

X-ray imaging reveals why this 17th century painted yellow rose lost its luster

Enlarge / Pigment degradation in the yellow rose of Abraham Mignon's *Still Life with Flowers and a Watch*. (a) The full painting; (b) detail of the yellow rose; and (c) elemental distribution image of arsenic.

N. de Keyser et al., 2022

"At an advanced stage, these phenomena can decrease the readability of the artwork and hence significantly alter the artists' intention," they wrote. That includes altering intended optical effects, such as the folds of draperies, which can disappear, making the object appear flat. This is what happened, for example, with the ultramarine degradation in Jan van Eyck's *Three Marys at the Tomb*. Also, the fading of red pigments in Van Gogh's *The Bedroom* turned purple walls blue and a pink floor brown—a reverse optical effect.

Mignon's yellow rose—a signature flower among 17th century still-life painters, per the authors—has suffered a similar fate. The rose provides "an exemplary topic for this study, looking flat and poor in color contrast while featuring a crumbling powdery appearance or a significantly broken up paint surface," the authors wrote, adding that the rose lost most of its 3D character, particularly when compared to the other, better-preserved flowers in the painting.

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