

MARCH 18

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JUNE 22

Sheffield's Catering To be announced

The Chemical Consultant

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NANOTECHNOLOGY – HYPE OR HOPE?

This provocative title led into a very interesting pair of presentations at the February 25 joint meeting of the ACC&CE and the Chemists' Club, held at Club Quarters in New York City. The Speakers were Dr. Sam Brauer, Business Communications Company and Douglas W. Jamison, Harris & Harris Group, Inc.

This meeting represented an extremely successful experiment with a new venue in New York. We expected that the topic would draw an unusually large and highlevel audience. The Chemists' Club offered us an advantageous arrangement, and offered to cosponsor the meeting, adding a second speaker and a massive publicity campaign to their own membership and the New York financial and venture community. The attendance was over 60, allowing the use of the Club Quarters' Priestley Room, after a one-hour reception in the main lobby of Club Quarters.

Presentation of Dr. Sam Brauer

Dr. Brauer introduced his talk by defining nanotechnology as

research and technology at the atomic, molecular or macromolecular level, creating and using structures, devices and systems that have novel properties due to their small size, and the ability to control or manipulate at the atomic scale.

Brauer stated Dr that most nanotechnology being developed short-term involves materials and not devices, and that most nearterm commercialization will be of nanomaterials in existing markets. He listed where nanomaterials are being used today and gave a brief history of one application - the nanocomposites industry. Dr. Brauer listed the major companies now involved in the development of polymer nanocomposites and a second list of nanoclay producers. applications in Perceived the automotive industry are giving impetus to current work in this area.

Dr. Brauer's employer, Business Communications Company, provides research and technical market analysis for numerous *Continued on page 2*

NANOTECHNOLOGY

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high-tech industries, including the chemical industry.

Dr. Brauer received his B.A. from Brandeis University, followed by a Ph.D. in Bioinorganic Chemistry from Dartmouth College in 1990. He did a postdoctoral stint at University of California in Davis in Gerd LaMar's laboratory.

Presentation of Mr. Doug Jamison

Mr. Jamison pointed out that the size and the extent of potential applications are not self-evident, more analogous to the early days of plastics rather than biotechnology or the internet. He presented compelling evidence that the exponential growth of patents, publications, and government financiing of nanotechnology indicates that we are entering the phase when investment in the right nanotech ventures may be appropriate. He listed the major companies and universities that are carrying out nanotechnology research projects, and listed a number of start-up companies that are making progress in different fields, such as materials and materials processing, nanobiotechnology, software, nanophotonics, nanoelectronics and nanoinstrumentation

Mr. Jamison presented a slide containing his definition of nanotechnology - the creation of useful materials, devices and systems through the control of matter on the nanometer-length scale, AND the exploitation of novel properties and phenomena developed at that scale. He finished up by showing some interesting slides illustrating the products being developed by some of the start-up companies he had listed earlier.

Mr. Jamison's firm, Harris & Harris (Nasdaq: TINY) is a venture capital firm specializing in "tiny technology" investments, including nanotechnology.

Prior to joining Harris & Harris Group, Mr. Jamison was Senior Technology Manager at the University of Utah Technology Transfer Office where he managed a portfolio of intellectual property in physics, chemistry, and the engineering sciences. Doug holds an M.S. from the University of Utah and a B.A. from Dartmouth College.

EXPERIENCES RUNNING A CONTRACT RESEARCH LABORATORY

Presentation of Dr. Peter Wachtel

ACC&CE had its January dinner meeting on the 27th in spite of the threat of snow. Peter Wachtel, President of Princeton Polymer Laboratories spoke about PPL, what it does, who it has worked with, and what it has accomplished over its 35 year history. Dr. Wachtel shared some key insights into how PPL attracts new business and gets results.

PPL started out in Princeton, with a strong focus on polymers and polymer processing. Over the years, business needs and markets changed, and the past heavy emphasis on polymer/polymer processing has fallen off with companies handling these issues in-house. Yet the total business of PPL has not fallen off nearly as dramatically; rather it has become far more varied. PPL is now located in Union, New Jersey, where its well-equipped laboratory has been set up to carry out work ranging from polymers to organic synthesis, with excursions into electrochemistry, specialty formulations, photochemistry and other technologies.

Wachtel says he develops business both by direct referral and by association with inventors and other sponsors, and has several strategies for sharing risks and rewards. Knowledgeable workers may arrange to carry out research on their own in the PPL facilities or with associates of PPL. Dr. Wachtel maintains relationships with a corps of research scientists who can be called upon to support or completely carry out research on a contract basis.

Wachtel described the output of PPL over the course of 35 years, including 90 patents obtained for PPL and its clients, and he maintains several key patents that can be licensed. It's not the everyday example of consulting as many experience it, but there are many elements that appear to add up to a long-lived composite of consulting and invention. The slide set used at the January dinner meeting is available for ACC&CE members.

COUNCIL CORNER

January 27

Attending: D. Riley, J. Porcelli, S. Duerr, W. Hoffman, T. Borne (Attendance was low due to impending snowstorm.)

Treasurer: Duerr reviewed the 12-month Budget 10/1/03 – 9/30/04 that had been arrived at by the Executive Committee. Important points

- Registration fees for all meetings are raised by \$5 to \$40 for members and \$50 for non-members.
- All future newsletters will be electronic.
- Ads will be included in the electronic newsletter. Given the much broader circulation, we encourage more members to buy ads.
- Internet expenses have been reduced by an arrangement with our provider for "bare bones" services.

Duerr then reviewed the Budget and Account Balance Reports. The results are close to budget.

Office Operations: There were no CHI contributions, and only 5 CHIs for the November and December period.

Membership now stands at 71, 29 and 2, an increase over the last report.

There were 67 total contacts made at the ChemShow 03 and they were sent membership and client referral information.

Newsletter: Porcelli and Hoffman will be developing the first issue of an electronic newsletter. **Program:** The February presentation will be by Sam Brauer on the subject of Nanotechnology. It will be a joint meeting with the Chemists' Club in NYC.. The March meeting will be a Joint Meeting with the New Jersey Group of Small Chemical Businesses, at the Holiday Inn North at Newark Airport. April and May speakers will be Bill Hoffman and Bill Swartz, respectively. Both meetings will be at Sheffield's.

Publicity: Porcelli reported on his electronic mailing to the CCN membership list and a 600 plus list of consultants obtained from the 2001 Chemical Engineering Progress Consultants and Expert Witness Directory. A number of responses were received, and some new members should be obtained as a result.

February 23

Attending: J. Porcelli, S. Duerr, W. Hoffman, T. Borne, T. Brumfeld, K. Domovs, C. Davidoff, R. Ehrenreich, L. Townsend, Executive Secretary.

Treasurer: Duerr reported that the forecast results for the year are almost \$1,000 poorer than budgetted.

Office Operations: There was no income from CHIs, and there was one new CHI in January and three in February.

Membership now stands at 69, 27 and 2, a poorer count than last month.

Newsletter: This is the first electronic newsletter.

Program: No changes from last month. A one-day presentation at the summer ACS meeting in Philadelphia is planned, the effort being led by Bill Swartz.



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NEW MEMBER INFORMATION

Randy W. Meirowitz #917

RND Technical Solutions. Inc. 18285 High Mesa Court San Diego, CA 92127 Consulting Chemist and Surface Scientist, providing solutions to technical, managerial and intellectual property problems. Fortune Start-up to 100 companies in personal care. textile. pharmaceutical, and forest products industries have been helped to financial benefits. Expertise in surface and colloid science, polymers, absorbency, and materials overcomes technical hurdles in all stages of R&D. Experience in strategic planning, process and project generation, staffing. team building, project management and risk assessment provides for managerial successes. IP successes are in patent strategy, infringement analysis, and due diligence.

Philip E. Rakita #918

Armour Associates, Ltd., 222 Delancey Street, Philadelphia, PA, 19106-4309

Olagoke Olabisi, Ph.D. #919

Infra-Tech Inc.. 8130 Spring Bluebonnet Dr., Sugar Land, TX 77479-7017 Polymers & Composites Technology Consultants: rubbers, thermoplastics, reinforcements. thermosets. blends. polymer alloys &

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Merrill Cohen #920

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electrodes and heart stents). consults Also. on possible industrial contacts for material developments small by university-based or private firms material developments doing government under (DOD. NASA, etc.) - sponsored R & D. (SBIR) contracts

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can't." Providing development, writing, and editing of internal and external documents, such as reports, papers, articles. presentations, brochures, newsletters, training manuals, regulatory compliance documents, etc., to corporate and consulting clients. Providing training to engineers, scientists, and others in business. particularly chemicaland environmental-related how organizations. on to improve their writing skills. Over 20 years of experience as an editor at two magazines serving chemical engineers and the chemical industry.

Charles G. Churchman #923

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