



THE DAYTON SECTION

Fostering scientific education and research and promoting public understanding of science

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BULLETIN**Summer Fun Issue 2006****Meetings****Aug. 26: 2nd Annual Section Picnic of the Modern Era****Sept. 22: Electrophilic Intermediates and Their Reactions in Superacids, Professor G. K. Surya Prakash****Section News and Errata**

- Past Meetings
 - Patterson High School Chemistry Awards, page 4
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DATE MATERIAL - MEETING ANNOUNCEMENT - DO NOT DELAY

NON-PROFIT ORG.
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American Chemical Society
Dayton Section
Eugene M. Kettering Center
140 East Monument Avenue
Dayton, OH 45402-1267

UPCOMING MEETING

DAYTON-SECTION PICNIC

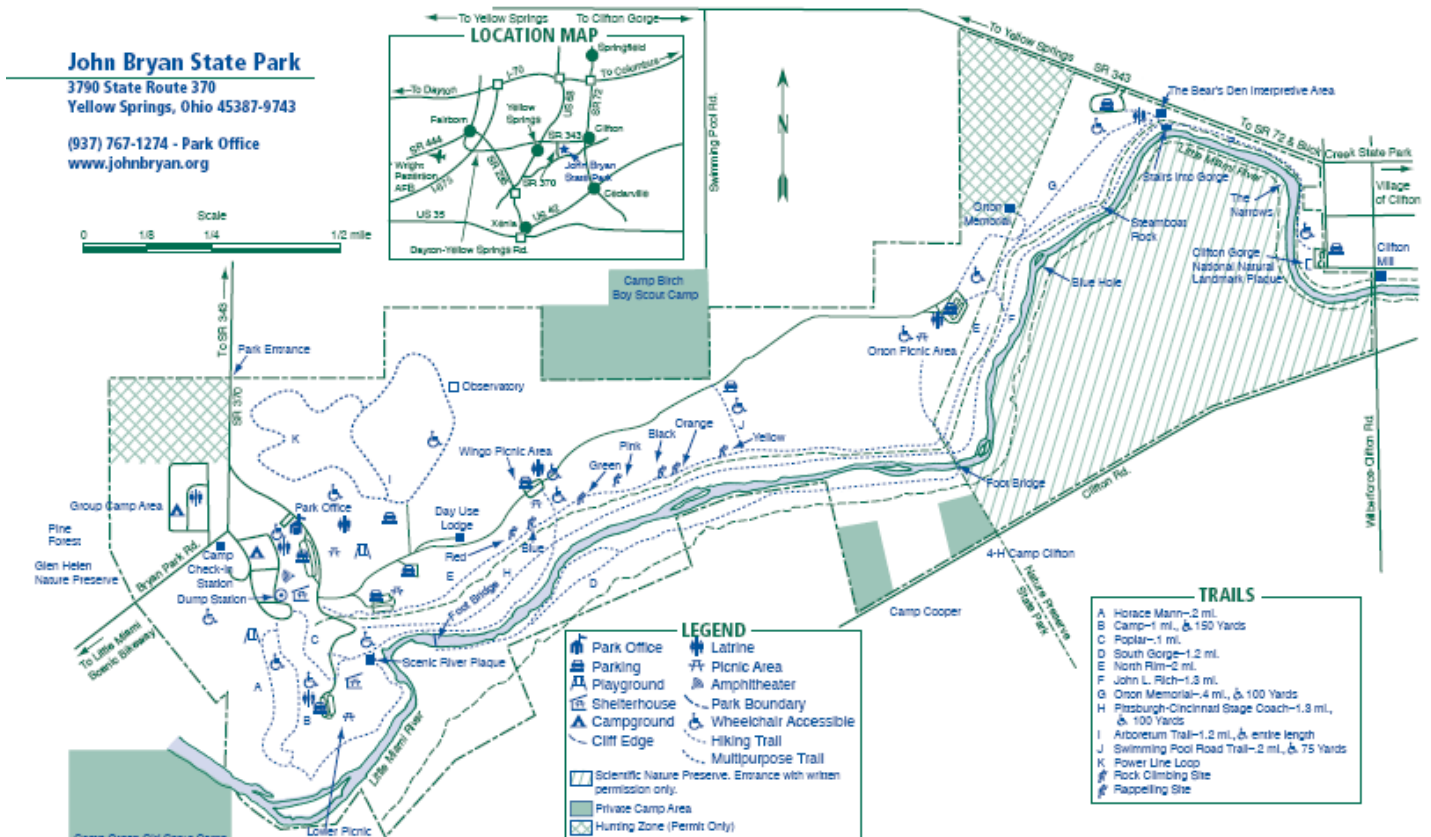
DATE: Saturday, August 26th
VENUE: John Bryan State Park, Main Picnic Area (Near Playground)
TIME: 11:30 AM – 4:00 PM, Rain (*unless an incessant downpour*) or Shine!
KEYNOTE SPEAKER: NONE!

This year we will continue our revival of an old tradition and hold a picnic for all Section Members and their families. The Section will provide hamburgers, hot dogs, veggie burgers, and drinks. Please bring a side dish or a dessert to share with everyone.

The main picnic area is near the playground where you enter the park off of SR 370. See below or http://www.dnr.state.oh.us/parks/parks/pdf/johnbryanmap_304.pdf for more details and directions. The park offers hiking trails, a playground, and open space for softball, soccer, or Ultimate Frisbee. And, there's plenty of shade for those poor souls who tend to wilt in the summer heat.

For planning purposes, let us know if you'll attend and number in your party by contacting Hilmar Koerner at @hilmar.koerner@wpafb.af.mil or (937) 904 5091.

Let us know, too, if you're a better grill cook than Steve.



UPCOMING MEETING

ELECTROPHILIC INTERMEDIATES & THEIR REACTIONS IN SUPERACIDS

A joint meeting with the Department of Chemistry, Wright State University and
the Air Force Research Laboratory, Polymer Branch

DATE: Friday, September 22nd

VENUE: Oelman Hall, Room 340, WSU (see map, back page)

TALK: 3:30; snacks will be served beforehand, so get there early!

SPEAKER: Professor G. K. Surya Prakash; Loker Hydrocarbon Research Institute and
Department of Chemistry, University of Southern California

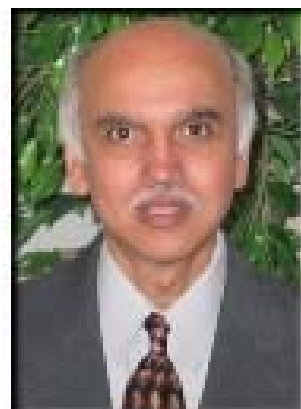
Abstract:

Acid catalyzed reactions have played a major role in hydrocarbon chemistry involving electron deficient intermediates such as carbocations, carbodications, onium ions, etc. The pioneering discovery of the use of superacids by George A. Olah, in the early sixties, to characterize such intermediates under so-called long-lived stable ion conditions led to the understanding of their structures and reactivity patterns much more clearly. Continuing studies in this area in the past thirty years have resulted in a paradigm shift in comprehending the stability and reactivity of electrophilic intermediates in superacid media. The lecture will not only cover structural and mechanistic aspects of carbocation chemistry but also the role of superacids in C-H and C-C sigma-bond activation.



About the Speaker:

G. K. Surya Prakash, Ph.D., is a Professor and George A. and Judith A. Olah Nobel Laureate Chair in Hydrocarbon Chemistry at the Loker Hydrocarbon Research Institute and Department of Chemistry at USC. He is also the Scientific Director of the Loker Hydrocarbon Research Institute. Prof. Prakash is an exceptionally creative and an imaginative organic chemist with 30 years of research experience. His work, on carbocations, hydrocarbon transformations, fluorinations, direct oxidation-methanol fuel cells, proton-conducting polymer membranes, nano-materials, energetic compounds, and battery electrolytes has received worldwide attention. Prof. Prakash has published more than 520 peer-reviewed scientific papers, eight books, and holds twenty significant patents. He has won many significant research awards and accolades including the American Chemical Society National Awards in Fluorine Chemistry (2004) and in Hydrocarbon Chemistry (2006) and also sits on the editorial boards of many international journals.



PAST MEETINGS

PATTERSON HIGH SCHOOL CHEMISTRY AWARDS

After an exam with a very large turnout (144 candidates from 16 different high schools) – the largest in a decade – a cutoff score left 13 finalists to submit essays for the final judgment and selection of the three winners of this year's Patterson High School Chemistry Awards. The Awards were presented on June 13th at Sinclair Community College with a keynote address by past ACS president, Dr. Helen Free. The winners, listed below, received cash awards (\$1000, \$500, and \$250 for 1st, 2nd, and 3rd place) and a certificate. The winners' teachers (in parentheses) were also given a \$50 cash award.

1st Place: Diana Cahill, Centerville High School (Mrs. Bonnie Buddendeck)
"Chocolate: A Neurochemical Delight"

2nd Place: Eric Reed, The Miami Valley School (Mr. Bryan Czarnota)
"Capsaicin – A Heat For All Seasons"

3rd Place: Guanqing (Grace) Ou, Beavercreek High School (Mrs. Tejinder Rattan)
"Chemistry's Panacea for the World Energy Dilemma: The Hydrogen Future"



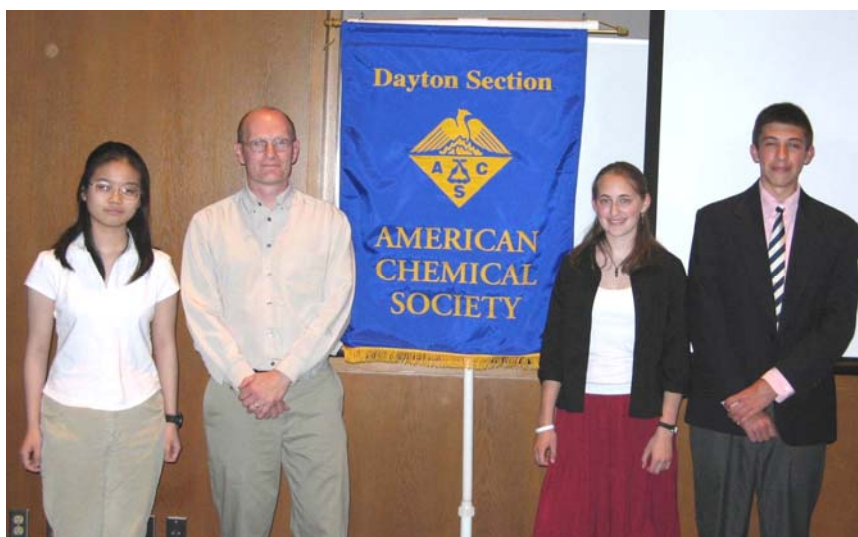
Students, parents, and Dayton Section Members mix it up.



Past ACS President Helen Free presented, "The Many Faces of Careers in Chemistry."



According to the Section's Immediate Past Chair, happiness is spelled C-O-O-K-I-E!



Just like Germany's World Cup "Football" team, Hilmar can at least rub elbows with some winners (from left to right): Grace Ou, Diana Cahill, and Eric Reed.

PAST MEETINGS

We thank all of the teachers who devoted their time to prepare their students for the exam and to the parents who motivated their children and attended the Awards Ceremony. Many thanks, too, to Helen Free for her presentation of a journey through the multifaceted careers of chemistry.

The Section is especially grateful to Mr. Berch Carpenter of Bellbrook High School for co-chairing the High School Awards Committee for so many years. Berch is retiring and handed over his duties to Bonnie Buddendeck of Centerville and Cindy Hasler of Bellbrook. We are indebted to Berch for his outstanding contributions to the Dayton Section and wish him all the best in his new endeavors.

CHEMISTRY OLYMPIAD EXAMINATION

Nine of the highest scorers on the Patterson HS Chemistry exam accepted an invitation to take the national Chemistry Olympiad examination that each year determines the 20 students who make up the US International Olympiad Team. The international competition will be held this summer in Gyeongsan in the Republic of Korea. The exam consists of three segments: an objective part; problem solving; and a laboratory activity. The nine students examined were recognized for their efforts at the Patterson High School Chemistry Meeting and were awarded \$50 for their efforts. Many thanks are due to Dr. Harvey Paige, who administered the exam.

The Chemistry Olympiad participants (and their teachers) are:

Annie Wang and Eric Harper of Oakwood High School (Mr. Slagel)

Paul Apisa and Christopher Wang of Centerville High School (Mrs. Buddendeck)

Nicole Gunasekera and Eric Reed of Miami Valley School (Mr. Czarnota)

James Voss of Beavercreek High School (Mrs. Rattan)

Nick Makley and Joseph Linsenmeyer Tippecanoe High School (Dr. McCray).

CALL FOR NOMINATIONS FOR SECTION OFFICERS

Were you just an undergrad the last time you bounced a check? Do you like to sign your name with a flourish? Wouldn't it be way cool to pick up the check and pay with someone else's dough? Do you know how to add and subtract with or without the aid of a calculator? If so, then you've got the right stuff to be the Dayton Section's next Treasurer!

OK, so maybe that's not you. Perhaps *you* would like to boss people around for a change. Sit back and relax while everyone *else* does all the work. Yeah, *that's* the ticket! What's more, not only do you get pizza for lunch every month or two – for *free* – but *you* get to pick the toppings. You can even choose the ground sausage that looks disgustingly like cat food just to spite that know-it-all Councilor! If that sounds like the good life to you (how can it not?), then you'd make a perfect Section Chair, or at least an improvement over the current crop of Chairs. Of course, you'd have to learn the ropes by first becoming Chair-Elect (kind of like a mouse learning to become a rat).

The Treasurer elected this Fall will serve for the 2007 and 2008 calendar years. The Chair-Elect will serve in that position in 2007, as Chair in 2008, and as Immediate Past Chair in 2009. Contact Hilmar Koerner at @hilmar.koerner@wpafb.af.mil or (937) 904-5091 if you are even *remotely* interested.

Alzheimer's Avoidance Therapy*

Unscramble the letters to reveal chemical phenomena, chemicals, or chemical moieties. Then, use the circled letters to solve the riddle. Answers next edition!

N O S Y D E N ○ ○ □ □ □ □ ○

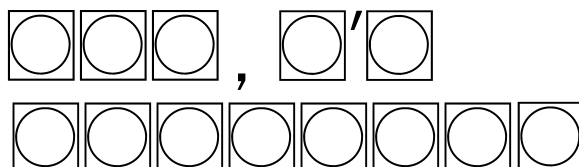
D I V N O C I ○ ○ □ □ □ ○ □

E L R Y O R P ○ □ □ □ ○ □ □

C S I A M ○ ○ □ □ ○

E T C T O □ □ ○ ○ □

Two sodium atoms walk into a bar. The barmaid comes over and says the chlorine ion over there feels very attracted to Na#1 and would like to buy him a drink. "What a floozy," exclaims Na#2. "It's not that," says Na#1, "I've lost an electron." "Are you sure?" asks Na#2. Na#1 replies:



*Surveys suggest that mental exercises, including word puzzles, may delay the progression of Alzheimer's Disease.

AAT Answers from the Last Edition

methoxy The retired chemist couldn't quite come up with a catchy title for his sleazy crime novel:
 vinyl "Blood is **More Viscous** Than
 ricin Dihydrogen Oxide"
 osmosis
 uracil

Quotable Quotes for \$2000, Alex!

"Speaking the Truth in times of universal deceit is a revolutionary act."

— George Orwell

"I am not a vegetarian because I love animals; I am a vegetarian because I hate plants."

— A. Whitney Brown

Wright State University Campus Map

Oelman Hall (OH) is nearer to Visitor Parking Lot 9 than to 2

