



## Seeing Is Believing!



**Topic:** Sulfur – properties of materials

**Courses:** General Chemistry

**Text References:** Enter references to parts of text(s) that logically go with this experiment (e.g., McMurray Fay 10.1, OFB 8.7, etc.).

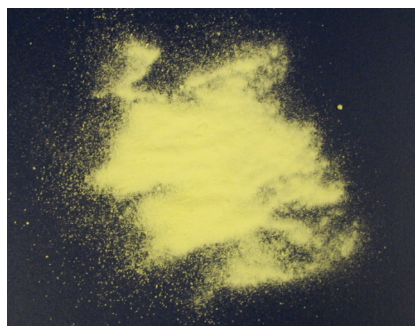
**Setup:** Preparation time is < 5 minutes.

- Sulfur (powder)
- Plastic “Zip-lock” bags

**Procedure:** Demonstration time is about 5 minutes.

1. Add a small amount of sulfur to each plastic bag and seal.
2. Circulate the bags amongst the class for observation.

**Observation:** Sulfur is not a green gas! It is a bright yellow powder.



**Explanation:** The physical form of an element has been illustrated. Sulfur occurs naturally in its elemental form (volcanoes). Gunpowder, which is made up of sulfur, sodium nitrate ( $\text{NaNO}_3$ ), and charcoal (carbon), was discovered around 1000 AD in China and Arabia. Sulfur is also used to vulcanize rubber. The amount of sulfur in circulation is used as a measure of economic development. Sulfur is most commonly used in the form of sulfuric acid ( $\text{H}_2\text{SO}_4$ ) as a processing agent in the manufacture of steel, polymers, and pharmaceuticals.