

Newsletter: Using Computers in Chemical Education Fall 2004

ACS Division of Chemical Education :-[Committee on Computers in Chemical Education](#)

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[Home](#) Welcome! The Newsletter is FREE! To be notified when new issues are available, please [subscribe](#).

[Current Edition](#) Announcement:

Editor
[Brian Pankuch](#) We are getting fewer responses to calls for articles for the Newsletter and fewer volunteered articles. Starting with this issue we will have a single issue per year, the Fall issue each year.

Contributing Editor

[Donald Rosenthal](#)

[Review of Director MX 2004](#)

from Macromedia

[Brian Pankuch](#)

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Macromedia Director is a very powerful tool that allows you to combine and work with many types of multimedia in the same project. It is able to combine images, text, movies, animation, DVD, sound, Shockwave, Flash, web links together and allow all the components to interact in your multimedia programs. You can create your own project such as an animation, and combine just about any other type of media, and animate that media.

Online Editor

[Scott Van Bramer](#)

Scott provides us with an update on safety resources available on the Internet, with many useful links.

[Safety Information on the Web](#)

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As the current Online Chemistry Course (OLCC): Chemical Safety: Protecting Ourselves And Our Environment has been under development, I have found a number

of very useful resources for safety information on the Web. As the course has developed, I am convinced that these sites should be in every chemical educators bookmark list. We should be using them as we develop experiments and our students should be using them to keep informed about the hazards they will encounter in the laboratory.

Conrad and Becky give us the opportunity to try out several ways of integrating an environmental textbook with interactive Flash animations. The animations should have wider application than just environmental courses.

(EDITOR'S NOTE: I found it useful to read this article with examples of the project open in another window. If you want to follow examples of the current status of the project as you read this article click <http://contemporarychemistry.com>. After opening, click on the "project reviewers" button at the top left corner of the first page and, in the pop-up window, enter "conrad" as the username and "chemistry" as the password.)

[Contemporary Chemistry: Visions of An Integrated Text/Multimedia Module Approach](#)

[Conrad Trumbore](#)

Emeritus, Department of Chemistry,

University of Delaware

[Becky Kinney](#)

Multimedia Developer and Consultant,

University of Delaware and Moonlight Multimedia

We report the evolution of a unique project developing an interactive textbook, linking to a multimedia module, and involving the exploration of higher degrees of student interactivity. This evolution progressed from Macromedia Director multimedia and hardcopy text, through Adobe Acrobat text with links to Flash multimedia, with the most recent combination of the multimedia features and text modules in a Flash-only format.

Bob and John are two experienced web developers who have started a

listserv discussion list for beginners and established developers who want to learn or share techniques. Take a look and see if you can benefit by signing up.

[ChemWebDev-L: a new listserv discussion list](#)

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In collaboration with CCCE, we are pleased to announce the inauguration of a new listserv discussion list specifically focusing on issues relating to chemistry-related web application development.

Harry has assembled a comparison of a number of metasearch engines and after trying several I've added them to my Bookmark bar to continue experimenting. There is quite a difference in the results from the different engines.

[Using Metasearch Engines for Chemistry-II](#)

[Harry E.Pence](#)

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"... The mergers and realignments of the past year are still churning the world of search engines. As if this were not enough, Amazon has recently announced that it is developing its own search engine that will make it much easier for an individual to manage his or her information resources. Until this situation becomes more stable, any attempt to compare the different engines is as fruitless as trying to nail plain jello on the wall. On the other hand, there have been some interesting developments in the world of metasearch engines, and it has been two years since this topic was discussed in these reviews (see Using Metasearch Engines for Chemistry-I). . ."

Mark provides us with links to some of his work, which is available to faculty and students. The amount of material and the number of links is amazing.

Chemogenesis and The Chemical Thesaurus

(see the links below to connect to this material)

[Mark R. Leach](#)

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Written/developed by Mark Leach and published by meta-synthesis, Chemogenesis and The Chemical Thesaurus are two entirely new academic/educational chemistry new media products. Both introduce new chemistry ideas, and both introduce these ideas in new ways.

Chemogenesis is an open access web book that tells the story of how chemical reactivity emerges in a coherent and understandable manner from the periodic table of the elements. Using a new, logical analysis it shows how the diversity and apparent complexity of modern chemistry arises.

The Chemical Thesaurus is a reaction chemistry database that holds information about "simple" chemistry: atoms, ions, laboratory reagents, etc. The aim of the project is to describe reaction chemistry in a comprehensive manner "from the bottom up", and to be a handy desktop chemistry reference for all. The next version - available winter 04 - will be comprehensive with respect to the current AS/A2 specifications.

The Chemogenesis web book and The Chemical Thesaurus are closely related in that the reaction chemistry database holds the raw data behind the various chemogenesis arguments and schema. But more importantly, the relational logic of the database has imposed a rigour and focus to the wider analysis of reaction chemistry space which gives rise to chemogenesis.

<http://www.meta-synthesis.com>

<http://www.meta-synthesis.com/webbook.html>

<http://www.meta-synthesis.com/Products/ChemThes3.html>

