

Comparing Covalent and Ionic Substances

It is no surprise that since covalent and ionic substances are held together by different types of bonds, they have different properties

Look up the characteristics of covalent and ionic substances on the internet. List some examples of each and find out if they:

- are solid, liquid, or gas at STP
- are hard or soft
- are flexible or brittle
- have low or high melting points
- are able to conduct electricity as a solid, liquid, or in solution
- have solids with regular geometric shapes
- are held together by additional non-chemical bonds

Explain what causes the observed differences.

You may find useful information comparing covalent and ionic compounds at the following sites:

- ✍ Characteristics of Ionic and Covalent Compounds <http://www.che.ilstu.edu/genchemhelphomepage/topicreview/bp/ch2/mix.html#charact>
- ✍ Ionic Compounds <http://www.newi.ac.uk/buckleyc/bonding.htm#Ionic%20Compounds>
- ✍ Covalent Compounds <http://www.newi.ac.uk/buckleyc/bonding.htm#Covalent%20Compounds>
- ✍ Solids, Liquids, and Gases http://wulfenite.fandm.edu/Intro_to_Chem/solids_liquids_gases.htm
Most of the article deals with the difference between ionic and covalent substances
- ✍ Chapter 12: Chemical Bonding http://www.platte1.k12.wy.us/gowdy/chapter_12.htm
- ✍ Ionic Bonding <http://users.senet.com.au/~rowanb/chem/chembond.htm#Ionic>
- ✍ Covalent Bonding <http://users.senet.com.au/~rowanb/chem/chembond.htm#Covalent>

or, you may use keywords to search with some of these search engines:

- ✍ Google <http://www.google.com>
- ✍ Alta Vista <http://www.altavista.com/>
- ✍ Go.com <http://www.go.com/>
- ✍ HotBot <http://hotbot.lycos.com/?query=>
- ✍ Lycos <http://www.lycos.com/>
- ✍ Yahoo <http://www.yahoo.com>
- ✍ Excite <http://www.excite.com>
- ✍ Webcrawler <http://www.webcrawler.com>
- ✍ Metacrawler <http://www.metacrawler.com>
- ✍ Dogpile <http://www.dogpile.com>

Once you find some useful information, you can copy it into Microsoft Word. This is done by dragging the mouse over the text on the internet and pressing **Ctrl + C**. The information is then pasted into Microsoft Word by opening the word processor and pressing **Ctrl + V**. Then, it can be saved. In order to write a report, information gathered from the internet in this fashion needs to be edited just like information gathered on index cards.

