



American Institute of Chemical Engineers Knoxville-Oak Ridge Section

For additional information see our Web site at: <http://www.ornl.gov/sci/aiche/>
Or contact: Linda Puckett, puckettlf@ornl.gov, (865)574-6147 or
Lori Daniels, lori.daniels@utk.edu, (865)974-2421

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January 2011 Meeting

Date: Thursday, January 20, 2011
Cost: \$20
Location: Calhoun's, Turkey Creek, Farragut, TN – Private dining area
Menu: Buffet (Special menu available upon request)

5:30 pm Executive Committee Meeting (All members welcome)
6:00 pm Dinner
7:00 pm Program – Mr. Steve DeCicco, EmeraChem, Inc., ***EmeraChem Catalysts for Off-Gas Emissions***

Abstract – A discussion of catalyst chemistry, catalyst manufacturing processes, and the efficacy of EmeraChem catalysts on the control of stack gas emissions will be held.

Bio – Mr. DeCicco has 30 years experience commercializing technologies, building start-up companies, managing projects and directing engineering departments. He has served the power industry as well as chemical, refining, pharmaceutical and manufacturing. The technologies involve syngas production, fuel reforming, combustion, thermal processing in porous inert media, catalysis and surface chemistry.

After leading numerous research groups and initiatives, in 2001 Mr. DeCicco joined EmeraChem LLC – a technology company offering an expanding family of commercial catalyst products including the lean NOx trap catalyst technology. He advanced from Director of Operations, to V.P. of Operations, to Chief Operating Officer. As operations leader and the senior engineer in the company he has been involved in all aspects of product development, engineering, project management, purchasing, manufacturing, and field service. His accomplishments include the design, testing, scale-up, and commercial demonstration of several catalyst technologies operating on conventional and alternative fuels.

Mr. DeCicco received an M.S. in Chemical Engineering from MIT and a B.S. in Chemical Engineer from New York University. He holds 3 U.S. Patents, has taught professional courses and produced over 40 publications including chapters in two McGraw-Hill handbooks. Additional biographical information is available at: <http://www.ornl.gov/sci/aiche/calendar.html#2>.

Please make your reservations by noon, **January 20**, by contacting

Linda Puckett, puckettlf@ornl.gov, (865)574-6147 or
Lori Daniels, lori.daniels@utk.edu, (865)974-2421

***The Section will subsidize up to 15 students,
including graduate students***

Thank-you to MCL, Inc.
for sponsoring our
newsletter this month
(See ad on page 2)

Women in Nuclear Conference to be held at Oak Ridge National Laboratory

The Women in Nuclear (WiN) Region II Conference will be held at the Oak Ridge National Laboratory (ORNL) on February 6-9, 2011. WiN was founded in 1999 as a non-profit association. The organization focuses but is not limited to women, who work professionally in various fields of nuclear energy and radiation applications. WiN members have a common commitment to provide information and communicate with the public. Please visit www.winus.org to become a member. There is **no fee** to join.

The Oak Ridge National Laboratory and the Tennessee Valley Authority chapters of Women in Nuclear wish to invite you to attend the WiN 2011 Region II Conference, "Mini Reactors-Mighty Neutrons" **February 6-9** at the ORNL conference center. Keynote speakers include Preston Swafford (Chief Nuclear Officer/Executive Vice President-TVA), Thom Mason (Laboratory Director-ORNL), and Susan Brissette (Canadian WiN president/ Manager- Management Systems-Bruce Power). All are welcome to attend. For more information, visit the Women in Nuclear

U.S. website (www.winus.org), or to register for the conference, visit [https://info.ornl.gov/sites/gnstd/gsec/meeting5/Lists/Registration/NewForm_copy\(1\).aspx](https://info.ornl.gov/sites/gnstd/gsec/meeting5/Lists/Registration/NewForm_copy(1).aspx).

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Members Forum – Testimonials on the Benefits of Membership

This column will publish a series of articles written by local section members that are intended to describe the reasons why members joined the AIChE and the benefits of being a member of the local section.

This forum presents an open invitation to all members to contribute to these monthly articles. It is our intent that these articles help others learn more about the real world benefits of being a member of the AIChE.

This third article comes from the 2010 local section Chair, Jacob Hutton. Jacob is a Process Engineer in the process-engineering group at ALSTOM Power, Inc., and a senior member of AIChE.

“For me to highlight the benefits of AIChE, I have to tell about my background of how I came to where I am now and the pivotal role AIChE has played throughout my history.

The inroads to my chemical engineering education started in my grandfather’s basement with a chemistry set and curiosity of makeup of different materials and anything relating to chemical reactions. I later came to relish chemistry and mathematics to the extent I wanted to be in a profession that used both. (To first be clear on the matter, my overall high school performance was far far from exceptional. When I graduated high school, I wanted change. I eventually decided to pursue a college education to undo the marks of my previous scholastic effort and create a

means for me make a living.)

At the start of my college education, on a whim and with limited information, I decided I would pursue a career in chemical engineering. I didn’t have a clue of what efforts to undertake to achieve this ambition nor immediate access to anyone who had an idea of what it takes to be a chemical engineer other than receiving the default answer “a lot of math and chemistry.”

So, I started out at a junior college. I took a lot of math and chemistry. I did pretty good, or good enough to convince myself that it was a good match; however, the greatest challenge for me at the beginning of my journey to becoming a chemical engineer was that there wasn’t anyone that could help me narrow down what a chemical engineer did or highlight any issues that drive the profession forward.

Later, I learned about AIChE and joined as soon as I could cobble the funds together. The information available was invaluable. I found out more about the profession, the different tools applied, the activities happening in the profession, the different areas that piqued my interest (Mass Transfer Technologies), and contact information for people to mentor me. It was a quantum leap for me in shaping my career path. The feature that was extremely helpful was the journal: *Chemical Engineering Progress*. Granted the vernacular was beyond my understanding, but it wasn’t too far for me to dig in and learn.

Later, when I transferred to The University of Tennessee, I immediately joined the student chapter. This was great to get to know people in the program above and below levels in the curriculum as well as see outward in the job market. Of course there were parties and other social events; yet reflecting on these experiences, these were probably the most invaluable activities to participate at the student chapter level. These activities helped me learn more about the persons in my classes and my professors that later have become pillars and sounding boards in my career development. There is not a replacement or substitute for this after you finish school. These activities seeded many of my longest friendships beyond the completion of my education.

Once I graduated from the University of Tennessee with my bachelor’s degree, I came out into a job market not too unfamiliar to what it is today. An entry level role in East Tennessee was virtually non-existent and I didn’t have sufficient work experience to compete against other professionals that had an edge over me. I took whatever work came available. I did technician work wherever possible and held down multiple part time jobs to clear the monthly bills. During this time, I turned to AIChE activities to keep me connected, to seek out opportunities, and to keep me engaged and active in pursuing an engineering role. AIChE was an outlet that allowed me to anchor in and hone my skills and do whatever came along.

After a year of field work and chasing every opportunity, I buckled down and reenrolled into graduate school to further drive an edge in my career potential. Again, AIChE was a tool that I leveraged

Members Forum (Continued)

to change my career situation. It kept me tuned in to the world of chemical engineering outside of East Tennessee.

Once, I finished my classes for my master's degree, I took a job that focused on mass transfer equipment (Please note: I was in the process of finalizing my thesis by this point but I needed to get beyond other personal obstacles in my life. It took me two years to finish my thesis while I was overcoming personal matters). When I started my job with this company, AIChE was outstanding resource for literature on the subject of packing, trays, tower internals, and learning above and beyond this area of focus.

AIChE also tied me in with a community of other chemical engineering professionals in the area that electrified my interest to further pursue professional certification. (By this time, I had finished my master's degree thesis while accomplishing other personal milestones). I saw that there were limited opportunities to secure "progressive" engineering experience where I was and saw that I needed to move my career forward to accomplish this.

I later pursued and secured a role with another company that further extended my skill sets beyond packings, trays, and tower internals as well as master other subjects, which brings me to my current existence as a Process Engineer.

Since I have made the transition to where I am now, I secured a PE license and matured many of my skills as a Chemical Engineer, needless to note that there is an endless opportunity to learn and redraft where I am heading.

During the entire passage of my

career, AIChE played a pivotal role in my career path from the earliest stages. Above and beyond this very fact, AIChE provides many tools to support the work I do through the Knovel Library and continuing education opportunities to maintain my licensure. I am also connected to a community where I can do what I can to facilitate others who are interested in chemical engineering and desire to make a living at it too."



Local Section Election Results

The ballots have been counted and the results of the Local Section election sanctioned. A total of 16 ballots were cast to elect the following local section officers and directors for 2011:

Chair: Michael Aident (automatic progression)
 Chair Elect: Candidate(s) wanted
 Secretary: David DePaoli
 Treasurer: Paul Taylor
 New Directors 2011-2012:
 Sharon Robinson and Ed Alperin
 Continuing Directors 2010-2011:
 Stuart Daw and Richard Denny
 Director – Past Chair: Jacob Hutton (automatic progression for 2011)

Please congratulate our newly elected officers and directors and continue to support the local section by participating in section activities.

Unfortunately our Chair-Elect candidate had to bow out of the election at the last minute, so we are continuing to solicit qualified candidates for this position. The Chair-Elect acts on behalf of the Chair during his/her absence and automatically becomes the Chair at the end of the current Chair's term. If you are interested in serving in this capacity, please let one of the section officers know.

Recruiters Not Calling You?

Five Reasons Why—And How To Fix It

You've been hoping for a new job, but your phone is silent. Does this sound like your job search efforts?

- You've sent out hundreds of resumes but received little or no response.
- You've left dozens of voicemails to recruiters — and they never return your call.
- You've tweaked your resume so many times you no longer recognize it.

Many talented, qualified job seekers get ignored by recruiters and hiring managers simply because their resume has one or more of the following problems.

1. Your resume highlights your lack of industry experience

If you lack specific industry experience, try highlighting your transferable skills. Job seekers who lack industry experience can make it past the resume screener by proving their ability with skills they have that transfer from industry to industry. Examples of transferable skills include expertise gained in sales, customer service, finance, accounting, negotiation, cross-functional communications, and/or team building.

2. Your resume shouts "Overqualified!"

Nothing scares off a recruiter faster than a candidate who is obviously overqualified for the job. The two main concerns are (1) that the candidate would soon get bored and leave at his earliest convenience, and (2) that the candidate would be too expensive to hire.

There are many valid reasons job seekers wish to downsize to jobs

with fewer responsibilities. Whatever your reasons, tailor your resume to fit your current career objective. This means you'll want to play down your prior responsibilities, list only relevant education (don't list a Ph.D. if you are applying for a mid-level management position!), and emphasize tactical experience over strategic planning when appropriate.

3. Your resume is crammed with information, but not the right kind

You'll catch the recruiter's attention if you have a clear, easy-to-read resume that highlights your skills and accomplishments, even at a glance. The first rule of resume effectiveness is relevancy, so edit out the past data and redundant facts that aren't relevant to your current career path. Fill your resume only with the skills needed for that particular job.

4. Your resume has too little information

A resume that looks more like an outline just doesn't give the reader enough to work with. Recruiters don't want to guess what you did at your last job. You need to include enough information to give prospective employers a vision of the possibilities if they choose to hire you.

5. Your resume doesn't include accomplishments

Remember, as a job seeker you are selling your talents, and you are competing with many others who have the same qualifications as you do. Accomplishments give recruiters a reason to choose you over others for the interview short list. Highlight how you have saved time, increased efficiency, cut cost and increased client satisfaction. After all, if you don't tell them,



(Source: DOE Digital photo archive at: <http://www.doedigitalarchive.doe.gov/>)

"The sun, with all those planets revolving around it and dependent upon it, can still ripen a bunch of grapes as if it had nothing else in the world to do."

Galileo,
1564-1642,
*Italian mathematician, astronomer,
and physicist, considered founder of
the experimental method.*

nobody else will!

If you use this five-point checklist to restructure your resume, you'll soon hear back from recruiters who appreciate qualified, articulate and confident candidates. The time you spend enhancing your resume could shave off months of fruitless labor and frustrating effort in your job search.

Article courtesy of Deborah Walker,
Certified Career Management Coach

Read more career tips and see sample resumes at: www.AlphaAdvantage.com

Email: Deb@Alphaadvantage.com

Engineers Banquet

Please mark your calendars for this year's Engineers Banquet. It will be held on **Thursday, February 17th**. The speaker this year will be **Mike Keith**.

In 2010, Mike Keith entered his 12th season as "*The Voice of the Tennessee Titans*". Keith has been named as Tennessee Sportscaster of the Year eight times since 2000, has won over 20 Associated Press state awards and has captured two national honors, including the industry's most prestigious award: the Edward R. Murrow Award for nationwide excellence in sports reporting. Keith is a member of the Battle Ground Academy Hall of Fame and the University of Tennessee Baseball Hall of Fame.

Please register online at:

http://www.regonline.com/knoxville_engineersbanquet_906877

You may select your registration option which includes the method of payment. If you intend to pay by check, you will need to select the pay by check option at both the first screen and the checkout screen. Please be aware that if you pay by credit card you will be charged a 4.95% processing fee. If you have any questions or need help with the online registration, please contact Mark McKinney (865) 670-8555 or Adam Byard (865) 769-3192 for assistance.

December Meeting Summary - After the Crash: Investing Following the Decade that Wasn't

If you were unable to attend the December meeting, you missed a real treat. David Moon, President of *Moon Capital Management*, provided an insightful and entertaining look at the financial situation of the last decade. He provided comparisons with current conditions and advice on avoiding some common investor pitfalls, while examining the historic relationships between earnings, interest rates, and corporate profits and giving insights as to what the next investment period may hold.

Activities Calendar

Date	Time	Topic	Speaker	Location
Jan 20	6:00 PM	EmeraChem Catalysts for Off-Gas Emissions	Steve DeCicco, <i>EmeraChem</i>	Calhoun's, Turkey Creek
Feb 17	6:00 PM	Joint Meeting with ANS: Dark Energy – Dark Matter	Mike Guidry, <i>UT</i>	Calhoun's on the River, Neyland Dr, Knoxville
Mar 13-17		2011 AIChE Spring Meeting & 7 th Global Congress on Process Safety		Hyatt Regency Chicago, Chicago, IL
Mar 17	5:45 PM	ALCOA aluminum can recycling facility tour	TBD	ALCOA, South Plant, Alcoa, TN
Mar 28-31		SASEF 2011 – 60 th Anniversary		Thompson-Boling Arena, Knoxville, TN
Apr 21	6:00 PM	Student Awards	TBD	TBD
May 5	6:00 PM	Uranium Processing Facility – Behind the Scenes Tour	TBD	Calhoun's, Turkey Creek

Sponsoring Opportunities

We continue to accept advertising in the newsletter in order to provide funds to support student participation in the meetings.

Rates per newsletter are:

\$80 full-page advertisement

\$45 half-page advertisement

\$25 quarter-page advertisement

The section will also continue to accept individual or corporate sponsors to provide student meals at section meetings. The sponsor will be recognized at the meeting and in the Newsletter.

The cost to sponsor one meeting is **\$200**. It's a great way to encourage students to attend the local meetings and become future members in the Institute!



(Source: DOE Digital photo archive at: <http://www.doedigitalarchive.doe.gov/>)

'Be courageous! Have faith! Go Forward!'

Thomas A. Edison
American Inventor
1847-1931

Officers

Chair:	Michael Aident	694-7333	Michael.Aident@shawgrp.com
Chair-Elect:			
Secretary:	David DePaoli	574-6817	depaolidw@ornl.gov
Treasurer:	Paul Taylor	574-1965	taylorpa@ornl.gov
Directors:			
Term ends 2011	Jacob Hutton	560-1706	jacob.hutton@power.alstom.com
Term ends 2012	Sharon Robinson	574-6779	robinsonsm@ornl.gov
Term ends 2012	Ed Alperin	694-7335	Ed.alperin@shawgrp.com
Term ends 2011	Stuart Daw	946-1341	dawcs@ornl.gov
Term ends 2011	Richard Denney	458-8875	rgdenney@charter.net
Membership:	Paul Taylor	574-1965	taylorpa@ornl.gov
Newsletter:	Linda Puckett	574-6147	puckettlf@ornl.gov
Webmaster:	Ben Lewis	574-4091	lewisbejr@ornl.gov
E-mail			aiche-chat@chem.engr.utk.edu
Website			http://www.ornl.gov/sci/aiche

**Knoxville - Oak Ridge
Section**

P.O. Box 2008
Bldg. 4500N, Room B12
Oak Ridge, TN 37830-6243

Phone: 574-1965
Fax: 574-6872

E-Mail: [aiche-
chat@chem.engr.utk.edu](mailto:aiche-chat@chem.engr.utk.edu)



We're on the Web!

See us at:

<http://www.ornl.gov/sci/aiche/>

Editor: B. Lewis

About Our Organization – Benefits for Young Engineers

As a member of AICHe, you can take advantage of any or all of these exclusive career and personal financial benefits, designed to address your needs.

Career advancement and support: Students and Young Professional Members have access to AICHe's exclusive career and employment services, including **CareerToolsPLUS!** for broad career support services at every career stage, including job search support. Sign onto AICHe's "focused" job board, CareerEngineer. Leading industry and academic employers **post jobs** and **internships** on CareerEngineer looking exclusively for qualified ChemEs.

ChEnected™: Get what you need from AICHe's blog ChEnected: where Chemical Engineer mix it up! Career advice, technical news, videos on ChETube™, fun stuff, Dilbert and ...well, what else do you want ChEnected™ to be for you? Get

ChEnected™ now and follow it all, too, on Twitter, Facebook and LinkedIn.

Short Term Medical Insurance: Cover any gap between your parents' policy and your first employer-provided coverage.

LibertyGuard Tenants Insurance: Protect your property at home or anywhere in the world from theft, loss or damage, and protect yourself against costs incurred from yours or guest injury. AICHe discounts available with 24/7 policy claims support.

Liberty Mutual Auto Insurance: as a member of AICHe, you qualify for a special group discount* on your auto, home, and renters insurance through Group Savings Plus® from Liberty Mutual. With Group Savings Plus, you can enjoy the ease and convenience of paying your premiums through checking account deductions with no down payment or finance charges. You'll also

enjoy fast, easy round-the-clock claims service and a variety of discounts including multi-car, multi-policy, safe-driver, passive restraints and anti-theft device discounts.* For a free, no-obligation quote, call 1-800-524-9400 or request [a free quote online](#).

Financial Advisory Services: Start building your savings, even while you deal with student loans.

Save Money on Your Next Car with the Liberty Mutual Auto Buying Service: Liberty Mutual has recently partnered with Zag, an online consumer auto dealership matching service to provide AICHe members with pre-negotiated, no-haggle pricing that is below market value AICHe members can visit the auto portal by [clicking here](#) to compare prices of new and used vehicles at local participating dealers, without having to set foot in a dealership.

(Source: AICHe web site <http://www.aiche.org/MemberCenter/FinancialBenefits/Graduates.aspx>)

**P.O. BOX 2008
BLDG. 4500N, ROOM B12
OAK RIDGE, TN 37830-6243**

