

Photodynamics in cultural history

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History's great painters studied the magic of light and color by choosing pigments to tell a story in a painting. However, as skilled as they were, the great artists could not always prevent the fading of their work in time. The brilliant colors of pigments exist by virtue of the fact that they absorb light. For art to preserve its beauty, the chromophores need to be able to handle the energy of

the absorbed photons without transformation. Successful pigments remain unchanged and visible for future generations while those with reactive photochemistry may fade. We study photodynamics in certain red and blue pigments and will also report on the use of light to study the early use of cacao by the Maya.