

# catalyzer



Journal for the 36th International Chemistry Olympiad | Kiel | Germany | 18–27 July 2004

Una Cariñosa  
Krou keigirizger  
Bienvenida  
Bine ați venit  
Hartelijk welkom  
Bienvenidos  
أهلاً وسهلاً  
Bienvenue  
Добро пожаловать  
DOBRODOŠLI  
Добро пожаловать  
Hjertelig velkommen  
Un caloroso Benvenuto  
a Tutti!  
Сардэчна вітаем  
தல்வதா  
热烈欢迎来到基尔  
Dobro ponacajete  
به امید دیدن خوش آمدید  
Üdvözlünk benneteket  
Hjærtligt velkommen  
Serdecznie Was witamy  
Горэчліва ўдзівіма  
Hos Geldiniz  
Щастяливо прощемо  
Tervetuloa  
Céad Míle Fáilte  
Sređine naš milane  
Hjertelig velkommen

# Welcome to Kiel

ÇoK Kõş geldiz  
Зарабейце! У аўгусту доўжыце  
진심으로 환영합니다.  
Sirsniigi sveicam  
Verð innilega velkomin  
Καλώς ήρθατε  
TERE TULEMAST



© LiStadt Kiel/Okon

## Kiel

*Host of the 36th International Chemistry Olympiad*



Kiel embraces the sea both geographically and emotionally. Residents would not want to miss the view of the big ferry boats in the middle of town, the huge cranes overtopping the docks, nor the beaches within easy reach.



Water is the characteristic element for Kiel, the fjord its center-piece. For centuries people have built on Kiel's maritime strength. Its harbour, its shipyards, its marinas are among the town's landmarks. Since its foundation in 1233 Kiel has been an economic center between Danish towns in the North and the river Elbe in the South, between the Baltic in the East and the North Sea in the West. The »Kiel Canal«, the world's busiest artificial waterway, connecting the two seas, has its eastern gateway in the shiplocks of Kiel-Holtenau.



One yearly highlight is the »Kiel Week«, a mix of sportive, cultural, political and fun events, the biggest summer festival in Northern Europe with myriads of guests from all over the world. For the World Sailing Association, Kiel Week is the »Mother and Father of all Regattas« with roots back to a race in 1882. Accordingly Kiel hosted the Olympic sailing competitions in 1936 and 1972 and has won a reputation as »Kiel.Sailing City!«.



Higher education is an asset for Kiel.

Some 30,000 students are enrolled at the Christian-Albrechts University (founded in 1665), the Polytechnic and the Muthesius Academy for Art and Design. The Medical School of the University, the Oceanography Institutes, the Institute for World Economics, and the Institute for Science Education all enjoy outstanding international reputations. The Educational Faculty of the University will be the venue of this year's IChO-competition.



Kiel has quite a varied history. Its inhabitants have lived under Danish, Austrian and Prussian rule. Duke Peter, born in Kiel Castle, became the Russian Tsar Peter III. In 1918 the Kiel naval mutiny led to the end of the monarchy and the first German democracy, the Weimar Republic. Towards the end of the Second World War the town, having been an important naval base, was almost totally destroyed.

With currently 240,000 inhabitants, Kiel is the state capital of Schleswig-Holstein and the centre of the K.E.R.N. economic and cultural region, which includes the neighbouring towns of Eckernförde, Rendsburg, Neumünster and Plön. But Kiel has more than regional interests. After the political changes of the recent past it is now again reaching out to its neighbours along the Baltic coast, as it has done for centuries before.



## Bordesholm

*Your home for the next 9 days*

Bordesholm is embedded in a landscape that was moulded by glaciers and boulders during the latest ice age. Hills, woods, meadows and lakes interspersed with little villages characterize the region.



© Johannsen

People have always been attracted to this harmonious piece of land. Early settlements can be traced back almost 10 000 years. In 1330 Augustinian monks came to build a monastery on a peninsula in the lake. The minster alone has withstood the gales of history.

Another landmark of Bordesholm is the 650 year-old linden tree. For centuries court hearings were held under its shadowing branches. Even today, although now a touristy event, court is held once a year in the traditional dialect of the region – followed by festivities.



© it-innovation team



© Johannsen



© it-innovation team



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The wealth of the monastery allowed founding and maintaining a sovereign school. This became the foundation of the University of Kiel, when duke Christian Albrecht had it transferred in 1665 – professors, library and all.

Today Bordesholm is a rural center with administrative offices, shops, schools as well as cultural and social facilities. One of the largest institutions is the »Verwaltungsakademie«, a boarding school for civil servants for the state of Schleswig-Holstein. This is your residence for the next few days. Modern furnishings and recreational facilities are set to make it a pleasant stay. Should you wish to use your muscles rather than your brain for a change, you will find a sports ground, and there is always a hop in the lake.

### Today's programme Monday July 19th

#### Guests

- 10.00 Opening Ceremony → CAU Audimax
- 12.15 Lunch
- Sightseeing tour in Kiel

#### Mentors and Scientific Observers

- Breakfast → Hotel
- 8.00 – 9.00 Late Registration → Hotel Maritim
- 9.00 Departure for Kiel University (CAU) → Hotel Maritim
- 10.00 Opening Ceremony → CAU Audimax
- 12.15 Lunch → CAU Mensa 1
- 14.00 Laboratory Inspection → CAU Anorg. Chemie
- 15.00 – 16.00 Buses to the Hotels → every 15 mins.
- 16.30 – 17.30 Buses to the University → every 15 mins.
- 17.00 – 18.00 Consultation with the Authors → CAU Olshausen 75
- 18.00 Buffet → CAU Olshausen 75
- 19.00 1st Jury Meeting → Lecture Hall No.3
- 23.30 Buses to the Hotels

#### Students and Guides

- 7.00 Breakfast → Student Hostel
- 8.30 Departure for Kiel University (CAU)
- 10.00 Opening Ceremony → CAU Audimax
- 12.15 Lunch → CAU Mensa 1
- 13.30 Departure for Kiel Harbour
- 14.00 Kiel Rallye → Hörn Campus
- 18.00 Departure for Bordesholm → Ostseekai
- 19.00 Dinner → Student Hostel
- 20:30 »Welcome to Germany« → Student Hostel



*The organizing committee (of which these are a few) has worked hard to prepare the ICh*

*Everything is ready and waiting for you...*



*...and now you are here. We hope you had a good trip.*



*Happy birthday Miguel Angel Torrente Marchante of Spain (yesterday) and Maria Isabel Tenorio-Bernal of Mexico (today)!*

### In Case of Need

Police 110 / Emergency 112

### Head guides

0171/281 93 60 and 0177/541 44 01

### Student Hostel

Verwaltungsakademie Bordesholm  
043 22/69 35 40  
Heintzestr. 13, 24582 Bordesholm

### Lost and found

Ana Schanze, Room 320 b;  
0176/23 12 19 56

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Angela Koch 0177/541 44 01

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### Mentor support

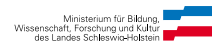
Wolfgang Buender 0170/691 18 48

### General questions

Monika Barfknecht 0162/366 28 86



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### Today's weather

Muggy until noon with chances for an occasional shower, possibly even a little thunderstorm.

Then the wind will turn to NW to bring dry and somewhat cooler air.

At the beginning of the Kiel Rallye you may want to run for shelter now and then.

Later we expect sunny stretches with temperatures around 20 °C (68 °F). The evening will be mild and dry with 15 °C (59 °F) at night. Water temperature in the lake at Bordesholm is 17 °C (63 °F).

### Impressum

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## Monday, 10:00, Auditorium Maximum of the University of Kiel:

260 participants plus their mentors and numerous guests from 65 different nations were welcomed by Prof. Reinhard Demuth, the President of the 36th IChO, and Dr. Hellmut Körner, the Undersecretary of Schleswig-Holstein from the Ministry of Education. One after another the teams together with their guides were presented in the spotlight. The last speaker was Prof. Henning Hopf, the president of the German Chemical Society, who outlined the successful history of the Chemistry Olympiad. But he also expressed his concern about the permanent underrepresentation of African states. In the end he encouraged the Olympians to pursue a career in the fascinating field of chemistry. The exciting background music for the Opening Ceremony was provided by the Percussion Ensemble of the Studienseminar Kiel.





## Kiel Rallye



Yesterday the teams headed for Kiel to explore the city and its sights. They had to complete a challenging questionnaire from "Geo Step by Step" while wandering from the southern tip of the fjord over the folding bridge, passing the town hall and finally into the Hiroshima Park.

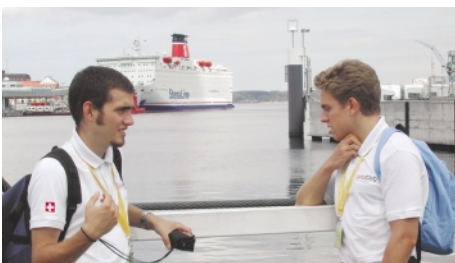
*„It wasn't very hard and a good way of exploring the city“.*

Vibhav of India



*„A new way of sightseeing, not as boring as usual! Kiel is a very interesting city.“*

Team Croatia



*„Kiel may be nice for studying or shopping. Some of the questions were nice, others could only be estimated. Unfortunately it was not enough time.“*

Athanasios of Greece

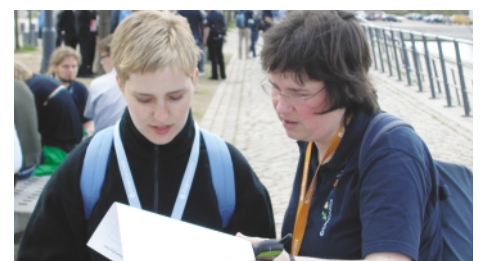


*„In my opinion the teams should have been mixed. So you would not only get to know Kiel but also other participants.“*

Tomas of Czech Republic

*„I liked the beautiful landscape, especially the seaside, and the nice weather.“*

Reza of Iran



## Today's excursion to the North Sea

### A brief introduction

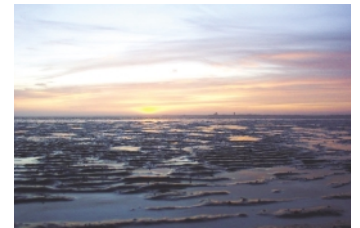
Extending along the coastline of Denmark, Schleswig-Holstein, Lower Saxonia and the Netherlands, the Wadden Sea is a unique coastal landscape with an unparalleled combination of sandbanks, dunes, salt-marshes and islands. It is one of the largest areas of tidal mudflats in the world. One of the special features of



Schleswig-Holstein's Wadden Sea are the "Halligen", small salt-marsh islands lying just above the high-tide mark. The "Halligen" are flooded regularly during spring-tides and stormy weather, when only the "Warften" – earth mounds on

which the houses are built – remain above water. The Wadden Sea is inhabited by an innumerable number of marine mussels, snails and worms as well as several marine mammals.

The Wadden Sea covering a total area of 8000 km<sup>2</sup> is protected in national parks. Mud flats fall dry at low tide, exposing the organisms living there to wind, weather and predators. Adapted to these



extreme conditions, plants and animals have their own strategies to survive. Mussels, for example, close their shells at low tide to prevent desiccation. Worms bury themselves in the mud to escape the beaks of hungry waders. For numerous species of birds, the Wadden Sea is a rich feeding ground and an ideal stopover for migratory species, such as the Grey Plover.

Four destinations are on today's schedule: The "Multimar Wattforum" in Tönning will be visited by all of you, to have the secrets of Schleswig-Holstein's Wadden Sea revealed. Then you will split up into three groups. One will visit the "Seehundstation Friedrichskoog", where abandoned baby seals are fed and prepared for wild life. The second group will go bird watching in the "Katinger Watt", while the third one will take a walk in the mud.

#### Today's programme

Tuesday July 20th

##### Guests

One day in Schleswig  
 Wiking Museum  
 Transfer by boat to the town of Schleswig  
 Walking through the old part of Schleswig with the cathedral  
 Castle of Gottorf

##### Mentors and Scientific Observers

Breakfast → Hotel  
 8.00 – 9.00 Buses to the University → every 15 mins.  
 8.00 – 17.00 Translation of the Practical Exam  
 CAU Olshausen 75  
 13.00 Buffet → CAU Olshausen 75  
 14.00 – 17.00 Buses to the Hotels → every 30 mins.  
 20.00 Dinner → Hotel Maritim

##### Students and Guides

6.30 – 8.00 Breakfast → Student Hostel  
 times to be announced  
 Departure for the North Sea → all-day excursion  
 19.00 Lunch → Multimar Wattforum  
 Dinner → Student Hostel  
 20.30 Safety Instructions → Student Hostel



## In focus: Switzerland

The Swiss team consists of 4 pupils between the age of 18 and 19, of whom Arnould (middle) originates from the French speaking part while Silvan, Kathrin (from left) and Jonas (second from right) come from the German speaking part of the country. Italian, French, German and Rhaeto-Romanic are the four official languages of Switzerland. Their guide Steffi (right) studies chemistry in Leipzig in her first year and keeps her fingers crossed for her team.

### How did your selection process work?

About 30 pupils participated in the selection process. The Chemistry Olympiad is not promoted by schools and teachers. So the participants receive a set of chemical problems to solve at home. The eight best students are invited to take part in a written exam. Four students are selected for the international round and

meet for one weekend to train their practical skills.

### Is the Chemistry Olympiad a well known competition? What are your expectations for the final round?

Unfortunately, the IChO is not very popular among students in Switzerland. That is why the contest is not the most important aspect for us but the get-together with other nations.

### What are your first impressions of Germany?

We left Zurich with sunny 30 °C and now we are here...

### Say a typical sentence in your mother tongue.

"Itz chnorzäd mär a Wörtli wie s'Velöli vom chline Ching oder s'Chnoblachchüechli usem Chuchichäschtle, demit nachher fruschtrierti Kataläiser-Läser öppis zum chnoblä hei.



## Backstage

Uwe and Angela. You have all seen them. They are responsible for your well-being. They take care of you (almost) day and night. Angela Koch is a teacher for Chemistry and English language, but currently employed at IPN to write a



doctoral thesis about bi-lingual science teaching in primary school. Uwe Amthor is a teacher of chemistry and biology, who works halftime at IPN in a research project about the in-service education of teachers.



Happy birthday Jan Lonzaric of Slovenia!

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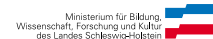
Wolfgang Buender 0170/691 18 48

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Monika Barfknecht 0162/366 28 86



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## Today's weather

Today's weather is a meteorologist's nightmare – very difficult to predict. SW from here a thundery front is waiting to get at us, while a friendly wind from NE keeps it away ... for how long is the question, however. The day starts sunny with high temperatures around 19 °C (66 °F) at the coast of the North Sea. With a little bit of luck you might get back with dry clothes, but if the front arrives ... Take a raincoat! The North Sea has 17 °C (63 °F). How about bringing a swim suit?

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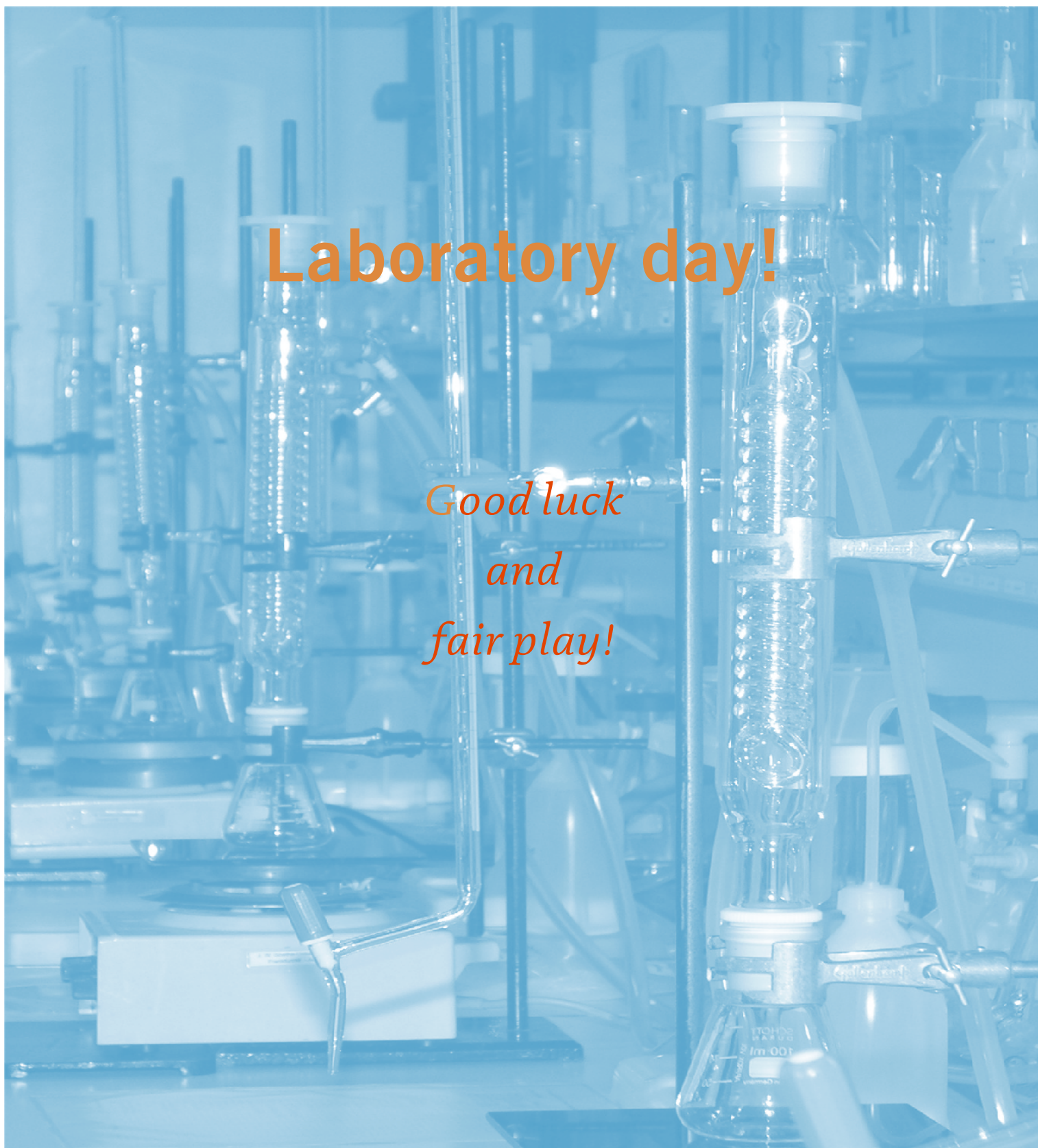
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**Laboratory day!**

*Good luck  
and  
fair play!*





## Visiting the Wadden Sea



Dirty legs, muddy hands and new culinary delicacies - sea grass tastes like salty plastic - were the foundation for a beautiful day in the mud flats. Wading through knee-deep mire, we explored crabs, the famous lug worms, and the world's fastest surf-riding snake.

Our guide showed us, how dangerous the tideland can be. In suddenly rising fog one easily gets lost. We simulated this with blindfolds. None of the "blind" students was able to walk in a straight line. Obviously, in case of an emergency, they would not find their way back to the beach.



Although it was a real nice trip, it's a little pity that everybody returned to the bank with dry and clean clothes ...





## Seals, whales and bird watchers

At the Seehundstation Friedrichskoog we were introduced to the daily work of the station and the seals' living conditions. Normally seals have a good life in the North Sea, but the babies, if separated from their mothers too early, are in great danger.

They are called "Heuler" (Howler) because of their characteristic weeps. The lucky ones are rescued by members of the seal-station staff. The others ...

After being fed for only 6 to 8 weeks, the seal babies are ready to go back to the sea.



While the students cooled their feet in the mud of the Wadden Sea, their mentors strained their brains translating the problems of today's Practical Examination into more than forty mother tongues. At the other end of the campus the lab assistants were briefed for their task.



### Today's programme Wednesday July 21st

#### Guests

Open air museum of Schleswig-Holstein  
in Molfsee  
Dinner in a private home

#### Mentors and Scientific Observers

Breakfast → Hotel

9.00 Departure for Molfsee Open Air Museum

half-day excursion

12.30 Departure for Kiel University

13.00 Buffet → CAU Olshausen 75

14.30–16.30 Consultation with the Authors → CAU Olshausen 75

17.00–17.30 2nd Jury Meeting → Lecture Hall No.3

17.30 Buffet → CAU Olshausen 75

18.30 2nd Jury Meeting Split Session → Lecture Hall No.2/3

23.30 Buses to the Hotels

#### Students and Guides

6.30 Breakfast → Student Hostel

7.30 Departure for Kiel University (CAU)

9.00–14.00 Practical Examination → CAU Anorg. Chemie  
Lunch Packages

15.00 Sports 'n' More → CAU Sportforum

17.30 Departure for Bordesholm

19.00 Dinner → Student Hostel

20.30 Some Remarks on the Practical Exam  
Student Hostel



## In focus: Kyrgyzstan

The four members of the Kyrgyz team – Kiyalbek, Altynbek, Meder, Munarbek (from left) - are between 15 and 18 years old. Their guide Tobias studies chemistry in his second year in Leipzig. Why he wanted to guide this team? Because he knew hardly anything about Kyrgyzstan.

*How did your selection process work? Is the Chemistry Olympiad a well known competition?*

The Chemistry Olympiad is well known in Kyrgyzstan. Almost every school sends their best pupils to the preliminary rounds, so it is an honor for the pupils to be chosen. There are several regional and the national round. The team of four students is formed after a selection test. The team prepares during a two-week seminar for the IChO.

*What will be waiting for you, when you come home from the Olympiad?*

Medal winners are usually honored by the president or the prime minister. Winners of the national Chemistry Olympiad and international medal winners can choose to study at any university in Kyrgyzstan.

*What are your first impressions of Germany?*

Everything is very clean in Germany. The roads are much nicer than in Kyrgyzstan. Our cars don't work for long time because the roads are so bumpy.

*Can you tell us about your country or your language?*

We write Kyrgyz in Russian letters but our language is more similar to the Turkish language than to the Russian. In school, we usually learn Russian, but we come from Turkish schools where science lessons are held in English.

*Say a typical sentence in your mother tongue.*

„Chakyrilbagan konok shypyrylbagan jerge oturat.“



## Backstage

14000 pieces of lab equipment, 12000 labels, 500 liters of chemicals – it all went through their hands in the past 6 months. Each test tube, every flask had to be cleaned and labelled. The preparation of the labs was their task, and as this did not seem enough, they also thought up today's problem No. 2. And yes, the signposts came from their desks, too.



Dr. Sabine Nick and Dr. Christian Naether are both lecturers at the Institute for Inorganic Chemistry, and they are a couple. Doing the job together was fun, they say, but they insist on mentioning the help of Imke Jess, Maren Rasmussen, Monika Schneeweiss, Klaus Kleinert, Andreas Slivirski, and Jomaje Rejai, without whom they would not have survived.

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### General questions

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## Today's weather

A bit cloudy in the morning, but dry. The sky will soon clear up, and we expect a lot of sun during the day with temperatures up to 22 °C (72 °F). Some may find it a bit warm during the practical examination, but for the sportive activities in the afternoon it will be just the right kind of weather. Later in the evening grey will again become the dominant colour above, announcing more water from above.

## Impressum

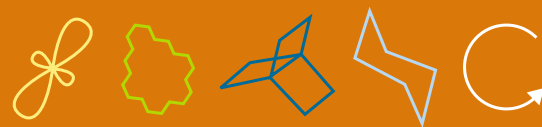
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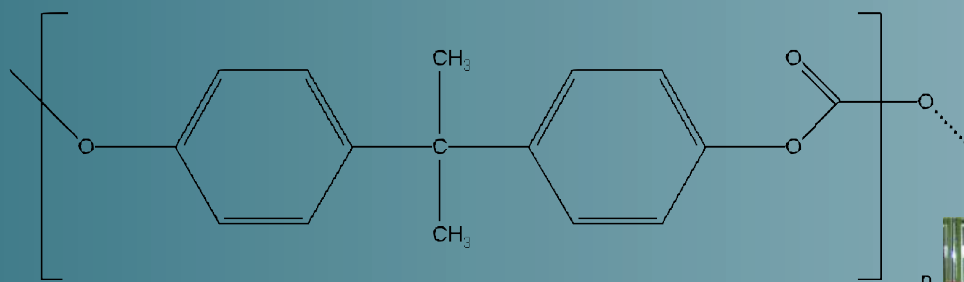
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## How did it go?

*The problems were okay, but I did not have enough time.*

Mara, Canada

*5 hours is a long time for an exam. I am waiting for the results.*

Thibaut, France

*It was a demanding practical and I was short on time. It was very exciting. It would be okay if I had more time.*

Leslie, Singapore

*The exam was difficult. I did not have enough time.*

Yerulan, Kazakhstan



*It was pretty hard but it was fun to do the experiments.*

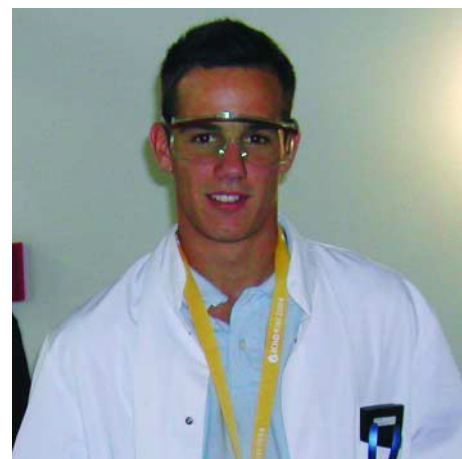
Emily, USA

*Initially I was working quite relaxed but in the end I had to speed up. The lab was very crowded.*

John, Ireland

*I am disappointed that I could not answer all the questions. I felt well prepared but, of course, unexpected things can always happen.*

Jonathan, Denmark





## Mens sana in corpore sano

After five stressful and exhausting, but nevertheless exciting hours in the lab, the students and their guides deserved some free time.



Fortunately, the Sport Forum of the university, within walking distance from the lab, offered a big variety of sports. While some perfected their skating skills others struggled to keep their head above water. The soccer and volleyball fields were the principal magnet of the afternoon, but the basketball courts were also crowded. A lesson in martial art or a swim in the cool water of the swimming hall were waiting for the toughest.



## ICHO goes public



In Kiel's largest shopping galleria, the "Sophienhof", an exposition informed the public all week about the exciting event in their university. Parts of yesterday's Practical Exam were demonstrated by Lukas Wirz and Henry Bittig, both on the reserve list of the German IChO team, while Dr. Näther explained the principles of titration to the interested spectators.



### Today's programme Thursday July 22nd

#### Guests

Trip to Hallig Hooge by boat  
Stagecoach on the island  
Reception in the Town Hall of Kiel

#### Mentors and Scientific Observers

Breakfast → Hotel

8.00 – 9.00 Buses to the University → every 15 mins.

8.00 – 17.00 Translation of the Theoretical Exam

CAU Olshausen 75

13.00 Buffet → CAU Olshausen 75

14.00 – 17.00 Buses to the Hotels → every 30 mins.

17.30 Departure for Kiel Town Hall → Hotel Maritim

18.00 Official Reception by the City of Kiel → Rathaus

Dinner in the Town Hall Restaurant → Ratskeller

Departure for the Hotels

#### Students and Guides

6.30 – 8.00 Breakfast → Student Hostel

times to be announced Departure for different industrial and research facilities

all-day excursion

Lunch

19.00 Dinner → Student Hostel



## In focus: New Zealand

Tony, Yun, Aritra and Reed (from left) of New Zealand were born in four different countries – China, England, Hong Kong, New Zealand. Nevertheless they all like their land as a good place to live and relax. Their guide Karsten is a Ph.D student of Math at the University of Göttingen.

*How did your selection process work?*

*Is the Chemistry Olympiad a well-known competition?*

The top students of the school compete in selection rounds. The 20 best of the national round attend a training camp during the holidays. In 2 exams, the team for the IChO is elected. The Chemistry Olympiad is rather unknown

at many schools, but it's getting more and more popular.

*What are your first impressions of Germany?*

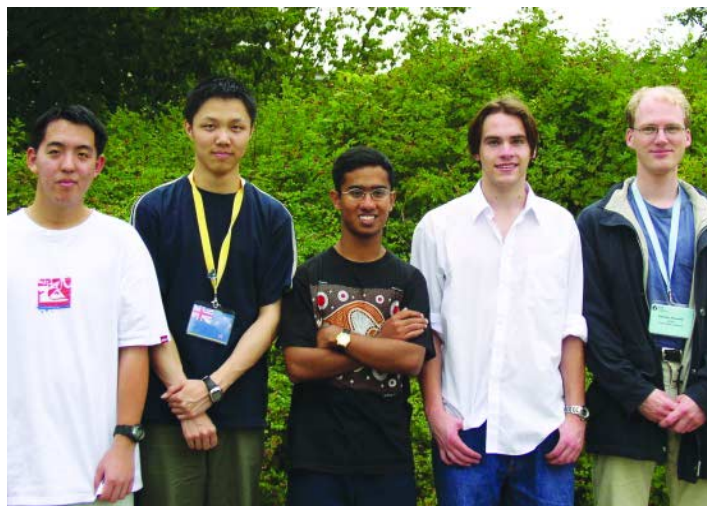
Everything is fairly similar to New Zealand, especially the weather. We like the excellent accommodation in Bordesholm.

*What will be waiting for you, when you come home from the Olympiad?*

We can expect a reasonable number of sheep and our parents.

*What can you frequently hear in the streets of New Zealand?*

„Haere mai!“ (Maori, „Welcome!“)  
„kishhhh kishhhh“



## Backstage



**Wolfgang<sup>2</sup>.** Dr. Wolfgang Bündler (left), member of the IPN staff, serves as Managing Director of the 36th IChO.

Wolfgang Hampe, now retired highschool teacher, is the chairman of the Scientific Board. They are both well seasoned Olympians, having coached and mentored the German IChO teams for over two decades.

They take both blame and praise for yesterday's lab problem No. 1.



Prof. Hans Joachim Bader and Dr. Barbara Patzke are science educators at the University of Frankfurt. It is among their specialties to reduce the complexity of chemical phenomena into adequate information for teachers and students.

## In Case of Need

Police 110 / Emergency 112

### Head guides

0171/281 93 60 and 0177/541 44 01

### Student Hostel

Verwaltungsakademie Bordesholm  
043 22/69 35 40  
Heintzestr. 13, 24582 Bordesholm

### Lost and found

Ana Schanze, Room 320 b;  
0176/23 12 19 56

### Student support

Uwe Amthor 0171/281 93 60  
Angela Koch 0177/541 44 01

### Guest support

Cristel Haensel 0171/683 95 35

### Mentor support

Wolfgang Buender 0170/691 18 48

### General questions

Monika Barfknecht 0162/366 28 86



## Today's weather

Chances are that this will be a real summer day. Some high fog in the morning, which should go away soon to make room for a lot of sun with temperatures up to 25 °C (77 °F). In the afternoon some clouds may well up. Kiel should stay dry, but excursions to Hamburg might hit a shower. Have a good day!

By the way, after the excursion the lake is inviting at 18 °C (64 °F).

## Impressum

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# *catalyzer*

Journal for the 36th International Chemistry Olympiad | Kiel | Germany | 18–27 July 2004

$$r = \frac{d\alpha(P)}{dt} = k_2 c_T(E) \frac{c(S)}{K_M + c(S)}$$

$$\frac{dc(S)}{dt} = -k_x c(S)c(E) + k_y c(ES)$$

## Theory!

$$\frac{dc(ES)}{dt} = +k_x c(S)c(E) - (k_{-1} + k_2) c^2(ES)$$



## Difficult decision

- Bernhard-Nocht Institute for Tropical Medicine
- Lufthansa Technik Headquarters
- Speed Train Maintenance and Repair Shop
- German Synchrotron Research Centre (DESY)
- Bayer Dystar
- Research centers at Borstel and Geesthacht
- Institute of Marine Sciences or the HDW Shipyard in Kiel
- Block Heat and Power Plant



There were so many attractive goals for the excursions to industrial sites and research facilities that it was hard to decide in advance, which one to choose. Each one turned out to be interesting ... and you can't have everything. The relaxed evening by (in) the lake was a welcome change after the exciting tours.

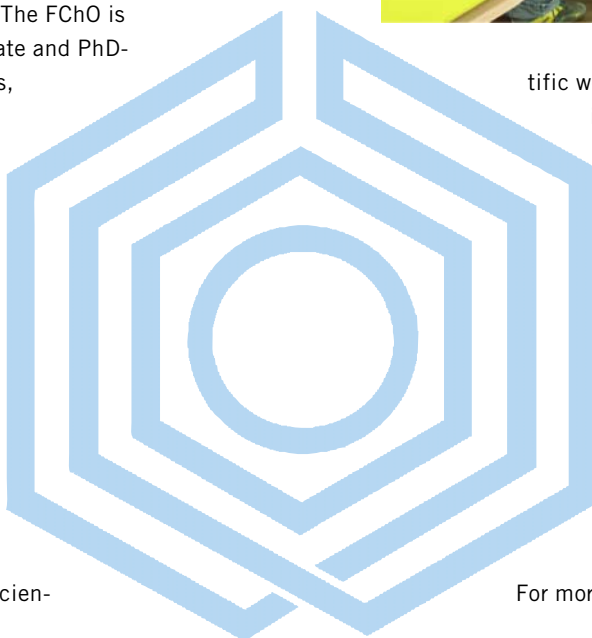




## Förderverein Chemie-Olympiade e.V.(FChO) *Friends of the Chemistry Olympiad*

The FChO was founded in 1992 by former German participants of the IChO. Its goal is to support the national section of the IChO in Germany, to promote the sciences in schools, and to facilitate networking between schools, universities, and industry by maintaining contact between its members. The FChO is operated by undergraduate, graduate and PhD-students. It has over 300 members, ranging from pupils to university professors, from teachers to chemists in industry.

The ability to perform well requires broad and specialized support - not just for the Olympic competition! Therefore the FChO supports the national rounds of the IChO by organizing regional seminars and internships for high schools students, as well as by giving them grants to attend regional and national meetings. In addition, an annual scientific



workshop is organized with guest speakers from industry, politics and science. This meeting is open to the public and expands the network beyond the national border.

In 1996, an opportunity was given to even younger students in Germany: under the IChO umbrella, experimental competitions were expanded to include both middle and high-school students in grades 5-11. Every year thousands of students from all over Germany participate.

Numerous members of the FChO are involved in the 36th Chemistry Olympiad as guides or members of the scientific board.

For more information visit [www.fcho.org](http://www.fcho.org).



### IChO Guests

The IChO also has a number of guests and observers. Well taken care of by Cristel Haensel, they are following their own program, which takes them to the sights of Schleswig-Holstein, such as the historic fishing village in Schleswig, and allows them to savour the region's specialties.



### Today's programme Friday July 23rd

#### Guests

One day in the old hansetown of Lübeck  
Walking through Lübeck  
Canal-trip around the old part of Lübeck  
Shopping  
Coffee and cake at Niederegger with a visit  
of the Niederegger Marzipan Saloon  
Dinner in a traditional restaurant

#### Mentors and Scientific Observers

Breakfast → Hotel  
8.00 Departure for Lübeck → all-day excursion  
Lunch Packages  
19.00 Dinner in a Historical Restaurant  
Schiffergesellschaft  
Departure for Kiel

#### Students and Guides

6.30 Breakfast → Student Hostel  
7.30 Departure for Kiel University (CAU)  
9.00–14.00 Theoretical Examination → CAU Olshausen 75  
Lunch Packages  
15.00 Sports 'n' More → CAU Sportforum  
17.30 Departure for Bordesholm  
19.00 Dinner → Student Hostel  
It's Party Time! → Student Hostel

## In focus: Egypt

The team of Egypt consists of 4 students, Mohamed Abd-El Hafez, Mohamed Abou-Hamra, Karim and Ahmed (from left). They are between 16 and 17 years old. Their plans for the future are to study Medicine, Engineering and Computer Programming. Karim wants to go to the German University of Cairo. Their guide Kerstin is a Ph.D. student, doing cancer research at the University of Bonn. She is a member of the FChO management.

*How did your selection process work?*

*Is the Chemistry Olympiad a well-known competition?*

The Chemistry Olympiad is rather unknown, even among students. There are about 300 participants in the whole country, from which the final team is selected in four exams.



*What are your first impressions of Germany?*

We only visited Kiel yet, but it was very nice. We enjoyed the presentations with liquid nitrogen yesterday.

*What will be waiting for you, when you come home from the Olympiad?*

As most people don't know about the IChO there won't be anything special. Maybe the Minister of Education will congratulate, if we do well.

*Can you tell us about your country or your language?*

Unlike in Germany, in Egypt shops are open 24 hours a day. You meet friendly and open-minded people everywhere.

*What can you frequently hear on the streets of Egypt?*

„Elsalamo Alekom“

## Backstage



What are Visa-regulations for Germany? Can we bring an extra guest? Do we have to pay in Euro? These and myriads of other questions went over her desk. Monika Barfknecht, secretary at IPN, is handling the official IChO-office. She is here representing all the other unnamed secretarial staff, who helped prepare and run the event.



The beginning and the end: Dr. Daniela Efler and Jan Steiné have provided you with the opening ceremony, and they are also in charge for the closing act next Monday. Daniela is a trained teacher of Biology and Chemistry, and is currently employed at IPN. Jan is studying information technology at the Kiel Polytechnic and is a part-time ICT-assistant at IPN.

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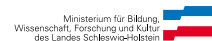
Wolfgang Buender 0170/691 18 48

### General questions

Monika Barfknecht 0162/366 28 86



INITIATIVE CHEMIE IM DIALOG Aktionsgemeinschaft der Chemischen Industrie



## Today's weather

You are likely to have sun for breakfast. With mild wind, if any, temperatures will rise to 25 °C (77 °F) again. Unfortunately, when the theoretical exam is over, clouds will begin to darken the sky. Later in the afternoon the sun will have lost the fight, and we have to be prepared for some rain. Even a little thunderstorm is possible in the evening – perhaps an adequate eruption at the end of the examination stress.

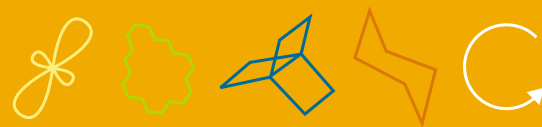
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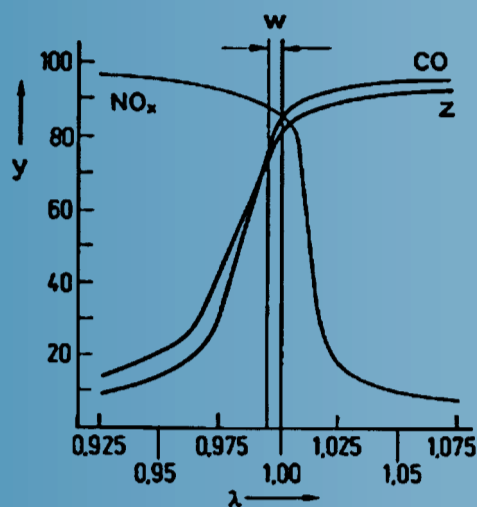
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# catalyzer



Journal for the 36th International Chemistry Olympiad | Kiel | Germany | 18–27 July 2004





## How was it?

*„The exam was great and difficult, but the translation wasn't clear sometimes and I have studied chemistry only in arabic“*  
Mohamed of Egypt (1)

*“It was very hard. I couldn't answer all the questions.”*  
Akio of Japan (2)

*“It wasn't too difficult, although there were many questions. I had twenty minutes to review my answers.”*  
Pavlo of Ukraina (3)



*“It was a quite demanding exam, but also was kind of funny. Everybody was really concentrated. People ran to the toilet to be back as quick as possible. I don't think too much about the results. Participation ist the most important thing.”*  
Jaana of Finland (4)

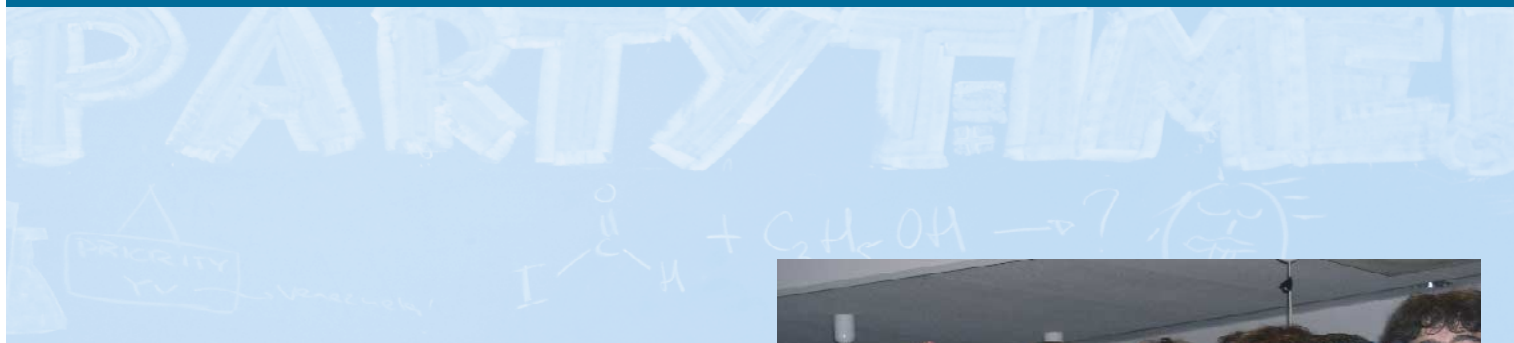
*“It was hard, many questions. It wasn't bad, but it could have been better.”*  
Jonas of Switzerland (5)

*“The test was better than the practical exam.”*  
Derya of Turkey (6)



*„It was ok, better than the practical exam, but I just answered one of the eight problems.“*  
Tomasz of Iceland (7)





## It's done, let's party!



No more formulae, no more diagrams! It's all over! Time to relax and have a party. So the students changed their calculators and pens for cocktail glasses and dancing shoes and gathered in the canteen of their Bordesholm home, which had been decorated by helpers and guides. No spirit in the cocktails, but certainly high spirits in the room. Inspired by the DJ's music, all stress was soon forgotten.



The main attraction of the evening was the beauty

contest with participants from all over the world. It was a very close competition – with smiles this time rather than brains – and a decision had not yet been reached at the press deadline.



### Today's programme Saturday July 24th

#### Guests

Kiel by bus and by boat  
Show and party in Sophienhof

#### Mentors and Scientific Observers

Breakfast → Hotel  
Marking Exam. Papers → Hotel  
Ferry- and Bus Tickets  
Lunch Packages  
17.30 Departure for Kiel City Centre → Hotel Maritim  
18.00 IChO-Reunion → Kiel Sophienhof  
Buffet  
Departure for the Hotels

#### Students and Guides

7.30–9.00 Breakfast → Student Hostel  
times to be announced  
Open House at a Lubricant Factory (optional)  
Fuchs Europe, Kiel  
13.00 Lunch → Student Hostel  
14.30 Departure for Kiel City Centre  
15.00–18.00 Time for Shopping → Kiel City Centre  
18.00 IChO-Reunion → Kiel Sophienhof  
Buffet  
Departure for Bordesholm

## In focus: Peru

Charli (19), Juan Pablo (17) and Mario (16) (from left) come from Lima, the capital of Peru. They want to study Chemistry or Chemical Engineering, maybe in the U.S. Their guide Verena studies Chemistry at Würzburg and is a wiz in languages. She has been in Peru for two months and speaks Spanish, English, French and Italian.

*How did your selection process work?*

*Is the Chemistry Olympiad a well known competition?*

Peru participates in the IChO for the first time. The Chemistry Olympiad has three selection rounds at private Universities. The candidates are trained in a weekly seminar at a private University in Lima. In this years' final round, only 6 of the 10 designated participants showed up. Of the final team of four students only three made it to the IChO, as the

last one had not approved his flight.

*What will be waiting for you when you come home from the Olympiad?*

As the Olympiad is funded by private Universities, there is not much furor about the team. We hope to meet a Minister if we do well.

*What are your first impressions of Germany?*

People are accurate, neat, hearty, attentive and polite. The practical exam was very interesting and rather challenging.

*Can you tell us about your country or your language?*

Everybody knows Machu Picchu, the ancient Inca city. Well known is our pisco sour, a drink from grapes, but much stronger than wine.

*What can you here on the streets of Peru?*

„¡Sí se puede!“



## Backstage



While the students enjoyed their well deserved it-is-over party, heads were smoking in the scientific board's hotel. Dr. Anja-Verena Mudring, Prof. Gerd Meyer, David Di Fuccia, Dr. Jutta von der Gönna, and Prof. Bernd Ralle (left to right), representing here all the authors of the theoretical problems and their assistants, were marking the exam papers until deep into the night.

A Holy Mass will be held at 18:30 at St. Nikolaus in the Rathausstr. 3 in Kiel, very near to the town hall (Rathaus), that you passed with the Kiel Rallye. The dinner buffet in the Sophienhof will start no sooner than 19:30, allowing you time to go to mass.



*Happy birthday Sudeep Uday of India!*

## In Case of Need

Police 110 / Emergency 112

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Wolfgang Buender 0170/691 18 48

### General questions

Monika Barfknecht 0162/366 28 86



INITIATIVE CHEMIE IM DIALOG Abt. Wissenschaft, Forschung und Kultur des Landes Schleswig-Holstein



## Today's weather

The early morning haze will soon disappear, and the sun will delight us almost all day, only now and then disturbed by a cloud or two. You can leave your raincoat in the closet. The wind is going to freshen up to 3-4 Bft. from north-westerly directions, reducing the regular 22 °C (72 °F) by a little windchill. In the afternoon, however, a rising easterly sea breeze will minimize this effect, providing us with a mild evening. Looks like a typical Schleswig-Holstein summer day.

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# *catalyzer*



Journal for the 36th International Chemistry Olympiad | Kiel | Germany | 18–27 July 2004

## Summer in the City





## Open house at Fuchs Lubricant Factory



Yesterday, many students took the chance to participate in the open house at Fuchs Lubricant Factory in Kiel. The visitors were shown a short movie, that illustrated the innumerable applications of lubricants in everyday life. Whether shavers, watches or cars - it is hardly possible to find a device that does not depend on lubricants. After the movie the visitors were given a guided tour of the whole site, during which they were shown the production facilities with its reactors and the quality-control laboratory. The detailed and clear explanation of the guides in combination with the illuminating tour provided the visitors with a good overview of lubricant manufacturing.



## Chemistry for laymen

Throughout the IChO week an exhibition informed the public in Kiel's shopping galleries. On Saturday members of the Young Chemists Forum of the German Chemical Society entertained the shoppers with simple and enlightening experiments. Quite a few - young and old - stopped for a little hands-on chemistry and to listen to the experts' explanation.



## Re-Union

Finally united again were students and mentors. Experiences were exchanged, and the students got first feedback about their exams. An artist entertained with magic tricks and juggling on the high monocycle, unexpected talent performed on the piano, and casual chats filled the time until the President of the IChO opened the rich buffet.



### Today's programme Sunday July 25th

*Guests*  
**Kiel Sailing City**

#### *Mentors and Scientific Observers*

**Breakfast** → Hotel  
**8.00–16.00** **Arbitration** → Hotel Maritim  
**9.00–18.00** **Visit to the Students' Kiel Sailing City**  
 Kiel Reventloubrücke  
**12.00** **Buffet** → Hotel Maritim  
**18.30** **Dinner** → Hotel Maritim  
**20.00** **3rd & 4th Jury Meeting** → Hotel Maritim

#### *Students and Guides*

**7.00** **Breakfast** → Student Hostel  
**8.15** **Departure for Kiel Fjord**  
**9.00–18.00** **Kiel Sailing City** → Kiel Reventloubrücke  
**Lunch** → Sailing Camp  
**15.30–18.30** **Buses to Bordesholm** → every 30 mins.  
**19.00** **Dinner** → Student Hostel



## In focus: China

The members of the Chinese team, Kan, Mingyu, Jian and Lianhui (from left) are between 17 and 18 years old. Jian will study Electronics at Tsinghua University while the others plan to study at Peking University.

Their guide Min originates from China and has been living in Germany for more than 3 years. She is studying Linguistics at Kiel University.

*Is the Chemistry Olympiad a well known competition?*

*How did your selection process work?*

The IChO is widely known and popular mainly in urban areas. This year, 140000 students participated in the first round of the Chemistry Olympiad in China, 160 qualified to the second round, of which the best 24 were elected for the final round.

*What will be waiting for you when you come home from the Olympiad?*

The Chinese Chemical Society pays much attention to the IChO while there is no special interest from the government side.

*What are your first impressions of Germany?*

Germany is a clean beautiful place. It is so peaceful in Kiel and in the morning, you can hear the birds singing. This is special for people from the 'crowded' China.

*Can you tell us about your country or your language?*

Our country has an old history and traditions, which are cultured until today. However, China is going through a fast development since a few years.

*What can you hear on the streets of China?*

"Ni hao"



## Backstage



Driving, copying, doing the dishes, just: helping. More than 20 "Orga assistants" have helped to make the 36th IChO a memorable event. Most of them are students from Kiel, but there are also former IChO participants from all over Germany.

### „Chemistry in Action“

After ten joyful days at the 36th IChO the Friends of the Chemistry Olympiad (FChO) wish to keep in touch with you. The FChO would therefore like to invite you to the international workshop "Chemistry in action" in Mainz, January 6 to 9 in 2005. The organizers are trying to provide financial support. For information and registration forms visit [www.fcho.org](http://www.fcho.org).



*Happy birthday Rolando  
Manuel Caraballo of Argentina!*

## In Case of Need

Police 110 / Emergency 112

### Head guides

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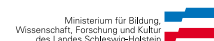
Wolfgang Buender 01 70 / 691 18 48

### General questions

Monika Barfknecht 01 62 / 366 28 86



INITIATIVE CHEMIE IM DIALOG Aktionsgemeinschaft der Chemischen Industrie



### Today's weather

Poor timing! After summerly yesterday we will have tough sailing conditions today. South-westerly winds will increase from early 3 Bft to 5 later in the day – with gusts of 6 in between. The sky does not play along either. It will be gray with only few holes for the sun to peek through, and it will not stay dry. Temperatures will not go beyond 19 °C (66 °F). Excellent conditions for ambitious sailors. Be brave!

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# *catalyzer*

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Alexey Zelfman, Russian Federation

## Gold Medals

Ham	Jun Soo	Korea
Liu	Lianghui	China
Yue	Kan	China
Ulatowski	Filip	Poland
Xue	Mingyu	China
Repko	Anton	Slovakia
Takacs	Constantin-Nicolae	Romania
Pluharová	Eva	Czech Republic
Thalhammer	Armin	Austria
Gupta	Priya	India
Jang	Hye Min	Korea
Hell	Michael	Germany
Chou	Fang-Chieh	Chinese Taipei
Kiss	Péter	Hungary
Arslan	Hasan	Turkey
Putau	Aliaksei	Belarus
Park	Young Woo	Korea
Yuan	Jian	China
Dydio	Pawel	Poland
Dral	Pavlo	Ukraine
Veledov	Afan	Azerbaijan
Allen	David	Australia
Galvelis	Raimondas	Lithuania
Polunin	Ruslan	Ukraine
Kawasaki	Akio	Japan
Eminov	Senan	Azerbaijan
Gögh	Attila	Hungary
Brehm	Martin	Germany
Tao	Ye	Canada



## Silver Medals

Zhiyentyev	Timur	Kazakhstan	Kerr	Christopher	United Kingdom
Han	Gyu Le	Korea	Brown	Eric	United States
Laurynenas	Audrius	Lithuania	Murzin	Vadim	Kazakhstan
Vorontsov	Egor	Russian Federation	Lonzaric	Jan	Slovenia
Chang	Kai-Po	Chinese Taipei	Bernat	Viachaslau	Belarus
Ng	Yao Zong	Singapore	Jamróz	Grzegorz	Poland
Tahmassebi	Hamoon	Iran	Zabilskey	Maksym	Ukraine
Chardin	Thomas	France	Biedermann	Frank	Germany
Tkachenko	Anton	Ukraine	Bissenov	Yeskendir	Kazakhstan
Meshnicharov	Kalin	Bulgaria	Xiao	Ying	Australia
Reck	Lukas	Germany	Nalbantoglu	Tugrul	Turkey
Saberi	Amir	Iran	Tsui	Emily	United States
Nguyen Mai Lu An		Vietnam	Sedláček	Ondrej	Czech Republic
Vass	Márton	Hungary	Soontrapa	Pannathat	Thailand
Vu Viet Cuong		Vietnam	Soneji	Parth	United Kingdom
Dangkulwanich	Manchuta	Thailand	Solomek	Tomás	Slovakia
Colombo	Raffaele	Italy	Duduta	Mihai	Romania
Tran Ngoc Tan		Vietnam	Karnas	Derya	Turkey
Kutlu	Mehmet Talha	Turkey	Seyedan	Seyed Esmaeil	Iran
Aberbuj	Pablo	Argentina	Beh	Leslie	Singapore
Bukkapatanam	Vibhav	India	Zhang	Fan	United States
Mo	Jeffrey	Canada	Adamson	Kaur	Estonia
Bushmarinov	Ivan	Russian Federation	Roberts	Reed	New Zealand
Wen	Ko-Ying	Chinese Taipei	Kiappes Jr.	John Leon	United States

## Bronze Medals

Chan	Jason (Kwan Kit)	United Kingdom	Malis	Momir	Croatia
Tromayer	Maximilian	Austria	Prostakova	Viktoria	Estonia
Bondoux	Thibaut	France	Barral	Ezequiel	Argentina
Adamson	Jasper	Estonia	Juozapavicius	Mindaugas	Lithuania
Nasiri Mahalati	Reza	Iran	Kruopys	Petras	Lithuania
Polari	Juan José	Argentina	Menova	Petra	Czech Republic
Saric	Andela	Croatia	Temaismithi	Jesada	Thailand
Mikulka	Tomas	Czech Republic	Chiu	Tony	New Zealand
Sachdeva	Sushant	India	Huang	Yun	New Zealand
Done	Nicolae	Romania	Vapaavuori	Jaana	Finland
Xie	Sheng Xiang	Singapore	Marbelia	Lisendra	Indonesia
Lerer	Adam	Canada	Kisner	Manja	Slovenia
Oyama	Takahiro	Japan	Bello	Simon	United Kingdom
Kamath	Sudeep Uday	India	Sunsandee	Neti	Thailand
Derendyaev	Anton	Russian Federation	Grajciar	Lukás	Slovakia
Seh	Zhi Wei	Singapore	Kambe	Tetsuya	Japan
Nusfelean	Bogdan	Romania	Koitz	Ralph	Austria
Zafred	Domen	Slovenia	Inniss	Mara	Canada
Rosenthal	Amos	Netherlands	Ceferov	Emin	Azerbaijan
Arzamasovs	Maksims	Latvia	Kappert	Emiel	Netherlands
Tsimkouski	Iosif	Belarus	Matsis	Stephanos	Cyprus
Ha Minh Tu		Vietnam	Pystynen	Juho	Finland
Pazur	Tomislav	Croatia	Carrero Gonzalez	Carlos	Spain
Iyer	Nithin	Australia	Baldassarre	Leonardo	Italy
Haemmerle	Arnaud	Switzerland	Deceline	Janice Alethea	Indonesia
Gille	Pierre-Edouard	France	Székely	Kathrin	Switzerland
Jecs	Edgars	Latvia	Yan	Harry	Australia
McCLean	John	Ireland	Önnheim	Magnus	Sweden
Zych	Michal	Poland	Kriz	Manuel	Austria
Masuda	Koichiro	Japan	Popovs	Ilja	Latvia
Caraballo	Rolando Manuel	Argentina	Häner	Jonas	Switzerland
Knjazeva	Olga	Estonia	Olsen	Tobias	Denmark
Christodoulou	Athanasios	Greece	Van Abswonde	Peter	Netherlands
Yang	Hsiang-Yu	Chinese Taipei	Yusupow	Mekan	Turkmenistan
Larrazabal	Gastón	Venezuela	Kramarics	Áron	Hungary
Ray	Aitra	New Zealand	Albert	Albert	Indonesia



## Honorary Mention

Ferreira Alves Rafael Victor Brasil

## Following

Abdel Hafez	Mohamed	Egypt	Kryftis	Achilleas	Cyprus
Abou Hamra	Mohamed	Egypt	Lindgren	Anders	Sweden
Alaslawi	Hessah	Kuwait	Lopes	Ricardo	Portugal
Alshameri	Zainab	Kuwait	Lyngvi	Eirik	Norway
Alzaabi	Fehed	Kuwait	Mametsieripow	Serdar	Turkmenistan
Anachkov	Svetoslav	Bulgaria	Marques	Cristina	Portugal
Antonellis	Grigorios	Greece	Massart	Amaury	Belgium
Arbesú Lago	Vicente	Mexico	Mathues	Wouter	Belgium
Arnardóttir	Lilja Rut	Iceland	Matias Morais	Karoline	Brasil
Asirow	Sohret	Turkmenistan	Mattia	Elio	Italy
Aytiev	Munorbek	Kyrgyzstan	Maury	Julien	France
Birbaum	Silvan	Switzerland	Medina	Juan Pablo	Peru
Brkljaca	Zlatko	Croatia	Meland	Knut Åge	Norway
Bullerjahn	Jakob Tómas	Iceland	Méndez Vega	Enrique	Cuba
Chichanov	Boris	Bulgaria	Mihnevics	Vitalijs	Latvia
Cordy	Yuri	Belgium	Mirmohades	Mohammad	Sweden
Dimitriou	Dimitris	Cyprus	Nurbudianto	Nurbudianto	Indonesia
Domínguez Trinidad	Zair	Mexico	Oosterheert	Wouter	Netherlands
Elsharkawi	Karim	Egypt	O'Boyle	John	Ireland
Epsek	Zala	Slovenia	Pajdak	Tomasz Halldór	Iceland
Escamilla Anguiano	Juan	Mexico	Papamichael	Nicolas	Cyprus
Fenton	Robert	Ireland	Parsopoulou	Konstantina	Greece
Ferreira	Mariana	Portugal	Percivalle	Claudia	Italy
García del Valle	Javier	Spain	Pina	Ana	Portugal
García Vargas	Jesus Manuel	Spain	Pqlvoinov	Dilmurod	Tajikistan
Gharib	Ahmed	Egypt	Quillas	Mario	Peru
Gunnarsson	Ómar Sigurvin	Iceland	Reimi	Manuel	Venezuela
Gurbanow	Musa	Turkmenistan	Romero	Domingo	Venezuela
Guski	Lars	Denmark	Ruiz	Charli	Peru
Hansen	Jonas Lerche	Denmark	Sabyrgali	Yerulan	Kazakhstan
Hutchinson	Steven	Ireland	Saleh	Ali	Kuwait
Högberg	Anna	Sweden	Sandstad	Marit	Norway
Højberg	Jonathan	Denmark	Sedlák	Róbert	Slovakia
Isabekov	Altynbek	Kyrgyzstan	Sousa Almeida	Igor	Brasil
Isgenderov	Hikmet	Azerbaijan	Stagno	Gerardo	Uruguay
Jussila	Tuukka	Finland	Tenorio Bernal	María Isabel	Mexico
Kamalov	Meder	Kyrgyzstan	Torrente Marchante	Miguel Angel	Spain
Kaparov	Kiyalbek	Kyrgyzstan	Vaklev	Nikolay	Bulgaria
Kodirova	Saiora	Tajikistan	Vargas Schmitz	Jürgen	Venezuela
Koukouzelis	Dimitrios	Greece	Veloso Saraiva	Lucas	Brasil
Kouva	Sonja	Finland	Zinger	Jonathan	Belgium
Krauchanka	Ivan	Belarus			

### Today's programme Monday July 26th

#### Guests

Hamburg

City and harbour tour

Official Closing Ceremony → Hamburg CCH

Closing party on the ocean liner

»Cap San Diego«

#### Mentors and Scientific Observers

Breakfast → Hotel

8.30 Departure for Hamburg → Hotel Maritim

10.00 Sightseeing by Bus and Boat

Lunch Packages

15.30 Closing Ceremony → Hamburg CCH

19.00 Departure for Hamburg Harbour

20.00 Rockin' the Boat! → Cap San Diego

22.00–00.30 Buses to Bordesholm and Kiel  
every 30 mins. or when full

#### Students and Guides

7.00 Breakfast → Student Hostel

8.30 Departure for Hamburg

10.00 Sightseeing by Bus and Boat

Lunch Packages

15.30 Closing Ceremony → Hamburg CCH

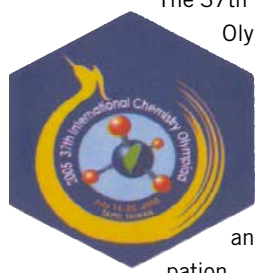
19.00 Departure for Hamburg Harbour

20.00 Rockin' the Boat! → Cap San Diego

22.00–00.30 Buses to Bordesholm and Kiel  
every 30 mins. or when full



## On to the next IChO



The 37th International Chemistry Olympiad will be held in Taipei, Chinese Taipei from July 16th to 25th in 2005. Representatives from more than 68 countries have announced their participation.

The IChO-2005 Competition will be held at two university sites in downtown Taipei, the National Taiwan Normal University's College of Science (NTNU) and the National Taiwan University (NTU). Both university campuses offer a pleasant and vital atmosphere.

Mentors and guests will be accommodated in the National Academy for Education Research (NAER), located in Sanhsia, some 22 km southwest of Taipei. This town is known for the Sanhsia Bridge with its prominent arches and columns, the Old Street and the Tsushih Temple.

Did you know that ...

- ... three different languages are spoken on Taiwan?
- ... Taiwan is crossed by the Tropic of Cancer?
- ... parts of Taiwan were first colonized by the Dutch in the early 17th century?
- ... the population of the city of Taipei has reached almost 2.7 million?
- ... Taipei hosts the currently highest skyscraper of the world?
- ... Taiwan is on GMT + 8: hours?
- ... "Formosa", the old name of Taiwan, means "beautiful island"?

Do not forget to circle the dates of July 16th to 25th 2005 in your calendar!

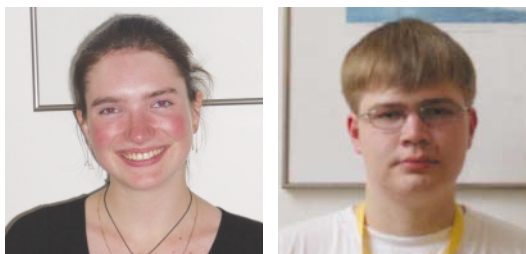
## Backstage



The Catalyzer team says farewell to all students, mentors and guests of the 36th IChO – and goes to sleep at last. Every night into the wee hours we selected photos, struggled with words, harassed the typesetter ... and at 7:00 a new issue was delivered. It was a fun change from what we usually do: Judith studies Chemistry in Leipzig, Stefan is a first-year chemistry student in Kiel, Sirius is a participant of the "International PhD Program" at EMBL in Heidelberg, Simon studies Biochemistry in Tübingen, and Peter, science educator at IPN, held the key to the editors' office.

Have a safe journey back home!

PS: Thank you Dirk Ladewig for the patient night shift in the printshop.



*Happy birthday Olga Knjazeva of Estonia and Anders Lindgren of Sweden!*

## In Case of Need

Police 110 / Emergency 112

### Head guides

0171/281 93 60 and 0177/541 44 01

### Student Hostel

Verwaltungsakademie Bordesholm  
043 22/69 35 40  
Heintzestr. 13, 24582 Bordesholm

### Lost and found

Ana Schanze, Room 320 b;  
0176/23 12 19 56

### Student support

Uwe Amthor 0171/281 93 60  
Angela Koch 0177/541 44 01

### Guest support

Cristel Haensel 0171/683 95 35

### Mentor support

Wolfgang Buender 0170/691 18 48

### General questions

Monika Barfknecht 0162/366 28 86



INITIATIVE **CHEMIE IM DIALOG** Aktionsgemeinschaft der Chemischen Industrie



## Weather

Sorry folks. Not a good day either. It will start with gray clouds, which may occasionally release a shower. During the day the gray will become a shade lighter, but no real hope for bright light. Later, aboard the ship, if you come on deck, you may get a glimpse of the evening sun over the harbour. No wind worth mentioning, but the temperature will be a disappointment: not much above 17 °C (63 °F). You better take some warm clothes with you.

## Impressum

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