



St. Olaf College Chemistry Department

Thursday, September 24,
2009

Regents Hall 310

3:15 p.m. with refreshments
before the seminar

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“The Chemical Education Digital Library: Online Resources for All!”



Would you be interested in an interactive, online periodic table that includes pictures of the elements, videos of their reactions, 3-D models of their crystal structures, physical and atomic-level data, and the means for sorting and graphing those data? This is Periodic Table Live! It is only one of the many online resources available from the Chemical Education Digital Library (ChemEd DL), a collaboration of the ACS, the *Journal of Chemical Education*, and the ChemCollective project at Carnegie-Mellon University (<http://www.chemeddl.org/>).

A decade of funding from the NSF has resulted in the National STEM Distributed Learning (NSDL), which consists of hundreds of collections of online learning resources and more than a dozen pathways projects. A pathway is expected to serve a specific discipline or a specific educational level, providing its constituency with access to all NSDL resources and encouraging community of effort to create, evaluate, and use online learning resources. The Chemical Education Digital Library is the chemistry pathway to the NSDL.

The ChemEd DL is charged with connecting the NSDL with chemistry teachers and students from middle school through graduate school and with bringing chemistry teachers and students to the NSDL. This involves collecting and then disseminating excellent online resources in chemistry, developing communities of chemists who create, use, and evaluate online resources, and providing online services to support its users and communities. The ChemEd DL has developed more than a dozen communities in areas such as physical and inorganic chemistry that are beginning to improve and expand the collections. ChemEd DL also provides blogs, wikis, and course management systems; these are readily available to anyone with Web access and can be used to meld related items from its collections into much larger units of instruction.

Examples of learning materials are Molecules 360, molecular structures in JMol format; *JCE WebWare*, an eclectic collection of Web-based applications; Netorials, online tutorials for general chemistry; Chemistry Comes Alive!, videos where chemistry is the center of attention; ChemPRIME, a general chemistry textbook in wiki format from which students can learn chemistry in the context of other sciences, everyday life, or other areas of interest; and ChemPaths, a means of ordering the content of the ChemPRIME textbook, presenting it to students, and allowing them to deviate from the path but easily find a way back. These and other ChemEd DL resources will be demonstrated.

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