



Chemists Without Borders

# Newsletter #14

March 31, 2012

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## The Next Generation is Coming on Strong!

On February 18<sup>th</sup>, 2012, Highland High School's ChemClub organized an American Chemical Society - Mojave Desert Section (ACS) and Chemists Without Borders sponsored event.

Inspired by the Arsenic Field Event last year, Ankit Vij invited members of the UC Santa Barbara Chemists Without Borders chapter to participate in demonstrations of the Arsenator and a composite iron matrix filter (designed by Dr. Abul Hussam of George Mason University). In addition, several fruit juices were tested for arsenic.

Ankit presented the results of this event at the ACS Science Mixer at the San Diego meeting (photo above right).

This event provided a learning experience for all participants and turned out to be successful, increasing arsenic awareness for the participants (photo below).



## Organization News

### Green Chemistry Initiative

John Cihonski, Project Manager

**Green chemistry** encourages the design of products and processes that minimize the use and generation of hazardous substances based on the [12 Principles of Green Chemistry](#). Chemists Without Borders is soliciting ideas for our Green Chemistry Initiative. The purpose of our Initiative is to identify chemistry based quality of life issues and then coordinate and assist in the development and distribution of environmentally sound, cost effective solutions.

We anticipate that the needs will fall into three general categories of solutions: Information, Product or Process related. The solutions may be as simple as supplying the appropriate information or referring to an available solution that the needs group is unaware of or as complicated as requiring a more extensive effort to actually develop a product or process for a novel situation.

Our approach has been to break the potential participants into two groups. The most important is the needs group, those with the inadequately addressed problem or who don't have sufficient resources to solve the problem. The second group is the green community at large that has resources and hopefully a willingness to assist in solving the problem. Since the success of this program relies on addressing real problems in a meaningful way, the first order of business has been to identify a sufficient number of potential projects so that we can begin to formulate and initiate meaningful programs.

The first tabulation of potential projects has been completed and four ideas were selected for further consideration:

- Processing of dyestuff contaminated waste water
- Improving water usage efficiency in cotton growing and processing
- Development of a Green Laboratory Kit for chemical education
- Developing a green education and project tracking web site for the rapid and efficient distribution and exchange of information

These ideas are currently being evaluated to ensure that Chemists Without Borders is addressing the real problem with sufficient resources to make a difference.

We are continuing to look for project ideas, especially ideas that involve groups with a current need that is not being addressed. If you have an idea for a project or are aware of such groups for projects, please contact [johncihonski@chemistswithoutborders.org](mailto:johncihonski@chemistswithoutborders.org). Also, if you are interested in volunteering to participate in a project please contact Lou Ciabattoni, Memberships at [louciabattoni@chemistswithoutborders.org](mailto:louciabattoni@chemistswithoutborders.org) and give him your contact information and your area of expertise or interest. This way, as opportunities arise, we can let you know. We look forward

to expanding our project list and to working with as many of you as possible to provide a real benefit to others and to meet our Green Chemistry Initiative Goal.

### The Composite Iron Filter

Both the Composite Iron Filter (CIM) and the Digital Arsenator have been validated. Data from the Arsenic Field Event held in March 2011 have been analyzed and show that the CIM we tested removes arsenic from contaminated water resulting in water with  $10 \mu\text{g L}^{-1}$  As or less. At this event, we also determined the accuracy and precision of the Digital Arsenator so that it can be accurately used in the field. The validation report is on our web-site [here](#).

### Member Meetings

#### San Francisco Bay Area (BAMM)

The next BAMM will be held on Saturday April 28, 2012 from 1:30 - 4:00 PM. The location will once again be at the Citra Apartment complex, 745 S Bernardo Ave., Sunnyvale CA 94087-1003, USA. The featured speaker will be Dr. Steven Chambreau who will discuss propellant chemistry. If you get lost on the way, you may call (408) 962-0256. Contact [Lou Ciabattoni](#) to reserve your spot.

If you missed the Bay Area Members Meeting in October, you can watch it on [YouTube](#).

#### Los Angeles Area (LAMM)

A Los Angeles area member group is forming. Contact [Yasmin Chaudhry](#) for more information.

Like us on Facebook (turn your notifications on) or contact [Lou Ciabattoni](#) to stay up to date.

### Member News

#### John Cihonski, Ph. D.

##### *Green Chemistry Project Manager*

John has over 30 years of experience as an entrepreneurial technical and commercial development professional. He has the ability to identify, evaluate, and direct significant pioneering opportunities in the chemicals, catalysis, electronics and advanced materials areas including nanotechnology. He has focused on identifying commercially viable technology and product options in technically demanding emerging areas. Much of his recent work has been in the area of process intensification, which has direct applicability in the green and sustainable areas that he is addressing with Chemists Without Borders. John's broad expertise is in part due to his industrial experience at El Paso Products, Engelhard, and Catalytica. He was a founding partner of VentureWest Technologies, an international technical, commercial development and licensing firm. John has also taught advanced undergraduate and graduate level chemistry and materials science courses at the University of Texas of the Permian Basin.

## Lois Ongley

The Executive Committee of Chemists Without Borders awarded Professor Lois Ongley the Distinguished Member of Chemists Without Borders Award for her work in 2011.

Dr. Ongley brings broad knowledge and expertise, not just in technical and scientific areas, but also in the development of an organization like ours. She is a major player in both our arsenic remediation and green chemistry education efforts. Her passion for teaching and for making a difference have taken her half way around the world and back on our behalf.

Lois currently serves as Corporate Secretary of Chemists Without Borders, and with her dedication, patience and initiative, she has made a massive contribution to our growth and development. Lois joins the ranks of only two other Distinguished Members, Nazneen Khanam and K. C. Wang.

## Corporate Officers and Directors

President	<a href="#">Bego Gerber</a>	Directors: Bego Gerber, Steve Chambreau, Rolande Hodel (AIDSfreeAfrica)
Vice-President	<a href="#">Steve Chambreau</a>	
Secretary	<a href="#">Lois Ongley</a>	

## Request response

It may seem like a small thing but even simple needs are those we can respond to. Recently a volunteer sent this request: "I'm working on a sustainable surface water treatment system for a cambodian and a malaysian jungle tribe, using local materials and stones. I'm an electronics engineer by trade, but have no chemical background. One of the stages I'm trying to sort out is pH correction using marble (calcite) and/or limestone. Please could you put me in contact with someone who could give me information on calcium carbonate (calcite) or limestone dissolution in water. I would like information so I can build a tank to bring the pH balance up to 7 or high." Some literature searching turned up an article that met the need.

Keep those requests coming, we can be of assistance. If you can help out with this type of occasional request, contact Lou Ciabattoni and let him know your area of expertise.

## Volunteer Positions

[Click here to see the detailed descriptions.](#)

Wondering what you could do for Chemists Without Borders? We would love to have you join our teams of volunteers! Take a look at the list below and find something that fits your time and expertise. We can use your help for a few hours a week, a few hours a month or for many hours, if you are available. And if you know someone else who might be interested - pass this on.

Chemists Without Borders is a fledgling organization and we need a variety of volunteers and supporters to move forward.

Please feel free to call any of the individuals listed below to ask questions and explore any opportunity. Check us out!

***Membership volunteer opportunities contact - Contact Louis J Ciabattoni, Membership Manager, Mobile: +1-650-255-2760, [louciabattoni@chemistswithoutborders.org](mailto:louciabattoni@chemistswithoutborders.org)***

1. Help with Chapter Development (University, Regional)
2. Help with Partner Relations (Red Cross, Hands On Network, other humanitarian orgs)
3. Be a Social Networks "Poster" (Facebook, Linked In, Google+, ACS Network, etc.)

***Education Project volunteer opportunities contact - Lois K Ongley, Secretary, (ph) +1-207-948-9120, [loisongley@chemistswithoutborders.org](mailto:loisongley@chemistswithoutborders.org)***

1. Project Manager
2. Curriculum Development (Environmental Management and Science BSc degrees)
3. Assistants for course development
4. Green Chemistry Education resources

***Clean Water (Arsenic) Projects volunteer opportunities contact - Ronelly Bem Garcia Taborite, Project Manager, [ronellytaborite@chemistswithoutborders.org](mailto:ronellytaborite@chemistswithoutborders.org)***

1. Arsenic Remediation Team members (working to enhance the distribution of a CIM arsenic filter)
2. Advisory Committee Lead - 1 person
3. Advisory Committee Members (4 persons with expertise in cultural/country analysis, geology, chemistry, water)
4. Partnership Development Manager - 1 person
5. Project Leaders: Manufacturing, Documentation and Standardization, Training, Country Replication.

***Corporate volunteer opportunities contact Steven D. Chambreau, Vice-President (ph) +1-951-529-1057, [stevechambreau@chemistswithoutborders.org](mailto:stevechambreau@chemistswithoutborders.org)***

1. Executive Director
2. Chief Operating Officer
3. Development Officer
4. External Communications Coordinator
5. Treasurer

***Administrative volunteer opportunities contact - Lois K Ongley, Secretary (ph) +1-207-948-9120, [loisongley@chemistswithoutborders.org](mailto:loisongley@chemistswithoutborders.org)***

1. Meeting note taker
2. Administrative filing and organizing of online documents and folders

***Green Chemistry Projects contact - John Cihonski, Project Manager, (ph) +1-408-629-7718, [johncihonski@chemistswithoutborders.org](mailto:johncihonski@chemistswithoutborders.org)***

***Other project areas contact - Bego Gerber, President, [begogerber@chemistswithoutborders.org](mailto:begogerber@chemistswithoutborders.org)***

1. Project Manager - Affordable Medicines & Vaccines
2. Project Manager - Disaster Services
3. Development Officer - Fundraising Team
4. Assistant development Officer - Fundraising Team
5. Grant writers - Fundraising Team

### Special Thanks

Lou Ciabattoni has put the “active” in active volunteer. Most of you have been the recipient of his efforts to forge strong inter-member relationships.

Ronelly bem Taborite has undertaken the leadership role in the “arsenic” project and is looking forward to leading the Water Initiative (once we have more than one on-going water project!).

### Funding

Chemists Without Borders is a 501(c) (3) not for profit organization incorporated in the State of California. It is funded by donations and grants. You may help us in our efforts as there are several ways to donate to Chemists Without Borders. Please donate via [Paypal](#) or send a check directly to Bego Gerber, President, Chemists Without Borders, 745 S. Bernardo Avenue #A121, Sunnyvale, CA 94087. In addition, should you have contacts at foundations or other institutions that might be interested in supporting Chemists Without Borders, please send us a contact name and phone number.



Chemists Without Borders is a global support network of volunteers providing mentoring, information and advice. Our vision is to ensure every person, everywhere, has affordable, consistent and persistent access to essential medicines and vaccines, sufficient safe water, a sustainable energy supply, education in green chemistry and business which people can apply in their daily lives and teach to others, safe processes in work environments where chemical hazards exist, and emergency support, including essential supplies and technology to areas of the world where governments and infrastructure are unable to provide these services.

Chemists without Borders, a 501(c)3 organization funded by donations, endorses no political agenda and conducts its activities solely on the basis of need. It operates within the [Code of Conduct and Guidance on Professional Practice](#) of the Royal Society of Chemistry and [The Chemical Professional's Code of Conduct](#) of the American Chemical Society. Further information is available at [www.chemistswithoutborders.org](http://www.chemistswithoutborders.org).