

Mineral Spotlight: Malachite on Chrysocolla

When the Statue of Liberty first overlooked the New York Harbor in 1924, its copper exterior gleamed like a newly-minted penny. Rain and humid air almost instantly began oxidizing Lady Liberty's polished surface, gradually covering her with the distinct blue-green patina we see today.

If you look closely, chrysocolla and malachite possess a similar hue to the Statue of Liberty. That's because oxidizing copper also forms these minerals—except underground. Rainwater carrying dissolved oxygen infiltrates the Earth's surface, reaching shallow copper ore deposits. The following reaction produces copper oxide, a critical ingredient in producing chrysocolla and malachite, and the compound responsible for Lady Liberty's blue-green coating.

Key Facts:

- The two green rings on the FIFA World Cup Trophy are made of malachite.
- Malachite and chrysocolla are different minerals but they often form together through similar processes.
- Malachite and chrysocolla are used as indicators of copper deposits.
- Malachite and chrysocolla can form as stalactites.

This feature was posted on Dice Museum social media by Museum curator Chafer Jolman on 8/2/23

