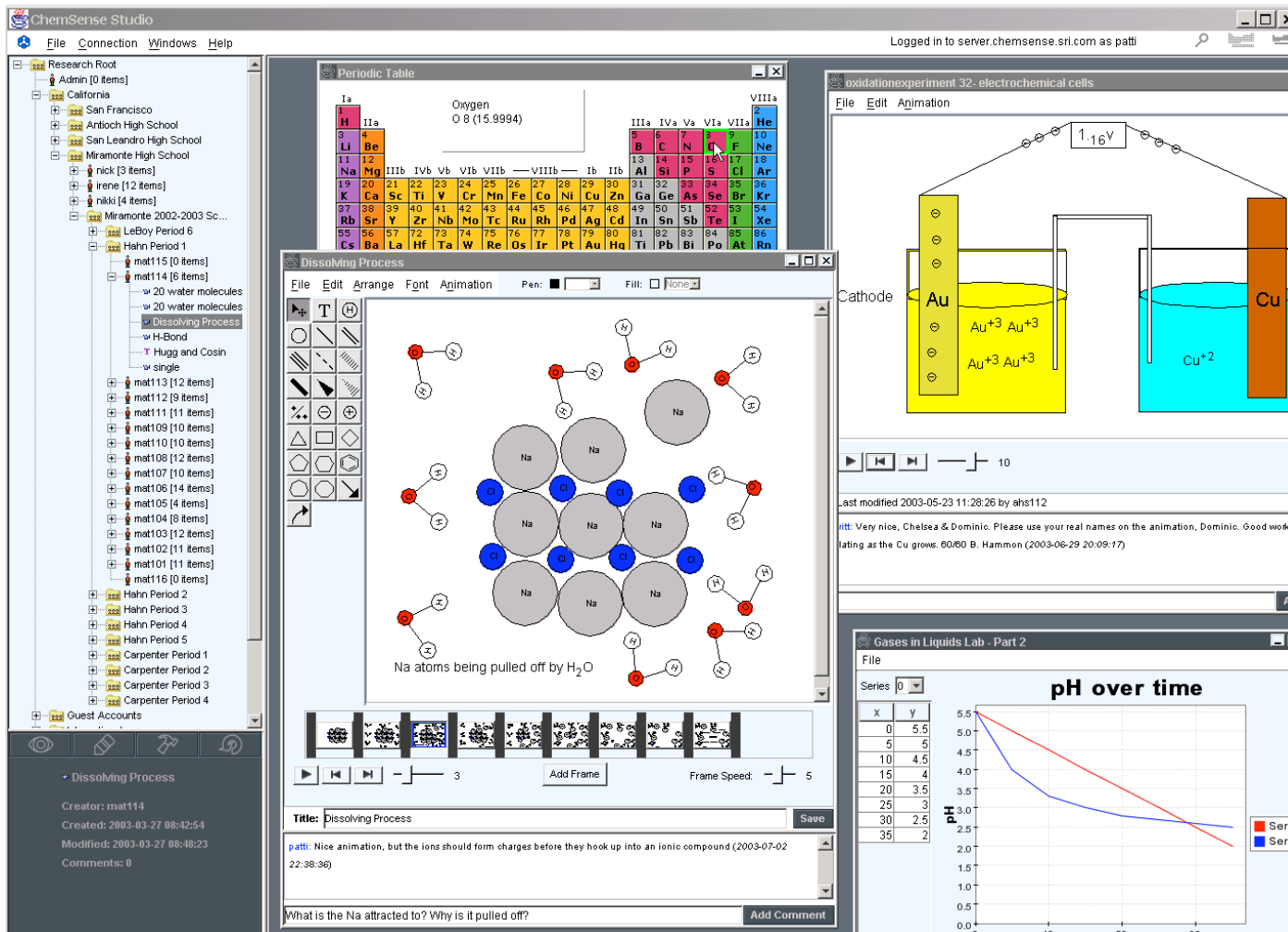


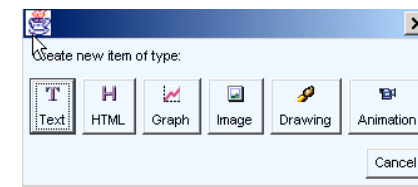
ChemSense (<http://chemsense.org>) is a chemistry education research project at SRI International, funded by the National Science Foundation. Working with the University of Michigan and California high schools, we are developing software and activities to help students investigate chemical phenomena and express their understanding in a variety of chemistry representations. Our research documents changes in students' representational and discursive practice as well as the implementation strategies of teachers.

## The ChemSense Studio

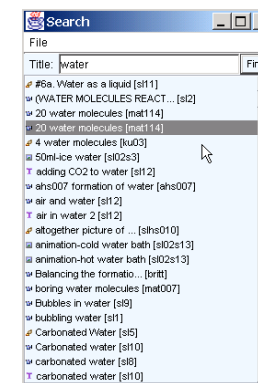
The ChemSense Studio helps students and teachers collaborate in the investigation of chemical phenomena. They create representations to explain the phenomena in terms of underlying chemical mechanisms, and review and comment on others' work. The software includes tools to create, share, view, and edit a variety of representations, including text, images, graphs, drawings, and storyboard animations of chemical processes. ChemSense uses a Java-based client-server architecture. A Web interface, called the ChemSense Web Gallery, is also available.



The screenshot shows the ChemSense Studio interface. On the left is a navigation tree with a 'Research Root' and various folders like 'California' and 'Hahn Period 1'. The main workspace displays an animation titled 'Dissolving Process' showing sodium atoms (Na) being pulled off by water molecules (H<sub>2</sub>O). A periodic table is visible in the background. The interface includes a toolbar with various drawing and editing tools, and a comment section at the bottom with a text input field and an 'Add Comment' button.



New item dialog



Search dialog

Left: The ChemSense Studio, with navigation tree (left pane) and workspace with a periodic table, graph, and student-generated animations. Can you identify misconceptions in this student work?

