Conceptual Chemistry

How Atoms Bond

Electron-Dot Structures

Electron-dot structures tell us how atoms tend to bond with other atoms. Carbon's electron-dot structure, for example, shows 4 unpaired valence electrons. Each hydrogen atom has 1 unpaired electron. Unpaired electrons from different atoms can pair up resulting in a bond. For carbon and hydrogen, we have the following, which creates the molecule methane, CH₄:



Use this idea to draw the electron-dot structures of the products indicated by name:

