Covers the elements beryllium (Be), magnesium (Mg), calcium (Ca), strontium (Sr) and barium (Ba). Includes trends in atomic and physical properties, trends in reactivity, the solubility patterns in the hydroxides and sulfates, trends in the thermal decomposition of the nitrates and carbonates, and some of the atypical properties of beryllium.

- **Alkaline Earth (Group II) Trends**
- **Group 2: General Properties**
  The elements in the group include beryllium (Be), magnesium (Mg), calcium (Ca), strontium (Sr), barium (Ba), and radium (Ra).
- **Reactions of Group 2 Elements with Acids**
  This page discusses the reactions of the Group 2 elements (beryllium, magnesium, calcium, strontium and barium) with common acids.
- **Reactions of Group 2 Elements with Oxygen**
  Group 2 elements (beryllium, magnesium, calcium, strontium and barium) react oxygen to generate metal oxides. This Module addressed why it is difficult to observe a tidy pattern of this reactivity.
- **Reactions of Group 2 Elements with Water**
  The reactions of the Group 2 elements proceed more readily as the energy needed to form positive ions falls. This is mainly due to a decrease in ionization energy down the group. This leads to lower activation energies, and therefore faster reactions.
- **The Solubility of the Hydroxides, Sulfates and Carbonates**
  This page discusses the solubility of the hydroxides, sulfates and carbonates of the Group 2 elements—beryllium, magnesium, calcium, strontium and barium—in water.
- **The Thermal Stability of the Nitrates and Carbonates**
  This page examines the effect of heat on the carbonates and nitrates of the Group 2 elements (beryllium, magnesium, calcium, strontium and barium). It explains how the thermal stability of the compounds changes down the group.