



IChO 2013 absolute winner
about the national secret of winning Olympiads
page 2 >>



Life after IChO
Career plans
page 3 >>



It's been fun!
Thanks from the Catalyzer team
page 4 >>

Running the flags up



192 medal winners traditionally hoisted their national flags at the 45th IChO Closing ceremony
>> page 2



Artikbay Ishankulov, M.D., Head Mentor of Uzbekistan delegation

«We're here for the first time. I really didn't expect such a success: one golden medal and two silver ones! My lyceum student Bekhozdebek Boltaev was awarded the gold one.

I'm really happy for him, he's from a simple family, his mother is a nurse, his father is a worker. He's a totally self-made, very ambitious, at the same time very open to dialogue. By the way he's won silver in the 47th Mendeleev Olympiad this year.

It was really hard to prepare for this Olympiad, it's much more complicated than our republican contests. Besides, we failed to translate the pre-tasks from English. But Bekhozdebek coped. I'm so proud of him”.



Vadim Eremin, MSU professor
Why Chinese delegation is such a success

– I used to think Chinese students are just well-trained and hard-working, but tend to fail the non-standard jobs. However, at this Olympiad there was a task on inorganic chemistry that just can't be trained for. It was designed as in traditional Russian competitions and was about a simple chemical experiment with a very surprising result. The guys had the necessary information to obtain this result. It has been the most difficult one, because even the trained guys really did not have enough time for it. But the Chinese guys coped with it. So after this contest I have no answer...

IChO takeaways



Guillermo Jauregui, Uruguay

I was amazed by Moscow, its size, the Red Square and the Faberge eggs. I'm taking home the experience of being exposed to so many cultures. The way people dress was particularly curious, when Japanese guys were wearing kimonos for breakfast, Kyrgyzstan had their special hats on. We tried some peculiar food like Danish candies. I loved blini and Russian candies.



Fernando Igoa, Uruguay

Theoretical exam wasn't difficult... it was impossible! But we had heard rumors about Russian tests in 2007, the hardest in the whole IChO history, so it met our expectations. We've made friends with a lot of guys from Latin America and Saudi Arabia (hi Norah)! And Planetarium was a great siesta!



Roberto León, Costa Rica

I am taking home souvenirs from at least 20 countries. A specialty from Russia is a bottle of kvass.



Olgert Dallakyan, Armenia

A little guitar from Mexico, several fridge magnets, I also have a small flag from Kuwait and Switzerland. I myself was giving some souvenirs too, like bracelets in the colors of Armenian flag. My facebook account is now richer. IChO was a great opportunity to become more outgoing and sociable.



Dovydas Draksas, Lithuania

I met a lot of interesting people from Latvia, Sweden, Denmark and Finland. I've learnt a lot about other nations. I could hardly imagine that Asian people are so cheerful and friendly, and the Scandinavians are so talkative. I also discovered that the Spaniards are really fantastic football players!



Nikita Onizhuk, Ukraine

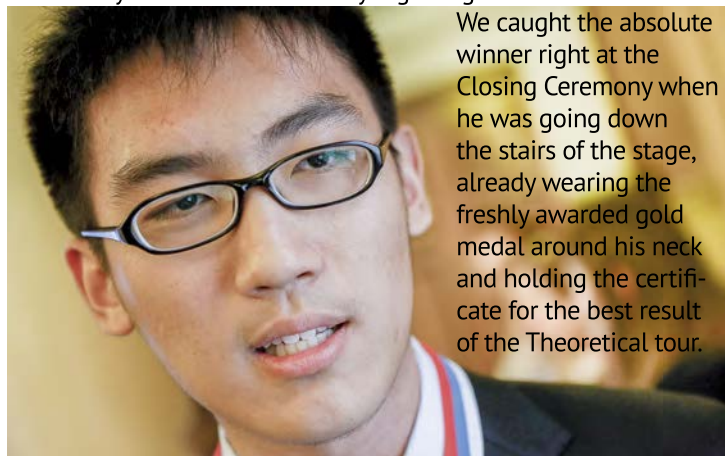
I'm taking home all issues of Catalyzer! We became great friends with Armenia, Russia, Macedonia, and Belarus. We played cards and Mafia together. We tried to teach our foreign friends some Russian phrases such as "ешкин кот". Besides we exchanged coins, now I have a large international collection of money! I improved my focusing skills, I'd never think I could be so well-disciplined!



Passionate love for chemistry and strict national selection

form the winning strategy for China.

Although the scores of the medal winners have not been announced or published, Catalyzer's reliable source has disclosed the name of the person who got the maximum 85.09 points at the IChO this year. It was Chinese Yuyang Dong.



We caught the absolute winner right at the Closing Ceremony when he was going down the stairs of the stage, already wearing the freshly awarded gold medal around his neck and holding the certificate for the best result of the Theoretical tour.

In English your name sounds a little like "you young". So how young are you, as a person and as a chemist?

– I'm 18, but I'm turning 19 very soon. As to chemistry, I started it at my 9th grade, so I've been doing it for 4 years so far.

Where are you from and what do you do now?

I'm studying in a USA university, Chemical engineering department. I'm from Tianjin, it's a relatively small city near Beijing.

"A relatively small" Chinese city is exactly how many people?

About two million.

Pretty small, indeed :) Did you expect yourself to win?

– Not really. Well, I mean, as to the gold medals, we were intending to get all four of them, It's a fail that we've got only three, the fourth one is silver... We're all sure it's due to some small mistakes... But the individual maximum score – no, I honestly didn't.

How did your country manage to get all these awards? Is it because Chinese people learn to be ambitious and persistent from early childhood?

– It's hard to tell being inside the culture, so I can only say for myself: I was

taking part in the Olympiad not out of ambition, but just because I passionately love chemistry. But as to China, I'd say we have a very strict selection on a national level, just because of the high competition and the amount of people. Only the very best pass.

Which task was the most challenging?

Experimental exam was generally harder for me, although many say the opposite. I can't say it was about some certain tough task, it was mainly about the time. When doing the synthesis I didn't get all the necessary experimental data on time, and then there was this exhausting choice of whether to finish one issue or try all of them.

What are your professional plans?

After I finish the undergraduate studies, I'll first get my PhD, I prefer organic chemistry, it fascinates me. Then I'll go to work for a university or a factory... Maybe have my own factory some day... I'd like the results of my research to be applied in environmental problems or energy sector.

What are you taking home from IChO?

New friendships with the guys from Israel and Argentina etc. And the impressions of Moscow, I'm amazed, I didn't expect it to be this cool.



Career ladder

Olympians are welcome to apply for jobs as practical researchers with Bayer and Dow Chemical who presented their programs and career opportunities to future scientists on Monday. The Dow Chemical company is constantly looking for bright chemists to develop the sustainable energy solutions. Bayer is saving humans lives by producing pharmaceuticals and is also in need of talents. Both companies are officially sponsoring IChO 2013.

Over 100 students took part in the meeting and regarding the amount of questions got curious about the businesses. **Artem Boychyuk** won-

dered how to join the companies, **Sona Adam Guluzade** asked about scholarships and internships, **Filip Zoran Ilievski** came to light with a questions about the number of Nobel Prize winners from Dow and Bayer. There was also a question about a typical day of an employee, which was followed by an expected one about salaries.

Young scientists appeared to be worried about combining their researches with the main job and career building. Catalyzer develops the topic.



Martin Reiterer, Austria

Next year I will study chemistry in Zurich, and then I hope I'll work in the Chemistry Department for a while. If I study well, I'll obtain the PhD. I'd like to work for physical chemistry, because there is a lot of mathematics, which I'm fond of. The Olympiad is a great investment into my future, because I've met a lot of my future colleagues from different countries, maybe our professional paths will cross someday.



Oskar David Henriksson, Sweden

I'd like to dedicate my life to researches and specialize in organic chemistry, it's beautiful! If I ever win a Nobel Prize, I think, that it would be pretty cool to take it for researches in alternative energy or making a cure of cancer. The Olympiad is the best way to get in touch with great researchers from all over the world, I'm sure it'll be of use. I hope at some point of my life I can get the same experience in the USA. Maybe I will study or provide some researches there, but I also want to work in my native Sweden.

Instagram under examination

To be honest, the 45th IChO hasn't been largely represented online. Let's improve it next year, and for now several photos we found on Instagram on the last day of the Olympiad.

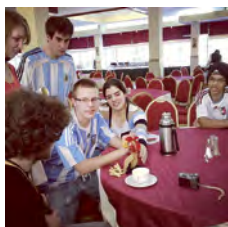
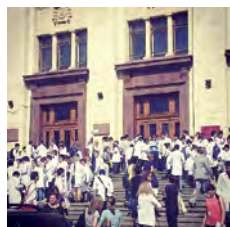


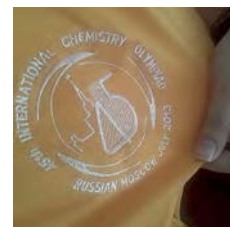
Photo by Argentinian guide **Ekatzerina Kozhemyazkina** depicting the moment her team met the French Mascot. An important contact in chemical professional community.



Turkish guide **Evgenia Ostashkina** has taken photo of the anthill of chemists before the experimental tour. Feeling nervous?



Chinese guide **Eli Tihomirova** shared a photo with her Chinese team with a scarf bearing the periodic table. As usual.



This picture by Armenian **Siranyush Badalyan** was discussed in terms of "Is there any other Moscow apart from Russian?" Well, you might be surprised, there is a number of Moscow-cities all over the world.



Stamps

Answers, as promised in issues 7-8

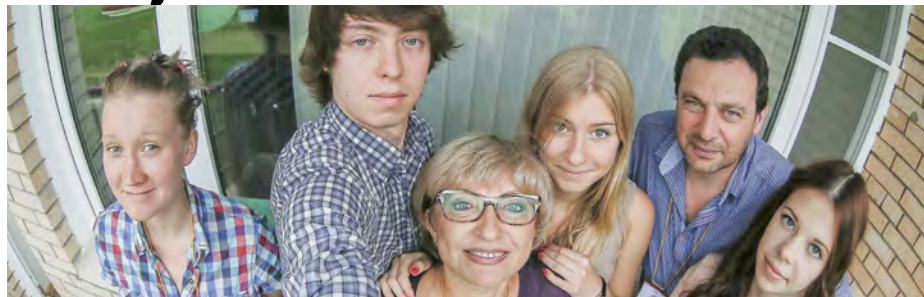
Mistakes: Mexican stamp has a CH_3 instead of CH_4 . Monaco stamp has an even cooler mistake: a quadrivalent hydrogen. It should be CH_4 of course.

On the USA stamp it can't be seen in this size,

but the phosphate group is attached to carbohydrates by the wrong oxygen.

Substances: Switzerland: ascorbic acid. Austria: steroids (the stamp pictures a man who has invented oral contraceptives).

Catalyzer 2013 *Thank you for being with us, it's been fun!*



Lyudmila Levina, Project Director.
Candidate of pedagogical sciences, Chief editor of "Chemistry in school" magazine

"...this cute feeling that among the guys sitting next to me at lunches and dinners there definitely are future Nobel Prize winners..."



Vladimir Golovner, editor in chief.
Chemistry teacher, Honored teacher of Russia

"Every time I took a comment and then checked the badge, it was either Boris Stolz or Lautaro Vogt or Josephine Pratiwi or Filip Kozlina – again and again! They appeared in



Lena Brandt, content director.
Works for SPN Ogilvy Public Relations

Catalyzer a dozen times, as if they were magnetizing all our team. I finally came up with a theory that all people have different chemical reactivity and it can be measured!"



Ivan Afanasyev, art director.
Independent photographer and designer



Lena Yudina, reporter.
Moscow State Linguistic University student

"Guys, thank you for your patience regarding my "what have you discovered today". I know it was hard and I appreciate it!"



Zoya Vysotskaya, reporter.
Russian Presidential Academy of National Economy and Public Administration student

Meet Russian Chemists



Dmitry Mendeleev
(1834-1907)

First steps in chemistry

Mendeleev recalled that as a child he was fascinated by glass blowers. Later on he would surprise his colleagues with being able to make his own glass equipment.

Contribution to chemistry

Mendeleev is definitely the most famous Russian chemist. In 1869 he discovered one of the fundamental laws of nature – the periodic law. With the help of it he predicted eleven elements, five out of these predictions came true.

In 1860 Mendeleev discovered the critical temperature. In 1874 derived the general equation for the state of an ideal gas (Mendeleev-Clapeyron equation). Stated the hydration solution theory, created the smokeless gunpowder. Published the textbook on "The Fundamentals of Chemistry" that several generations of Russian chemists were taught by.

Interests

Took interest in economics. Mendeleev was one of the authors for the Customs Tariff of Russia (1891). He was one of the first in Russia to carry out a flight in a hot air balloon (1887) to observe a solar eclipse. Drafted an icebreaker to wrestle through the ice of the North Pole (1902). Developed the principles of using mineral fertilizers to increase soil fertility. Founded the first Metrology Institute in Russia.

Quote: "You can't look for anything, either mushrooms or any correlation, without approaching and trying".

Vadim Eremin, coordinator
Professor of Chemistry Department,
Moscow State University

Anastasia Grigorieva,
translation editor



150 Years
Science For A Better Life



Contacts

45th IChO web-site:
www.icho2013.chem.msu.ru

45th IChO secretariat:
info@icho2013.chem.msu.ru

Catalyzer team

Lyudmila Levina
Vladimir Golovner

Ivan Afanasyev
Lena Brandt
Anastasia Grigorieva

Lena Yudina
Zoya Vysotskaya