



Rocky Mountain AIChE News

October 2002

Volume 12 Number 2

October Section Meeting: Research and Development of Zeoponics

October's presentation will be given by Richard Andrews and James Shaw, CEO and president, (respectively), of ZeoponiX, Inc. ZeoponiX develops, manufactures and markets high efficiency nutrient delivery systems and materials for growing plants. The technology is known as "zeoponics", a word coined from "zeolite" and "hydroponics," and was originally developed for NASA's Johnson and Kennedy space centers to support long term space missions. The basic science involves natural zeolite minerals, and using totally new ion exchange nutrient delivery mechanisms for fertilizers. These innovative fertilizers are very high efficiency and also have major environmental benefits of reduced loss of nutrients to the environment. The presentation will review the research and development, explaining some of the process chemical engineering to convert from scientific interest to a commercially useful technology.

Since doing the NASA research, ZeoponiX has commercialized and sold zeoponic materials into several specialty agricultural markets. Some very local Colorado area users include the new Denver Bronco sports field, area golf courses and greenhouse operations. Research in Malaysia has shown these materials to be excellent for dramatic increases in yield of rice, the largest food crop in the world.

Mr. Andrews is the founder of ZeoponiX, Inc. and the principal responsible for the technical development of the products, process engineering

(continued on inside)

October Section Meeting

Speakers: Richard Andrews, CEO
James Shaw, President
ZeoponiX, Inc.

Topic: Research and Development of
Zeoponics

Date: Tuesday, October 15, 2002

Time: 6:00 Social
6:30 Dinner

Location: Doubletree Hotel
8773 Yates Drive
Westminster
303-427-4000

Cost: \$15 (half price for students and unemployed)

Please RSVP by **Friday, October 11th**. Indicate your name, phone number, and number of attendees by e-mailing Kevin Milliman at kevin_milliman@earthtech.com. Alternatively, you may leave a voice mail for Kevin at 303-804-2374.

(continued from front cover)

and product efficacy research and testing. Mr. Andrews is a registered professional engineer in Colorado and holds Bachelor and Master degrees in chemical engineering from the University of Kansas. In 1987, he founded Boulder Innovative Technologies, Inc. an environmental consulting, regulatory affairs and contract R&D company that focused on new products and processes for using the ion exchange and adsorption properties of natural zeolites. In 1994, he founded ZeoconiX, Inc. to commercialize "zeoponic" fertilizers that had been developed in cooperation between NASA and Boulder Innovative Technologies, Inc. Both Boulder Innovative Technologies, Inc. and ZeoconiX are active in the fields of agriculture and environmental engineering with natural zeolites. Mr. Shaw is the business and financial management primary party for ZeoconiX, Inc., joining the company in 1997 when products were first introduced to the market. Jim has an undergraduate degree from Oregon State, and is a chemical engineer with a Masters degree from the University of Colorado. After a successful career with USEPA, Rocky Mountain Energy Company and the Department of the Interior, Jim left the government and became an entrepreneur by accepting the president position with start up ZeoconiX, Inc. where he continues to serve in that capacity.

WHAT CAN YOU CONTRIBUTE?

We need articles for this newsletter which may be of interest to our members. Do you have something you can contribute? Please send your ideas to the editor at mmoes@ekiconsult.com.

AIChE Publications

Encompassing more than 300 titles, including books, magazines, software programs, video tapes, CD-ROMs, and training modules, the publishing program of the American Institute of Chemical Engineers (AIChE) is a diverse and reliable information resource.

From safety and environmental issues, to the latest technological advances in such "core" chemical engineering areas as heat transfer and separations, AIChE books are the premier references for the working chemical engineer. AIChE regularly publishes additions to the following series:

- *Ammonia Plant Safety & Related Facilities*
- *Proceedings of the Ethylene Producers' Conference*
- *Loss Prevention Conference Proceedings*
- *AIChE Originals*

For a complete listing of AIChE books, periodicals, and electronic products, request your FREE copies of the following 2002 catalogs: Technical Publications, Environment & Sustainability, Process Safety, and Electronic/Multimedia, or browse our online catalog. All titles can be purchased by contacting AIChE customer service. To order books, call 800-242-4363 or fax 301-843-0159. For periodicals, call 800-242-4363 or fax 212-591-8888.

AIChE Meetings

2002

Oct 3-4	Eng & Construct. Contracting San Francisco, CA
Oct 8-11	CCPS Int'l Jacksonville, FL
Nov 3-8	Annual Meeting & Career Fair Indianapolis, IN

2003

March 30-Apr 3	2003 Spring Nat'l New Orleans, LA
May 5-8	Offshore Tech Houston, TX
June	Process Develop. Symposium Poconos, PA

For further information, contact
National AIChE.

National AIChE Contact Info

AIChExpress Service Center:

(US/Canada): 1-800-AIChemE
(1-800-242-4363)

(International): 212/591-8100

Fax: 212/591-8888

E-mail: xpress@aiiche.org

Member Services: 212/591-7981

Career Services: 212/591-7670

Govt. Relations: 202/962-8690

Govt. Relations Fax: 202/962-8699

Web Page: <http://www.aiiche.org>

Rocky Mountain AIChE Officers

Dennis Gertenbach	Director	303/279-4501
James Meyer	Chair	303/271-1899x11
Kevin Milliman	Vice-Chair / Program	303/804-2374
Curtis Dominicak	Secretary	303/969-9416
Craig Wildemuth	Treasurer	303/791-6307
Stephanie Church	Membership	303/978-3084
Martin Vorum	Employment Info	303/789-0848
Kevin Ritter	Student Chptr. Liaison	303/782-0164x108
Laura Moes	Editor	303/770-2432

Rocky Mountain AIChE News is published eight times a year by the Rocky Mountain section of AIChE. Opinions expressed herein are those of the authors and are not necessarily those of AIChE nor the officers of this section.

The objectives of 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.

UPCOMING MEETINGS

*Do you have a topic you would like to learn about?
Is there a tour of a facility you would like to take?
Would you or your company like to present a
program or host a meeting? Please contact Kevin
Milliman at 303-804-2374 or e-mail to
kevin_milliman@earthtech.com with your
suggestions.*

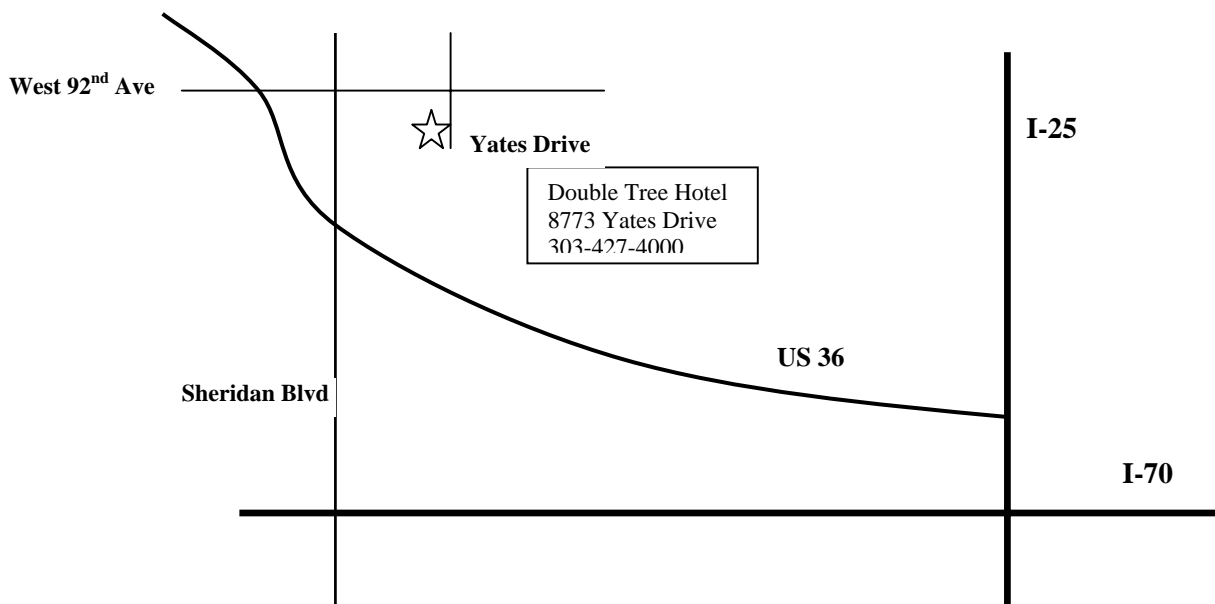
Rocky Mountain AIChE News
America Institute of Chemical Engineers
1025 West Peakview Circle
Littleton, CO 80120-3327

Return Service Requested

On the Web at:

<http://www.aiche-rm.org>

Send us your e-mail address
(send to mmoes@ekiconsult.com) and
receive this newsletter electronically!



DIRECTIONS: Take I-25 to US 36 (Boulder Turnpike). Travel west on US 36. Exit at Sheridan Blvd and go north (to the right). Turn right at the first light which is W. 92nd Ave. Turn right at the first street which is Yates Drive. The Double Tree hotel is at the bottom of the hill on the right hand (west) side.