ODYSSEY Molecular Explorer

Release 5.4

Scientifically Sound Modeling for Learners and Teachers of Chemistry

Scientific Content

- More than 200 *Molecular Labs* for various teaching environments, including new labs for *The States of Matter* and *Intermolecular Forces* (mirrored as iOS apps; to be released).
- Recently introduced labs (all mirrored as iOS apps) include *Common Substances*, *Water at the Molecular Level*, *Atomic Orbitals*, *Chemical Elements*, *Ionic Bonding*, *Electron Sharing*, *Polar Bonds and Molecules*, *VSEPR Theory*, *Multiple Bonds and Resonance*, *Basic Crystal Lattices*, *Ionic Solids*, *Crystal Surfaces*, and *Functional Groups*.
- Spanish Language translation of many labs.
- More than 100 *Applied Chemistry* topics and more than 1,000 *Molecular Stockroom* models.

Molecular Modeling Support for College-Level Textbook

- Numerous activities to accompany *Chemistry: Human Activity, Chemical Reactivity*, Second Edition by Mahaffy, Tasker, Bucat, Kotz, Weaver, Treichel, and McMurry (Nelson Education, 2015).
- Canadian Edition: 200 Activities; International Edition: 232 Activities.

Eight Levels of Content Display (Switch to another setting at any time via the *Preferences* dialog)

- *My Favorites* (if declared)
- *Introduction to Chemistry*
- *High School Chemistry*
- *AP Chemistry*
- *College Chemistry*
- *Textbook/Canadian Edition*
- *Textbook/International Edition*
- *Materia en movimiento* (in Spanish)

Table of Contents Editable and Customizable

- Use the *Edit* option to remove any undesired topic / add any topic from the master list for all content levels.
- Restore the program to its original state with *Full Reset*.
- Create your personalized table of contents with the *My Favorites* setting.
- Export the *My Favorites* list from Instructor's Edition to Student Edition (`Favorites.odysettings` file).

Support for Windows 10 and macOS 10.12 Sierra

- Minimum requirement for Windows: *Windows Vista*.
- Minimum requirement on the Macintosh: *OS X 10.8 Mountain Lion.*
- Pinch gesture on Macintosh trackpad no longer causes molecular rotation freeze.
- Protocol no longer garbled in States of Matter/2D lab.
- Lone pairs option no longer missing for some models of VSEPR lab.
- Lighting problem fixed in Visualization of Lone Pairs lab
- Other bug fixes, formatting changes, and improvements.

Instructor's Edition Features (not included in Student Edition)

- Answer Key.
- List of Misconceptions for each molecular lab.
- Customization of questions (and creation of new labs if Enable Authoring of New Labs option is set).
- Saving of complete molecular labs (can be hyperlinked).
- Alignment with Next Generation Science Standards* (applicable to High School Chemistry setting).
- Alignment with AP Chemistry Curriculum** (applicable to AP Chemistry setting).

College Chemistry setting (neglecting any customization): *Numbering of the Molecular Labs*

Old		*New*
5.3.1		**5.4.0**
1		same
2		same
3	→	**4**
4	→	***Edit****
5		same
6		same
7		same
8		same
9		same
10		same
11		same
12		same
13		same
14		same
15		same
16		same
17		same
18		same
19		same
20		same
21		same
22		same
23		same
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29		same
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69		same
70		same
71		same
72		same
73		same
74		same
75		same
76		same
77		same
78		same
79		same
80		same
81		same
82	→	***Edit****
83	→	**82**
84	→	**83**
85	→	**84**
86	→	**85**
87	→	**86**
88	→	***Edit****
89	→	**88**
90	→	**89**
91	→	**90**
92	→	**91**
93	→	**92**
94	→	**93**
95	→	**94**
96	→	**95**
97	→	**96**
98	→	**97**
99	→	**98**
100	→	**99**
101	→	**100**
102	→	**101**
103	→	**102**
104	→	**103**
105	→	**104**
106	→	**105**
107	→	**106**
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126	→	**125**
127	→	**126**
128	→	**127**
129	→	**128**
130	→	**129**
131	→	**130**
132	→	**131**
133	→	**132**
134	→	**133**
135	→	**134**
136	→	**135**
137	→	**136**
138	→	**137**
139	→	**138**
140	→	**139**
141	→	**140**
142	→	**141**
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144	→	**143**
145	→	**144**
146	→	**145**
147	→	**146**
148	→	**147**
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168	→	**167**
169	→	**168**
170	→	**169**
171	→	**170**
172	→	**171**
173	→	**172**
174	→	**173**
175	→	**174**
176	→	**175**

* Lab available by invoking ***Edit List***