



March 2008  
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# Central Texas ACS

Newsletter of the Central Texas Section of the American Chemical Society

Thursday, March 20, 6:00-7:00 Social Hour, 7:00-8:00 Dinner, 8:00-9:00 Speaker

## Tuff and Functional: Specialized Transparent Materials for Government Applications

### Dr. Chad Booth

Assistant Professor of Chemistry, Polymer Research Group  
Department of Chemistry & Biochemistry, Texas State University

**Mamacita's Restaurant:** \$7 for students, \$10 for members

1400 Aquarena Springs Drive, San Marcos

Please RSVP to (512) 636-1905 or email [chair@centraltexasacs.org](mailto:chair@centraltexasacs.org)

#### Dr. Chad Booth

Chad J. Booth received a B.S. in Chemistry from Southeastern Louisiana University in 1995 and a Ph.D. in 2000 at the University of Southern Mississippi for work in structure property relationships in liquid crystalline polymer materials under the direction of Anselm C. Griffin, III. (now department chair of Polymers and Textile Fiber Engineering at Georgia Tech), and then continued his career with postdoctoral study at The University of North Carolina at Chapel Hill under the direction of Ed Samulski and Joe DeSimone. He joined the faculty in the Department of Chemistry & Biochemistry at Texas State University-San Marcos in 2001. Dr. Booth is interested in the development and modification of transparent polymers for specialty applications. His research projects include the development of transparent armor for military aircraft, the development of anti-biofouling windows for marine rovers and solar panels, and the development of polymer films for gas separation and purification. Funding for his research has been provided by ACS-PRF, US Navy, US Army, NAVAIR, and NOAA.

#### Talk Abstract

We are currently working on several different projects which utilize different polymeric materials. The common theme for all of the projects in my laboratory, however, is that of transparency. The overall scope of these projects includes high impact resistance materials, anti-biofouling materials, and gas permeable polymeric films for gas purification and separation. Over the past several years, we have utilized different polymer backbones; anything from polyesters and polyimides to poly (methylmethacrylate) (Plexglass) and modified their properties by structure modification or through the use of additives. This talk will discuss these modifications, the rationale behind the modification, and the outcomes. The most interesting results to date, from the polymers studied, have been impact resistance 35% greater than that of bisphenol A polycarbonate and anti-biofouling windows which display 50% higher light transmission after six months exposed to aggressive algae.

# Central Texas ACS: March 2008

## Chair's Page

### Letter from the Chair

Greetings Central Texas ACS!

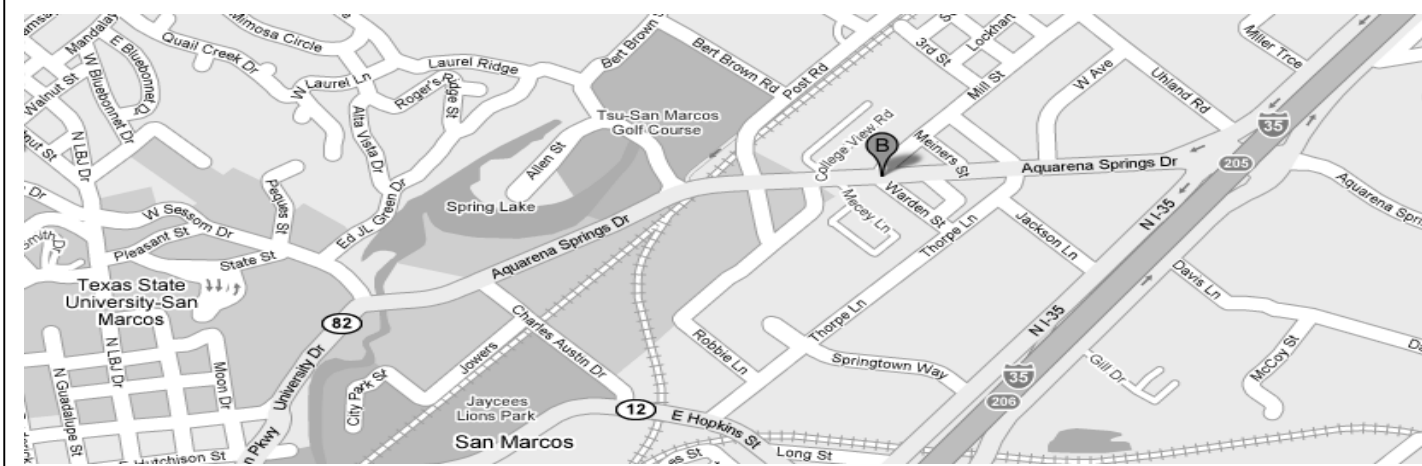
Our 2008 Spring events began with a bang at the Women In Chemistry "Thinking Outside the Beaker" event held at UT in February. I would like to give a special thanks to Diane Kneeland for coordinating the event and allowing our Local Section to co-sponsor the keynote speaker, E. Ann Nalley, past ACS President. This month we are honored to have one of our section members, Dr. Chad Booth, speak to us about transparent polymeric materials he is developing for government applications. We will round out our spring events with Chemists Celebrate Earth Day on April 19th, and as a special treat, we will host our Scholarship and Membership Awards Celebration at the Dell Diamond on April 29th. I hope everyone is able to join us for these fun events!

Our Fall calendar is filling up quickly with a technical talk scheduled for October on superconductivity, and a return to the Alamo Drafthouse in November for a talk on the "Serious and Delirious Use of Chemistry in Movies". National Chemistry Week will be celebrated October 19-25 with the theme "Having a Ball with Chemistry"; this event will focus on enhancing the understanding of materials, design, and safety improvements in sports equipment made possible by chemistry as well as hydration and nutrition for athletes.

I would like to welcome our newest editions to the Central Texas ACS Executive Committee: Deborah Hess, Secretary & Dodie Wells, NCW/CCED Coordinator. Our section could not survive without the dedication of those serving in EC positions. I look forward to seeing all of you in San Marcos on March 20th!

Best regards,  
Betsy McGrew, Chair

### Thursday, March 20 Meeting: Directions to Mamcita's Restaurant (B) in San Marcos



### "Thinking Outside the Beaker" Career Day at UT February 23



# Central Texas ACS: March 2008

## Calendar of Events

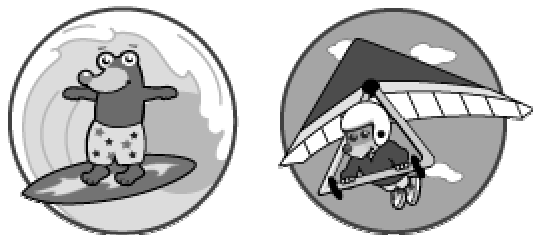
### Chemists Celebrate Earth Day

Beverly S. Sheffield Education Center,  
2201 Barton Springs Drive  
April 19, 2008  
This year's theme

### "Streaming Chemistry"

You can check out the following links for this event:

[www.acs.org/earthday](http://www.acs.org/earthday)  
<http://www.ci.austin.tx.us/splash/>



Those interested in volunteering for CCED  
may contact Dodie Wells at  
[dodiewells4@hotmail.com](mailto:dodiewells4@hotmail.com)

### Summer Workshops for High School Chemistry Teachers

The mission of the American Chemical Society's (ACS), teacher training program is to improve the quality of secondary chemical education in both content and instructional approach. To that end, ACS has offered national teaching training opportunities in the form of summer workshops since 1988.

### Texas State University: July 13 – 18, 2008 Chemistry in the Community Workshops

These five-day residential workshops are designed for teachers using or planning to use the ACS first year chemistry textbook, *Chemistry in the Community*. The first four units of the textbook are covered in detail. Instructional tips and techniques are given by experienced teacher leaders as well as explanations about the *ChemCom* philosophy. Teachers have the opportunity to perform many of the student laboratory investigations and classroom activities from the textbook themselves, gaining valuable insight to the safety aspects, analysis and preparation of these activities.

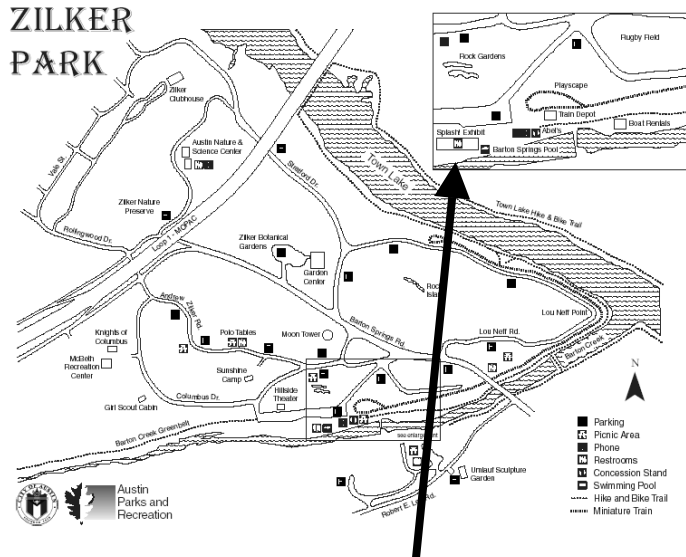
The registration fee for this workshop is \$50.00; ACS provides room, board, and materials. More information, requirements, application forms and/or online registration may be found at [www.acs.org/education](http://www.acs.org/education) (follow the link for Courses and Workshops).

### Texas State University: July 13 – 16, 2008 Teaching Inquiry-based Advanced High School Chemistry Workshops

If you're looking for new ideas to enhance your advanced high school chemistry course, take the Teaching Inquiry-based Advanced High School Chemistry workshop. Based on the college textbook *Chemistry* and led by experienced chemistry educators, this 3-day residential workshop will give you the tools you need to incorporate inquiry into your advanced high school chemistry course. The workshop provides instructional tips and techniques for promoting active and collaborative learning through: short experiments that introduce chemical concepts, modeling as a means to understanding and explaining chemical concepts and reasoning as a means to solving problems.

The registration fee for this workshop is \$50.00; ACS provides room, board, and materials. More information, requirements, application forms and/or online registration may be found at [www.acs.org/education](http://www.acs.org/education) (follow the link for Courses and Workshops).

### ZILKER PARK



CCED will be held at the "Splash! Into the Edwards Aquifer" exhibit at the Beverly S. Sheffield Education Center, 2201 Barton Springs Drive, Austin, TX 78746, (512) 478-3170, from 12:00 - 4:00pm