



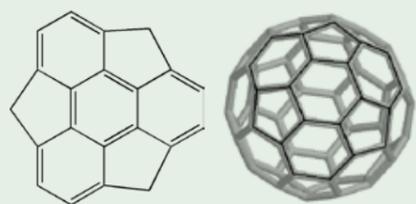
## Today's programme

| Students    |                                       | Mentors and Scientific Observers |                                     | Guests      |  |
|-------------|---------------------------------------|----------------------------------|-------------------------------------|-------------|--|
| 07:00-08:30 | Breakfast                             | 07:00-09:00                      | Breakfast                           | 08:00-09:00 | Breakfast                                      |
| 09:00-09:30 | Walk to the Grassalkovich Manor House | 08:00-                           | Translation of the Theoretical Exam | 09:00-18:00 | Whole day program in the Hungarian Great Plain |
| 09:30-12:00 | Team games - Theme games              | 13:00-14:00                      | Lunch                               | 18:30-19:30 | Dinner at the hotel                            |
| 12:00-12:30 | Walk back                             | 18:00-19:00                      | Dinner                              |             |  |
| 12:45-14:00 | Lunch in Gödöllő                      |                                  |                                     |             |  |
| 14:00-17:00 | Interactive costume play              |                                  |                                     |             |  |
| 17:00-19:00 | Free time                             |                                  |                                     |             |  |
| 19:00-20:00 | Dinner                                |                                  |                                     |             |  |

## Molecule of the day

Sumanene may not appear a very exciting compound at first sight. However, a closer look at this aromatic molecule reveals that it is a fragment of buckminsterfullerene, C<sub>60</sub>. The molecule is bowl-shaped with a bowl depth of 118 pm. Its name was derived from the word *suman*, which means 'sunflower' in both Hindi and Sanskrit. Sumanene itself and other similar compounds may be very important in the rational synthesis of fullerene derivatives. (*Science*, **2003**, 301, 1878)

(Lente Gábor)



## Useful expressions

A copper angel whistling on a willow tree

His/Her sons' things

For your repeated pretending that you are unprofanable (longest non-compound word)\*

What are you frying little furrier, are you frying salted meat little furrier? (tonguetwister)

You committed this fake crime (tonguetwister)

Our translation is ready

We finished printing

I'll go back to my room

A fűzfán füttyülő rézangyalát

Fiaiéi (most vowels in a row)

Megszentségteleníthetetlenlégeskedéseitekért

Mit sütsz kis szűcs, sós húst sütsz kis szűcs?

Te tetted e tettetett tettet

A mi fordításunk kész

Végeztünk a nyomtatással

Visszamegyek a szobámba

## Curiosity of the day

Cold welding is an interesting phenomenon: clean, flat surfaces of a given metal strongly adhere when brought into contact under vacuum. In your opinion is it an exothermic or endothermic process? Is it a chemical process? How does the entropy change during the process?

## Three good ways to get thrown out from a chemistry laboratory

1. Pretend that an electron got stuck in your ear and insist on describing the sound to the others.
2. Pop a paper bag at the crucial moment when the professor is about to pour sulfuric acid.
3. Deny the existence of chemicals.

(collection of J. Verhagen)

## Weather

We are looking forward to another unpleasant windy and rainy day. So wear your sweaters and carry an umbrella with you wherever you go today.

## Colophon

## Catalyzer

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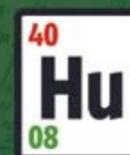
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40th International  
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## Catalyzer

Issue No. 6 – Wednesday 16 July 2008

## You know you are Hungarian...

- » when feeding your guests is your main priority even if they claim they're not hungry and in which case you get slightly offended/upset that they don't want your hospitality.
- » when you know that "a copper angel whistling on a willow tree" is actually a profane expression!
- » when you use fruit to make soup.
- » when you tend to feel sorry for yourself for no particular reason and complain a lot.
- » when you know that the "goulash" you see in many restaurants has in fact little/nothing to do with the gulyásleves we really eat.
- » when meeting another Hungarian in a country outside of Hungary is amazing.
- » when you love Túró Rudi but can't really explain to foreigners what the hell it is until they try it.
- » when you have a funny accent in every other language you speak.
- » when you call a 79 km long lake (the Balaton) the Hungarian Sea.
- » and you are able to swim across it!
- » when your language has two words for love.
- » when you have a name day and no foreigner understands what that's good for.
- » when you can't type on an English keyboard because y and z are mixed up.
- » when you believe that all geniuses and celebrities have some relation with Hungarians. Or they just simply are Hungarians.
- » when Winnie the Pooh and The Flintstones is actually much funnier translated into your language than the original.
- » when you know that all parts of a pig are edible, and it takes only half a day, some friends from the countryside and 2 litres of pálinka to prove it.
- » when it surprises you again and again, how much more impressive and chiselled the Hungarian translations of most non-Hungarian poems are than the originals.
- » when you can make astonishingly delicious dishes without spending more than 3 euros (krumplisztészta, káposztástészta, túróstészta).
- » when you can (actually) pronounce gy, as in "hogyan" – and not say hogané.
- » when friends/family celebrate your birthday by pulling your ears.
- » when there is thermal water or a spa in your hometown or very close to your hometown.
- » when people from all over the world keep on asking you if you understand anything from the Finnish language.
- » when someone says that Hungarian "is like Russian and all those other Slavic languages" and then you have to go into great detail about the origins of Hungarian with a scolding history lesson.
- » when you know why the bells of every church ring every day at noon.
- » when there's a Petőfi, a Széchenyi, and a Kossuth street even in the most backward settlement. And you can get anywhere in Hungary just by consistently following Kossuth street through every town you go through.
- » when you are having a hard time explaining to foreigners that actually when you write or say your name, your family name/surname comes first.
- » when having a barbecue means roasting lard on a stick and dripping the grease on bread.
- » when you think bread, lard and pálinka is a balanced meal as long as you also have onions.
- » when you live abroad and wander around in a bookstore, you very frequently end up in the travel section, longingly staring at the photos of an unbelievably gorgeous Budapest (or whichever city you are from).



## The three trials – fairy tale

### Part 1

Once upon a time there was a flourishing kingdom called Chemilia. Its king was very old and to his deepest sorrow none of his three sons, Nicholas Calculus, Andreas Historicas and the smallest Marcus Literatus, was willing to take over his sparkling ruby crown. In his despair the king finally decided to find an heir to his throne in a sensational competition.

So he sent out many carts to all the countries in the world to bring every youngster brave and clever enough to stand his trials to the kingdom of Chemilia. The cart called Hydrogen went to America and to the far-lying Asia, the others went to other parts of the world, but there was so many of these carts that no sane earthly carbon-based creature would be able to remember them all. The courageous youngsters came in amazing amounts. I daresay there were more than  $10^{21}$  moles



of them.

The competition was opened on bright Sunday morning in the fancy sparkling theater of Chemilia with the following words of the king: 'My dear children I am here to call you for a contest. The bravest and the most clever who can stand my

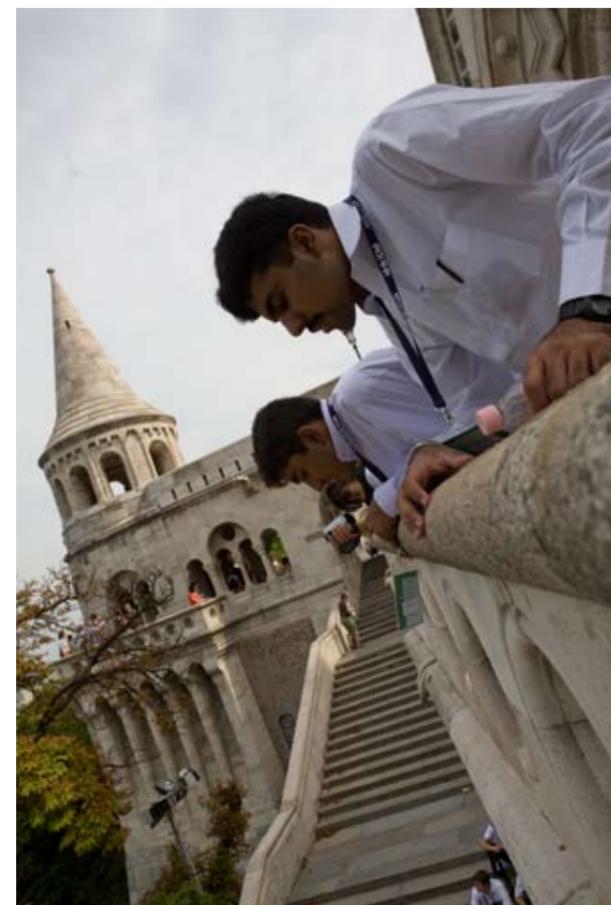
three trials will be awarded a medal of Au and will get the right to rule over all the four provinces of my kingdom; Organica, Inorganica, Physico-chemica and Analytica; and also over the treasure island called Quantummechanico on the sea of  $H_2O$ . Now listen carefully because I am going to tell you what my three trials are. The first one will be easy, you will have to explore my country with help the green elves called Guides. If you are ready with it you will have to face the second trial which is much harder than the first one, you must defeat Bunsen Burner the dragon and after that learn to work with two original inventions of Chemilia, the burette and the pipette. All I have to say to you is be very punctual and precise with them. Those who stand these trials can go for the last and hardest one, in which you have to show how clever and smart you are by answering my tricky questions. So all I can wish you is good luck and a fair contest.'



Thus the competition started. All the youngsters stood the first trial easily, they explored beautiful Chemilia in two exhausting days with the help of the Guides, the diligent green elves, and were ready for the second trial. On the day of the second trial the brave youngsters were taken to the cave of Bunsen Burner, the dragon in soaking downpour, and dressed up in their white lab coat armor and glasses they gloriously defeated the dragon. After that they found the Chemilian inventions hidden deep down in the cave and- remembering the king's admonitory words- started to work with them precisely and punctually. They stood this trial too and contented with their victory waited for the third one...

...to be continued

(Darvas Mária)



## Did you know...

that Wigner Jenő (Eugene Wigner), the famous Hungarian physicist, who developed the theory of symmetry in quantum mechanics as well as achieving brilliant results in nuclear physics (Nobel Prize, 1963), graduated as a chemical engineer at the Technical University of Berlin? If not, do not worry, you are not alone. Wigner was the chief designer of the first working atomic reactor which was constructed in Chicago in collaboration with DuPont. At a meeting during the project one of the DuPont engineers told him: "Dr. Wigner, you tell us all about nuclear physics; we are chemical engineers, we'll do the rest." "Gentlemen", - Wigner replied - "you are greatly mistaken; I am a chemical engineer too; I have my diploma from the Berlin Institute of Technology." Indeed Wigner contributed essential ideas to the design of the reactor even at the price of personal friction with DuPont. In fact, the extraction of Plutonium and reactor cooling required considerations involving both conventional chemical engineering and nuclear physics.

## ...and that...

the famous mathematician, John von Neumann who contributed to computer science, economics, game theory, quantum mechanics and various fields in mathematics was in fact a chemical engineer? He obtained his diploma at the Technical University of Zurich, because his father had insisted that he had to get a university degree in a field more profitable than mathematics. Nevertheless, the young Neumann obtained another degree in maths in the same year but in Budapest. He then continued his sparkling mathematical career in various fields. You might wonder if his "chemical" years in Zurich held him back from pursuing his math career. No, you can stop worrying. In Zurich, he only attended the university at the end of each semester, just to sit for the exams. Due to his excellent memory he passed them easily. He spoke five languages (Hungarian, French, German, Latin, Classic Greek) at the age of ten, he could quickly memorize a page from a telephone book and recite the numbers and addresses. His ability to perform lightning fast calculations was legendary: it was said that he could check the calculations of the first computers by performing the same calculations in his head.

(Stirling András)