



# THE DAYTON SECTION

DAYTON SECTION'S WEB PAGE ADDRESS:  
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## BULLETIN

March-April 2002

### *Annual Member Poster Session and College Awards Night*

University of Dayton  
Tuesday, March 5, 2002



### *"The Application of Chemistry to the Examination of Works of Art"*

Dayton Art Institute  
Wednesday, April 3, 2002

**DATED MATERIAL -- MEETING ANNOUNCEMENT -- DO NOT DELAY**

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**AMERICAN CHEMICAL SOCIETY  
Dayton Section  
Eugene W. Kettering Center  
140 East Monmouth Avenue  
Dayton, Ohio 45402-1267**

# Meetings...

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## March

### Annual Poster Session and College Awards Night

**Date:** Tuesday, March 5, 2002

**Place:** University of Dayton  
Kennedy Union Ballroom  
(<http://www.udayton.edu/campusmap/map.html>)

**Agenda:**

Posters:	6:00-9:00 PM
Refreshments:	6:30 PM (complimentary pizza and soft drinks)
College Awards:	7:30 PM
Poster Awards:	8:00 PM

### Program:

The annual Dayton Section Poster Session will take place Tuesday, March 5<sup>th</sup> in the Kennedy Union Ballroom at the University of Dayton from 6-9 PM. This year we are again co-hosting the event with the Society for Applied Spectroscopy. You, your colleagues and students are invited to participate by presenting a poster relating to any area of chemical research. This year we will be presenting 2 \$100 cash awards for the best undergraduate and graduate poster presentations.

Abstracts of 250 words or less should be sent electronically to Dave Tomlin at [david.tomlin@afrl.af.mil](mailto:david.tomlin@afrl.af.mil), by close of business 26 February 2002. Please indicate on the abstract if you would like to be considered for the awards. Please see the call for abstracts in the Bulletin or on the webpage.

The Patterson College Chemistry Award, sponsored by the Dayton Section, American Chemical Society, is presented annually to an outstanding junior chemistry major at each college and university within the Section's boundaries. The awards for this year's winners will be presented in a ceremony at 7:30 PM.

### *Future Meetings 2002*

<i>May</i>	<i>TBD</i>
<i>June</i>	<i>High School Awards</i>
<i>September 19</i>	<i>Frank Bates (Art of Beer Brewing)</i>
<i>October</i>	<i>Career Night</i>
<i>November</i>	<i>Dr. Leslie Perkins</i>
<i>December</i>	<i>Professional Practices/Social</i>



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## April

**Date:** Wednesday, April 3, 2002

**Place:** Dayton Art Institute (see map on the back page)  
456 Belmonte Park North  
Dayton, Ohio

**Agenda:** *Tentative (please check the web page or contact Dave Tomlin for updates)*  
Talk: 6:00 PM  
Social: 7:00-9:00 PM (Cash Bar, complimentary hors d'oeuvres  
reservations are required)\*  
We will have access to the main galleries for viewing.

**Speaker:** Dr. Suzanne Lomax,  
National Gallery of Art

**Topic:** "The Application of Chemistry to the Examination of Works of Art"

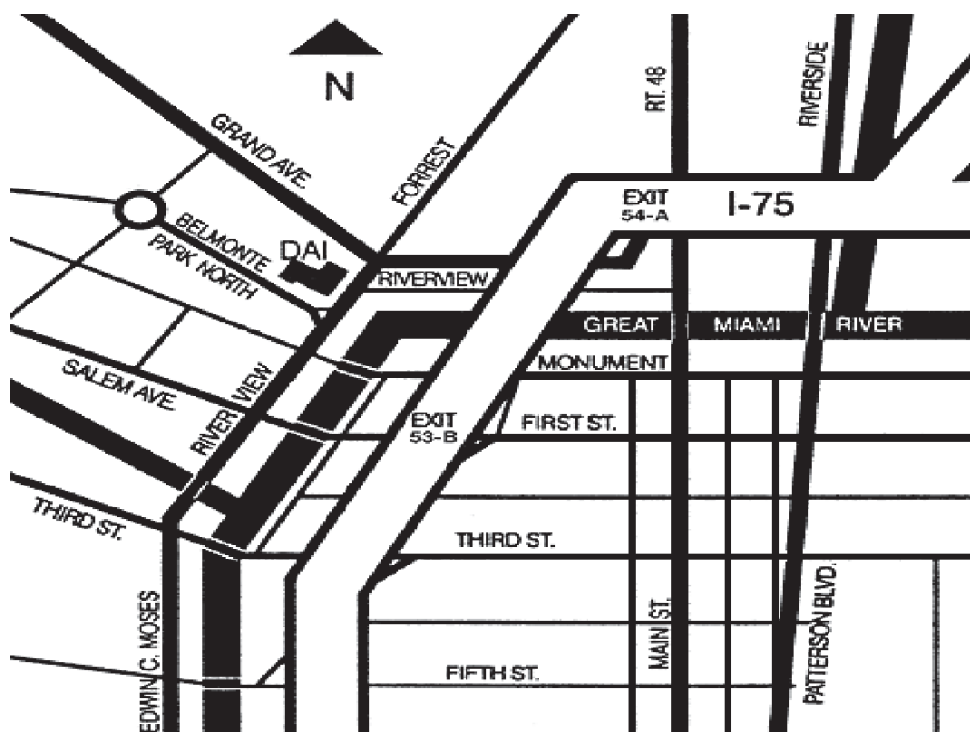
**Abstract:** Scientists have been associated with museum conservation laboratories for many years. Only recently, however, have art curators and conservation begun to appreciate the contributions that scientists can make in the preservation and restoration of the art objects. At present, about a dozen museums in the United States have conservation science departments. Art conservation frequently requires specific information about the component materials of a painting or object prior to treatment. Due to the complex stratification of paintings, most questions that arise concern the nature of their components. Microscopic cross sections of a painting are frequently taken and viewed with the polarizing microscope to understand the different layers that make up the object. Pigment identification is frequently employed to determine if the pigments are in keeping with the time period of the object, as well as to understand the artist's materials and methods. Such tasks are performed using polarized light microscopy and X-ray diffraction of powdered samples or X-ray fluorescence, which is well-suited to this talk due to its noninvasive nature. To study the identity of binding media, the conservation scientist uses gas chromatography (GC), high-performance liquid chromatography (HPLC), and infrared spectroscopy. GC is used to identify oil-containing binders, as well as for the identification of waxes and various low molecular weight resins, HPLC can be used to identify proteinaceous binders and organic dyes. Ultraviolet radiation can be used to examine the varnish layer of a painting as well as to identify areas retouched in previous conservation treatments. Infrared reflectography is frequently used to examine underdrawing on a painting. In addition, X-rays are often used to determine where lead white has been used on a painting, as well as to reveal damaged areas beneath the painting's surface. This talk will focus on the application of these various techniques to the examination of paintings and sculpture. Examples will be presented from the National Gallery of Art collection.

**Biography:** See back page

**\*Reservations:** For reservations, contact Dave Tomlin at 937-255-3808 x3181 or david.tomlin@afrl.af.mil. To ensure an accurate headcount for the hors d'oeuvres reservations must be made by close of business March 20, 2002.

(continued)

**Biography:** Suzanne Quillen Lomax received her Ph.D. in organic chemistry in 1984 from the University of Maryland, working with Patrick Mariano exploring the photochemistry of iminium salts. She then went to Northwestern University, where she performed postdoctoral research with Frederick Lewis, examining intermolecular photoaddition reactions. Dr. Lomax has been in the Scientific Research Department of the National Gallery of Art since 1986, investigating the identification and aging behavior of artists' materials. She has been a tour speaker for the American Chemical Society Speaker Service since 1991. Her areas of interest include the identification of synthetic organic pigments and modern paint binders. In addition, she has performed extensive analyses on traditional 15th and 16th century artists' paint binders.



### From the Chair

This is my first editorial as Chair of the Dayton Section. I would like to take this opportunity to encourage you to get involved with the local section. I believe we have a great schedule of events this year. We are trying to make the events more social, less technical, and more family friendly (after all who wants to attend yet another meeting.) I understand how busy everyone is, I am a 39 year old

father of 3 boys (4 year old twins, and a 2 year old) and I am well aware of the pressures and time commitments of job and family. I'm not an Academician, nor am I a Government employee and I don't need this job for résumé filler, I am simply a member who wants to see change in the *status quo*. Please consider helping all of us with your ideas, suggestions and most of all your participation.

Now that I have bored you with that litany, I have a question to ask those of you who are still reading this, would you be interested in attending a family picnic this summer at a local park/playground where the local section will provide the food and soft drinks. If you think this is a good idea please contact me and if I get enough positive responses, I will go ahead with the planning of just such an event. If not, don't say I didn't try. Please take this opportunity to let me know what you think of the section, good, bad, or ugly, I don't care, I would like the feedback as to what you expect from us, it is your section.

Dave Tomlin, Chair  
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