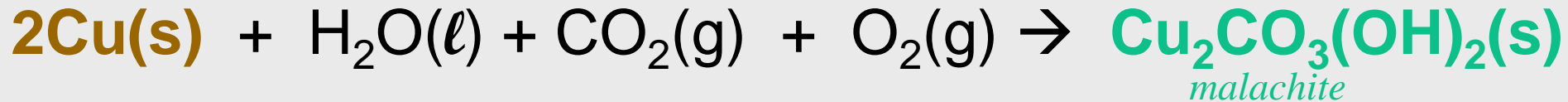


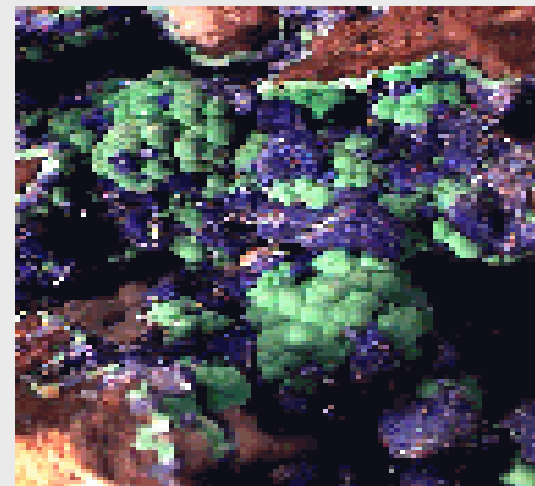
# Copper Corrosion



South-facing entrance of Harrin Hall (UCA). Corrosion from copper sheathing over the arched door runs down the face of the column as blue-green streaks.



**Azurite** and **malachite** are minerals that contain  $\text{Cu}^{2+}$  ions.

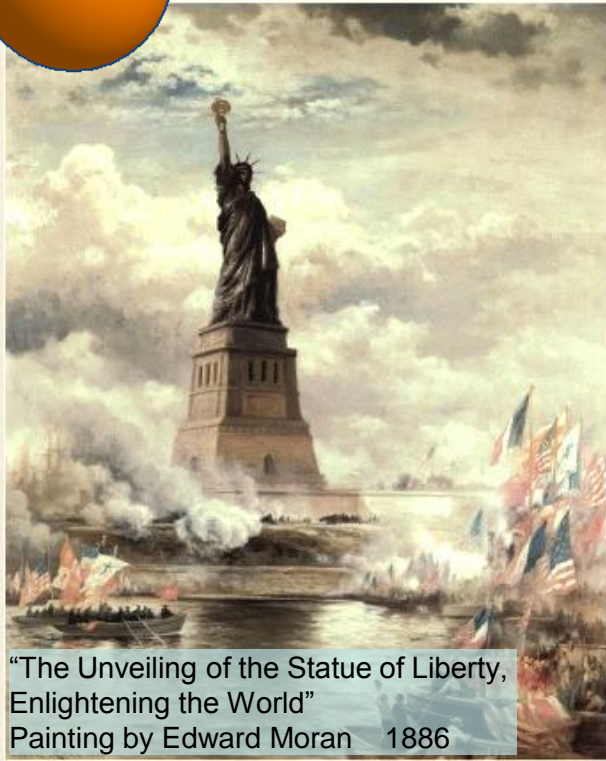


The vivid colors of copper minerals make it easy to see why they attracted the attention of the ancients.

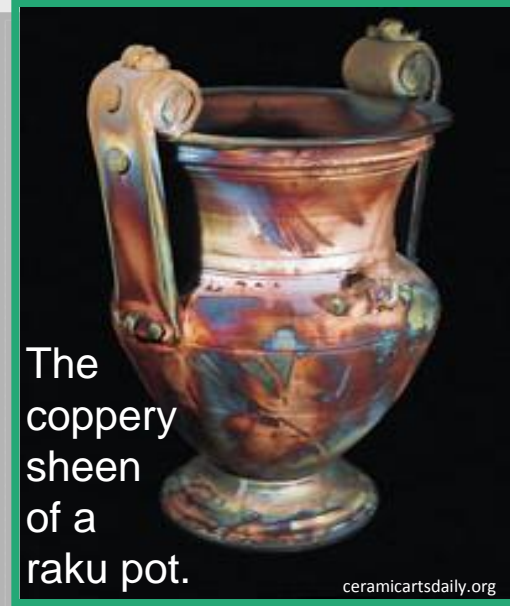
Copper atoms

air, water

Copper ions



The skin of the Statue of Liberty is made of copper. When first erected it appeared red-brown, the color of fresh copper. Over time its characteristic blue-green patina emerged as surface copper atoms were oxidized by air and reacted with water.



Raku firing converts copper-glazes (like patinas) back to metallic copper.



Pure copper is a pinkish-brown metal.

Oxidation by air and water forms colored surface copper compounds.

In some cases this layer can wash away exposing fresh underlying metal.

