

A DC Science Café Event...

A Chemist's View of Cultural Treasures



Painting involves an alchemy: transforming animal, vegetable or mineral substances into pigments to create images that inspire or delight. Join Barbara Berrie, a chemist at the National Gallery of Art, as she describes how instrumental analyses have been revealing painters as materials innovators as much as they are artists. Using modern laboratory tools, she and colleagues have discovered that painters have modified raw pigments by adding finely ground glass and sands; broadened the range of hues at their disposal for glazing ceramics by adopting metal foils, complex oxides and other ingredients; and brightened their palettes by mixing rare and unusual minerals into their pigment formulae. For the colors in the Virgin's mantle in *Madonna and Child* (1320/30) in the collection of the National Gallery of Art, for example, Berrie's most recent analyses have shown that the Florentine master Giotto (1266-1337) chose an intense bright yellow glass for his yellow and added the rare green-blue mineral mixite ($\text{Cu}_6\text{Bi}(\text{AsO}_4)_3(\text{OH})_6 \cdot 3\text{H}_2\text{O}$) to the purest azurite. With the tools of their trade, Berrie and other art-minded scientists contribute to the historical narratives underlying our greatest cultural treasures.

Monday, September 15, 2014

6:30 - 8:30 pm

**Busboys and Poets, 5th and K St.
NW, Washington, DC**

www.busboysandpoets.com/about_5th.php

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This event is free and open to the public by way of a collaboration between DC Science Writers Association and the Chemical Society of Washington. Donations welcome.