



The Chemical Consultant

Association of Consulting Chemists and Chemical Engineers, Inc.

Scientific, Engineering, Business & Management Consultants

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FUTURE MEETINGS

There will be a virtual meeting the second Tuesday of every month at 7 pm ET

**Last Meeting:
September 25
(Expert Witness
Presentation) by
Dr. David Manuta**

Next Meeting:

The Association of Consulting Chemists & Chemical Engineers (ACC&CE) is a network of senior-level consultants with a broad range of functional expertise and many years of experience in the chemical and allied industries.

The purposes of the organization are:

To offer prospective clients a “clearing house” which they can use to find the most qualified consultants or team of consultants whatever their particular problem may be.

To furnish support to its members as they conduct their consulting practices.

This newsletter is intended to support those purposes as well as to educate prospective new members and prospective client organizations about ACC&CE, and how we can be most helpful to them.

ACC&CE Officers

David M. Manuta,
President

dmanuta1@roadrunner.com

Tom Borne, Vice-President

tslbrn@verizon.net

Joseph V. Porcelli,
Secretary

jvpjii@jvporcelli.com

J. Stephen Duerr, Treasurer

chemlabconsulting@gmail.com

Joseph V. Porcelli,
Past President

jvpjii@jvporcelli.com

Charles Leonard,
Webmaster

charlie@cleonard.net

Richard M. Goodman
Programming

RMGConsulting@msn.com

Richard L. Schauer
Membership

The ACC&CE has an interactive website – www.chemconsult.org that allows prospective clients either to input their problem or to search for those consultants most skilled in their area of concern.

IN THIS ISSUE

This newsletter begins with a very interesting letter from our President, David Manuta, which appears on pages 2 and 3.

On page 5 is a message from your editor.

On page 7 is another important article by our new Programming Chair, Richard Goodman. We are very interested in getting feedback on our Presentation GTM meetings and to get suggestions from our readers on topics for future presentations..

Finally, I repeat my request once again for comments and articles from our members. Also, I am asking for help from any of our members who are relatively expert in LinkedIn. Please address all responses to: jvpjii@jvporcelli.com.

Joe Porcelli, Editor

LETTER FROM THE PRESIDENT

Dr. David M. Manuta, (Certificate #882), President of ACC&CE

On Wednesday (9/19/18) I received an e-mail that I had not expected. A mechanical engineer friend of mine and a fellow traveler in the independent consulting space, Bob Yano, PE, had died suddenly. The Celebration of Life on Saturday (9/22/18) honored a great man, husband, father, grandfather, friend, engineer, etc.

I met Bob about fifteen (15) years ago. He called to inform me that he was no longer "working for wages" and that he was embarking on his adventure in small business [now known as Leading Technologies (LT)]. The intent was to build out LT in the science and engineering disciplines. Bob wanted "a go to guy" who could handle chemical engineering, chemistry, physics, plus "unique" assignments as they arose. I accepted Bob's request and I haven't looked back.

Bob was an Ohio State University (OSU) Buckeye through and through. He obtained both his B.S. and his M.S. degrees from OSU, he met his lovely wife there, and several family members are OSU alums too. The Yano family would often tailgate prior to OSU home football games. These generous people always had plenty of food and drink at these gatherings. All who were there quickly became part of an extended family, beyond their beautiful daughters-in-law and the grandchildren that Bob and Janette loved so dearly.

At one of the first tailgate gatherings, I was very quiet. Bob and Janette asked me why. My response was that I felt intimidated being in the presence of all of these intelligent and attractive young women! Their simple answer was, "Get used to it!" Going forward, when Bob asked me to watch a Buckeyes game with the family, the affirmative response (unless there was a scheduling conflict) took on the order of nanoseconds.

One of the more challenging cases that Bob asked me to work on was a Public Defender Case in Michigan. The Defendant was accused of Assault with the Intent to Murder a former girlfriend. Both Bob and I had worked fire investigations, so we evaluated what the Defendant used. It turned out that the Defendant wanted to surprise the young woman with a few selective sprays of a commercially available perfume.

Unbeknownst to the Defendant, the active ingredient in the perfume was ethanol. The Defendant did not know that driving around on a 75 degree Fahrenheit day in a black pick-up truck was NOT A GOOD IDEA! We recognized that the ambient temperature was in excess of the flashpoint temperature of the ethanol. When the perfume plunger was pressed a sufficient number of times, the concentration of the fuel vapor (ethanol) could then be in "the sweet spot" between the lower and upper explosive/flammability limits for ethanol.

The Defendant sprayed the young woman in her car. The ethanol (fuel), the available oxygen in the air (oxidizer), and the static electricity from the contact of the young woman's shoes on the carpet (ignition source) produced what must have LOOKED LIKE A FLAME THROWER! Needless to say, when the Defendant released the plunger, the flame was no longer visible.

LETTER FROM THE PRESIDENT (Continued)

The Prosecutor apparently learned about the relevant Fire Science after reading my Expert Report. Since the Prosecutor usually does not Depose expert witnesses in Criminal Cases, he requested a *Daubert* Hearing.

The Prosecutor wanted to limit my testimony on the basis that the Fire Science described was "belief", not well-established science and engineering. The Judge is tasked with being the Gatekeeper per the 1993 US Supreme Court Case *Daubert et al. v. Merrell Dow Pharmaceuticals, et al.* My testimony was found by the Judge to be credible and that it met the reliability standards required by *Daubert*. I was allowed to provide expert testimony in Chemical Engineering, Fire Science, and Thermodynamics at Trial.

While the basic facts of the case could not be changed, the Jury Verdict was that the Defendant was found Guilty of Assault, but the Intent to Murder specification was NOT met.

At the *Daubert* Hearing, the Public Defender, a lovely young woman, wore a mini-skirt. She sat on the corner of the Defense table and she crossed her legs. After ca. five (5) seconds of silence, the Judge admonished the Public Defender (in paraphrase) that, "You may continue to ask questions of your Witness, but you must do so from behind the podium!"

I deliberately did not comment on what the Public Defender had done, since my words would have been memorialized in the transcript. As a result, this vignette was NOT an issue at Trial.

In the Small World that we live in, Bob was involved in two (2) of our Clearing House Inquiries (CHIs). On CHI-062 in 2014, I was doing thermodynamics calculations for our Client. As the project developed, we needed to test the device. Bob sized the heat exchanger for our Client. I am now working with this Client on additional funding via the Small Business Administration.

On CHI-068 in 2016, the task was to safely handle quantities of hydrofluoric and nitric acids for a firm near Columbus, OH. When I began the consultation, a key player there was one of Bob's sons. This connection was valuable in getting the task completed.

Bob's wife told me that they had just gotten back from Nashville (where they had a great time) and that they had played tennis the day before he passed. Their daughter-in-law, who handles business matters, told me that case documents were meticulously stacked on Bob's desk, seemingly just waiting for him to return to work.



Dr. David M. Manuta, FAIC, President
Fire Investigations/Litigation Support

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email: mc2@dmanuta.com
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J. Stephen Duerr, Ph.D., P.E., CPC
Consulting Metallurgist/Chemist
chemlabconsulting, LLC
514 Corrigan Way, Cary, NC 27519
908-500-9333

chemlabconsulting@gmail.com
www.chemlabconsulting.com

SCHAUER ASSOCIATES

Dr. Richard L. Schauer
Regulatory Consultant

P.O. Box 398, 1211 Dexter Corner Road
Townsend, DE 19734

Phone: (732) 586-5678

Fax: (302) 449-6012

E-mail: rschauer@schauerassociates.com

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Catherine A. Byrne, Ph.D.
Consulting Polymer Chemist
Belmont Polymer Associates, LLC
10 Homer Road
Belmont, MA 02478-2311
tel (617)484-1797

cbyrne@belmontpolymerassociates.com

LETTER FROM THE EDITOR

Dr. Joseph V. Porcelli (Certificate #906)

In our last two newsletters published in 2018, I mentioned the large addition to our mailing list due to our activities at the last Chem Show, and the development of two new tri-fold brochures, to be available to all members, one aimed at prospective new members and the other at prospective new clients. These are now available and now any members wishing to obtain hard copies of either or both should contact David Manuta or Joe Porcelli. We also have a pdf version of each that could be emailed to our members and prospective members and potential clients. A number of our members have already asked for some of these brochures.

In August, we sent pdf copies of both brochures to all of the attendees at the Chem Show for whom we had either mailing addresses or email addresses. We sent these by US Mail to those who had given us their mailing addresses, and by email with attachments to those who had not. We hope to see some positive results of these efforts.

We continue to hold monthly council meetings on-line via GoToMeetings (GTM), although we took a vacation from these meetings for July and August. The September meeting took place on the 25th. It was a presentation organized by Programming Chair Richard Goodman. The presentation was by our President David Manuta and that meeting is described in an article by Goodman which appears later in this newsletter. The presentation was well received but again the audience was disappointing. Several of us missed the meeting due to other commitments, but we would like to hear from everyone what topics would induce them to call in on future presentations.

In the last newsletter I commented on the efforts to build up our LinkedIn group, both as another way of publicizing ACC&CE, as well as communicating with members and prospects. We now appear to have 43 members in our group, an addition of one since the last newsletter. I have tried to invite all ACC&CE members who are active in LinkedIn to join our group, but I cannot tell how many have received the invitation. This is why I am continuing to ask for help from the “experts” among our members.

Please communicate with me at jvpji@jvporcelli.com with your ideas and/or to volunteer.

Joe Porcelli, Editor

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Email: CRDRConsulting@verizon.net

AM Rossmeisl Consulting



Anne-Marie Rossmeisl
Consulting Chemist

19 Nashua Road
Pelham, New Hampshire 03076
USA

1-603-560-9689 (cell) or 1-603-635-8432 (home)

Twitter: @amrchemconsult

E-mail: amrossmeisl@gmail.com

<http://amrossmeisl.wix.com/amrossmeislconsult>

Edward Richman, Ph.D.
President



Richman Chemical Inc.
768 N. Bethlehem Pike
Lower Gwynedd, PA 19002
www.richmanchemical.com

T: (215) 628-2946 x12
F: (215) 628-4262
C: (215) 704-3335
er@richmanchemical.com

Report of the ACC&CE Program Chair

By Dr. Richard M. Goodman (Certificate #747)

Tuesday evening, September 25, 2018 ACC&CE President David Manuta presented a talk entitled, “Independent Chemical Consulting: Succeeding as an Expert Witness.” It was an impressive talk containing a lot of information about expert witness referral services, key consultants who can teach you how to build yourself up as an expert witness and the proper behavior when functioning as an expert witness. The complete talk was recorded and will be available as a video on the Chem Consult website in due course.

However fine the presentation was, unfortunately the attendance was disappointing. The only participants were 5 board members + one member who personally suggested the topic himself. That means the other three dozen or so members did not tune in to the talk live, even though the topic was central to being successful as a chemical consultant. This follows the similarly low turnout for a fascinating tech talk by Michael Blumenthal on “Food Industry Forensics” last May.

In keeping with my comments in the last two newsletters, the general membership in ACC&CE has difficulty making time in their busy schedules to participate in hearing technical talks. I don't know how many access the recordings on the website. I do know that it is not fair to have very busy people to take the time to prepare such talks when so few members will listen. Therefore, I again make a strong request of the general membership of ACC&CE to seriously consider what programs they wish to have and to let me know their wishes. Be expansive and creative in what ideas you wish me to pursue. I will do my best to respond to member interests. I await your wishes.

JVP
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DR. JOSEPH V. PORCELLI
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www.jvporcelli.com

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www.forrestalconsultants.com

FORRESTAL CONSULTANTS LLC
Princeton Forrestal Village
116 Village Boulevard, Suite 200
Princeton, New Jersey 08540-5799
(609) 951-2285
Facsimile: (609) 371-9247
info@forrestalconsultants.com

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Contributed Article by Member

By Marvin B. DeTar, Ph.D. (Certificate #910)

The synthesis of anabolic steroid metabolites

A client asked me to supply them with the metabolites of two anabolic steroids because of a Food and Drug Administration request. Some professionals familiar with steroid nomenclature know that there were at least four different systems used to name steroids until a single nomenclature evolved over the last sixty years. The, at present, electronic record recovery system did not cover the earlier naming systems adequately.

I was familiar with the different steroid nomenclatures and how to perform a little used literature search tool. The original patents were found and printed copies were made after a four hour search. It was decided that a newer method of synthesis would increase the yield of the metabolites, so it was performed. After the two anabolic steroid metabolites were synthesized, the two metabolites, both proofs of purity, and both unequivocal structural determinations were transmitted to my client and to the FDA. The method provided a slightly higher yield of both metabolites.

Since my client's starting steroids possessed different crystal structures and different crystalline habits, the FDA needed to provide a reproducible synthesis from steroids with the original crystal structures and to strictly follow the patent methods and compare both results my client shared with their results. This would also complete a highly sought internal FDA project. The staff at the FDA accomplished the project goals six weeks later.

My client now possesses bona fide metabolites of the two anabolic steroids and the FDA possesses the identical steroid metabolites as well. The FDA was able to pursue a definitive analytical determination of metabolites in retained samples of urine of athletes who were boosting their performance by using anabolic steroids before and/or during athletic competitions.

Marvin B. DeTar, Ph.D.,
Managing Member

Molecular Technologies LTD

1880 Ridgewick Drive
Wickliffe, OH 44092
ACC&CE Certificate #910

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Steve Duerr — chemlabconsulting@gmail.com

Joe Porcelli — jvpil@jvporcelli.com

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c/o J. STEPHEN DUERR, Ph.D., P.E., CPC

ACC&CE Treasurer

514 Corrigan Way, Cary, NC 27519, USA

Phone—(908) 500-9333

accce@chemconsult.org

www.chemconsult.org

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