

New in Odyssey v. 6

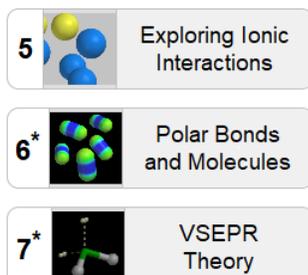
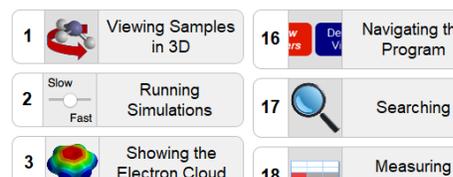
Scientific Content. Pages now grouped according to five specific types: *New Users*, *Demos & Visuals*, *Guided Labs*, *Concepts & Applications*, and *Molecular Stockroom*.



New Users. Section revised and extended; now includes a total of 57 pages covering the general operation of the program and the building of new models. Customization instructions moved to this section.

Demos & Visuals. 55 new pages with experiments and visualizations that are focused on a single question rather than a subject area. Extensive use of model comparisons. Subset of 21 highly relevant items presented as *Featured*. This section is going to grow steadily through the *ODYSSEY* maintenance releases.

General Operation of the Program



Guided Labs. 115 pages that are available in a worksheet format where the protocol for a computer experiment and/or visualization is followed by questions. Subset of 21 highly relevant items presented as *Featured*. Total number of questions is now almost 1,200 and includes *Questions (Advanced)* for some of the labs. Labs that are also available for the iPad are labeled.

Concepts & Applications. 148 pages with models, and sometimes protocols for computer experiments, that address a certain subject area or chemistry application. An essay may accompany the models (although no questions). Some related topics now consolidated into single pages.

Molecular Stockroom. Same categories as previously; some new models added.

Custom Lists. Now created from scratch from the pool of available pages (rather than through modifying existing tables of contents). Available for *Demos & Visuals* and *Guided Labs*. Can be shared with other Odyssey users through the *Export Custom Lists* option in the *Preferences* dialog.



Graphical Interface. New text presentation style and new icons (largely compatible with Spartan). Notation for quantum mechanically calculated surfaces changed to *Electron Cloud* (rather than electrons) and *Low Density/High Density* surfaces (similar to Spartan).

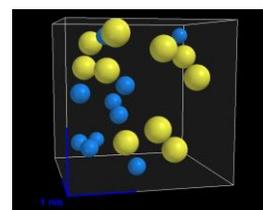


Simulation Functionality. Speed of simulations can be controlled with a permanently shown *Slow/Fast* slider. (Explicit time steps can still be set via the *Dynamics* → *Time Step* option in the *Properties* table.)

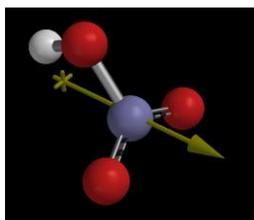
Build functionality. Build modes (*Add Atoms/Delete Atoms/Make Bond/Break Bond*) indicated at bottom of build panel, rather than through a changing icon. Labeling of x-, y-, and z-axes now consistent for all build operations and always implementing a right-handed coordinate system.

Multiple Models Visualization. Improved comparison-feature extensively used; allows for the presentation of sets of multiple models more than once on the same page.

Ionic Bonding Exploration with Charged Spheres. Particles now change radius when becoming charged, i.e., cations are automatically smaller than anions.



User Input Functions. New printable table in the *Help* menu. References in individual pages now always led by the *Touchpad/Trackpad* option, as this is the most widely used input mode.



Dipole Visualization. New *Emphasize Dipoles* option (set in the Preferences dialog). Style now uniform for classical and quantum dipoles; length of latter scales with the magnitude of the dipole moment. Spurious minute dipole moments now suppressed.

Standards Alignment for Secondary Schools. Now an item in the *Help* menu. Alignments with the AP Chemistry* curriculum and the NGSS** for the now 19 states that have adopted them. New additional state-level standards for 12 NGSS lead-state partners that have not adopted the NGSS.

Online Teaching Videos. Hyperlinks to YouTube videos that show how *ODYSSEY* can be used to illuminate the topics of ionic bond formation, molecular polarity, and hydrogen bonding.

Japanese-language content. 141 new pages (including 21 Featured) addressing topics from all areas of *ODYSSEY*.

Spanish-language content. 102 pages (including 21 Featured). Now also provides 20 tutorial pages covering the general operation of the program and the building of new models.

German-language content. 62 new pages (including 21 Featured) plus 26 tutorial pages covering the general operation of the program and the building of new models.

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