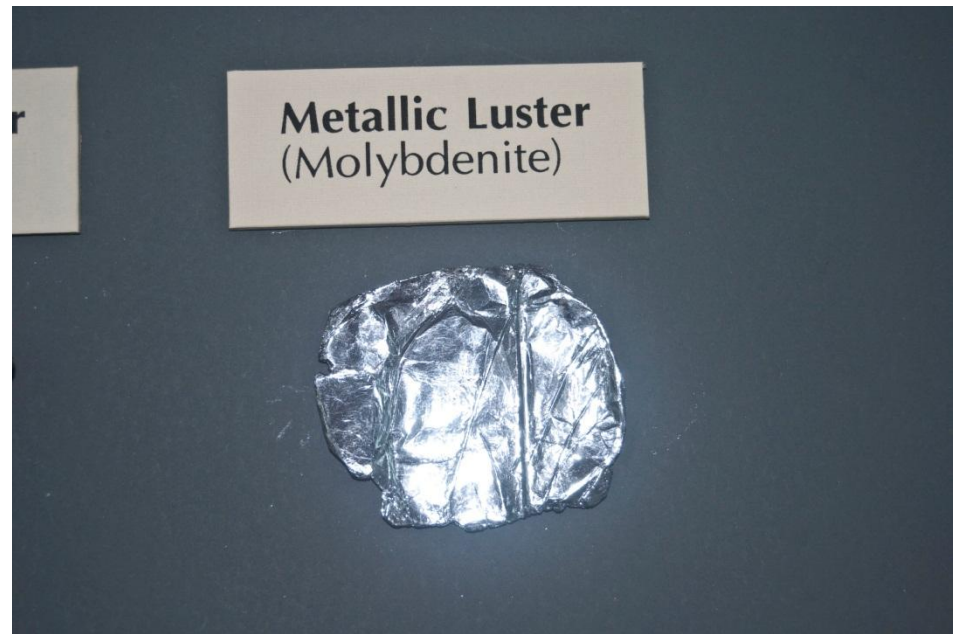


# **Metals and Nonmetals**

# Luster

the way an object reflects light.

- shiny
- dull
- metallic
- waxy



# Malleability

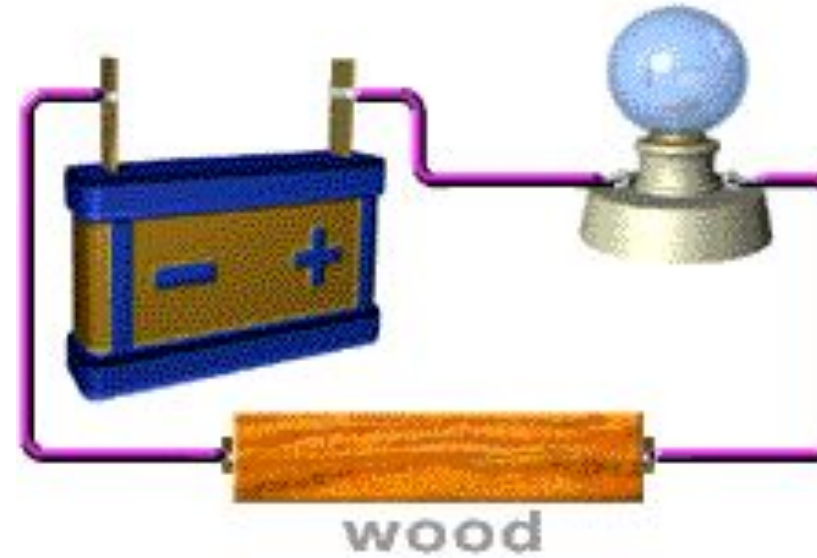
how well an object can be hammered into thin sheets.

- **flattened penny**
- **aluminum can**
- **tin foil** (фольга)
- **aluminum foil**

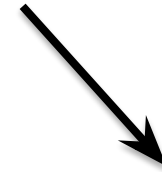


# Conductivity

how well an object allows electricity to move through.



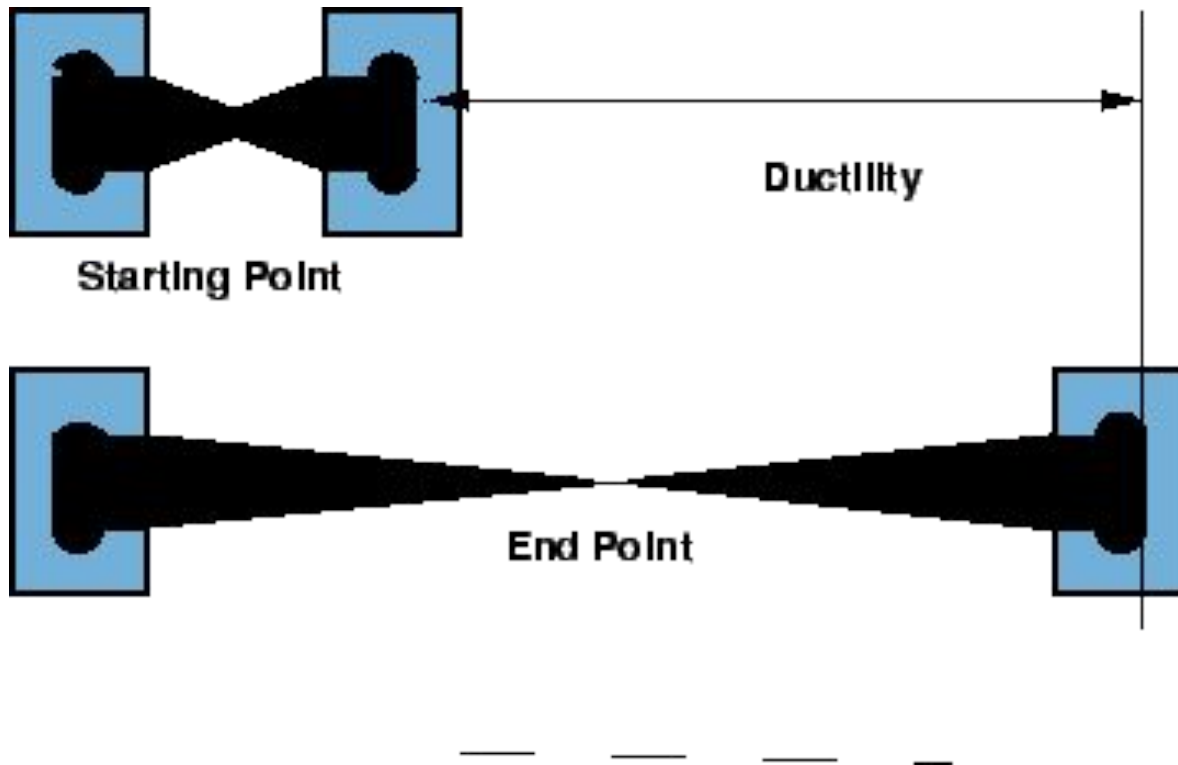
electrical



thermal

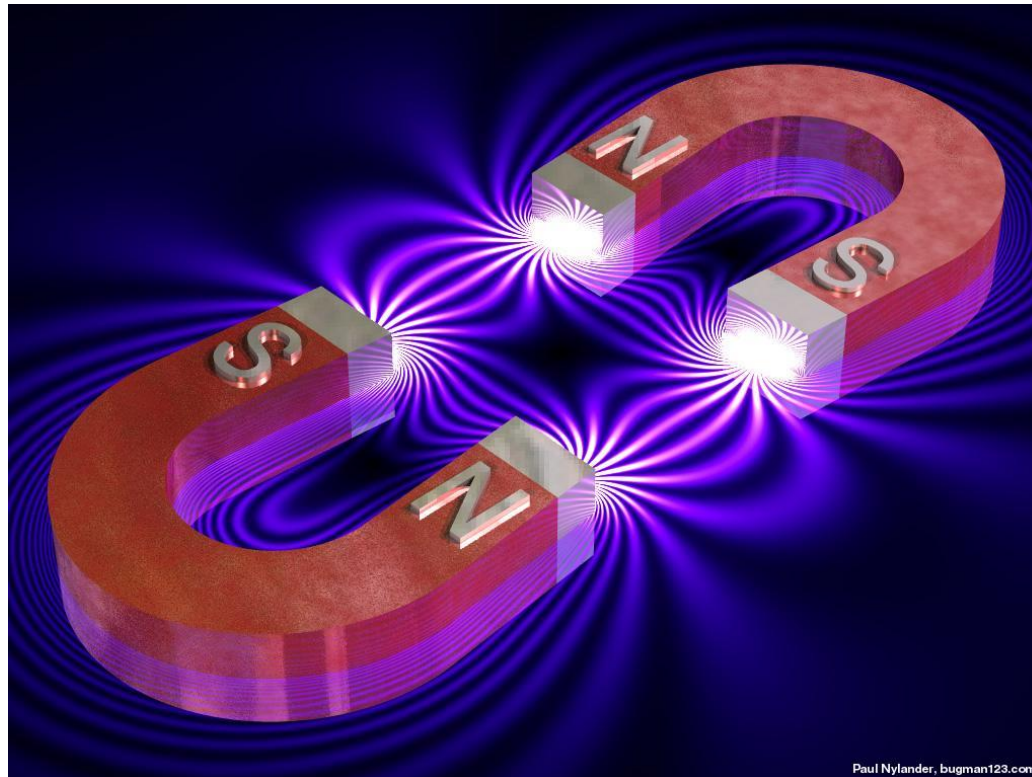
# Ductility

can be stretched into wire.



# Magnetism

attracted to or pushed away by a magnet.



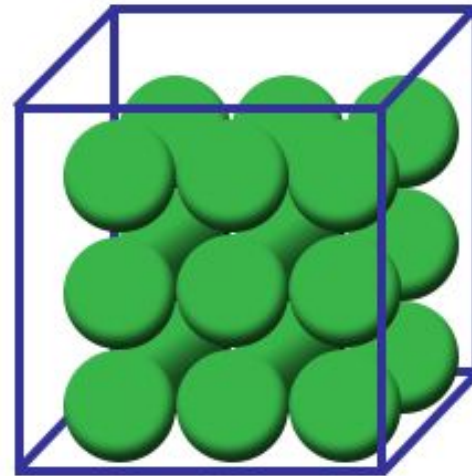
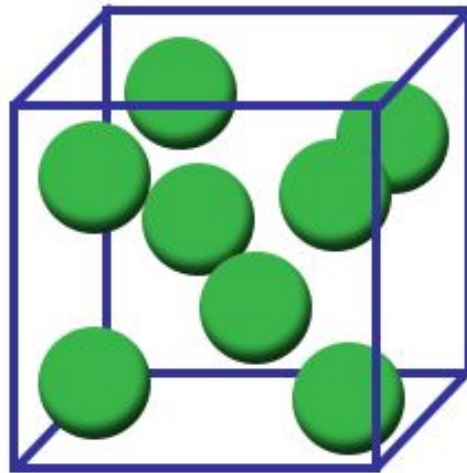
# Sonorous

produces a sound when struck with another object.



# Density

the relationship between the mass of a substance and its size:







<b>Property</b>	<b>Metals</b>	<b>Non-metals</b>
Appearance	Shiny.	Dull.
Melting and boiling points	High (they are all solid at room temperature, except mercury which is a liquid).	Lower than metals (bromine is a liquid at room temperature, and eleven others are gases).
Density	High (they feel "heavy").	Low (they feel "light").
Strength	Strong (they can hold heavy loads without breaking).	Not strong.
Malleability	Malleable (they can be hammered into different shapes without breaking).	Brittle (they break or shatter when hammered).
Ductility	Ductile (they can be drawn out to make wires).	Not ductile.
Heat conductivity	Good.	Poor.
Electrical conductivity	Good.	Poor (but graphite, a form of carbon, is an exception).

# Metalloids

- electronegativities between metals and nonmetals;
- ionization energies between metals and nonmetals;
- reactivity depends on other elements involved in the reactions;
- sometimes have characteristics of both metals and nonmetals;
- intermediate electrical conductivity.