

October 16, 2017

Dear Colleagues,

If you are using the Greenbowe Chemistry Education Research Group Flash-based computer simulations you have noticed that Iowa State University removed the website hosting the simulations and discontinued the URLs to the computer simulations. The new site hosting the legacy Greenbowe Flash-based computer simulations and animations is the University of Oregon's chemistry lecture demonstration web site <https://chemdemos.uoregon.edu>. These legacy simulations and animations were developed over ten years ago and need to be converted to HTML5 within the next year if teachers want to continue to use the simulations. We are also placing high quality chemistry education instructional resources on this site. There are several issues we need to address in this letter. The first two are the UO website and the conversion of the Flash-based simulations to HTML5.

The current University of Oregon "chemdemos" web site was designed 15 years ago to be an internal site for ordering chemistry demonstrations to accompany our general chemistry lecture courses. We have incorporated more interactive chemistry activities and are doing more active learning in our general chemistry courses. The "chemdemos" web site is not suitable to host a collection of additional active learning instructional resources such as demonstrations, manipulates, activity sheets, visualizations, computer simulations, computer animations, and assessments – quiz and exam questions. Nor is the "chemdemos" web site set-up to serve files. We are in the process of placing the Flash-based files on a separate University of Oregon website in order to create new URLs to the legacy computer simulations and to new instructional resources.

In order to accomplish the above, the University of Oregon "chemdemos" web site will be undergoing continuing renovation and up-grades over the next year. The Department of Chemistry & Biochemistry and the College of Arts & Sciences at University of Oregon are funding the development of this website. Once this has been completed, there will be an open public section, where the legacy computer simulations in their original form will be hosted. There will also be a password protected access section that will host the newly developed resources, including converting the current simulations and animations to HTML5. Access to new resources will be limited to chemistry instructors (and institutions) who have supported the work it takes to re-program the existing computer simulations, to develop new computer simulations and to develop new chemistry education instructional resources.

As you may be aware, the legacy Flash-based simulations are now 12-15 years old and the code will soon not work with current browsers. Chemistry instructors will have free access to the legacy computer simulations as long as there is an internet-browser

supporting Flash simulations. In order for chemistry instructors to use the simulations once the browsers stop supporting Flash, we need to change the old Flash-based computer simulations to HTML5-based computer simulations. To accomplish this developmental work, we need funding to pay digital artists, computer animators, and computer programmers for their work. HTML5-based simulations will work on nearly all Macs, PCs and smart devices with a reasonable screen size. In order to gain access to the non-public web site chemistry instructors will need a password. Chemistry instructors, especially AP Chemistry teachers who are acquainted with guided-inquiry and the Science Writing Heuristic, should review a segment of the movie (or the book) “Lord of the Rings: The Fellowship of the Ring” where Frodo Baggins, Gandalf the Grey and the other seven members of the Fellowship are at the “Wall of Moria”.
Gandalf: "It reads 'The Doors of Durin — Lord of Moria. Speak, friend, and enter.'"
Gandalf: "Oh, it's quite simple. If you are a friend, you speak the password, and the doors will open." Tolkien, J.R.R. The Fellowship of the Ring. New York: Houghton Mifflin Company, 1994, print. The Lord of the Rings: The Fellowship of the Ring. Produced by Peter Jackson et al., directed by Jackson, New Line Cinema, 2001, movie.

If you are a chemistry instructor and have used, are using or will be using two or more of our computer simulations, we are asking you (or your school or institution) to please donate a minimum of \$15/year for each simulation you are using up to a maximum amount of \$100/year. If you are using just one of our computer simulations, please consider donating \$15/year. One can make a donation by clicking-on the “\$ Donate” button on the University of Oregon “chemdemos” web site or the “\$ Donate” button on the University of Oregon Department of Chemistry and Biochemistry home page. The donate button will automatically link you to the University of Oregon Foundation’s web site and to the “Chemistry Achievement Endowment Fund”. In the additional gift instructions window, please type “my donation is to be used for chemistry education resources”. Personal donations are tax deductible. We are projecting we will need a minimum of \$70,000 (USA) to convert and up-grade the 40 Flash-based computer simulations and animations to HTML5-based simulations and animations. We need your contributions. Thank you in advance for supporting this endeavor.

If you need to send a Purchase Order here is the address:

University of Oregon Foundation
“Chemistry Achievement Endowment Fund”
1720 E. 13th Avenue, Suite 401
Eugene, OR 97403-22531
Phone: 541 302-0300

Other issues:

It is our goal to continue to support teachers by providing high quality and effective instructional resources. While we are pleased there are many chemistry instructors who are using our instructional resources, we are disappointed when teachers create their own instructional lesson based on our resources and place their lesson on a public web site without providing a reference or citation to the computer simulation or resource. If your lesson or URL incorporates any of our computer simulations and you are placing the lesson with the simulations on a public web site, please be professional. Request permission to place any portion of the computer simulation or use the computer simulation on a public web site. Provide a proper citation or reference to the computer simulation just as you would when quoting from a book or professional publication. The legacy computer simulations are instructional resources used by teachers with their students in their classroom. The original “legacy” Flashed-based computer simulations are not commercial products and may not be used for commercial purposes or for profit. Requesting permission to use the computer simulations with your students in your classroom or on a school’s password protected web site is not necessary.

During the migration from Iowa to Oregon, not all of the legacy computer simulations files survived. The new chemdemos web site will have a section for comments. If you need a resource and do not find it on our chemdemos website, send in a suggestion. If you do not see a legacy computer simulation on the chemdemos web-site that you have been using a) e-mail and make a suggestion that we include it on the site or b) if you did download the .swf files from the ISU web site prior to the migration, please e-mail Tom the .swf file. For example, we are missing the .swf file for the computer simulation “Colligative Properties: freezing-point depression and boiling-point elevation”. If you have this file, please contact Tom.

If and when we have enough funding, we will start to convert and up-grade the computer simulations. A time-line will be posted on the “chemdemos” web site projecting when work on each of the 40 simulations will begin and when we expect the simulation to be ready in a beta testing mode. Also posted on this time-line will be the requested new computer simulations and animations and when we will be able to begin work on these resources. Thank you for taking the time to read this letter.

Sincerely,
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