

AMERICAN CHEMICAL SOCIETY

7:00 PM

Tuesday, March 7, 2000

Fribourgh Hall, Room 102
University of Arkansas at Little Rock

Program:

Chemical Analysis of Fire Debris in Suspected Arson Cases: Triumphs and Pitfalls

Dr. Wolfgang Bertsch
University of Alabama

ABOUT THE SPEAKER:

Dr. Wolfgang Bertsch is a Board Certified Forensic Examiner, a member of the International Association of Arson Investigators, and serves as Editor of the Journal of High Resolution Chromatography. In addition to his position in the Department of Chemistry at the University of Alabama, he serves as President of Investichem Laboratories, Inc. in Tuscaloosa specializing in fire debris analysis by gas chromatography/mass spectrometry (GC/MS). Dr. Bertsch's research interests include general chromatography with emphasis on capillary column technology, GC/MS, instrumentation, and applications; forensic analysis; development of new concepts, in fire debris analysis; optimization, trace analysis; food and flavor analysis; sampling methodology for volatiles in foods, wine, and citrus essential oils; organoleptic evaluation; pyrolysis-GC; application to bacterial classification, synthetic polymers, forensic analysis, insect taxonomy, and related areas, environmental analysis; sampling methodology for trace volatiles in air and water (except pesticides); analysis of industrial effluents; natural products chemistry; and analysis of essential oils, plant materials, and materials of biological interest. Dr. Bertsch has published more than 100 refereed articles, one book, and chapters in three other books.

ELECTRONIC COMMUNICATION: I am trying to send as many newsletters as possible electronically. If you received this by normal post, then I don't have a workable e-mail address for you. If you communicate electronically, send an e-mail to JerryM@mail.uca.edu and get your ACS meeting announcement that way. It saves time and money.

HOW TO GET THERE:

From I-630 take University Avenue south. Turn into UALR on 28th Street and follow the signs to the parking lot. Fribourgh Hall is the tall white concrete building that looks like a bunker. Follow the signs to the UALR Planetarium and you will find FH 102 in the same area.

DINNER WITH THE SPEAKER:

Dinner will be at 6:00 PM at the China Feast restaurant which is directly across University Avenue from UALR. They serve a chinese buffet that is recommended by Marian Douglas and Bob Steinmeier.

ABOUT THE PROGRAM:

Arson is a multibillion dollar business. Forensic chemists attempt to determine whether traces of accelerants such as gasoline are present in fire debris. At first sight, it would appear that volatile fuels would "go up in smoke" and the evidence may thus disappear. This is a possibility, but in the majority of all cases, remnants of fuel type volatiles are left behind. Those are the target of the analyst. The chemical analysis of fire debris is one of the most challenging tasks one can think of. The forensic chemist needs to isolate volatiles from the debris and distinguish the compounds derived from accelerants from those generated by pyrolysis. There are many problems with the analytical methodology currently available to the forensic chemist. The presentation will focus on the weak links of the overall procedure and present data from round robin tests. "False positives" (finding an accelerant when none is present) is the worst possible scenario. Unfortunately, errors of this type do sometimes occur even when sophisticated instruments are used. Several examples will be presented.

FROM THE CHAIR: Does anyone else smell that? It smells like spring to me! The weather outside, as I sit in my office and compose, is beautiful. I hope that everyone is finding time to enjoy it. In my experiences, a career in chemistry has never been much of an outdoors activity. Maybe some of you are luckier than I am?

Again, my goal here is to share my thoughts, and hopefully solicit yours. Was anyone aware that our Central Arkansas local section is celebrating its 50th anniversary this year? I wasn't until I recently received a letter from the ACS President, Dr. Attila Pavlath. His letter suggests honoring all of the past chairs of our local section. He is volunteering to prepare certificates and attend our "anniversary event" to present them to the past chairs, all at no cost to us. Therefore, the executive committee is planning to arrange this "anniversary event" during the fall of 2000, possibly in conjunction with National Chemistry Week. Here's what we need from the membership, if anyone has it. Dr. Pavlath states that he has a list of our section's chairs since 1973. He is asking that we find out which chairs prior to this date are still alive so that he can prepare certificates for everyone. Consider this an "all points bulletin" for names of section chairs prior to 1973. If you have any useful information, please send it my way. Again, my contact information is available on the section web site, or in the February newsletter.

Another idea along these lines comes from chair-elect, Jeff Moran. It involves distributing community service awards to people who have contributed to chemistry (directly or indirectly) over the past 50 years. This list would include individuals from industry, academia, government, etc. Recognition such as this would be an excellent way to show our appreciation for these people, as well as inform them that we exist. Jeff recently returned from an ACS Leadership Conference some very good news. He obtained information regarding an opportunity that our local section has in receiving funding for new educational programs (approximately \$26K). It is our hope to be able to use some of these funds to increase our recently publicized travel grants for secondary teachers. On that note, I want to remind everyone about the local section travel grants that are available for undergraduates to attend ACS meetings. This seems relevant with the 219th ACS National Meeting in San Francisco occurring at the end of this month. Just go to the local section web site to download the application form.

On a final note, I want to share an idea that came about in conversations with Dr. Robert Maruca and his students at Arkansas Tech during the February meeting. Why is it that all of our local section meetings are held at one of the academic institutions in our section? If there is some historical reason, I am unaware of it. Maybe it is just habit? I would think that there are many industrial sites in our section that have excellent facilities to hold a section meeting. So, I'm taking this opportunity to ask if there are any industrial members who would like to arrange to host a section meeting at their location. If so, please send a note to myself or Jeff Moran, who is in charge of next year's speaker service and arranging the meetings. The commitment merely involves providing a seminar room at your facility, and maybe local transportation of the speaker to and from the hotel. Members of the executive committee usually take care of the rest of the arrangements. So, if you've been having trouble making it the local section meetings, and would like to have a meeting come to you, just let us know!