

CINTACS



Newsletter of the Cincinnati Section of the American Chemical Society

January, 2015
Vol. 52 No. 4

Section Calendar

Upcoming Events

January 15	"Chemistry and Art" Cincinnati Museum Center
February 12	"Nanomedicine", Mt St Joseph U
March 18	Chemist of the Year Venue, Miami U
Mar 22-26	Spring National ACS Meeting, Denver, CO
April 15	Teacher and Student Awards, Northern Kentucky University

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January Monthly Meeting

"Chemistry and Art"

Cincinnati Museum Center
Thursday, January 15, 2015

Meeting Program

6:00 -
7:00pm

Registration and Social Hour

Dinner

\$35.00 Members/Guests or \$20.00 for
Emeritus, K-12 Teachers, Students, Un-
employed, New Members

7:00 -
7:45pm

Menu: Your choice of chicken (balsamic
marinated grilled chicken breast with
smoked tomato au jus), beef (sirloin rou-
lade stuffed with smoked gouda, pro-
sciutto, fresh sage, and arugula horse-
radish), or vegetarian (spinach, garlic,
and pinenut parcels with subdried toma-
to sauce) entree. Dessert includes hot
chocolate creme brulee with shortbread
cookies.

Speaker: Dr Gregory Dale Smith, Indi-
anapolis Museum of Art

7:45 -
8:45pm

**The Analysis and Virtual Restoration
of Color Fading in Vincent's *Under-
growth With Two Figures***

Register at <http://www.acscincinnati.org/meetings/>

THE CINTACS NEWSLETTER**Vol. 52, No. 4 January 2015**

Editor.....Adam Bange

CINTACS is published eight times a year (September through May) by the Cincinnati Section of the American Chemical Society. The submission deadline will be approximately January 25 for the February 2015 issue. Electronic submission is strongly preferred. All materials should be sent to:

Adam Bange
Xavier University
3800 Victory Parkway
Mail Location 4221
Cincinnati, Ohio 45207-4221
Tel.: (513) 745-3950
Fax: (513) 745-3695
E-mail: Bangea1@xavier.edu

ACS Cincinnati SectionChair:

Kevin Ashley
KAshley@cdc.gov

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thomas.jb.1@pg.com

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walterske@nku.edu

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From the Chair

Happy New Year 2015 to all of the members of the ACS Cincinnati Section. Here's hoping that your holiday season has been enjoyable and festive, yet restful and relaxing. [And that you're not too overdosed on football...]

This month's section meeting is to be held on Thursday, January 15th at a terrific venue: the Cincinnati Museum Center. The meeting will feature a fascinating presentation by Dr. Gregory Smith, an art conservation chemist with the Indianapolis Museum of Art. Dr. Smith will discuss his laboratory's restoration work on a Van Gogh masterpiece, "Undergrowth with Two Figures," a painting whose home is in our own Cincinnati Art Museum. I am grateful to Dr. Matt Gardlik, Chair of the ACS Indianapolis Section, for recommending Dr. Smith to us. (Some of you may remember Matt, who established our section's website and served as webmaster for several years.) This outstanding presentation, which combines chemistry and art, should not be missed!

I would again like to express appreciation to Dr. Kemal Catalan, President of the NOBCCHE Cincinnati Chapter, and Dr. Diane Parry, President-Elect of the Society for Applied Spectroscopy, for their help in arranging last month's speech by Kristin Williams, an inspiring young chemical engineer with Procter & Gamble. Kristin's presentation offered us an intriguing glimpse into real-world problem solving in industry and underscored the need for knowledge and applications of chemistry in consumer product development.

At last month's meeting, Bruce Ault explained to us the about the 'sausage-making' involved in producing the newly-revised section bylaws. Thanks to Prof. Ault as well as Beth Reno, Diana McGill and Dan McLoughlin for their painstaking work in updating our bylaws. I am happy to report that the updated bylaws were formally approved via a unanimous affirmative vote at the Dec. 10 gathering. The revised bylaws will now be conveyed to ACS National for final perusal and approval. Once adopted, the new bylaws will be posted on the section's web page.

We are indebted to Adam Bange and Michele Mangels for their continued diligence in working on the newsletter and web page, respectively. Please consider submitting potential items of interest to Adam and Michele for posting, publicity & etc.

I'd like thank Mike Weaver, the Awards Chair of the Cincinnati section, for his ongoing efforts in beating the bushes to secure nominations for active volunteers within the section. Please consider nominating deserving teachers and volunteers for local, regional and national awards: see the announcements for awards in CINTACS and on the website at www.acscincinnati.org.

Best wishes to all,

Kevin Ashley



The featured speaker for the evening is Dr Gregory Dale Smith, an Otto N Frenzel III Senior Conservation Scientist from the Indianapolis Museum of Art. In this lecture, Dr. Smith will present the various roles played by a scientist in a fine arts museum, highlighting a recent collaborative project investigating color fading in Vincent van Gogh's 1890 masterpiece, *Undergrowth with Two Figures*. The artist's use of a modern fugitive dye, present as the pigment Geranium Lake, has resulted in significant color change in the picture and a shift in the aesthetics of the artwork. Careful scientific analysis identified the colorant as eosin, a halogenated fluorescein derivative, while elemental spectroscopy allowed the non-destructive, sub-surface detection of the compound in now totally faded passages of the painting. A brief history of the synthesis of eosin, and of its importance in artworks of the late 1800s will be given. A virtual restoration of *Undergrowth* using realistic colored layers determined by micro-colorimetry of cross-sections of the painting gives a better "impression" of this post-Impressionist's artistic efforts.

Dr. Smith received a B.S. degree from Centre College of Kentucky in anthropology/sociology and chemistry before pursuing graduate studies at Duke University in time-domain vibrational spectroscopy and archaeological fieldwork. His postgraduate training included investigations of pigment degradation processes and palette studies of illuminated manuscripts at the British Library and the V & A Museum, development of synchrotron infrared microscopy facilities at the National Synchrotron Light Source at Brookhaven, and researching cleaning issues related to artists' acrylic emulsion paints at the National Gallery of Art. In 2004, Dr. Smith joined the faculty of the conservation training program at Buffalo State College as the Andrew W. Mellon Assistant Professor of Conservation Science. In 2010 Dr. Smith was hired as the senior conservation scientist at the Indianapolis Museum of Art where he has constructed a state-of-the-art research facility to study and preserve the museum's encyclopedic collection of nearly 56,000 works of art.

Local Section Supports IURS

The International Undergraduate Research Symposium (IURS) is "An Encounter to Advance International Scientific Interaction and Collaboration between Students, Faculty and the Local Science Community, and to Increase Cultural Understanding and Peace". It is an opportunity for science students to travel internationally to present their research and to interact with science students of other cultures. The Cincinnati section has provided \$500 for local students from Wilmington College to put towards travel to India this month.

Local Section supports Lighthouse Community School

Our section provides two opportunities each year for K-12 schools to apply for education grants that will be used to fund programming that improves chemical education in the local area served by CINTACS. Our latest successful recipient, Lighthouse Community School, is dedicated to educating youth in the foster care system, youth diagnosed with emotional disturbances, and they specialize in drop-out recovery/prevention. A division of Lighthouse Youth Services, Lighthouse Community School's fundamental mission is advancing the dignity and well-being of children, youth and families in need. They seek to provide students with independent living, life, and social skills to those who experience crises that significantly interfere with their academic progress in a traditional school setting. Inquiry-based learning through experimentation is a way to develop critical thinking skills, which will serve students later in life.

Lighthouse Community School is launching a comprehensive chemistry course and adding to their interactive physical science course. They currently offer an on-line chemistry class with no instructor or experimentation. With the addition of the instructor-led chemistry class to their master schedule, they can offer a flexible, inquiry-based experience in the classroom.



October 30, 2014

Gloria Story
Procter & Gamble
Mason Business Center
8700 Mason-Montgomery Road
Mason, OH 45040

Dear Ms. Story:


On behalf of Trustees, staff and clients that we serve, thank you for your generous K-12 Education Grant from the Cincinnati Chapter of the American Chemical Society of \$1,000.00 (received 10/24/2014) to support the chemistry program at Lighthouse Community School.

Lighthouse Community School takes great pride in employing unconditional positive approaches to foster a safe, stable community that develops effective social skills and enhances academic progress.

This is only one of the many services Lighthouse provides to over 5,000 children, teens, and families each year. In our 45 years of service, Lighthouse has consistently fostered a caring environment that places youth and families first. Chief among our values is the belief that young people can learn to make positive changes in their lives. Your gift affirms that belief.

Thank you again for your generosity!

Sincerely,


Robert C. Mecum
President & CEO

Thanks again - How nice of you group to do this - TB



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