

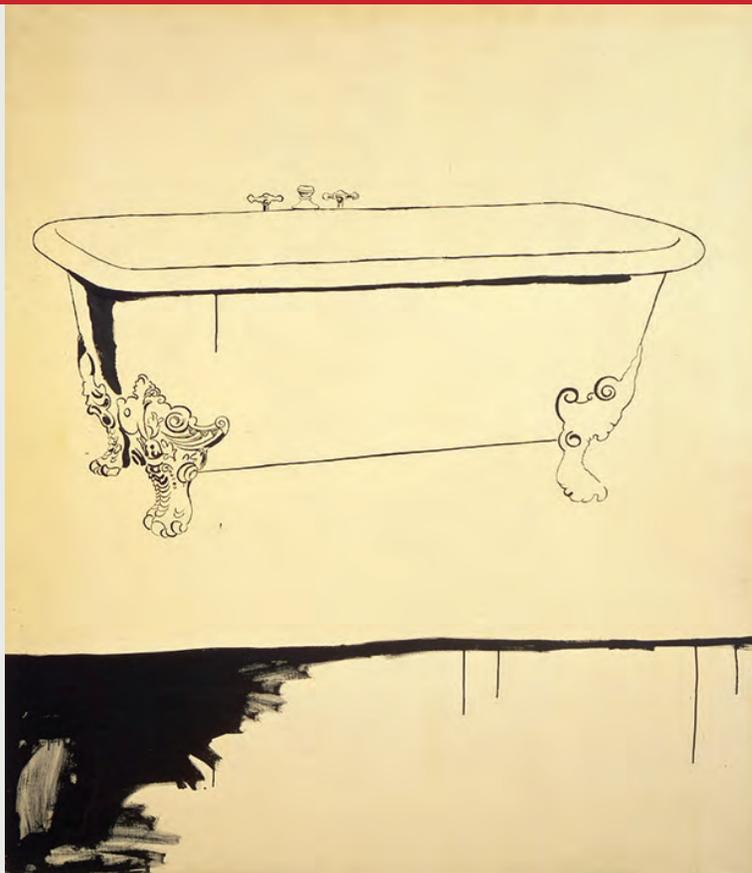
USING OXYGEN TO REVIVE DAMAGED ART

Treating damaged works of art is a tricky and time-consuming process that often produces mixed results. Now NASA has found a way to help bring damaged paintings back to life. NASA was breaking down oxygen molecules into oxygen atoms (a process that happens in nature in the upper atmosphere).

The researchers were using the atomic oxygen to test the durability of satellite materials when they discovered that atomic oxygen could remove organic materials from the surface of objects without damaging the object. Bad news for satellite parts (which needed their coatings) but great news for the art world.

The chief conservator at the Cleveland Museum of Art tried the atomic oxygen treatment on two paintings damaged in a church fire in Cleveland.

Although the paintings were not extremely valuable (and so were good subjects for an experiment), all other attempts to restore them had failed. Atomic oxygen proved to work wonders, and the soot and char came off to reveal the image below it. Since the treatment is a gas, the underlying layers were not harmed. The treatment doesn't work on everything and won't replace other techniques altogether, but the conservator was impressed enough to continue to work with NASA on the process. A small, portable atomic oxygen unit has also been built to treat artworks that have been damaged in a small area (by graffiti, etc.). A beam of atomic oxygen is applied directly to the damaged area to «spot clean» a piece of art. This technique was used to clean a lipstick mark from Andy Warhol's painting Bathtub (figure). A cosmetic party had been held at the Andy Warhol Museum in 1997. Free lipstick samples had been distributed at the party, and one reveler decided to kiss the painting! The painting was not varnished, so the lipstick stuck fast to the paint. After a day of treatment with the atomic oxygen beam, the lipstick mark was gone. Space technology can now be used to revive and restore art!



This famous Andy Warhol painting was spot cleaned by using a beam of atomic oxygen.

Leggi attentamente il testo e rispondi alle domande che seguono.

- A** How did researchers discover the importance of oxygen in «cleaning» surfaces?
- B** Which treatment can repair damaged areas?