

# Chicago Section NEWS



April 1992

Number 7

## APRIL MEETING: WASTE MINIMIZATION STRATEGIES

*Dr. E.S. Venkataramani*

*Merck Sharp & Dohme Research Laboratories*

**MEETING  
SPONSOR:**

**JOHN BROWN**

Our speaker for the April meeting is Dr. Venkataramani who is a Research Fellow in Chemical Engineering R&D at Merck Sharp & Dohme Research Laboratories in New Jersey. The meeting topic will be Waste Minimization Strategies During Pharmaceutical Process Development.

New drug research and development is a complex, costly and time-

### Meeting Notice

**Date:** **THURSDAY, April 9, 1992**

**Location:** The Sheraton O'Hare  
6810 N. Manheim, Rosemount, IL  
(located close to O'Hare airport  
2 blocks N of Higgins on Manheim)

**Time:** 4:30 Board Meeting  
5:30 Social Hour  
6:30 Dinner

**Meeting Topic:** Waste Minimization Strategies

**Speaker:** Dr. E.S. Venkataramani  
Merck & Co. Inc., N.J.

**Price:** \$ 22 Members, \$ 25 Non-members.  
Please make reservations by Thursday, April 9, by calling the ACS office at (708) 647-8405. If you discover that you cannot attend the meeting after making a reservation, please find someone else to take your place.

**Menu:** Salad-fresh greens with choice of dressing  
Roast Pork Loin, Colorado style  
Double baked Potatoes, Stir fried Vegetables  
Ice Cream, Choice of beverage

consuming endeavor. The best opportunities for incorporating waste minimization initiatives occur during the process development phase. The talk focuses on development and implementation of rational waste minimization strategies during pharmaceutical process development at Merck & Co. The general approach consists of several steps. First, a complete process material balance is calculated in order to generate detailed descriptions of all prospective waste streams for possible waste minimization opportunities. Second, specific waste minimization initiatives are tested and evaluated, and, if feasible, incorporated into the process design. Finally, the process material balance is updated to incorporate and document successful waste minimization initiatives. Highlights from two recent case studies illustrating the application of this strategy will be presented: For Case I, technology was developed to recover and reuse 85% of all process solvents, and for Case II, methylene chloride was engineered out of the process, and 53% of all other solvents will be recovered and reused within the process.

#### Meeting Speaker: [REDACTED]

Dr. Venkataramani, Research Fellow, Chemical Engineering R&D is a member of the executive committee, AIChE. At Merck & Co. Inc., he is involved in the Design/Development, scale-up and economic analysis of processes for the manufacture of complex synthetic organic molecules, natural and biological products, Plant trouble shootings and regulatory submissions (FDA and EPA).

#### Schedule of Events

April 9	Chicago Section Meeting
April 10	Deadline for April newsletter
May 13	Chicago Section Meeting

#### Chicago Section **NEWS**

Jim Galichus	Chairman
Shannon Brown	Chairman-Elect
Jeff Perl	Vice Chairman
Sheila Moran	Program Secretary
Marsha Kloker	Treasurer
Chris Thomas	Editor

Chicago section news is published nine times a year by the Chicago section AIChE. Opinions expressed herein are those of the authors and are not necessarily those of the officers of the Chicago section.

Copy for inclusion in Chicago section news must be received no later than the date above.

The objectives of the AIChE are to advance chemical engineering in theory and practice, to maintain a high professional standard among its members, and to serve society, particularly where chemical engineering can contribute to the public interest.

If you have any questions or comments regarding the newsletter please contact Chris Thomas, 2200 East Devon Ave. Suite 117, Des Plaines, IL 60025. Telephone: (708) 738-3965 FAX: (708) 590-0544

## CHAIRMAN'S CORNER

Jim Galichus

The Joliet Section of the AIChE is going to consolidate with the Chicago Section. There are approximately 130 members of the Joliet Section who will become members of the Chicago Section as soon as the issue has been formally approved by National at the April New Orleans' meeting. Our membership will increase by about 10 percent and our new members will receive this newsletter. We can expect a stronger and more active Section with addition of these members and I know we'll enthusiastically welcome them.

Due to last minute conflicts, our April speaker, was forced to revise his schedule. Bob, who is a well-known and interesting speaker will be on our fall program. Thanks to some fast footwork by Jeff Perl, the program committee has been able to reschedule the April meeting for a very interesting topic on *Waste Minimization Strategies During Pharmaceutical Process Development*. This will also be a joint meeting with the Chicago Chapter of the Academy of Certified Hazardous Materials Managers-ACHMM- who are meeting that day at the Sheraton International O'Hare for a training seminar. They will join us for social hour, dinner and the meeting; this represents our second joint meeting with another society in recent years.

During National Engineers Week, Paul Rom and I attended an Interorganizational luncheon sponsored by the ISPE. Dr. Joseph Bordogna, who is the assistant Director for Engineering of the National Science Foundation, was the speaker. *Concurrent Integration* was his title for the engineers role as a major contributor in our society for integration of diverse information to usable and useful technologies. Dr. Bordogna is an unusually articulate and thoughtful leader for this key role as Engineering's representative at the National level.

We are still trying to find a volunteer to act as a chemical Engineering representative on the Illinois Engineering Examiner's Council. This activity is a significant commitment in that it meets at least eight times per year with each meeting lasting one to two days. Also, the candidate will have to have been registered as a Professional Engineer for 12 years. If you are interested, or know someone who might be, please let us know so that we can discuss this opportunity with them.

Over 80 Lords and Ladies attended the February 14th Social Night at Medieval Times in Schaumburg. Although our yellow and red knight was not successful in winning the competition, the display of horsemanship, costumes, the pageantry and the Games made for an enjoyable event.

Please note that we are coming up to the election of next year's officers, so, if you want to run, have a nomination or need an absentee ballot, please review the information in this newsletter.

## JAMES J. CARBERRY WINS ERNEST W. THIELE AWARD

Congratulations go to professor James J. Carberry of Notre Dame University as the recipient of the Ernest W. Thiele Award for 1992. The award will be presented during the April meeting of the Chicago section.

Professor Carberry is being recognized for his extensive research and teaching contributions in the area of chemical and catalytic reaction engineering. His thorough knowledge combined with broad industrial experience have given his work a down-to-earth touch that characterizes chemical engineering at its best. His innovative spinning-basket reactor has been an enormously effective tool in acquiring catalytic and kinetic information of high reliability. His elucidations of the interplay of heat and mass flows with kinetics in both catalyst pellets and reactors are classics. The criterion he has established for testing for heat and mass transfer effects in catalysis have found their way into textbooks and particularly into industrial practice. His textbook on Reaction Engineering is broadly used.

The Thiele award is presented each year to a Midwest region member of AIChE who has made outstanding contributions to advance the practice of chemical engineering. The award, sponsored by Amoco Oil Company, consists of an engraved plaque and a \$1000 honorarium.

## **McCormack Award Winners**

The McCormack award is presented each year to outstanding students from Chicago area chemical engineering schools. The winners and their advisors for this year are:

University	Student	Advisor
IIT	Yun H. Song	Prof. David Venerus
UIC	George Myers	Prof. Irving Miller
Northwestern	Richard B. McClurg Todd E. Wichmann	Prof. Thomas Goldstick

## NOMINATIONS OPEN FOR CHICAGO SECTION OFFICERS by *Shannon Brown*

Nominations are now open for officers and Directors-at-Large of the Chicago Section AIChE. Elections will be held at the section's annual meeting on May 13, 1992. The winning candidates will serve terms running from July 1, 1992 through June 30, 1993.

Any member in good standing for the past two years is eligible to run. Actual requirements are listed in the by-laws. The nomination form (below) must be returned to the secretary or submitted in person by the close of the April 8 general meeting.

The final slate of candidates will be determined by the nominating committee and published in the May issue of *Chicago Section News*.

There are five open positions available:

A Chairman-Elect will serve a one year term followed by a year as Chairman. (The chairman position will not be voted on. As the current Chairman-Elect, I will automatically become Chairman for 1992-93). The Vice Chairman-Program, Secretary and Treasurer each serve a one year term. A Director-at-Large will be elected for a 3-year term. (There are three Directors-at-Large whose terms expire on a rotating annual schedule.)

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### Absentee Ballots Available

Officers and Directors-at-Large of the Chicago Section AIChE will be elected at the section's annual meeting to be held on May 12. Of course, not every member can attend the meeting.

As provided in the by-laws, any member in good standing who cannot attend the annual meeting may request an absentee ballot. Just fill in the coupon and return it to the Secretary.

### Nomination Form

I suggest the following names for elective office in the Chicago Section AIChE.

Chairman-Elect: \_\_\_\_\_

Vice-Chairman-Program: \_\_\_\_\_

Secretary: \_\_\_\_\_

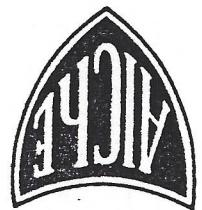
Treasurer: \_\_\_\_\_

Director-at-Large: \_\_\_\_\_

Signature: \_\_\_\_\_

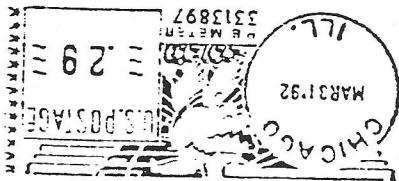
FIRST CLASS MAIL

62217  
PAUL ROBERT ROM  
957 HIGHLAND AVE  
GLEN ELLYN IL 60137



7173 N. Austin  
Niles, IL 60648

American Institute of Chemical Engineers  
Chicago Section News



### Absentee Ballot Request

I cannot attend the annual meeting on May 12, 1992. Please send me an absentee ballot.

Signature: \_\_\_\_\_

Name: \_\_\_\_\_

Address: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Return this form to Sheila Moran, IBM Corporation, 2707 Butterfield Rd., Oak Brook, IL 60621.