

no. 3

July 22, 2012

# Catalyzer

44th International Chemistry Olympiad  
United States of America



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Celebrating International Excellence in Chemistry

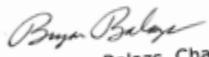
Greetings to all the participants of the 44<sup>th</sup> IChO! The IChO continues to bring together the brightest high school students in chemistry from around the world for a week of cultural events, friendship and camaraderie, and of course, intense scholarly competition. The 283 students from 72 countries bring a level of excitement due to the blending of so many fascinating cultures and traditions. Each attendee will take home a renewed spirit of chemistry excellence and international cooperation.

We are in an inspiring era for science, where the accelerating pace of discovery in chemistry and related fields is improving the lives of people around the world. The students of this year's Olympiad will be part of this transformation and will excel in whatever field they pursue.

I wish to acknowledge our sole corporate sponsor, The Dow Chemical Company, whose generous donation insured that this event would be world-class in terms of its competition, events, and venues. And special thanks to the American Chemical Society and the University of Maryland at College Park and in particular the Department of Chemistry and Biochemistry, which provides exceptional facilities and support, allowing a rigorous and fair competition.

On behalf of the entire host team, WELCOME to the USA!!!

Sincerely,

  
Dr. Bryan Balazs, Chair, 44<sup>th</sup> International Chemistry Olympiad



**Bryan Balazs**  
Chair, 44th International Chemistry Olympiad



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*Celebrating International Excellence in Chemistry*

# Opening Ceremony and Touring the Nation's Capitol

**Richard Schrock** was curious as a youngster. He was always building things and was busy with his hands, mostly working with wood. That all changed when his older brother gave him a chemistry set when he was 8 years old. After that he was hooked on science. His distinguished academic and professional career led to a Nobel prize in chemistry in 2005 for his work on metathesis reactions and single molecule catalysts. Dr. Schrock will be one of the prominent people welcoming participants to the opening of the 44th International Chemistry Olympiad.

The official opening ceremony will take place today in the Elsie and Marvin Dekelboum Concert Hall on the campus of the University of Maryland. Students and mentors from 72 nations will hear from **Maryland Governor Martin O'Malley**, **University of Maryland President Wallace Loh**, and representatives from the **American Chemical Society** and **Dow Chemical Company**.



Musical performances will be provided by the **University of Maryland Jazz Studies Combo** and **The Eagle Spirit Dancers**.

After the opening ceremony students can look forward to their first excursion, which includes a trip to one of the world famous **Smithsonian museums**, a tour of **Georgetown** and a visit to **Embassy Row**, home to many of the foreign embassies from around the world.



*The Elsie and Marvin Dekelboum Concert Hall in the Clarice Smith Performing Arts Center.*



## Megatrends

With the world's population expected to reach nine billion by 2050, we need solutions to big challenges like energy, climate change, food, housing and health. To address these challenges, Dow researchers are developing solutions that focus on four megatrends: agriculture, consumer & lifestyle, energy, and infrastructure & transportation.

As the world's population grows, so does the need for sustainably-grown, nutritious food. Researchers at Dow AgroSciences are harnessing the power of chemistry to develop solutions that result in higher yields and more nutritious plants.

Similarly, global demand for sophisticated consumer goods is increasing as well. From electronics to personal care and even medicines, our solutions make consumer goods more convenient and environmentally friendly.

Solutions to energy conservation and increased consumption are also critical to our future. Dow is developing solutions that make traditional energy sources more efficient and environmentally friendly while also providing solutions that support new efficient, clean energy use globally. From lighter, more aerodynamic materials that improve the performance for cars and wind turbines, to materials that utilize renewable energy to power homes and automobiles, Dow uses chemistry to make the future brighter for everyone.

As population growth puts more pressure on the global infrastructure, innovation in this area will be key to maintaining our quality of life. Whether it's cleaner water, increased energy efficiency, or cleaner transportation, Dow is delivering solutions that help make life better from the ground up.

Since 1897, our solutions have served customers across the globe and helped address many of the world's most challenging problems. In this same spirit, Dow will continue to combine the power of science and technology to passionately innovate what is essential to human progress.



# Arrival and Registration

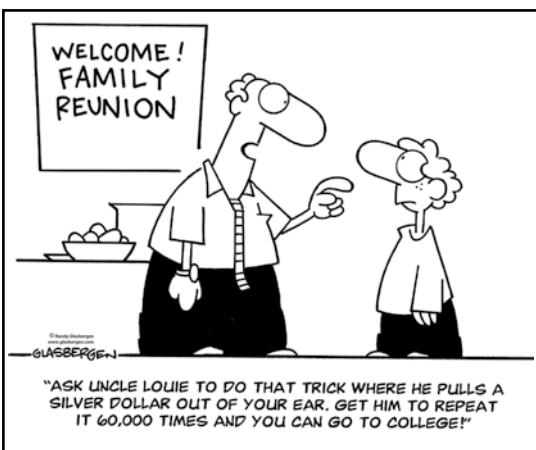


## Simple Machines Puzzle Answers

ACROSS: 3. Fulcrum 4. Inclined Plane 6. Wheel and Axle  
DOWN: 1. Pulley 2. Screw 5. Lever 6. Wedge

## Sunday, July 22 Schedule

	Students	Mentors and Observers
morning	Opening Ceremony/Clarice Smith Performing Arts Center UM	
afternoon	Washington, D.C. Tour	Lab Inspections
night	Evening Activities	1st Jury Meeting



**On the cover masthead:** The bald eagle is the national bird of the U.S., is depicted on the Seal of the President of the United States, and is shown on all paper currency in the U.S. The natural range of the bald eagle spans the entire continental U.S. and parts of Canada and Mexico.

# Puzzle

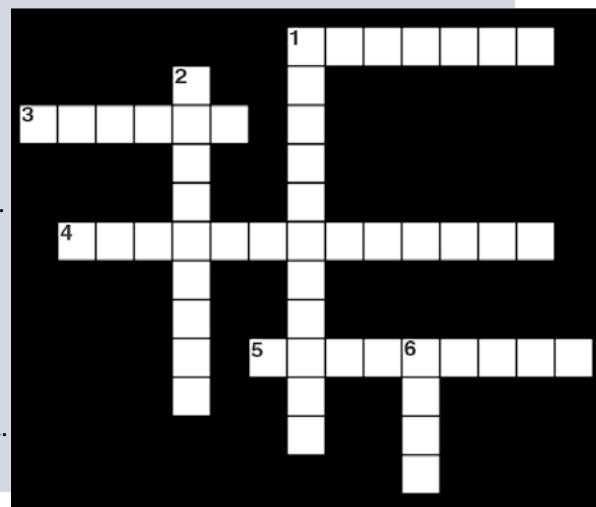
## Energy Sources

## Across

1. This process is used in nuclear power plants.
3. This process is how the sun produces energy.
4. This type of power plant produces energy by harnessing moving water.
5. Resources that do not run out are called...

## Down

1. Coal, oil and natural gas are examples of... (two words)
2. A device that can convert sunlight directly to electricity. (two words)
6. Windmills produce energy by harnessing...



Answers are in issue #4.

## 1921, USA

**Band-Aids** were invented by a Brooklyn pharmacist, **Robert Johnson** and his brothers, **James** and **Edward**. The concept came from **Sir Joseph Lister** who disinfected every bandage he used in surgery by soaking it in an aqueous solution of carbolic acid.

## SUPPORTERS

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