

The Bunsen Burner

Valparaiso University Chemistry Club Newsletter

Special Interest Articles:

- Meet the new organic professor, Dr. Kevin Jantzi
- Learn about summer research experiences and opportunities.
- Chemistry Jokes and a Crossword puzzle

Chemistry Club Executive Board:

Mike Stachniak,
President
Ariana Mankerian,
Vice President,
Webmaster
Sara Mar,
Secretary
Cathy Nelson,
Treasurer
**Erick Wolf, Ashley
Coulter**
At-large members

Meet Professor Jantzi...

After one year of teaching organic chemistry at Valpo, Dr. Kevin Jantzi has settled in and learned a lot about Valpo, so we thought it was time for you to learn a few things about him. Dr. Jantzi grew up in Michigan before attending Goshen College in Indiana. He started out as a biology major, but when he had to study plants, he switched to chemistry. While at Goshen, he received the opportunity to travel to Africa for a study service term, and participate in a chemistry REU program through North Carolina State University. While at Goshen, Dr. Jantzi met an organic professor who believed that molecules have feelings, and sparked his interest in organic chemistry. After receiving an undergraduate degree, Dr. Jantzi attended the University of Wisconsin-Madison and graduated with a Ph D. in organic chemistry. Graduate school presented some challenges, like having to take a synthesis course twice and getting a 24/100 on his first exam. There were also exciting moments such as being called "Dr. Jantzi" for the first time and discovering his passion for teaching. When Dr. Jantzi isn't teaching, he enjoys reading fantasy novels, watching science-fiction movies, coin collecting, learning about finances, playing sports, and listens to any music except country. Dr. Jantzi's favorite molecule is Taxol (a cancer medication) because this molecule shows how synthetic organic chemists positively affect science, and because it is a great example of the scientific process. If you have any more questions for Dr. Jantzi, stop in NSC 240 to chat!

~Ariana Mankerian

From the President

Welcome back Chemistry students of Valparaiso! With the Fall 2005 semester underway we are looking forward to another exciting year! The Chemistry Club is planning many events that we hope all students would like to participate in. Please check the back page for our schedule of upcoming events including our Mole Day Party, Neils All-Nighter, and Chem in the Schools Program. I want to introduce this year's Chem Club E-Board. Ariana Mankerian, our Vice President is in

charge of the Chem in the Schools Program. Cathy Nelson, Treasurer, deals with all financial transactions. Sara Mar is our secretary who takes minutes and sends out club e-mails. Erick Wolf and Ashley Coulter are at-large members who provide input and assistance whenever needed. Finally, Dr. Kevin Jantzi is our Faculty Advisor. The E-Board meets every Monday at 11:00 in the chem lounge and all at-large members are welcome to come. At-Large general meetings

are usually held once a month and include free pizza and information about upcoming events sponsored by Chem Club. There are no fees for club membership so everyone is encouraged to join and participate! I hope you are all as enthusiastic as we are about this year. Enjoy this fall's edition of The Bunsen Burner and I hope to see you all at the Mole Day Party at Dr. Engerer's house in a few weeks!

Mike Stachniak
Chemistry Club President



"The Bunsen Burner"
Neils Science Center
Valparaiso University
Valparaiso, IN 46383

Chemistry Jokes...

Q. Where does one put the dishes?

A. In the Zinc.

Q. What did the MS say to the GC?

A. Breaking up is hard to do.

Q. What do dipoles say in passing?

A. Have you got a moment?.

Q. Did you hear about the chemist who was reading a book about Helium?

A. He just couldn't put it down!

Q. What do you call a tooth in a glass of water?

A. One molar solution.

Q. What is a cation afraid of?

A. A dogion

Q. What's the difference between chemistry and cooking?

A. In Chemistry you should never lick the spoon!

Q. What is $\text{Ba}(\text{Na})_2$?

A. Banana.

Q. What did one proton say to the other when they were fighting?

A. Let me atom!

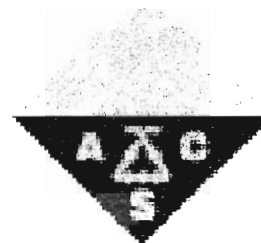
BECOME AN ACS STUDENT MEMBER TODAY!

Did you know that VU's Chemistry Club is an American Chemical Society Student Affiliate Chapter? This means that you can become a student member of the American Chemical Society.

Student membership definitely has its rewards. Besides being a member of a professional society,

you receive *Chemical and Engineering News*, "In Chemistry," the student affiliate newsletter, a research opportunities directory, and many other benefits, for only \$21 a year!

For more information, or to become a member, visit the ACS webpage:
[Http://www.acs.org](http://www.acs.org)



Summer Research Experiences

I worked with Professor Cook here at VU. We worked on creating a Mannich Reaction for use in an organic chemistry lab. In order to determine if the proposed reaction is feasible for a classroom setting, more testing needs to be performed to determine the actual structure of the product obtained. This research was a great supplement to my organic chemistry experience.

~Ryan Vetur
Junior

This summer I tested for lead hazards in the Hilltop Neighborhood. Once a week I collected samples around homes. The samples were analyzed by dissolution in highly concentrated nitric acid. Finally reports were sent out informing homeowners of our findings. Research was positive experience, I gained more confidence in my laboratory skills and had lots of fun too!

~Jessica Recchia
Sophomore

My research project was part of a larger research effort with the goal of more efficiently managing contaminated soil and groundwater at Department of Energy. My area of interest is the use of microbes to facilitate the chemical reduction of contaminants. This research has given me the opportunity to work with different techniques and instruments and is an ongoing project this semester. ~Miriam Conces
Senior

Finding Summer Research Opportunities

Looking for a job for the summer? Ok, you probably aren't yet. The time to start looking, however, is fast approaching. You may be considering a job at a restaurant or retail store, but another option to consider is summer research. You can get paid and receive college credit, while gaining experience that will benefit you as a chemistry student and applicant to graduate programs. A variety of positions are offered each year around the world. VU students have worked at universities and industrial

locations across the United States and some have ventured to Europe and Africa. Several resources are available to find information on summer research. On the chemistry department's homepage there is a link to summer employment that provides a listing of internships that the department has a connection to.

Additionally, it is helpful to search online search engines. This will provide you with a long list of available summer internships so attempt to limit your search as best

you can by location, topic, etc. Finally, talk to people in the chemistry department at VU or at other universities. If you find research you are interested in, contact the advisor individually, and sometimes they will hire you purely based on your interest. These are just a few of the ways to get started searching for information about research positions. Remember, working in a lab all summer and getting to apply skills learned during the year that reflect your interests is typically more fun than working anywhere else!

~Cathy Nelson

Letter from the advisor...

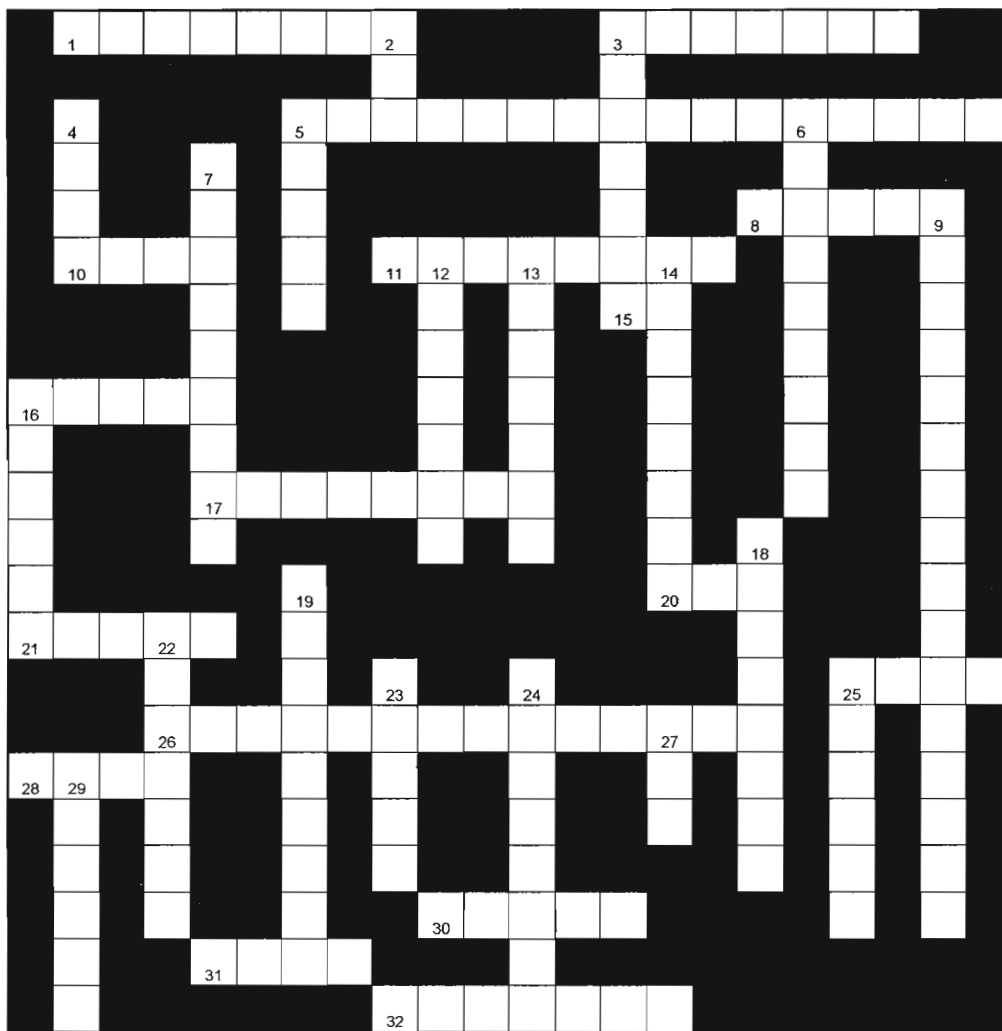
I had my first introduction to Chem Club almost two years ago while applying for my position with the organic chemistry department at VU. The activities described on the club website (the regressive dinner, the Neils All-Nighter, and Chemistry in the Schools to name a few) left a lasting impression on me as I compared the chemistry department at VU with other schools. I was impressed by the level of student-faculty interaction and obvious camaraderie among the

students. It is easy to forget that there is more to a college education than the grades one earns. Perhaps even more important are personal growth and exploration within one's chosen field beyond book knowledge and structured laboratory experiments. Chem Club certainly has its share of fun events and experiences like Chemistry in the Schools, and visits to graduate schools are highly valuable to one's personal and professional development. As the

faculty advisor for Chem Club this year, I'd like to see Chem Club branch out and try some new things. A few of my suggestions are: a community night where chemical demonstrations are performed, Chemistry Jeopardy, and trivia contests. Chem Club has the unique opportunity of offering entertainment for all those involved, but it also provides diverse educational experiences for students and the Valpo community as well. So join the club!

~Dr. Kevin Jantzi, advisor





CROSSWORD PUZZLE CLUES

ACROSS

1. Not an ionic, but a _____ bond.
3. Part of the atom with no charge.
5. A first year chemistry course.
8. A famous chemist, last name is a unit of energy.
10. If Avogadro had a pet...
11. Two or more different atoms combined to make a substance.
15. Silicon.
16. The building chemistry majors spend the most time in.
17. Color change, formation of a precipitate, or release of gas are characteristics of a _____.
20. Instrument used commonly in organic, gives ¹H or ¹³C spectra.
21. Common unit of measurement for volume.
25. Two part instrument that separates and identifies compounds based on volatility and _____ molecular weight.
26. Defined by 3 laws that govern energy transformations in a reaction.
28. Famous chemist Niels _____ that made discoveries about atomic structure.
30. Bond that has atoms with very different electronegativities.
31. Two electrons between two atoms form a _____.
32. Molecule with long, repetitive carbon chains.

DOWN

2. _____ foil, commonly found in kitchens.
3. The center of an atom.
4. Smallest unit of an element.
5. ΔG is _____ free energy.
6. The study of all elements except carbon, mainly metals.
7. For most of us, it's our major...and our life. ☺
9. Type of chemistry that could "shock" you if you're not careful.
12. Study of carbon and carbon compounds.
13. Famous chemist Linus _____.
14. Element that makes up most of the air.
18. $\frac{\text{Force}}{\text{Area}} = \text{_____}$.
19. You better not forget to put in indicator for an acid-base _____.
22. ΔS
23. Scientific type of gas that electron configurations are modeled after.
24. ΔH .
25. His law of effusion is $\sqrt{\frac{M_2}{M_1}}$.
27. Frozen H₂O.
29. The element in the air that living things need.

Chem in the Schools

Having participated in many Chem Club events, I think that the most fun club activity is Chem in the Schools (CITS). CITS is an outreach event for fifth grade students where groups of club members travel to local elementary schools to perform simple chemistry demonstrations to get the kids excited about chemistry. In the past few years our CITS program has not been as active as we would like, but we are hoping to change that this year with more groups going out to schools and trips to as many schools as possible.

For me the best part of Chem In the Schools is watching how much fun the kids have as they learn about something we like to learn about too. We have fun attempting to burn teacher's dollars, shoot rubber stoppers across the room, and throw frozen fruits and racquetballs at school walls to watch them shatter. The kids really enjoy our demonstrations and are so interested that they often like to be involved in some part of our experiments. CITS provides an opportunity for us to pass on our love of science to others who might not see the fun in it that we do. Perhaps we may even help encourage a few future chemistry majors...

~ Erick Wolf

A Tribute...

Dominique "Nick" Dekeyser was born February 22, 1985 and passed away on August 25, 2005. Nick was a biochemistry premed student here at VU, and was also pursuing an interest in psychology with the ultimate goal of doing work in neuroscience. Many students who knew Nick remember his energetic personality and his on the go mentality. This past summer Nick worked on a research project with Dr. Goynes and also for in the psychology department. Nick was a dear friend to many in the chemistry department and we all miss him dearly. This issue of the Bunsen Burner is dedicated to his memory. Rest in peace Nick, we love you and miss you.

Chemistry Club Events: Fall 2005

<i>Event</i>	<i>Date</i>	<i>Time</i>	<i>Location</i>
General Meeting	Weds. Sep. 7	11:05	NSC 224
General Meeting	Weds. Oct. 26	11:05	NSC 224
Mole Day Party (Dr. Engerer's house)	Sat. Oct. 29	Evening- TBA	TBA
General Meeting	Weds. Nov. 30	11:05	NSC 224
Neils All-Nighter	Fri. Dec. 2	TBA	Neils