Finding Images on the WWW

Part of [The Alchemist's Lair](#) Web Site
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YOU ARE HERE> [Alchemist's Lair](#) > [Web Tutorial](#) > Finding Images

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IMPORTANT! This page has now been revised with more up-to-date material. The archived version should be used for historical purposes only and is at http://WWW.ONEONTA.EDU/faculty/pencehe/imagesearcharc.html

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An important part of the success of presentation software is the use of appropriate images to reinforce and clarify the lecture. Many commercial textbooks now include CD-ROMs that provide images that may be used for lectures, but these are not always appropriate. The web is an excellent alternative, since many web pages include images. Unfortunately, it can be a discouraging job to find the desired needle in the midst of the two billion pages of the WWW haystack. There are, however, several resources that can make this searching easier and more likely to be successful.

When selecting images from the WWW, be sure to take copyright into consideration. Many sites include a statement of copyright policies. Be sure to read these notices before using any images. Some sites copyright all images (even if their right to do so may be questionable); other site owners explicitly state that none of the images are copyrighted and invite educational use.

Sites for General Purpose Images

Often it is possible to use general purpose images from the Web to illustrate chemical principles and to make the lecture more realistic. The [History of Art Visual Resources Collection](#) the University of Michigan provides links to many different art history sites arranged by geographic region. The web Gallery of Art offers an [Art Search Engine](#), that seems to be especially good on less well known artists. The U.S. Library of Congress maintains the [American Memory Site](#), which is said to offer more than seven million digital images from 100 different historical collections. [Columbia University's Webseek](#) lists categories ranging from dogs and cats to transportation, but nothing that appears related to science. It may be of some help for general images. [Paula Berinstein's directory of image sites](#) is also very good. Berinstein says that her directory of image sites is "not exhaustive," but it certainly comes close. She now suggests that users make a small contribution through PayPal if the site has been useful.

Special Sites for History of Science Images

The most efficient strategy is to look at sites devoted to science. For example, several web sites are dedicated to pictures of individual scientists. John L. Park, of ChemTeam, runs an [on-line gallery of famous chemists](#). Another site with many pictures of famous scientists (mainly physicists) is [Harry Nelson's site](#) (mainly physicists). In addition, Nelson includes excellent links to many other useful sites.

Another good source of pictures of famous scientists is the [Emilio Segre Visual Archives](#) of the Niels Bohr Library of the Center for History of Physics at the American Institute of Physics is said to contain 25,000 historical photographs, slides and other visual material. The main focus here is twentieth century American physicists and astronomers, but many other images are also included. The Edgar Fahs Smith Memorial Collection, an excellent source for images of scientists, equipment, and laboratories, is now part of the Schoenberg Center for Electronic Text and Images. I have recently had no luck trying to enter the Smith Collection directly (perhaps it's under construction?) but you can search the collection using the [SCETI search engine](#) .

General Search Engines

Undoubtedly the biggest change in searching for images on the WWW since 2000, when the previous report was written, has been the vast improvement in the ability of general search engines to find images on the web. [Google](#), [FAST](#), and [AltaVista](#) have all made image searching much more convenient and efficient. Indeed, when simply clicking on a button can configure an engine to do image searching, it seems safe to say that there is absolutely no need for users to learn how to do field searching. Although all three of these engines are good, Google generally gave about an order of magnitude more hits than either of the other two on terms like RNA, ORTEP, AFM, and Lavoisier. The Google site is also less cluttered with ads, etc. and the search procedure is very simple. Two other major engines, HOTBOT and MSN Search, do not seem to allow for direct image search, although one can look for pages that include images. This is much less useful. In summary, Google was the clear winner among general search engines when looking for images, with FAST the runner up.

Image Search Engines

When image searching was discussed two years ago, [Ditto.com](#) was rated as the search engine of choice for images. It may still be useful when looking for general purpose images, but for scientific images, all three of the general engines mentioned above gave one or two more orders of magnitudes more hits and the relevance of the hits from Ditto didn't seem very good. Another image-specific engine, [Picsearch](#), gave a greater number of results that seemed to be more relevant than Ditto, although Picsearch still did not give results within an order of magnitude of Google. In short, specific image search engines seem useful only as a last resort, when everything else has failed. Meta-search engines, like [Proteus](#) , are in a similar category. The rationale for using a meta engine is that several engines might give better coverage than a single engine. When there are engines like Google and FAST available, that cover a large fraction of the web, a meta engine only makes sense if it includes one or more of the most comprehensive engines. Usually this is not true. Several small engines combined do not equal one big engine, either in convenience or comprehensives. To repeat, the main message from this study is that the best strategy for searching for images on the WWW is to simply use Google.

Miscellaneous Sites

Even though there are few images related to chemistry at the site, it may be worth mentioning the [NASA Image Exchange site](#) (NIX). The pictures are probably more interesting to astronomers than chemists, but there are some great shots here. I also looked briefly at a site titled [BESS, The Internet Retriever](#), which emphasizes the ability to protect children online in school. The results were very poor and the engine is not recommended, but I include it since it appears to be being sold to schools based on the ability to filter out porn. I found it to be very slow and to filter out almost everything (which may be one way to eliminate porn). If you are afflicted with this problem, be sure to check out Seth Finkelstein's article on [BESS vs. Image Search Engines](#). Seth won an [Electronic Frontier Foundation (EFF) Pioneer Award in 2001](#) for this work.

As the name implies, [Free Graphics](#) offers links to "the top 508 graphic links on the Internet!" that may be used without charge. There is not much chemistry here, but the site is a good source of buttons, bullets, etc. It is one way to avoid copyright problems. [Create Your Own Graphics](#) can be helpful when designing banners, buttons, etc. for a web page. [The TechSmith site](#) lists several types of shareware that may be of interest, including a program called Snag-it. According to the description, Snagit "captures anything on the Windows desktop quickly and easily." A screen capture tool like this can be very helpful in some situations.

And on the Lighter Side ;-)

Those of you who work a lot with optical isomers and want a search engine designed just for you should take a look at http://www.alltooflat.com/geeky/elgoog/ . It may give you a new perspective.