, and the whole object of science is simply to reduce the fundamental incomprehensibilities to the smallest possible number.”

--Thomas Huxley



Synlett, Synthesis, and Synfacts Available Online

Major journals in synthetic chemistry, *Synlett* and *Synthesis*, are new additions to Chemistry Library journals available online. Look for them in the eJournals @ Emory database or find them at

[http://www.thieme-](http://www.thieme-connect.com/ejournals/toc/synlett)

[connect.com/ejournals/toc/synlett](http://www.thieme-connect.com/ejournals/toc/synlett) and

[\[connect.com/ejournals/toc/synlett\]\(http://www.thieme-connect.com/ejournals/toc/synlett\). Online versions of both journals provide access to “efirst” articles published ahead of print in each issue.](http://www.thieme-</p></div><div data-bbox=)

Synfacts was launched by Thieme Chemistry in June 2005 and compliments *Synlett* and *Synthesis*. The new title is designed to provide “a commented overview of the most interesting current trends in synthetic chemistry”. *Synfacts* (<http://www.thieme-connect.com/ejournals/toc/synfacts>) is published online and in print in 12 monthly issues per year.

E-Print Network for Physicists, Chemists, and Other Scientists

www.osti.gov/eprints

The E-print Network reveals a wealth of valuable research mainly in physics but also in chemistry, biology and life sciences, materials science, energy research, computer and information technologies, and other disciplines. The E-print Network utilizes a unique deep Web search capability that combines full-text searching through PDF documents residing on e-print Web sites with a distributed search across e-print databases. The Web search pulls to the desktop documents that are often hard to find.

Users of the E-print Network, which was first launched as PrePRINT Network in January 2000, can perform full-text searches on over 16,000 Web sites and in 39 major databases of e-prints from around the world. All this content—close to 20 million pages of full text—is available to users at no charge. The E-print Network also offers a weekly alert service that provides patrons notification of new documents, as well as links to 2,300 scientific societies.

The resources available via the E-print Network are located on a wide range of sources residing at academic institutions, government research laboratories, scientific societies, private research organizations, and the Web sites of individual scientists and researchers. The Network facilitates access to these resources as well as communications between researchers. When a document is displayed or downloaded, the patron actually downloads the e-print directly from the Web site where the document resides. The document is not stored or maintained by the E-print Network. From the author Web site, the user can rapidly access supporting documents, background material and contact information.

E-prints are scientific or technical documents circulated electronically to facilitate peer exchange and scientific advancement. To find out how to add e-prints to the E-print Network, contact Dr. Dennis Traylor at traylor@osti.gov, at phone 865-576-3327, or by mail at Office of Scientific and Technical Information, U.S. Department of Energy, P.O. Box 62, Oak Ridge, TN 37831. Having e-prints in the network increases awareness of research and promotes the dissemination of information to a broader audience.

Student Lab Reports Lacking Something?

Contact your librarian for assistance. We can provide classroom instruction, instruction via BlackBoard or LearnLink, and/or instruction through a webpage. Library instruction is designed specifically for your class and assignment(s).





New Biology Librarian Arriving Soon!

Rachel Borchardt will be joining the Robert W. Woodruff Library (Main Library) on February 1, 2006. Rachel will be working closely with the Department of Biology and the Neuroscience & Behavioral Biology (NBB) program.

Her responsibilities will include:

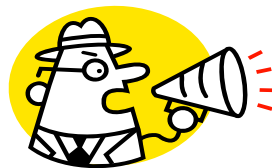
- Offering tailored instruction, online (e.g. Blackboard, LearnLink, and course web guides) or in the classroom, for your course-specific assignments
- Providing one-on-one research consultations to students and faculty
- Developing and managing the collections in her areas

Requests for course-specific workshops, book/video/journal purchases, and appointments for library research assistance in biology are welcomed!

Rachel graduated from Oberlin College in 2002 with a double major in neuroscience and psychology. She graduated with her masters in library and information science in 2005 from the University of Pittsburgh with a medical specialization. She worked for two years as a Research Assistant at the Center for Cognitive Brain Imaging at Carnegie Mellon University prior to attending library school.

She is also an avid ultimate Frisbee player.

Please feel free to contact any of the other science librarians for assistance prior to Rachel's arrival.



May We Have Your Attention Please?

Access to library journals and databases off campus has changed. Please use your Emory Network I.D. and password. This is the same I.D. and password you use to access OPUS, BlackBoard, LearnLink, and PeopleSoft. For assistance identifying your I.D., please call the AAIT Help Desk at 404-727-7777.

Looking for a Career? Become a Science Librarian.

Are you looking for a rewarding career that will keep you in the sciences but doesn't demand the hours and stress of laboratory/field research and grant writing? Science librarianship is an enjoyable and interesting profession that allows you to remain involved in scientific societies and to keep current in the technical and scientific literature.

Science librarianship involves analyzing users' needs to determine what information is appropriate, as well as searching for, acquiring, and providing the resources containing that information. The job also includes an instructional role, such as showing users how to access information.¹ By combining your science degree(s) with a master's degree in library and information science, you could find employment opportunities in universities, federal and state governments, hospitals, corporations, museums, and other nonprofit or for-profit agencies.

The job outlook for librarians is very good, according to the U.S. Department of Labor's *Occupational Outlook Handbook*.² The need for librarians with a science background and/or technical specialties, such as experience with bioinformatics, GIS data, or statistical software, is growing. Furthermore, librarians in the U.S. and Canada earn a median salary of \$55,250 at university libraries and \$74,022 at nonuniversity libraries.³ The median beginning salary is \$36,984⁴. If you enjoy working with people, teaching, performing literature reviews, and using information technology, you should consider librarianship.

For additional information, please contact one of Emory's science librarians or visit the career web sites of the American Library Association (ALA) and Special Libraries Association (SLA). Also, a career information session will be held in the Robert W. Woodruff Library during the spring semester.

Footnotes:

^{1,2,4} Bureau of Labor Statistics, U.S. Department of Labor, *Occupational Outlook Handbook, 2006-07 Edition*, Librarians, on the Internet at <http://www.bls.gov/oco/ocos068.htm> (visited January 04, 2006).

³ Association of Research Libraries (ARL), *ARL Bimonthly Report 240: ARL Salary Survey Highlights*, June 2005, on the Internet at <http://www.arl.org/newsltr/240/salary.html> (visited January 04, 2006).

Further Reading:

American Library Association, *Careers in Libraries*, on the Internet at <http://www.ala.org/ala/hrdr/careersinlibraries/careerslibraries.htm> (visited January 04, 2006)

Special Libraries Association, *General Industry FAQs*, on the Internet at <http://www.sla.org/content/membership/Genfaq.cfm> (visited January 04, 2006)

EMORY DISSERTATIONS & THESES ONLINE

All of Emory's dissertations and theses are now available free online from the database *Dissertation Abstracts* (a.k.a. *Proquest Dissertations and Theses*). Links to these full-text versions are also in the process of being added to EUCLID along with their abstracts. You can search by author, advisor, or title either in EUCLID or *Dissertation Abstracts*.

STEPS SEARCHING DISSERTATION ABSTRACTS

- Go to *Dissertation Abstracts* database from Databases@Emory <http://web.library.emory.edu/databases>
- Search by author, title, advisor or school.
- Once you have located the dissertation, click one of the following options:
Order a Copy / Checkout or ***Free Download***
- A customer information screen will appear. Fill in your name and email address and click ***Continue***.
- You will be asked to review your order, click on ***Submit Order***.
- You will receive an online receipt telling you that will be receiving an email with downloading instructions. Your receipt will include an Order ID and Tracking Number/PIN. You can print this off to keep track of your request.
- Normally you will receive an email with downloading instructions within minutes. The email will give you a URL to click on and instructions on downloading with Windows vs. Macintosh. The dissertations are in PDF format. Dissertations are available for downloading for 72 hours.

STEPS SEARCHING EUCLID

- Search EUCLID <http://www.library.emory.edu> using the title, author, or advisor.
- In the EUCLID record, click on the ***ELECTRONIC ACCESS*** link.
- Once at the ProQuest Digital Dissertations page, click on ***Free Download***.
- At the Download page, enter your email address and click on ***Download Now***.
- You will receive an online receipt telling you that you will be receiving an email with downloading instructions. Your receipt will include an Order ID and Tracking Number/PIN. You can print this off to keep track of your request.
- Normally you will receive an email with downloading instructions within minutes. The email will give you an URL to click on and instructions on downloading with Windows vs. Macintosh. The dissertations are in PDF format. Dissertations are available for downloading for 72 hours.

~This article was adapted from an article in the Information for Social Scientists newsletter, issue 30.

Back Issues of *Scientific Notations* are available:

<http://chemistry.library.emory.edu/scientificnotations.htm>