

- **The chemistry of p- block elements**
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- *Bond strength*
- *Bond Energies*
- *Bond Polarity*
- *Dipole Moments*
- *Electronegativities*
- *Prediction of Molecular Topology*
- *Valence - shell Electron pair Repulsion (VSEPR)*

الكتب الأساسية:

Inorganic chemistry, principle of structure and reactivity, James E. Huheey, 4th ed., 1993.

Inorganic chemistry, Catherine E. Housecroft and Alan G. Sharpe, 3rd ed., 2008

المرجع المساند:

Inorganic chemistry, Shriver and Atkins, 5th ed., 2010