

The Chemical Record

Volume 56 — Number 5 — June, 2014

Columbus Section of the American Chemical Society, Inc.

Wenbin Qi, Section Chair — Qiwenbin@gmail.com

George Greene, Editor — george.greene@abbott.com

Section Website: columbus.sites.acs.org

IN THIS ISSUE...

| | |
|--|---|
| JON PARQUETTE NAMED 2014 COLUMBUS SECTION AWARD RECIPIENT | 1 |
| MEETING NOTICE | 2 |
| PROGRAM DETAILS | 2 |
| ABOUT THE PRESENTATION: <i>THE SELF-ASSEMBLY OF FUNCTIONAL NANOSTRUCTURES</i> | 3 |
| STATE SCIENCE DAY 2014-CHEMICAL SCIENCES AWARD SPONSORED BY ACS COLUMBUS SECTION | 4 |
| SILVER CIRCLE NEWS | 6 |
| COLUMBUS SECTION ACS CALENDAR OF EVENTS | 6 |
| ABOUT <i>THE CHEMICAL RECORD</i> | 6 |
| CHANGE OF ADDRESS | 6 |

JON PARQUETTE NAMED 2014 COLUMBUS SECTION AWARD RECIPIENT

By LEWIS HOGARTH

The Columbus Section Award will be presented to **Dr. Jon Parquette** of The Ohio State University Chemistry and Biochemistry Department during the June, 2014 meeting of the Columbus Section of the American Chemical Society. Dr. Parquette received a B.S degree in chemistry from the University of California, Berkeley in 1988, and his Ph.D. in 1994 from Stanford University working with Barry M. Trost. At Stanford, he was an American Chemical Society, Division of Organic Chemistry Fellow. After completing postdoctoral work at Caltech in 1996, working with Peter Dervan as an American Cancer Society Postdoctoral Fellow, he became a faculty member at The Ohio State University. His research is currently supported by a National Science Foundation CAREER AWARD (1999). Dr. Parquette is also a past Chair of the Columbus Section.



The meeting will be held on the campus of Ohio Dominican University in the Bishop Griffin Student Centre on June 18, 2014. There will be a reception followed by the plaque and award presentation and a meal. Following the meal, the recipient, Dr. Parquette will be giving a talk on *The Self-Assembly of Functional Nanostructures*. Please see details elsewhere in this issue of *The Chemical Record*.

MEETING NOTICE



Columbus Section of the American Chemical Society Meeting #873

Presentation of the 2014 Columbus Section Award

The Self-Assembly of Functional Nanostructures

Dr. Jon Parquette
The Ohio State University

Wednesday, June 18th, 2014

Bishop Griffin Student Center, Room 258-260
Ohio Dominican University
1216 Sunbury Road
Columbus, OH 43219
www.ohiodominican.edu

PROGRAM DETAILS

| | |
|----------------|--|
| 5:30 – 6:15 PM | Executive Committee meeting (All Section members are welcome to attend) |
| 6:15 – 7:00 PM | Reception: Hors d'oeuvres and beverages. Beer and wine will be available at the cash bar. |
| 7:00 – 7:45 PM | Buffet Dinner Lemon Parmesan Chicken or Vegetarian Lasagna with salad, Rolls and Butter, Vegetables and rice pilaf Dessert: chocolate mousse or strawberry shortcake Coffee and tea |
| 7:50 – 9:00 PM | Presentation of the 2014 Columbus Section Award: <i>The Self-Assembly of Functional Nanostructures</i> by Dr. Jon Parquette |
| Cost | \$25 per person members and non-members, \$5 for retired and unemployed members, \$5 per student. New members are free! Payment will be collected at the door; cash and checks accepted. There is no cost to attend the program only. <i>Remember that this is a dinner order and must be paid. Please help control costs by honoring your order.</i> |



| | |
|--|---|
| RSVP | Please use the voice mail reservations service by calling 614-447-3600 extension 7047. Follow the template for reservations*. Alternatively, please send e-mail with the same information to The Columbus Section at the following e-mail address: acscols@wowway.com or use the Meeting Reservation Form on the Section's website. |
| *Voicemail/e-mail Reservations Template | <ul style="list-style-type: none"> • First and last name: Please spell last name. • Membership category: member, non-member, retired, emeritus, unemployed, and student. • Employer Your phone number, in case we need to contact you. |
| Reservation Deadline | Friday, June 13, 2014 by noon |
| Program Contact | Wenbin Qi, 614-260-4179, Qiwenbin@gmail.com |
| Directions & Parking | The Bishop James A. Griffin Student Center at Ohio Dominican University is located on the east side of Sunbury Road. From the South <ol style="list-style-type: none"> 1. Take I-670 to the 5th. Avenue exit and get off there. 2. Turn towards the Downtown (west) on Fifth Avenue and proceed through two traffic lights to Sunbury Road. 3. Turn right on Sunbury Road (north) and continue through two traffic lights and an automatic pedestrian traffic light. 4. Turn left into the parking lot at the next traffic light. From the North <ol style="list-style-type: none"> 1. Proceed south on Sunbury Road from Morse Road. 2. Go past the turns for Easton, and keep going until Ohio Dominican University brick buildings are seen on both sides of the road. 3. Turn right at the traffic light and go into the parking lot. Once in the Parking Lot: Go forward through the parking lot and turn left in order to get to the southerly end. Find parking there near the new brick building. This building is the Bishop Griffin Student Centre. Enter the building by using the walkway between the brick structures and use the door on the right hand side. For the Executive Committee Meeting go upstairs to room #276 just at the top of the stairs. For the meeting, turn right at the top of the stairs and walk along the corridor to rooms 258, 259 and 260. Free parking is provided. |

ABOUT THE PRESENTATION: *THE SELF-ASSEMBLY OF FUNCTIONAL NANOSTRUCTURES*

The self-assembly of small molecules into one-dimensional nanostructures offers many potential opportunities for the development of new materials with functions ranging from targeted drug delivery and tissue engineering to optoelectronics and sensing. In order to realize the potential for nanoscale self-assembly to contribute to these applications, it is important to control the size, shape, and internal/external surface structure of the nanostructures in a predictable and versatile manner. Most applications require the assembly or co-integration of functional co-factors that may include specific drugs, chromophores or imaging agents for biomedical applications. Thus, the self-assembly process must not only be controllable with regard to nanostructure, it must be capable of integrating these functional components. We have developed several versatile strategies that permit functional chromophores to be assembled into one-dimensional nanostructures, such as nanotubes, based on β -sheet aggregation and/or amphiphilic association in water. This lecture will discuss why the nanoscale dimension is special and our recent efforts to program molecules to assemble into structures in that size regime.

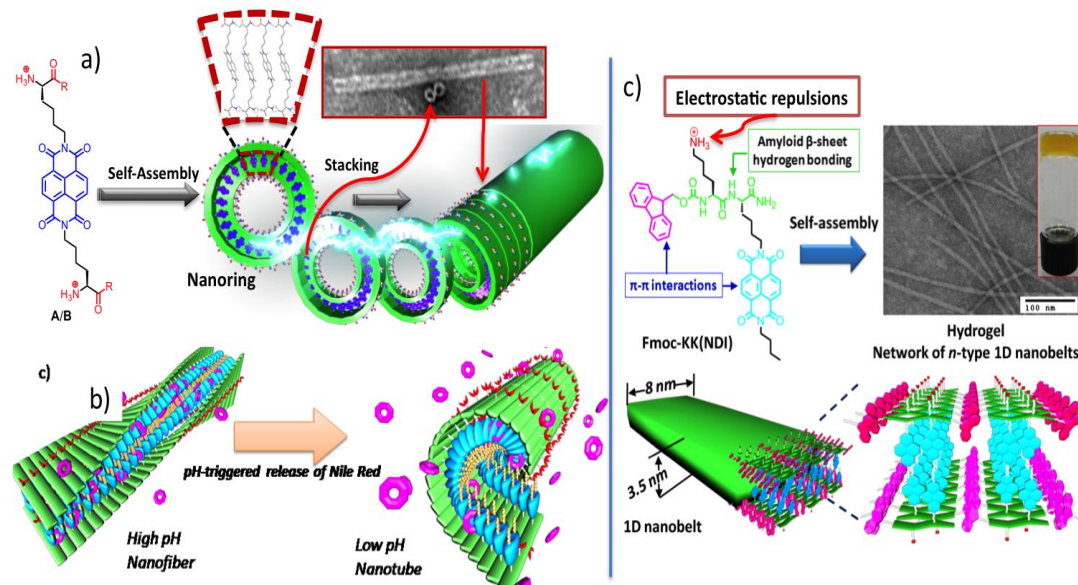


Figure 1. Self-assembly strategies developed in the Parquette group. (a) Amphiliphic assembly of nanotubes containing naphthalenediimide (NDI) organic semiconductor chromophores. (b) Peptide b-sheet-based nanotube assembly of peptide-dendron hybrids and encapsulation of hydrophobic dyes in water. (c) Dipeptide b-sheet assembly of ribbons and fibers functionalized with organic semiconductor chromophores.

STATE SCIENCE DAY 2014-CHEMICAL SCIENCES AWARD SPONSORED BY ACS COLUMBUS SECTION
BY YUN GONG AND WENBIN QI



First held in 1949, the 65th Annual State Science Day was hosted by The Ohio State University, Columbus, on May 10th, 2014. This year's event is one of the largest of its kind in the nation. Since 1998, as part of its commitment to chemical education at all levels, the Columbus Section has sponsored awards for outstanding projects in the chemical sciences. This year, with the help of 28 wonderful judges, we judged 149 projects by students range from grade 7 to grade 12. And the project subjects include energy, material, biochemistry, environment and many other aspects with chemistry content. We, all of the judges, enjoyed talking to so many smart kids and getting to know their brilliant ideas. Here is the list of winners of the Chemical Sciences Award sponsored by ACS Columbus Section on State Science Day 2014: (placing, name, grade, school, city, project title)

Grades 7-9

1st Prashanth C Raguananthan, 7, Oakwood MS, Canton, *An evaluation of the difference amongst several antacids*

2nd Charles D Mayville, 7, St Vincent Depaul, Mt Vernon, *Thin layer chromatography of leaves*

3rd Kathleen M Hallinan, 8, Walnut Hills HS, Cincinnati, *The effect of pH on corrosion of metals*

HM Shifra R Narasimhan, 7, Athens MS, Athens, *Light assisted sugar estimation using refraction*

Grades 10-12

1st Blueye' B DeMessie, 11, William Mason HS, Mason, *Developing a sustainable water filtration system for low income countries*

2nd Shilpa P Murphy, 11, Olentangy Liberty HS, Delaware, *Studies on oil - water - surfactant ternary phase diagram*

3rd Gabrielle C Bolt, 12, Black River HS, Sullivan, *Recycling cobalt chloride from the pink catalyst reaction*

HM Mariah L Costa, 11, St Vincent St Mary, Akron, *Mimicking host defense peptides*

We would also like to thank this year's team of judges. They are a wonderful group and did a great job in recognizing the excellent project and inspiring future chemists. On behalf of the section, we appreciate the service by all judges:

Robert Bird
Kate Cahill
Mrinal Chakraborty
Lee Cherney
Bob Kroshevsky
Lisa Delp
Soumitra Deshmukh
Indu Gopal

Dumont Jones
Eric Masson
Ariel Moore
Joan Muellerleile
Keesha Neidrich
Ramasamy Pandian
Brian Peebles
Gabriel Peterson

Spencer Porter
Al Pyzik
T. V. (Babu) RajanBabu
James Ross
David Speth
Jeff Trent
Yingying Zeng

Special thanks to **Dr. Bob Kroshefsky**, who has been coordinating this award for many years and helped with recruiting, organizing, training and everything this year.

By

Dr. Yun Gong

Coordinator, State Science Day 2014, Chemical Sciences Award sponsored by ACS Columbus section

Dr. Wenbin Qi

Chair, ACS Columbus Section

Have a very HAPPY and SAFE Summer, Everyone!

-Your Chemical Record Staff



Silver

SILVER CIRCLE NEWS
By Tom Weeks

Silver

The last Silver Circle meeting of the Spring took place on June 5 at the OSU Automotive Research Center. Meetings will resume in the Fall.

For more information, email tomweeks@aol.com. As always our meetings are open to ACS members of all ages, their spouses, and assorted science groupies.

COLUMBUS SECTION ACS CALENDAR OF EVENTS

| Year | Month | Date | Day | Location | Comments |
|------|----------------------|---------|-----------|--|---|
| 2014 | June | 13 | Friday | | Deadline for reservations for June Section meeting |
| 2014 | June | 18 | Wed | Bishop Griffin Student Centre, Ohio Dominican University | May Section meeting and presentation of Columbus Section Award to Dr. Jon Parquette of The Ohio State University. See details elsewhere in this issue of <i>The Chemical Record</i> |
| 2014 | July | TBA | TBA | TBA | Baseball game |
| 2014 | August | 10 – 14 | Sun – Thu | San Francisco | 248 th ACS National Meeting and Exposition |
| 2014 | October | 15 | Wed | Chemical Abstracts Service | Monthly Section meeting – Dr. Diane Grob Schmidt (ACS President-Elect) |
| 2014 | October | 19 – 25 | Sun – Sat | Here, There, Everywhere | National Chemistry Week 2014 Theme: <i>The Sweet Side of Chemistry – Candy</i> , Showcasing the chemistry involved in candy and confections Stay tuned to <i>The Chemical Record</i> and the Section website for details. |
| 2014 | October | 25 | Sat | Main Branch, Columbus Metropolitan Library | NCW interactive chemistry demonstrations for children of all ages. Volunteers are needed; contact Professor John Blaha (Jblaha@csc.edu) for more information. |
| 2014 | October/ November | 29 – 1 | Wed – Sat | Pittsburgh | 45 th ACS Central Regional Meeting |
| 2014 | November | TBA | TBA | TBA | Joint meeting with the Central Ohio Section of the American Institute of Chemical Engineers |

ABOUT THE CHEMICAL RECORD

The Chemical Record, official newsletter of the Columbus Section of the American Chemical Society, Inc., is published monthly, February-May and September-December (eight issues per year.) Opinions expressed by editors or contributors do not necessarily represent the official position of the Columbus Section or of the editorial staff. We welcome your contributions to your *Chemical Record*. Please submit them via postal or electronic mail to **George Greene**, PO Box 360941, Columbus, Ohio 43236-0941, george.greene@abbott.com. Electronic mail contributions should be in MS Word file attachments (preferred) or plain-text messages. *Thank you very much!*

CHANGE OF ADDRESS

Changes in postal or e-mail address should be reported to the Membership Chair, **David Speth**, 614-688-5162, drspeth@sbcglobal.net. David will forward the change-of-address information to ACS Headquarters.