

Catalyzer 19/07

International Chemistry Olympiad, Zurich, Switzerland

19 July 2023

Today's Weather



27°C

Schedule

Students

08:45 - 14:00 Practical Exam,
ETH Hönggerberg,

18:30 - 19:45 Career Evening,
ETH Zentrum

Mentors and observers

8:00 - 16:00 Excursion Discover
ETH Zurich/ Empa/ Eawag

16:00 - 18:00 Meet the authors,
Crowne Plaza

20:00 - 24:00 Jury Meeting 2,
Crowne Plaza

Tenseness Barometer



Students

Team Guides

Happy Birthday



Luca De Masi
Student, Italy



Let's Find Solutions Together

From food security and access to clean water to environmental pollution and human health - our global society faces many challenges to which the chemical sciences can help provide solutions. At the Finding Solutions Fair, the IChO participants met companies and many of their employees.

In addition to waterproof, breathable membranes from the start-up Dimfora, the start-up NexMR presented a new technology using sensitivity-enhanced NMR that can screen libraries of thousands of molecules within days. At Givaudan, the students were able to discover Ambrofix, an amber molecule produced by sustainable synthesis, which is used in perfumes. At Metrohm, they got to know a model of a chromatography

column and a titration robot. Lonza gave some examples of how interdisciplinary scientific collaboration can help solve problems and at the NCCR Catalysis, the students learned more about new carbon-neutral value chains for the production of fuels and chemicals, starting from renewable resources via catalytic processes. Oleh from Ukraine was impressed: "At the Finding Solutions Fair, I found out about modern ways of solving chemical equations. I am so excited about the possibility to simulate chemical equations on modern computers and to get immediate results without having to be in a lab for days, weeks or even months or years. It saves much time and materials." All in all, a very diverse and educational event. (al/sa)

Today is the day of the practical exams and we wish the students all the best! You can be very proud of yourselves to represent your country and will certainly do your country and family proud, no matter what the result is going to be. Good luck, you can do it!



Matterhorn - King of the Alps

At 4478 m above sea level, the Matterhorn is one of the highest mountains in the Alps. Because of its striking pyramid shape, it has become a symbol of Switzerland and the fascination of mountaineering. The Matterhorn is one of the most famous and most photo-

graphed mountains in the world. 158 years ago, on 14 July 1865, a seven-man rope team around the Briton Edward Whymper reached the summit for the first time. As beautiful as the mountain near Zermatt in Switzerland is as difficult it is to climb. On the descent, four men lost their footing and thus their lives. Nevertheless, the fascination of the Matterhorn never waned. Many tourists come to Zermatt to admire the view

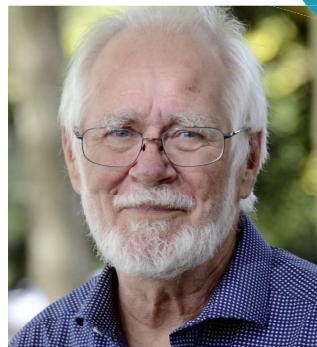
and to take pictures, others want to go all the way to the top. Every year, some 300 to 400 people attempt to climb the peak with a guide. The Matterhorn captivates people from all over the world and fires their imagination. (al)



Jacques Dubochet

Jacques Dubochet was born in 1941 in Aigle, Switzerland. He studied physical engineering at EPFL and molecular biology at the University of Geneva (UniGe). He was appointed professor at the University of Lausanne (UNIL) in 1987, where he stayed until his retirement in 2007.

Jacques Dubochet received the nobel prize in chemistry in 2017 for developing cryo-electron



microscopy for the high-resolution structure determination of biomolecules in solution, together with Joachim Frank and Richard Henderson. With cryo-electron microscopy, the structure of (biological) samples, including viruses, protein complexes or DNA, can be determined at a very high resolution without having to crystallize the samples. (Eva Vandaele)

Switzerland's growth engine

Switzerland has a well-established chemical and pharmaceutical industry that plays a significant role in the country's economy. The sector has a long history and is Switzerland's leading exporter, generating roughly 50% of total annual exports and 5% of GDP. There are approximately 1,000 industry operators, including many major multinationals. Employment in the Swiss pharmaceutical and chemical industry is significant and contributes to the creation of many jobs in the country. In 2020, the sector employed around 74,000 people in Switzerland and over 338,000 internationally. (al)

Question of the Day:

Which organic compound is responsible for the book pages turning yellow over time?

- A. Lignin B. Starch C. Cellulose D. NaOH

Yesterday's solution: B: Chitin is a polymer of N-acetylglucosamine and probably the second most abundant polysaccharide in nature. It is a component of cell walls and exoskeletons.



You're currently reading the short version of the daily newsletter. Find more articles **online**.



Find more photos and videos **online**.

Editorial Team:

Andrea Leu (al), Chiara Brändli (cb), Lea Hasler (lh), Lena Frölich (lf), Saulé Akavickyté (volunteer) (sa)
Pictures: various sources

Yesterday in Pictures

