

# ANIMATIONS AND SIMULATIONS AS LECTURE DEMONSTRATIONS

Gary L. Bertrand  
Department of Chemistry  
University of Missouri-Rolla  
Rolla, MO 65409-0010  
gbert@umr.edu

Over the years, I have developed a number of computer simulations that I have taken into the classroom as "demonstrations". While these are perhaps less effective than live demonstrations, they add new dimensions of dependability, reproducibility, ease of preparation, and the range of conditions that can be demonstrated within a relatively short period of time. There is an additional advantage in that they can be provided to the students for individual "experimentation". The major problems that I have encountered in making these simulations available to others have been in cross-platform applications, because the authoring environments have been better suited to Macintosh, while the majority of prospective users are Windows-based. Some of these problems have been reduced through delivery over the Internet, but interactivity often requires the use of a plug-in. I have found the installation of these plug-ins to present a substantial impediment to my students and many teachers. Download delays are another serious impediment.

Follow this link to see the demonstrations:

<http://www.umr.edu/~gbert/bertrand.html>

**(Demos use animated GIFs and JavaScript.)**

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