

# Catalyzer



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## ***“If young people talk to each other they will never fight against”***

*Manfred Kerschbaumer (Austria), President of the Steering Committee of the IChO*

All exams finished yesterday. Nothing can be changed. But I hope that everyone coped with tasks, showed all the knowledge they had and did their best. I hope everything was smooth and you will always be the best, the fastest and will always win!

– *Why does the theoretical tour go after practical? In many cases, the order is reversed.*

– You are right – usually, the theoretical exam is the first part. But there is a historical explanation! In 1990 in Paris we had very difficult and long theoretical competition. The students were disappointed, frustrated and didn't like Chemistry Olympiad at all! So the main argument is to save the interest! The second argument is timetable. On the first day we had an Opening Ceremony and a Lab inspection. After that we discussed the practical part and next day translated it. And when translation of theoretical part began, nobody went to sleep the whole night! Practical part is shorter, so the International Jury has changed the order of parts. Some changes we had in 2002 in the Netherlands: mentors discussed theory and practice at once and then they had the whole day for translation. But the system when the practical exam is at the head works and I think we will save it for years.

– *Are you satisfied with the level of tasks?*

– The level of practical part is OK. The level of theoretical one is rather high. There are a lot of interesting but difficult tasks. However, this is the International Olympiad and the level of theoretical questions should be comparable with practical ones. If to look at previous Olympiads that were 10-15 years ago the level has been changed, especially in the field of practical competition. These changes have appeared because of modern methods we invented in chemistry. The theory has also been changed - first of all in the volume of the texts. 20 years ago the whole set of theoretical tasks concluded 10 pages with 5000 characters, now we have 25 000 characters!



– *What is the main goal of such an event for you?*

– A lot of young people get together. We connect them with each other. We help them to communicate with people of other cultures and languages. They have one thing in common, one thing they can easily talk about – chemistry. It will help them to learn how to develop and change a subject. And if young people talk to each other they will never fight against. I think it is the main goal of such an event.

– *What is the main function of Steering Committee?*

– The International Steering Committee was found in 1992 because the number of countries-participants was so big that it was impossible to discuss problems with such amount of people and find a solution. Furthermore, the majority of mentors aren't native English speaking persons, and our communication is in English. So today we have a small group of 14 members from different countries: Russia, Austria, Denmark, Hungary, Germany, Slovakia, Ireland, Australia, United Kingdom, Korea, China. They know English and we can prepare proposals to Jury (for all the mentors) for voting and decision. May be, we will also help to solve financial problems in the future.

*to be continued on the page 3*

***Hard work has done. Congratulations!***



***Everybody knew that it was not allowed. Only one didn't.  
And he was the one who made a discovery. A. Einstein***



## Dialogue with mentors

### Diana Piano, Portugal

-What are the difficulties you are facing while translation?

-Yes, there are some of them, because we are Spanish-speaking country, but we are in a close touch with the team from Spain and they help us.

-What are your functions as mentors?

-We translate the tasks and the works, check them and if there are different views on the result, we discuss it with mentors of Russian team and usually come to the compromise. If everything is the same, that's no problem.

-Do the parents call you often, because their children can't ring them?

-No, really not so often. On the one hand, they were prepared to this situation that the mobile phones would be taken. On the other hand, they trust us and they are sure that their children are safe and happy.

### Noorsaadan Abd. Rahman, Malaysia

-Was it difficult to translate the tasks for you or not?

-No, personally for me it wasn't. The only difficulty is that I'm not an expert in all branches of chemistry (I'm teaching organic synthesis and drug design), so sometimes I took advice of some more experienced people in this area.

-Are the parents worrying about their children, because they are so far away from home?

- Yes, of course, they are worrying in the case of such competitions, it's



very important to get a moral support from your relatives. About the safety of their children - no, they aren't.

### Galina Shevtsova, Peru

-Galina, your name sounds quite Russian for us.

- Yes, I'm originally from Russia. I graduated Moscow State University in 1970, we were the classmates with Valery Vasilyevich Lunin, then, at the same department (Petroleum Chemistry and Organic Catalysis) we graduated the post-graduated scholarship. I got my PhD in 1973 and Valery Vasilyevich, I don't know exactly.

-How many years are you in Peru?

-About 30 years.

-Did Moscow changed from your last visit to Russia?

-Yes, certainly Moscow has changed a lot for recent time: new buildings, good roads, luxurious hotels and restaurants. But I'm an often guest in Moscow, I come here about twice a year.

### John Kotz, USA

-Do you have any difficulties with the translation?

-Oh, no. We are speaking American English, it differs in some ways, but not so much. The only difficulty is that the tasks are very difficult. But for us it's not a problem.

-Are you satisfied with the level of the tasks?

-We are satisfied with the level of the tasks and the level of our team.

*Maria Nefedieva*

-Do you like Moscow? What has changed since your last visit?

- I like Moscow! I was here in 1996 as a Mentor of 28th IChO for the first time and twice this year: in December – with other members of Organizing Committee for Jury Meeting of 39th IChO and now – when 39th IChO has been opened. For these 10 years the city has changed greatly. The number of cars, traffic jams and people on streets have increased. But I like it. The first day after translation work I went to the Red Square by metro. My biggest impression is the Kremlin and Diamond Hall where I was this

December. Basket full of diamonds! 10 kilos of diamonds! I have never seen anything like that! And I would like to go to St. Petersburg, I have never been there. Also I like Russian cuisine – vodka, "borsch" – I have tasted it! As for Russian people – it is a big difference between the new generation and elderly people. I think it is very difficult for them to start, to find a place in the new time. I know these people personally, they are very good people, and Mr. Lunin of course! I'm glad to get together this year in Moscow!

*Maria Kokhanova*

## Best of the best

*The nose of chemist, who works in a big laboratory, runs the danger of serious trials. Because, some of the matters even in a negligible proportions can turn people out of the room. Which matters are the most disgusting for our nose and which disturb it more than other chemical substances?*

## Well, it is a real stinker!

Thiols or mercaptans R-SH (the second name of these compounds tells on their opportunity to join the mercury) have one of the most disgusting smells. To the natural gas, which usually burns in the stove on our kitchens, it is accepted to add small quantity of the substance with very strong smell, for example, isoamilmercaptan  $(\text{CH}_3)_2\text{CH}-\text{CH}_2-\text{CH}_2-\text{SH}$ , to identify the gas escape at home. Indeed, people can feel the smell of this compound in the quantity of two trillionth part of gramme!

Mercaptans add a smell to the extremely stinking secretion of skunks, which are named stinker. But there are smells even worse...

In the Guinness Records Book it is proclaimed the most stinking substances – ethylmercaptan  $\text{C}_4\text{H}_9\text{SH}$  and buthylselenmercaptan  $\text{C}_4\text{H}_9\text{SeH}$ . Their smells

remind “aroma” combination of rotting cabbage, garlic, onion and sewage at one time. In the book of the famous Russian scientist-chemist A. Chichibabin “The base principles of the organic chemistry” it is said that the smell of mercaptans – is one of the most disgusting and strong smells, that can be met among organic matters...

Nevertheless, the record of sensitiveness belongs to the compound with pleasant smell. This substance – vanillin, its presence in the air can be felt with the concentration  $10^{-11}$  gramme in a liter. However, this record has been beat lately. The new recordsman - so-called vinous lactone, that as the Swiss chemist H. Gut showed in 1996, gives to red and white wines the sweetish coco aroma. Our nose is able to feel this substance with the concentration 0,01 picogram in a litre of air.



## Lessons in Russian

Boy – мальчик [malchik]  
Girl – девочка [devochka]  
Beautiful – красивый [krasivi:j]  
Ugly – ужасный [uzgasni:j]  
Stupid – глупый [glupi:j]  
Clever – умный [umni:j]  
Funny – забавный [zabavni:j]

Sleep – спать [spat]  
Together – вместе [vmeste]  
Speak – говорить [govorit]  
Tasty – вкусный [vkusni:j]  
Tea – чай [chaj]  
Juice – сок [sok]  
Water – вода [voda]

## Call

Police - 02

Fire station and ambulance - 911

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## Tomorrow program Sunday July 22th

8.00 – 8.45 Breakfast, Olympiets

9.00 – 13.00 Paintball and “Adventurer” game

13.00 – 14.00 Lunch, Olympiets

14.00 – 18.00 Free time, sports activities

18.00 – 19.30 Dinner, Olympiets

21.00 – 23.55 Disco

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