Infozine No. 26

The magazine for users of scientific information

Editorial
Beautiful truths

Beauty creates more trust than content. An insight that is important for critical reading as well as for creating visualizations.
In the recent PsyArXiv preprint Fooled by beautiful data: Visualization aesthetics bias trust in science, news, and social media, authors Chujun Lin and Mark Thornton write that scientists, policymakers, and the public increasingly rely on data visual-izations. In their study, the authors tested whether the beauty of data visualizations influences how much people trust them. Their results show that people perceive more beautiful charts as more trustworthy, across a wide range of sources, topics, and chart types.
After 25 issues, the Infozine has received a slightly revised layout and is now again somewhat more in line with ETH Zurich's corporate identity. We hope you like the new layout: without the top bar, overall lighter, airier and with more white space. We think that good typographic design is important for all contents.

Enjoy reading the 26th issue of Infozine.

Your Chemistry | Biology | Pharmacy Information Center

Research Visualization

As described in the editorial of this 26th Infozine, well-designed data and information are more trustworthy. Does a well-designed visualization of one's research come across better than a poorly formatted list of publications? The Information Center has always been convinced the answer to this question is a solid yes, and until a few years ago, we offered visualizations of research in the form of word clouds as a service. Every May, when the publication year has ended, we visualized the research of D-CHAB and D-BIOL.

For this purpose, we retrieved the titles of the departments' publications via Scopus, using the Scopus ID's of the professors. We found that this identifier is among the best maintained and leads to reliable results. Visualizations were offered on the department or institute level as well as for individual research groups. Unfortu-nately, Jonathan Feinberg's program Wordle, which we used for this purpose and which generates visually very appealing word clouds, is no longer available (except for an old version in the Internet Archive). There is no lack of ord cloud generators on the web, but none that we know of can compete with Wordle in terms of aesthetics, ease of use, and configuration options.

We are happy to be able to offer this service again. Maria Pechlaner, the IT coordinator of the Info Center, created a web tool based on the algorithm provided by Jason Davies, which comes close to Wordle in terms of appearance and con-figuration options and adds new capabilities as well. Aspect ratio, word angle, brightness, fonts, and colors can be freely selected and, unlike in Wordle, export is also possible as a higher resolution .png or as an .svg file.

Would you like a visualization? Contact Maria Pechlaner, who will prepare your custom visualization. Ready-to-use files for D-CHAB and D-BIOL research can be found on this website.

News from ETH Library

New Open Access Agreements for members of ETH Zurich

The ETH Library recenty signed Open Access agreements with the *American Institute of Physics* (AIP), the *Company of Biologists*, the *IEEE* and the *Institute of Physics* (IOP). Thus, as of 1 January 2022, scientists at ETH Zurich can publish open-access articles for free as the fees are covered by the new Open Access agreement. The agreements require that you as the corresponding author of the submitted article are employed at ETH Zurich.

■ American Institute of Physics (AIP)

The agreement enables members of ETH Zurich to publish in all hybrid AIP journals (XLSX, 25 KB). This agreement applies to all articles with an acceptance date in 2022.

■ Company of Biologists

Members of ETH Zurich may publish in all three hybrid Company of Biologists journals without limitation:

- Development
- Journal of Cell Science
- Journal of Experimental Biology

■ IEEE

Members of ETH Zurich can now publish articles in all gold open access publications of IEEE (Institute of Electrical and Electronics Engineers). Although hybrid journals are excluded for the time being, negotiations will continue in 2022. In the case of hybrid journals, you have the possibility to publish in the Research Collection via green open access. At IEEE, this is usually possible at the date of publication in the journal.

■ Institute of Physics (IOP)

Members of ETH Zurich may publish without limitation in almost all IOP journals, including gold open access publications (XLSX, 34 KB), with the exception of Electrochemical Society (ECS) and American Astronomical Society (AAS) journals. This agreement applies to all articles with an acceptance date in 2022.

■ MIT Press – Direct to Open (D2O)

The ETH Library supports the Direct to Open Program (D20) of MIT Press. Through D2O, part of the publisher's books is transferred from the traditional purchase model to a collaborative open access model that is supported by libraries worldwide. No costs are incurred for authors in books published through the program. **Good to know:** You can find an overview of all title lists in the open access wiki of ETH Library.

New Services

■ Bibliometrics helps you with your research

You research, write and publish, but who is taking note of your results? Who reads your scientific publications? How aware of your research are people inside and outside academia?

You and your team document your work by writing down and publishing the content and results of your research. Your publications are cited and integrated into patents and policy documents. Your scientific results are also taken up by media such as daily and weekly newspapers and blog articles. Bibliometrics and altmetrics focus on the quantitative analysis of publications and offer far more than just a citation analysis. Bibliometric analyses enable you to obtain insights that can help you with strategic questions about research – be that for you personally or for your team.

Benefit from ETH Libary's new service. Feel free to contact ETH Library (bibliometrics@library.ethz.ch) and take advantage of the possibilities of a personalized bibliometric consultation for your research work.

Open Access Heroes 2022

Knowledge Unlatched (KU), a company owned by major STM publisher Wiley, offers free access to scholarly content for readers and researchers around the world. Its crowdfunding Open Access (OA) models and initiatives provide libraries worldwide with a central place to support the publishing of OA content from leading publishers in a wide range of disciplines. Recently, KU has announced the Open Access Heroes 2022, presenting major users and uses of OA. The book with the most interactions in 2021 by a large margin was *Frankenstein: A New Edition for Scientists and Engineers* (MIT Press), with well over half a million interactions. It can be found in KU's Open Research Library.

Action Plan for Diamond Open Access

The Action Plan for Diamond Open Access, an initiative of Science Europe, cOAlition S, OPERAS, and the French National Research Agency (ANR), which aims to promote a sustainable, community-driven Diamond Open Access (OA) scholarly communication ecosystem, has been published on March 2, 2022. Diamond Open Access refers to a scholarly publication model in which journals and platforms do not charge fees to either authors or readers. Diamond Open Access journals represent community-driven, academic-led and -owned publishing initiatives.

How to detect fake videos

It is getting more and more easy to fake photos and even videos or put them in a different context. With still images, the reverse search of Google Images often helps to see if the photo can be found in a different context – or if similar images allow to determine the original location with certainty. This is also possible for videos, at least for YouTube videos, which can be checked on the website DataViewer by Amnesty International. Entering a video link yields screenshots from the video, which are then forwarded to the reverse image search on Google.

Six simple search tips for Scopus

A short three-minute video explains the search options in Scopus. Do you know the difference between searching a "Loose Phrase" and an {Exact phrase}? If not, it is worth watching the video.

MolAR – a very cool app for chemists and everyone interested in chemistry

Check out this extremely cool chemistry visualization tool, created by Sukolsak Sakshuwong, Umberto Raucci, and Hayley Weir from the Martinez Group at Stanford University. Use the free iOS app to bring molecules to life by visualizing their 3D structures in augmented reality and thus placing them anywhere in your lab, office or room. How about a caffeine molecule on the windowsill?
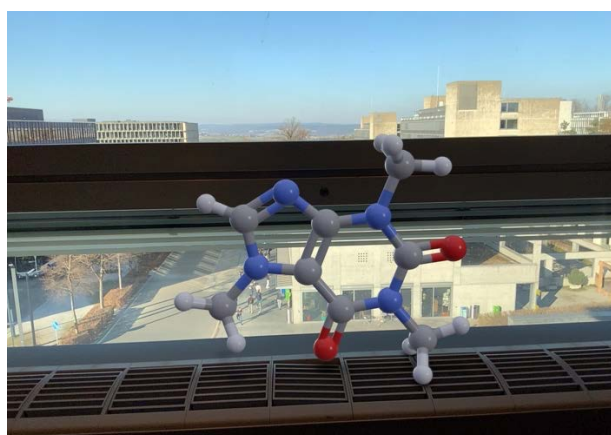
You can also visualize any molecule on PubChem, visualize any protein in the Protein Data Bank, draw chemical structures manually and visualize them in AR, take photos of structures or scan objects such as food and see the molecules inside them. A banana will get recognized by AR and a major constituent molecule will be displayed.
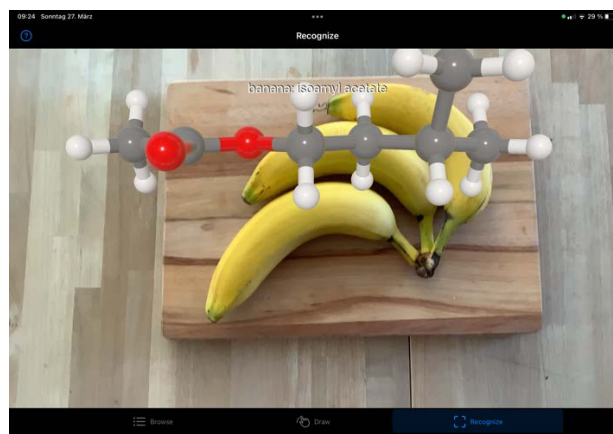
Research Integrity

The ETH Executive Board has issued new guidelines on scientific integrity. They build on the four principles of reliability, probity, respect and responsibility and apply to all members of ETH Zurich involved in scientific research and teaching as of January 1, 2022. Regulation 414 (PDF) applies to "all members of ETH Zurich who are involved in scientific activities", therefore including administrative and technical employees who may also be scientifically active.

Integration of ROR in Crossref

In literature databases such as Scopus, Web of Science or Dimensions, in addition to information on scientific publications and their authors, other data from the research environment are becoming increasingly important. This includes information on the institutions to which the authors belong or which have funded a research project. To ensure unique identification and referencing of these institutions, the Research Organization Registry (ROR) was launched in 2019. Similar to the well-known ORCIDs for individuals, the ROR compiles open data and unique identifiers for universities, institutes, government agencies, and other entities.

R https://ror.org/05a28rw58

ETH Zurich

SWISS FEDERAL INSTITUTE OF TECHNOLOGY IN ZURICH, ETH ZÜRICH, ETH ZURICH, EIDGENÖSSISCHE TECHNISCHE HOCHSCHULE ZÜRICH, ÉCOLE POLYTECHNIQUE FÉDÉRALE DE ZURICH, POLITECNICO FEDERALE DI ZURIGO

WEBSITE
https://www.ethz.ch/en.html

OTHER IDENTIFIERS
GRID grid.5801.c
ISNI 0000000121562780
Crossref Funder ID 501100003006
Wikidata Q11942

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A milestone for widespread use of ROR data is likely to be its integration into Crossref. As a major registration agency for Digital Object Identifiers (DOIs), Crossref indexes many millions of articles and other digital objects, as well as their references to each other. Crossref data provide a foundation for the literature databases mentioned above. The integration of ROR should further improve the quality of data on the work of scientific institutions.

Visualizations from PubMed

Everything is subject to change, including biomedical research topics. The site Sci70 (https://sci70.sysbio.tools) visualizes the frequencies of the most commonly used PubMed index terms over the years with bar chart race graphs. In this way, time travel is possible. Available categories are diseases, genes, and articles from the journal Science. Finetuning of speed, number of columns, and start and end year is possible.
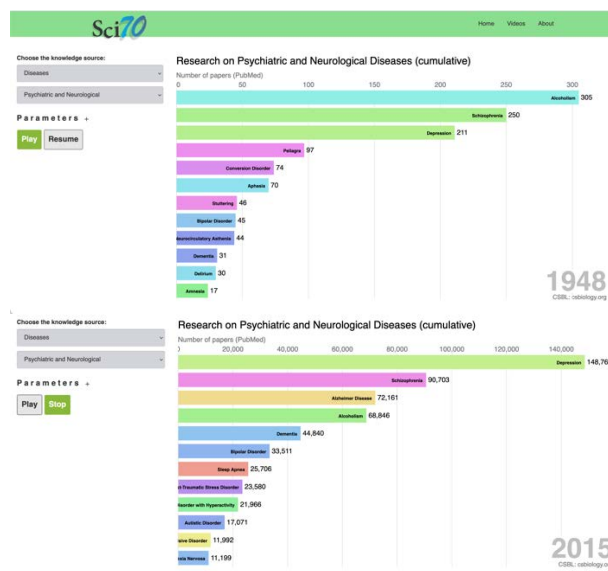
Reading lists in Google Scholar

At the beginning of the year, a small but useful feature was added to Google Scholar. If you are logged in with a Google account, you can add articles to a reading list using the "Save" button that appears below each search result. Any number of reading lists can be created. Individual articles can be either permanently removed from the lists or archived for later retrieval. The lists can be exported as CSV files and in various other formats.

Prior-Art-Analyses in SciFinder[n]

Covering 46 major patent offices, CAS SciFinder[n] is also a valuable tool for patent searching. Using the PatentPak option, users can view full-text patents for reference, reaction, or substance search results as well as notes by the SciFinder[n] analysts in a searchable format. Since the latest update of SciFinder[n], an exciting AI-powered *Get Prior Art Analysis* option is also available, which you can access when opening a SciFinder[n] record of a patent application. Using CAS concepts, indexed substances and IPC codes, this option generates a list of patent and non-patent literature, which is as close as possible to the claimed invention in the given patent. More information on patent searching in SciFinder[n] can be found in the SciFinder[n] Webinar IP Search Tips.

App Tip (2)

Wildtiere

The Wildtiere (Wildlife) app from the StadtWildTiere and Wilde Nachbarn projects active in Switzerland, Germany and Austria takes a similar approach as the apps in App tip 1.

Anyone who spots squirrels, foxes, hedgehogs, frogs, or other wild animals can report the sighting via app and thus help generate up-to-date data on the occurrence of animal species in urban and rural areas.
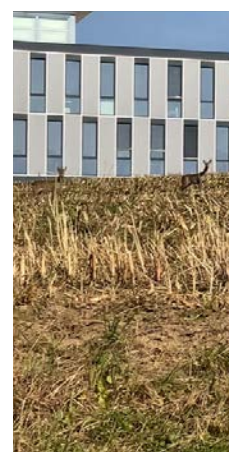
Again, observations can be shared on a public map. The app is available for Android and iOS, but only in German.

From the world of scientific information

AlphaFold on Euler

Science magazine's breakthrough of the year 2021, DeepMind's AlphaFold presents a viable solution to the 50-year-old challenge of predicting a protein's structure from its sequence. In doing so, it has radically transformed the field of protein structure prediction. Now freely available in its second incarnation, AlphaFold2, the program can be used predict entire databases of proteins. DeepMind and EMBL's European Bioinformatics Institute have created a database, AlphaFoldDB, to make the predicted structures available to the scientific community. The first release contained the entire human proteome together with several model organisms, while the second release contained structures for most of UniProt. In 2022, they plan to expand the coverage to include a large proportion of all cataloged proteins.
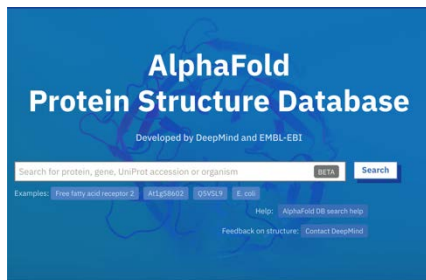
ETH members can run AlphaFold2 on the Euler cluster. Instructions for its use and slides from an information event on March 21, 2022, have been provided by ETH Zurich's Scientific IT Services. Use the predicted structures with caution, however, the program's performance depends on how closely the target protein (the one being predicted) is related to the proteins with known structures used to train the program as well as the number of homologous protein sequences available. The predicted structures should be treated as hypotheses and are a good starting point for further study and analysis.
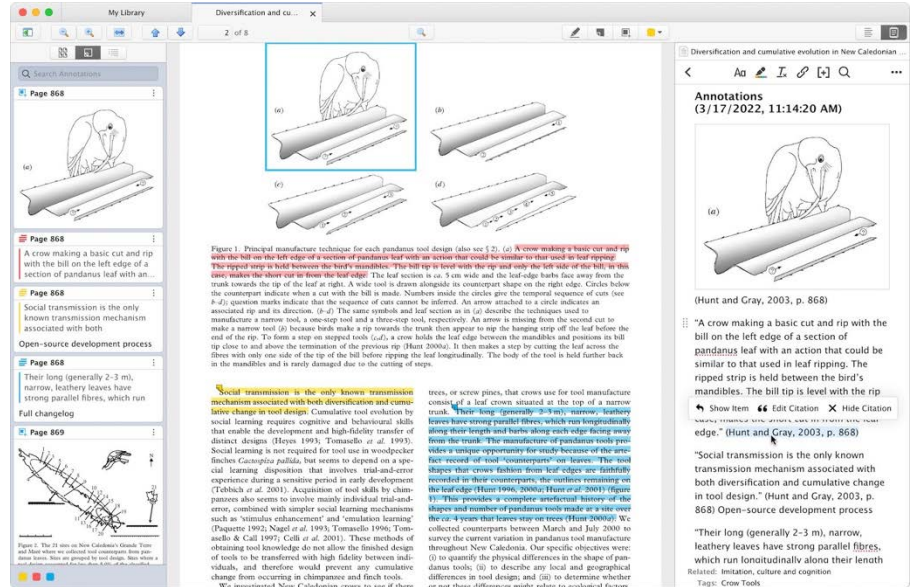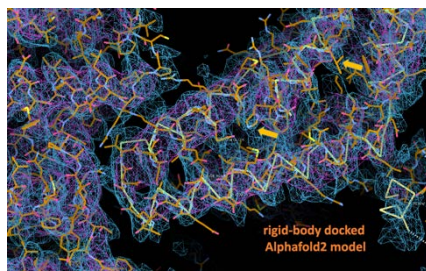
Newly released: Zotero 6

Almost five years after the release of Zotero 5, the sixth major version of the open-source literature management software Zotero was released in March 2022. In addition to numerous minor optimizations, a highlight of this version is the completely newly developed PDF module. This allows PDF files to be edited seamlessly via the user interface to add highlighting, comments, and annotations. The integrated note tool has also been revised, so that citations of documents in the user's Zotero database can be added and notes can be transferred directly to word processing programs. All these features can also be used with the cloud service to synchronize the entire database, including notes and annotations, on other devices or to collaborate on a bibliography with a group. ETH members who register with their ETH address receive unlimited cloud storage space.
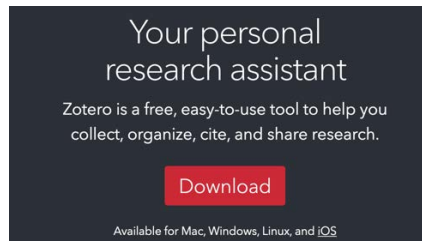
Zotero also allows to import existing databases from Citavi, EndNote, Mendeley and other programs. The software is available for macOS, Linux, Windows, and iOS. For Android, compatible third-party apps are available.

## SciFinder[n] includes unique bio-sequence data and capabilities

In Infozine No. 24 we reported on the Biosequence Search option, added to SciFinder[n] about a year ago, that allows searching biosequences using BLAST, CDR or motif search algorithms. In January 2022, a major expansion of this platform was launched, including over 1 billion sequences from patents, scientific literature, and NCBI databases. Displaying of sequence alignments with filters and links to literature references are available as well as the option to export sequence answer sets into Excel, including alignments. For more information, please watch the SciFinder[n] Webinar More than Chemistry: Biosequence Searching in CAS SciFinder[n]

In Review now available for over 500 journals

In Review, an innovative service of Springer Nature which allows early sharing and increased transparency in peer review with the journal submission and peer review process, is now available on over 500 Springer Nature journals, including the Nature and BMC portfolios that contain journals of disciplines such as physics, engineering, plant and animal sciences. Using *In Review*, researchers share their manuscript via Research Square, a multidisciplinary preprint and author services platform.

Scopus – The Roadmap for 2022

Elsevier has summarized the planned further developments of Scopus in a short PDF.
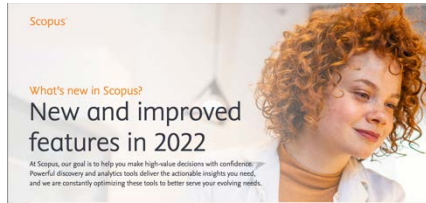
The flyer has been written by the marketing department, the highlights are, therefore, briefly summarized here:

Better Research Signals

Under the heading *Better Research Signals* new functionalities are introduced, aimed to help researchers better evaluate publications: For example, in 2022 it will be possible to sort the search results according to *most viewed* and several year ranges. Furthermore, the number of views per document is to be added on the results page.

Already now, the United Nations' Sustainable Development Goals (SDGs; see p. 7) are displayed on the *Document Details* page:

Alongside publication metrics, Scopus has started to list the SDGs relevant to the respective paper. This feature has already been introduced to some users and will be made available to all Scopus users in a phased approach over the course of the year.

In addition, profiles of organizations and authors will include the SDGs to which their research is aligned (Q3 and Q4, respectively).

Improving the visibility of this information will help you to identify potential partners and collaborators working in a particular field of interest more quickly.

Ease of use

For an enhanced document search, Scopus will add more analytics options to the search and discovery workflow.

Search and analytics

Scopus is currently experimenting with new search options, such as *similar* and *suggested* searches. The presentation of the Scopus Research Results Page will undergo further changes. Some users are already offered a test version of this page.

Users will also have more full-text access options: On the Scopus *Document Details* page, users now see – if applicable – the options *View PDF*, *View repository version*, and *View at publisher*. The *View repository version* and *View at publisher* buttons have been placed under the *Full text options* drop-down for a more streamlined view.
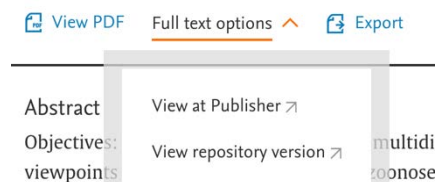
Scopus will also add a sticky toolbar, which enables user access to toolbar actions even when scrolling down the page.

Furthermore, Scopus is no longer focusing on researchers only, but also on data scientists, who can "leverage the data off-platform through a separate licensing structure, and then embed it into their specific data pipelines and workflows to enable more accurate search, discovery, and prediction". These possibilities have been used by the Information Center for quite some time for various tools (see page 1).

cOAlition S initiates Journal Comparison Service

cOAlition S commissioned the creation of a Journal Comparison Service to help the research community better understand if the publishing fees they pay are commensurate with the services delivered and to gain better insight into the elements of those services. Beginning in Spring 2022, cOAlition S plans to release the Journal Comparison Service in a phased approach, starting with

accepting data from publishers. The online service will be accessible to authorized users in late Summer 2022.

Browse through historical newspapers

Discover 247 historical newspapers from Germany, from the years 1671 to 1950, in the German Newspaper Portal. This service is provided by the Deutsche Digitale Bibliothek (German Digital Library) and bundles newspaper holdings and collections and makes them visible and accessible online free of charge. Find interesting articles via full-text search or find newspapers via title, place of publication or publication date.

Consortium of Swiss university libraries signs agreement with PLOS Konsortium

The Public Library of Science (PLOS) and the Consortium of Swiss Academic Libraries have announced a three-year Open Access agreement that allows researchers to publish in the PLOS suite of journals without incurring Article Processing Charges (APCs).

Scientific Writing Lab

Both during the studies and in later career stages, the ability to express ideas clearly and concisely contributes to success. For this reason, the Chemistry | Biology | Pharmacy Information Center (ICBP) is now offering a Scientific Writing Lab, Wednesday evenings from 17:00 to 19:00, starting February 23, 2022, in room G2 of the HCI building at ETH Zurich's Hönggerberg campus.

The Scientific Writing Lab supports students, particularly from D-BIOL and D-CHAB, in all stages of their writing process: getting started, writing, revising, and publication. In addition to getting feedback, the two-hour sessions can be used simply as a dedicated time and place to write.

Dr. Gina Cannarozzi, an Information Consultant at the ICBP and a research scientist with over 40 publications, will be advising students in private consultations, which can be booked by emailing cgina@ethz.ch.

The Information Center is on LinkedIn

Libraries have always been a place for storage and dissemination of information. With the overwhelming amount of information now available, the role of libraries is shifting to include information management. The Chemistry | Biology | Pharmacy Information Center embraces this role by providing seminars and courses about databases and tools for managing scientific information, consulting on specific problems in data management, and maintaining a group of Information Consultants that keep abreast of changes in databases, tools and information management solutions in the sciences. The Information Center informs about these subjects on our Twitter and Instagram feeds as well as our new page on LinkedIn, the professional networking and business platform. The Info Center's LinkedIn page was created to increase the visibility of the Information Management services at the Information Center. Topics posted include: 1) Life Sciences, Chemistry, Pharmacy and Materials Science tools, databases, visualization, software and information management tips; 2) Life Sciences, Chemistry and Pharmacy events, opportunities and news in Switzerland, especially Zurich; 3) Events at the Information Center; 4) Webinars and learning opportunities in the Sciences; 5) Initiatives and news about culture, diversity and gender issues in science, particularly in Switzerland and at ETH Zurich.

Quick facts
United Nations' Sustainable Development Goals (SDGs)

SDGs are on everyone's lips, including ETH Zürich.

The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides "a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 Sustainable Development Goals (SDGs), which are an urgent call for action by all countries – developed and developing – in a global partnership." Relevant for libraries, among others, are Goal 4 (*Quality Education*), as well as *Climate Action* (No. 13) or *No Poverty* (No. 1).

Let's talk about women in science

The natural sciences have historically always been a male-dominated field. In some respects, this is still true – at least at the executive level. In our first interview conducted on Women's Day 2022 and hosted on the D-CHAB Public Relations YouTube channel, Wall of Scientists founder and doctoral student Enriqueta Vallejo-Yagüe explains how we can learn from the past to change the future.

Women's Day 2022 – How to improve the future by acknowl…

In our second interview Helma Wennemers (D-CHAB), Gabriele Werner-Felmayer (Medical University of Innsbruck) and Ulrike Tappeiner (President of the University of Bolzano) give advice on how to become a successful female scientist today. Julia Ecker leads through the conversations. The podcasts can be found on YouTube.

Frauentag 2021 – Naturwissenschaftlerinnen und ihre Erfolgsrezepte

News from the Information Center

The binding machine is back!

Since February 21, 2022, a binding machine is available again in the printer room.

The use is free of charge under these conditions:

- You belong to one of the three departments: D-CHAB, D-BIOL or D-MATL.
- You are registered as a library user in *swisscovery*.
- You show your scripts to be bound at the Infodesk to get the required material.

Here you will find the instructions (German) as well as a short instruction video. Users who do not meet these criteria are asked to use the fee based service of the ETH-Store.

Borrow games and sports equipment at the Infodesk

Between courses or during intense study periods, it's good to take a break and get some exercise in the fresh air. The Information Center provides you with the right material. How about a game of Kubb, a ping-pong match, or a round of backgammon? If you've had a lousy day, perhaps the *Cards Against Humanity* might cheer you up.


The games are lent free of charge to ETH members registered in the library system *swisscovery* and must be returned the same day.
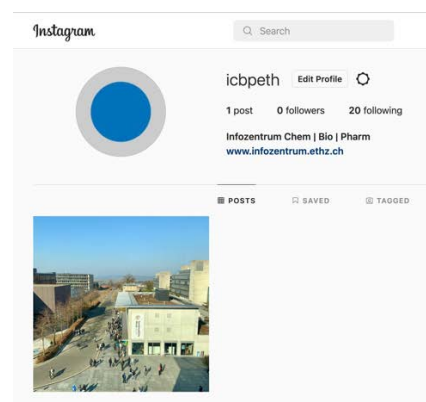

The new menu cards are here

For research groups in D-BIOL and D-CHAB, the Research Group Seminar Menu Card 2022 is now available (PDF). Do you want an update on what's new in information solutions (databases and tools)? Choose your information menu from our Menu Card and create your individual program from our selection of starters, main courses, specials and desserts. We will tailor the presentation exactly to your needs and research topics.
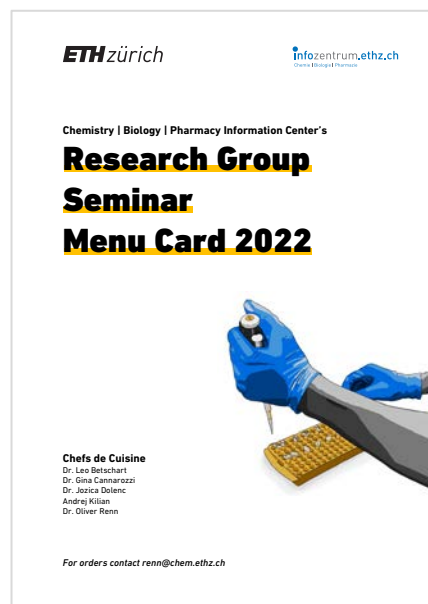
The Information Center is back on Instagram

In early December 2022, Meta, formerly Facebook, suspended our Instagram account for an unspecified violation of their terms of service. Upon appeal, we were asked to take a picture of the account owner holding a clean (!) sheet of paper with both hands, with his handwritten name, the account name and a code. Even though this mugshot reminded us of a photo of fall 1977, after some hesitation, we sent the photo but never heard from Instagram again. All attempts to contact Instagram were unsuccessful. As we learned on Twitter, we are not the only library to which this has happened. After a three-month waiting period, you can now find us on Instagram again, under the new name @icbpeth. Follow us to keep up with what's new at the Information Center.