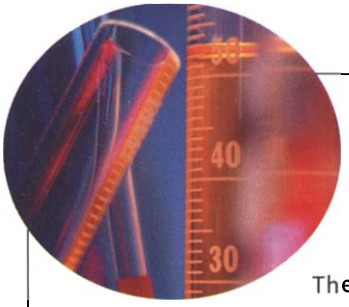


NETWATCH

edited by JOCELYN KAISER

LINKS

Orgo Helper

The organic chemist's job can be summed up as a few major tasks: synthesize stuff, confirm the structure, write it down, publish it, keep up with the literature. That list is the formula behind this no-nonsense Web directory, created by an academic-turned–industry chemist, which brims with essential links for synthetic organic chemists.

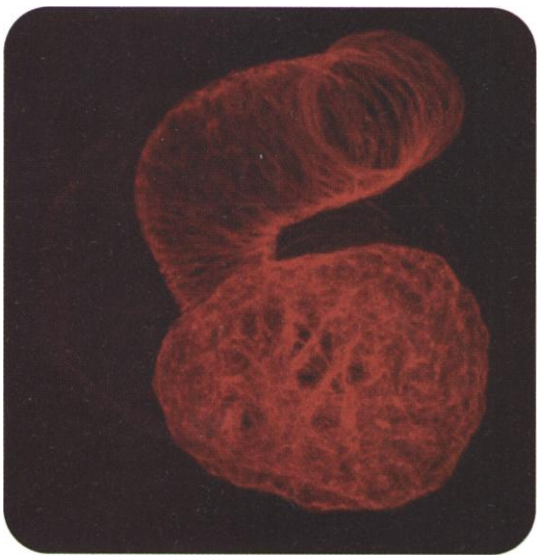
A grab bag of what you'll find: online journals, patent sites, spectra databases, boiling points of solvents, software for drawing molecules, a textbook on organometallic compounds, and a guide to naming carbohydrates.

www.organicworldwide.net

RESOURCES

The Dope on Radiation Risks

Now that nuclear power is back in fashion—that is, if the Bush Administration has its way—perhaps you're wondering about the dangers of hot rocks. A good source of answers is the Radiation and Health Physics Page. It's run by University of Michigan health physics students—the nation's future radiation safety officers—who've packed the site with informative documents and links.



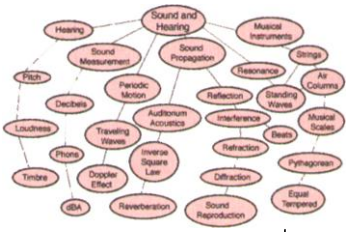
Several primers and a glossary will set you straight on nonionizing and ionizing (electron-stripping) radiation and becquerels versus curies. A timeline covers not just Three Mile Island but the first reactor "accident" 1.8 billion years ago: a uranium deposit in Gabon that burned for 200,000 years. In the Ask the Expert section, professionals address queries such as how much cesium remains in Chornobyl pastures, and what do nuclear power plants do with spent fuel (it stays on site now but may someday go to Nevada's Yucca Mountain). Research links include journals, radionuclide data, and the center studying Japan's atomic bomb survivors.

Another tidbit is a calculator that tells you how much radiation you're exposed to each year. It's roughly equal to seven dental x-rays and comes mainly from radon, although plane rides, LCD watches, the stone and brick in houses, and having a sleeping partner can all add various amounts.

www.umich.edu/~radinfo

EDUCATION

Flash-Card Physics



Forgot what an upsilon particle is? Want to know how your car's brakes work? Then motor over to HyperPhysics, created by Georgia State University physics professor Rod Nave for his classes of science teachers.

You'll find a huge collection of capsule reviews—cheat sheets, you could say—of material covered in introductory physics, such as electromagnetism and quantum physics. What makes the site unusual is that subjects are linked in flow charts, so visitors can wander intuitively from, say, mechanics to fluids to hydraulic brakes. Or use the site's index to bone up on scores of topics, from black holes to mesons to Faraday's law to loudspeakers.

hyperphysics.phy-astr.gsu.edu/hphys.html

RESOURCES

A Xanadu for *Xenopus*

Once used in human pregnancy tests because a hormone in a pregnant woman's urine makes it lay eggs, the African clawed frog, *Xenopus*, is a favorite test subject of cell and developmental biologists. The fast-growing critter also stars in Xenbase, an expanding community Web site.

Built to replace a plainer site, Xenbase offers a researcher directory, job postings, and links to genomic databases. There are also a slew of jazzy features such as automated MEDLINE searches. (Click on "eye" to get only those *Xenopus* papers.) Under Maps and Movies, check out films of growing embryos and a heart development atlas (left). And "fate maps" reveal with a few clicks where the 16 cells, or blastomeres, in an early embryo wind up after 10 hours of division. By summer, "we will have a list of genes expressed in those areas and show when they come on and go off," says biologist Peter Vize of the University of Texas, Austin, the site's overseer.

Vize and colleagues are planning much more, including diagrams of cell signaling pathways. Another section under way will include tissue images that show where a specific protein is expressed—from embryo to tadpole—for thousands of genes.

vize222.zo.utexas.edu/frog.html

Science Online

A Web supplement in *Science* Online enriches this week's special issue on the ecology and evolution of infection. Included is an archive of past *Science* articles on themes such as antibiotic resistance and parasitology, as well as a guide to Web resources on diseases, their evolution, and the challenge of emerging infections.

www.sciencemag.org/feature/data/diseases/index.shtml

Send great Web site suggestions to netwatch@aaas.org

CREDITS: (TOP) DIGITAL VISION; S. J. KOLKER *ET AL.*, *DEVELOPMENTAL BIOLOGY* 218(1), 64 (2000)