

Descriptive Mineralogy

Halides:

Minerals with Halogen Anions

Classification of the Minerals

- *Non-Silicates*

- *Native Elements*
- *Halides*
- *Sulfides*
- *Oxides*
- *Hydroxides*
- *Carbonates*
- *Sulfates*
- *Phosphates*

- *Silicates*

- *Orthosilicates*
- *Sorosilicates*
- *Cyclosilicates*
- *Chain Silicates*
- *Layer Silicates*
- *Tektosilicates*

Halides:

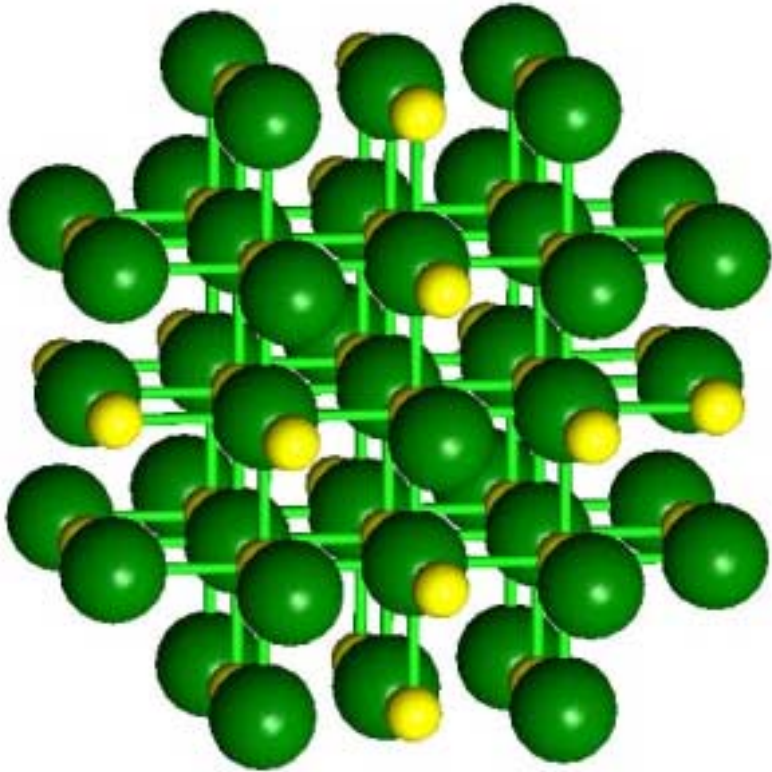
Minerals with halogen anions

- *Halite (NaCl) and Sylvite (KCl):
Evaporites*
- *Fluorite (CaF₂) Low temperature
hydrothermal*
- *Cryolite (Na₃AlF₆): Pegmatite*

Halite Cube



Halite NaCl



Crystal System	Cubic
Point Group	$4/m-32/m$
Space Group	$Fd3m$
Optical	isotropic 1.51
Color	colorless
Luster	Vitreous
Hardness	2
Density	2.1 g/cm ³

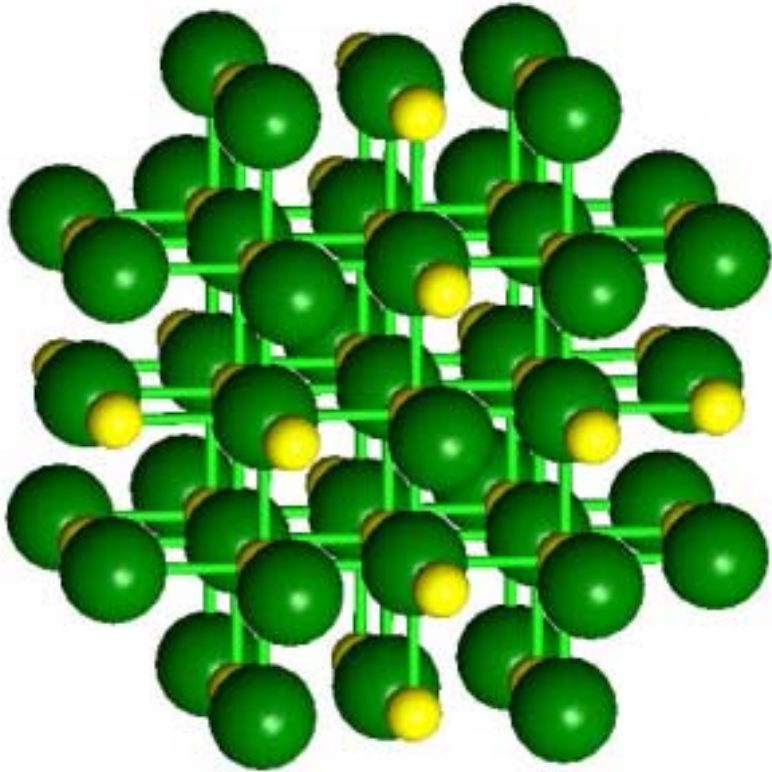
Halite NaCl



Occurrence: Evaporites,
Salt Domes

Uses: Table salt, De-icing,
Nuclear waste host rock?

Sylvite KCl



Crystal System	Cubic
Point Group	$4/m-32/m$
Space Group	$Fm3m$
Optical	isotropic 1.45
Color	colorless
Luster	Vitreous
Hardness	2
Density	1.99 g/cm ³