



NEWSLETTER---

## THE CHEMICAL CONSULTANT

Association of Consulting Chemists & Chemical Engineers

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### COLEMAN COMPLETES TWO-YEAR TERM

As I near the end of my term as president of Association of Consulting Chemists & Chemical Engineers, Inc., I am prepared to accept responsibility for some accomplishments and to plead guilty for some lackluster performance in other areas. While I am responsible for the overall operation of the organization, I have been aided most ably by many others.

Dick Cowell was Vice President for my first year and he did a superior job in helping this organization at a time when we had a new president who had not served as vice president. Dick oversaw finances, did the program work, ran the Chem Show booth, and found "Fornos of Spain" restaurant in Newark.

Peter Hay as Secretary kept me on track with respect to the constitution of our organization, doing things the proper way, and offering strong encouragement to try a few new ideas in running ACC&CE. Peter has gone on to become Newsletter Editor where he is taking over from Gerry Gizinski, who served well and began several innovative publishing ideas during his tenure. Peter has taken the existing newsletter with its very good standards and excellent features, and set even higher standards of excellence for the future.

Steve Duerr was and is our Treasurer. He has endured problems in the report generation computer program, found ways to schedule our income and expenses so most of us on Council and understand the ups and down of finance. He has given us clear explanations of the budget and he constantly seeks the perfect format. We started out with little or no reserves two years ago and now have set aside over \$5,000. In addition to this work he has headed a task group to get us on-line. Steve has found a company that will bring us a web page with many state-of-the-art features. We are already getting membership inquiries and consulting job opportunities over the network. Marty Goffman and others have provided strong support for this venture into cyber space.

Efrem Zaret has served as Secretary for the past year and will continue to serve in the future. He has updated the reporting of Council meetings to make reading and understanding easier. He has served on several special committees during this time.

Dave Armbruster is the current Vice President and our next President. He has continued the fine work begun by Dick Cowell in finding new locations for meetings and he has begun joint meetings with other technical groups in various locations. Dave also got Bill Swartz interested in marketing and this has led to Bill and his committee doing a review of member expectations and contentment

with our organization. Bill will present many of his findings at the October 27, 1998 meeting. His charts are clear and he is an excellent presenter. All members will benefit from hearing what he has to report.

Past Presidents have given me council and encouragement. Pete Townsend has been outstanding in his special support and the others have been there for me and the organization whenever the need arose. Pete presented his daughter-in-law, Linda, as a candidate for Executive Secretary when Beth Jones left to work in the theater after about ten years with ACC&CE. Pete was extremely careful to avoid any pressure for anyone to give Linda any special consideration during the interview process. Among three candidates to the Council, Linda was picked immediately based on qualifications. After Linda became Executive Secretary, Pete spent a lot of time helping her 'learn the ropes'. We all thank Pete for a smooth transition.

Early in my term as President, I set a meeting date that conflicted with an important religious holiday. We have taken steps to prevent reoccurrence of this faux-pas. Meeting dates will be published well in advance now thanks to our new web page as an added check and assurance.

We have stopped our NY phone number. We are holding more meetings in various NJ locations so we can be closer to where our members live. Council members are being elected from some locations well beyond central NJ.

I emphasized getting on the Internet as a means of making us better known so we would get more job requests for our members. This is beginning to happen. I placed more emphasis on service to members by getting a web page going and improving our CHI system. The way members receive notification of job opportunities is quite different from the way it was one year ago. The CHI requests come in, they are written up and are posted to members by fax and E-mail without any delay. This system is just starting to function and seems to be an improvement.

Communications with members about ACC&CE activities has not been as good as it should have been. The new Newsletter format is helping. I am writing articles about my consulting practice and the organization. Others are contributing but it is a difficult job for the Editor to come up with 'hot leads' and writers for articles every issue. He needs your help.

Thanks to the hard work of the membership, the elected officers and directors, and the office staff, the Association of Consulting Chemists & Chemical Engineers, Inc. has moved forward from two years ago. We have a new Executive Secretary, we have rebuilt a reserve fund, our geographic base has expanded (well beyond New York City), and we have gone electronic in the office and on the web.

I thank the members of Association of Consulting Chemists & Chemical Engineers, Inc. for allowing me this chance to serve them for the past two years as President. Now I ask them to please give Dave Armbruster and his administration the support, encouragement, and prodding that they gave me and look forward to many more improvements as we move rapidly forward together.  
Ernest A. Coleman

## **CHEMISTRY IN THE DENTIST'S CHAIR**

Dinsmore, I observed the following steps of repairing my old molar: out came the loose and broken filling, buzz went the water-cooled drill to clean and shape the exposed surface, on went the phosphoric acid solution (quickly rinsed!) for etching the dentine, on went the acrylic resin followed by the UV light to make a bonding coating, in went the form to surround the tooth, squish went the polysiloxane from the miniature caulking gun, out came the impression for the new cap, on went another coat of acrylic with UV, and I was done.

I went back to have the custom-built cap cemented in place. It was bonded to the acrylic primer by a thermosetting resin. I must remember to ask the dentist what type.

In the idle time waiting for new materials to set, I thought of the chemistry going on in my mouth and the selected members of ACC&CE; who are qualified to serve the needs of dental researchers, manufacturers of dental materials and even the lawyers brought in to try to settle liability claims.

### **INTERNET SITES OF INTEREST "BENEFITS FOR THE SELF-EMPLOYED" THE INTERNET SITE OF WORKING TODAY**

<http://wwwac.org>. "Working Today, founded in 1995, is a national nonprofit membership organization that promotes the interests of people who work independently -- a diverse group that now makes up nearly 30% of the American labor force. Our members are freelancers, independent contractors, temps, part-timers, contingent workers, and people working from home.

"For the \$10 yearly membership fee, members of Working Today receive: a quarterly newsletter, a voice in issues of importance to members of the independent workforce, access to Working Today's services, including prepaid legal services, discounts, and group rates for comprehensive health, dental, vision, and life insurance."

(ACC&CE has not researched this organization. Readers may choose to investigate for themselves.)

### **FOR THE SEARCHERS FOR FACTS AND REFERENCES LIBRARY SITE FOR SEARCHING THE WEB**

<http://www.rmc.edu/academic/library/chem.html>

Nancy Newins at Randolph-Macon College, Ashland, VA maintains a web site where many information resources are now available through the LIBRARY HOME PAGE. Find books, videos or journal titles; other library web catalogs; books in library collections nationwide; other databases in a wide variety of fields. Also may assist with interlibrary loans.

### **WELCOME TO NEW MEMBERS**

Since the issuance of the 1998 directory Consulting Services, more members have joined. Below are thumbnail resumes for each. Complete scope sheets can be obtained from the ACC&CE office. Please examine the characteristics of these 5 members and welcome them. You may find that one of

them has experience and skills that you can use. This is an opportunity to expand your network of contacts.

ROBERT J. BOCKSERMAN (#872) Conatech Consulting Group, Inc., 287 N. Lindbergh Blvd. Suite 208, Creve Coeur, MO 63141-7849. Telephone: (314) 995-9767; FAX: (314) 995-9766. Bob consults on foods, medical products and chemicals. More particularly, he specializes in the following: Product and Package Development, Engineering Systems, Process Development. Safety, Quality Control, Manufacturing and Packaging Procedures.

EUGENE N. BILENKER (# 874) Crown Food Consultants, 24 Melrose Terrace, Elizabeth, NJ 07208-1706. Telephone: (908) 354-2926; FAX: (908) 354-8070; E-mail: Bilenker@compuserve.com. Gene has broad experience in the food manufacturing industry. He has worked with food quality issues and FDA regulations, packaging, product development, labeling for food ingredients, among others. He holds a doctorate in food technology from MIT.

ANGELO MOLITERNO (# 875) Pro-Equip, Inc., 51 Edgemere Road, 51 Edgemere Road, Livingston, NJ 07039. Telephone: (973) 716-0337; FAX: (973) 716-0338. Angelo is a chemical engineer with a master's degree in business administration. His specialty is heat transfer equipment design and analysis. He has rich experience in heating and cooling systems in the energy, petrochemical and chemical process industries.

KAL R. SHARMA (#876) Independent Institute of Technology, P.O. Box 9152, Reston, VA 20190. Telephone and FAX: (703) 925-0853; E-mail: kalsharma@aol.com. Kal is a registered professional engineer in chemical engineering. He consults in polymer process development, thermodynamics, instrumentation and fluidization. He is available for expert testimony and work with ISO standards.

ELIAS H. SHAER (# 877) Performance Testing Labs., 259 Rampart Ave., Suite 303, San Antonio, TX 78216. Telephone: (210) 308-7393, FAX: (210)479-0722; E-mail: ehshaer@aol.com Elias is a physical chemist with a record of industrial experience in household and consumer products. He consults in technology transfer, product development and introduction into the marketplace. His has experience in customer service and speaks both Spanish and Arabic.

### **CHEMISTRY IN THE PRODUCE AISLE**

The curious chemist can pick up all kinds of knowledge as he or she goes about daily living. I saw an item for sale in the supermarket: a small plastic canister equipped with vents and with adsorbent and potassium permanganate inside. The label declared "Patent Applied For" and explained that the device is to be put in the refrigerator with the fresh fruits and vegetables to slow down their ripening in storage.

The label informed the purchaser that the ripening process is accelerated by ethylene gas and that the fruit generates ethylene as it ripens. Apparently the permanganate is there to destroy the ethylene. I don't know if it works, but it is refreshing to see the distributor taking the grocery shopper seriously enough to mention the chemicals by name.

## NUTRACEUTICALS BOOMING

The pharmacy today gives shelf room to more and more "natural" medications. These are powdered animal or plant parts or extracts that many people believe have curative or medical powers. They have become so popular that they are now known generically as "nutraceuticals", generally defined as nutritional supplements or diet aids.

This marketing explosion followed the action in 1994 when the U. S. Congress created the Dietary Supplement Health and Education Act. This change in the Federal Food and Cosmetic Act law moved such products out of the reach of Federal control. If advertised and sold as curative, they come under the FDA's jurisdiction. If offered as "nutritional supplements" or "aids to better health" they do not. With this change in the law, marketing followed quickly, offering natural and even totally synthetic materials as nutritional or dietary, providing they do not overtly claim biological activity. Look at a few cases.

We read that Mark McGwire takes androstenedione as an aid to building his already big muscles even bigger, the better to swat home runs. Some say the "andro" turns into testosterone in Mike. We also read that he works out a lot and that a person's testosterone goes up after intensive exercise, even without andro. Others are quoted as saying that there is not enough systematic clinical evidence to say that testosterone and home runs are even mathematically linked. Still, sales are booming and fears are being raised that kids eager to become home-run hitters will be harmed by buying andro at the health food store.

A similar rush is on to buy DHEA (dehydroepiandrosterone), "The Hormone of the 90's?"; "Fountain of Youth in a Bottle...". Here again, there are no direct claims for strictly medical or biological effects, but word-of-mouth and testimonials influence the public to buy.

An interesting case of a folk remedy is St. John's Wort, long known as a herbal medicine. This plant and its extracts and formulations are recommended to "make you feel better". Many of those who take it testify that they do feel calmer and more able to concentrate. It is interesting to note that pharmacologists have identified its active ingredient as Hypericin. This is a complex fused-ring benzenoid compound, CAS Number 548-04-9. At least one clinical trial of it appeared in the Journal Phytomed in 1994 showing activity as a mild anti-depressant.

Another source of "natural" and "herbal" medicines is the Far East. Chinese pharmacology today relies on an array of thousands of plant and animal materials prescribed by doctors according to age-old traditions. There is cross-over today with Western pharmaceutical research in an effort to identify the active compounds and manufacture prescription products.

Take the case of Huperzine A, an alkaloid extracted from the Chinese club moss plant. It is completely different from Hypericin -- don't confuse the names. Huperzine is being bought at retail under various trade names with the expectation of improved memory and forestalling of dementia. The active compound, another complex fused-ring structure, has actually been synthesized in the laboratory. Laboratory research has identified its mode of action as being neurologically active as a cholinesterase inhibitor. This raises hopes of cures or remedies for Alzheimer's disease.

Companies are evaluating chemical analogs, looking for stronger beneficial effects. If successful, new Huperzine-related products may be submitted to FDA for prescription use.

Some critics see this unbridled expansion of chemicals and natural products as dangerous for the buyers. They would have FDA given powers to require proof of effectiveness and safety similar to those required for other over-the counter drug products. Other people are seeking remedies not available to them for their conditions and claim the right to have access to them without waiting for the usual FDA approval delays. They are more concerned with possible benefits than possible hazards. It's a dilemma.

### **A FAR-OUT WAR STORY by Ernie Coleman**

Newsletter writing during the summer months is not routine. Case in point is this fresh look at consulting by our President. It is educational; it is unexpected; it is definitely "far-out". Ed.

Like many of you, I still rely on consulting income, but every once in a while I can donate some time to worthy causes. My wife Ann says that I do too much pro bono work, but I rather err that way than the other.

Thanks to the INTERNET, the International Executive Corps in San Francisco found me, and the Inner Mongolian Bureau of Foreign Experts invited me. I went to China without knowing my exact project or destination. My hosts were not clear, but fuzzy projects can be fun.

There was a perfectly usable single ply blown film line that they wanted to use to make stretch cling wrap film for hay. By wrapping hay in plastic it is kept from the elements so it lasts for the season without need for a barn. The idea is worldwide, wherever there is a shortage of barns. Well, the world class product is coextruded cast film so there is no way to utilize the existing machine in this application. After making this conclusion, I offered to try to find an investor with about seven million dollars who would explore the possibilities in Inner Mongolia for profitable ventures.

I will of course be most pleased to return -- for expenses only -- as technical advisor should such a person come forward. The people were most hospitable and treated me royally. Now, we are talking Inner Mongolian standards, and it is different there.

Very few tourists and even fewer Americans go to Hailar, at city of about 250,000 in the grasslands. There are sheep, cows, and horses on the many miles of relatively flat grasslands. This is BIG SKY far east. They took me out about 30-50 miles from town to a ranch for a bar-b-q. They asked me if I would like to observe the slaughter of the lamb which I declined. About 2 or 3 hours later we were presented with platters piled high with steaming hot lamb, bone in. For vegetables we ate cucumber slices and pickled carrots. There was beer, alcohol (something potent like schnapps), and Mongolian tea (half milk half herbal tea). Knives and fingers were the way to eat the lamb which was delicious. If you like lamb, go to Hailar, Inner Mongolia for a few meals.

They also have a native grass which cooks up OK and local wild mushrooms which are quite good and very rare. The Japanese are trying to learn how to cultivate them; so far without success. Other than a silkworm, I did not have too many weird dishes and the spicy hot was really quite mild.

I enjoyed the trip. Yes, my bags were lost by United, but the local Chinese airline from Beijing to Hailar (3 per week) was one of the best flights I ever had. I did see the great wall and it was far more than I expected. Yes, I did have to give lectures on my project, updates on plastics, and how to

formulate detergent to clean wool for use in coats. I had an excellent interpreter. I would return even though my hotel had no AC and every public toilet in China is unimaginably filthy. One learns how to survive. After seeing China and some other parts of the world, I realize how rich we all are in America. Please find me a potential investor so I can return.

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