CATALYZER

Journal of the 35th International Chemistry Olympiad

11 July 2003 **Athens – Hellas** **Issue No. 7**

Editorial

No more exams!!! The final test is over… We are looking forward to the results. Students are visiting today the Aluminum Factory at Viotia and Delfi one of the most important archeological sites of Hellas and without exaggerating of the whole world, since it was known to be the "omphalos" of Earth. According to the myth, two eagles had been released by Zeus from opposite ends of Earth and following great flights across the skies they finally met at Delphi.

Some mentors are marking the examinations and some others are going shopping.

In this issue you will have the opportunity to read comments from the students on the theoretical exams and, since you asked for it, we are coming back with more of "a little bit fun".

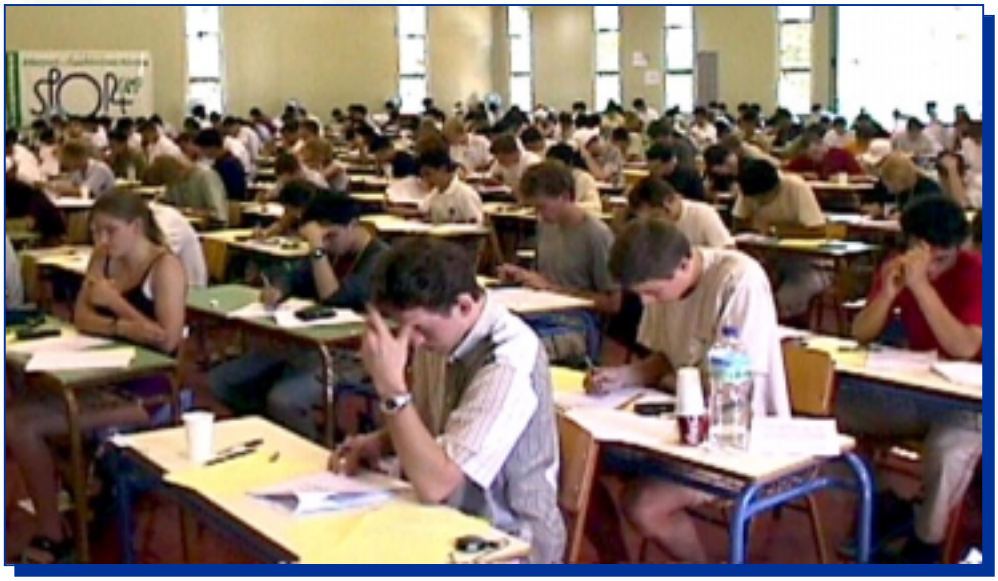
What's on a professor's mind?

The philosophy was to teach the students a few things and make them think and prove that chemistry is a mixture of many-many things. Of course we tried very hard for all of the scientific tasks to have prototypical component insight. I would like to admit that some of the scientific tasks of the section B, the physical chemistry section, are rather harder than the other sections. But it just happened, it was not intentional. That is the way physical chemists are thinking. Physical chemists are more close to physics, so of course things like that are projected through the difficulty of the scientific tasks.

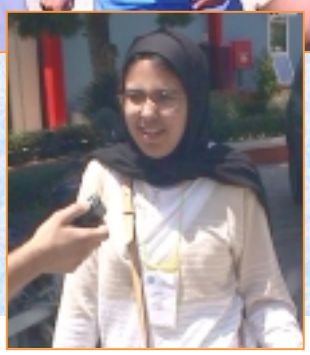
Professor Aristides Mavridis
Department of Chemistry, NKUA

We chose a problem in Kinetics, because we believe that Kinetics is very important in Chemistry and in every other area of Science and also we chose a subject on Aluminum, because Hellas is producing Aluminum. So, we wanted to give a question on a problem, which refers to a product of Greece.

Associate Professor Athina Petrou
Department of Chemistry, NKUA



How did you find the theoretical tasks?



A nice exam of moderate difficulty. Big thanks to the organizers for making all happen.

Georg Zhong (Australia)

It was a beautiful exam. In order to make it, you had to know chemistry.

Kenny Bravo (Cuba)

I think it was easy and we should do everything very carefully.

Yan Zhou (China)

The exam seems very exhaustive, but also fair. It was creative and original.

Joel Yuen Zhou (Mexico)

The test didn't surprise me, but I'm not going to make any predictions about the results.

Helga Dogg Flosadottir (Iceland)

It wasn't impossible to solve. Too many tasks for five hours. The first task was too long and maybe the physical chemistry questions were the most difficult ones.

Aldena Saric (Croatia)

They were too many and there was the problem of running out of time.

Velisarios Masouras (Cyprus)

It was very easy. The medal depends on the practical exam. Physical Chemistry problems need work, but the organic part was very easy. It was a bit tight for time. The multiple choice questions were very easy apart from one or two.

Vikram Balasubramanian (India)

It was ok. The most difficult part was the physical chemistry one and still the most interesting. They were much more tasks than Gronigen.

Aliaksei Putau (Belarus)

They were easier than the previous years. They were too many, but also easy. The Physical Chemistry part was the most difficult.

Evgeny Beletsky (Russian Federation)

I think it was quite difficult. Some parts were ok, but other were more difficult.

Franziska Bell (Austria)

I thought that the exam was difficult, because there were questions that we never learned at the school. They were very difficult questions, especially the organic part.

Andre Ramos (Portugal)

I tried to do my best. The organic part was very difficult.

Hussein Nijem (Kuwait)

It was difficult, especially the organic part.

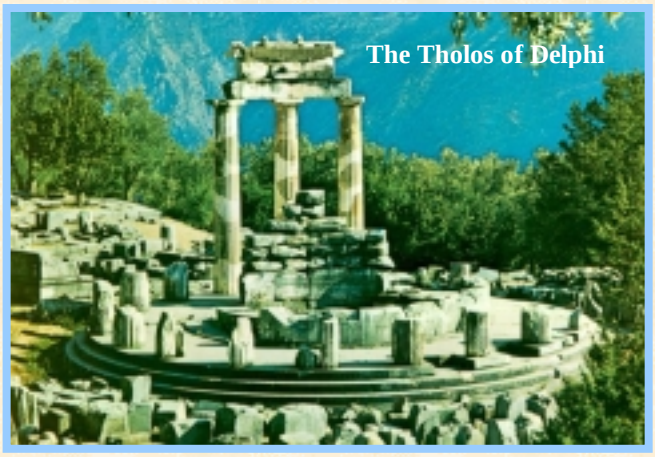
Carlos Oliveira (Portugal)

I didn't find them very difficult.

Anton Menshenin (Russian Federation)

The Temple of Delphi

Located about one hundred miles northwest of Athens is the ancient site of the Delphi. The complex of buildings, which includes the Temple of Apollo, The Tholos, and the Castalian Spring, is nestled in the forested slopes on the south side of the sacred mountain called Parnassus.
According to the earliest legends the site was originally a sacred place of the earth goddess Gaia and was guarded by her daughter, the dragon Pytho. Later legends state that Delphi was the center of the world as determined by the god Zeus. A still later legend relates that Apollo, the son of Zeus, came from his home atop Mt. Olympus to Mt. Parnassus to kill Pytho and to violently claim the site. Later repenting of his crime, Apollo purified himself and, returning to Delphi, persuaded Pan (the goat-god of wild places and evocative music) to reveal to him the art of prophecy. Upon the site of his battle, Apollo erected his own oracular temple and, at the exact place where he had 'speared' the dragon, an omphalos stone was set in the ground.


The Tholos of Delphi

a chemist and a toxicologist teamed up to produce a wealth of evidence suggesting that the ancient legends had in fact been accurate. The region's underlying rocks turn out to be composed of oily limestone fractured by two hidden faults that cross exactly under the ruined temple, creating a path by which petrochemical fumes (methane, ethane and ethylene) could rise to the surface to help induce visions. In particular, the scientists found that the women communing with the oracle probably came under the influence of ethylene - a sweet-smelling but psychoactively potent gas - once used as an anesthetic.
The priestress was called Pythia and she answered questions regarding the future once a month, for nine months each year. The answers, interpreted by male priests and then spoken in verse, proved so accurate that the Delphic oracle came to exercise enormous political and social influence in the Greek empire for nearly one thousand years. However the oracles were most of the times equivocal. For a variety of reasons the


The Theater of the sanctuary


The altar of the Chians

Many archaic accounts of Delphi relate that the oracular priestesses, known as Pythia, sat upon a chair situated over a fissure in the earth from which emanated trance-inducing vapors.
Until recently this matter was considered to be a fabrication from post-Delphic times. During the late 1990's however, a geologist, an archaeologist,

Delphic oracle was in decline by the 1st century AD and the last recorded oracle was in 362 AD. The arrival of the new god of Christianity signaled the death knoll of the ancient Greek oracle shrines and Delphi was abandoned to the elements.

Eva Karatairi, Student, Department of Chemistry, NKUA

A little bit fun…

Chemist's last words

• And now the tasting test...
• And now shake it a bit...
• In which glass was my mineral water?
• Why does that stuff burn with a green flame?!?
• And now the detonating gas problem.
• This is a completely safe experimental setup.
• Now you can take the protection window away...
• Where do all those holes in my kettle come from?
And now a cigarette...

If you're not part of the solution,
you're part of the precipitate!

A physicist, a biologist and a chemist were going to the ocean for the first time.
The physicist saw the ocean and was fascinated by the waves. He said he wanted to do some research on the fluid dynamics of the waves and walked into the ocean. Obviously he was drowned and never returned.
The biologist said he wanted to do research on the flora and fauna inside the ocean and walked inside the ocean. He, too, never returned.
The chemist waited for a long time and afterwards, wrote the observation, "The physicist and the biologist are soluble in ocean water".

Program of the day

Students

6:30-7:30	Breakfast at SC
8:00-20:00	All-day excursion to Aluminum factory and Delphi
20:00	Dinner at SC

Mentors

8:00-9:00	Breakfast at Hotel
9:00-13:00	Marking examinations & Free Morning for Shopping
13:00-14:00	Lunch at Hotel
17:00-20:00	Special Anniversary Meeting at Evropi Conference Room (President Hotel)
20:00	Dinner at Hotel

Contact for Information

Assoc. Prof. A. Tsatsas
National and Kapodistrian University of Athens
Department of Chemistry, Inorganic Chemistry Laboratory
Panepistimiopolis 15771 Athens, Hellas

Tel.: +30-210-7274339
Fax: +30-210-7274782

e-mail: 35icho@uoa.gr

Editorial Team

Dr Anthony Bobetsis
Councelor of Chemistry, Pedagogical Institute

Patrina Paraskevopoulou, Christodoulos Makedonas and Constantinos Menidiatis
Inorganic Chemistry Laboratory, Department of Chemistry, NKUA