ETH zürich

Infozine No. 16

The Magazine for Users of Scientific Information

Do you 📖📚 in the 🛁 or in the 🌳, in the 🏠, in the 🛏, with 🍷 or ☕, 🍵 or 🍸?

With the latest version of Apple's mobile operating system 11.1. the number of possible Emoji has increased to 2613 – according to the Emoji wikipedia. Yes, there is already a Wikipedia for Emoji. Soon it will be possible to go back to early writing systems and to communicate again exclusively via images or to write headlines like the one above. And more and more Emoji are invented. According to the New York Times Magazine, the Unicode consortium can thus hardly take care of any other tasks. 2613 Emoji words is a relatively large vocabulary. According to a study conducted by The Economist in 2013, native speakers know 20 000 to 35 000 words, 4-year-olds already know 4000 words. According to Wikipedia, a basic vocabulary of 2000 words already covers 90% of all texts. The number of spoken words is supposedly gender-specific (see page 8). On page 2, we report yet another suggestion to reduce the number of words.

*We hope you enjoy reading the 16th edition of the Infozine.*

Your Chemistry | Biology | Pharmacy Information Center

Preprint servers arrive in chemistry

While physicists have always been in favor of preprint servers – the famous arXiv for preprints in the fields of mathematics, physics, astronomy, and computer science has been founded already in 1991 – other disciplines are more reluctant. bioRxiv (pronounced "bio-archive") – the preprint server for biology, has been founded end of 2013. Chemists always felt that there is no need to share early results as a preprint instead of the final publication in a chemistry journal – except through conference abstracts. Data and results were kept close until they were peer-reviewed and finally published. Additionally, most chemistry journals did or do not accept manuscripts that have already been published on a preprint server.
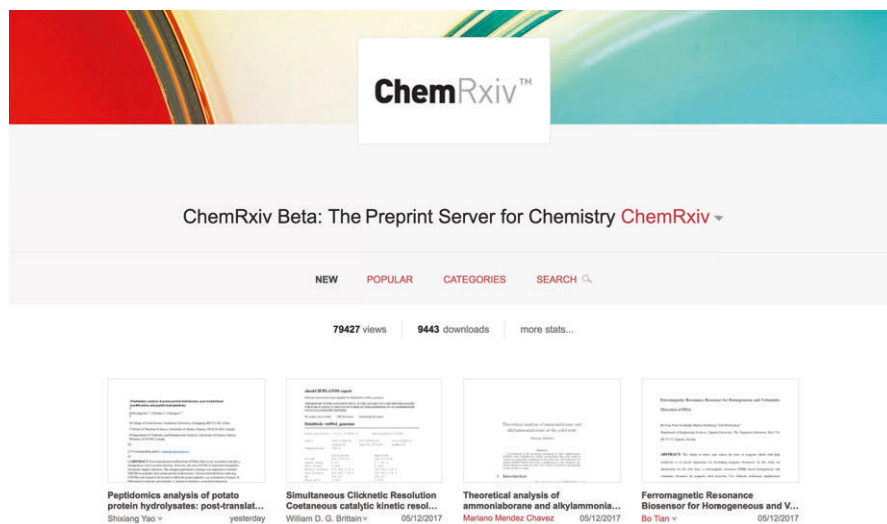
However, preprint servers are gaining growing attention, not only in terms of open access and open science. Thus, publishers, societies and other bodies either invest in preprint servers or launch them. BioRxiv, for example, received additional funding from the Chan Zuckerberg Initiative in April 2017. And in summer 2016, STM publisher Elsevier announced the acquisition of the Social Science Research Network (SSRN), a scholarly research preprint repository and online community for social science, founded in 1994. Following the acquisition of SSRN, Elsevier launched community-specific preprint servers, including one for chemistry. Elsevier had actually tried already in 2000 to launch a preprint server for chemistry, called ChemWeb, a project that failed. Now, just over the course of a few weeks, two preprint servers for chemistry have been launched: Elsevier's Chemistry Research Network (ChemRN) and ChemRxiv, a joint effort by the American Chemical Society (ACS), the Royal Chemical Society (RSC) and the German Chemical Society (GDCh). Many ACS journals now accept manuscripts that have already been published on a preprint server and more journals from other publishers are likely to follow.

The Infozine Interview

The wish:
Time to get really everything done.

6 questions, today to Cyril Schroeder (23), 7th semester Interdisciplinary Sciences

1. Which are the areas scientists should focus on more in depth?

„You must focus your research on something," I find that maybe too demanding. In the end, you should do research on what interests you and what you enjoy, and sometimes by doing that by chance you will find quite useful things. Apart from that, I think research should be carried out on fields that still provide "practical useful results".

2. Which information resources besides Google and Wikipedia do you know?

KnowItAllAnyWare, Reaxys, SciFinder (*Editor's note: All databases can be found via* Databases *on our Website*)

3. When do you consider a lecture fascinating?

When the professor is passionate and really tries to teach you something. The material should be a bit more demanding, so that you don't say to yourself afterwards: "Oh, I could have learned this from a book faster and better". A little bit of eloquence and rhetoric doesn't hurt either.

4. If you were granted a wish, what would it be?

To have enough time to reconcile all the things that mean something to me (a time reverser, for example, would be very practical).

5. Where is your favorite place at ETH?

I don't have a one favorite place, but I really like the Fusion Coffee and my desk.

6. Which book would you like to recommend?

The book "Fictions: Narratives 1939-1944" by Jorge Luis Borges. It is somewhat different from what is normally known. It is a collection of short stories, all quite surreal. *(Editor's note: The book can be found via* ETH Library's Knowledge Portal*. The copy located in the "Baubibliothek" unfortunately has the status "not found". However, the book "Gesammelte Erzählungen", which also contains this story, is available).*

*Jan Wyler conducted the interview. Would you like to answer our questionnaire and receive an original Information Center memory stick? Please contact Jan Wyler (*wyler@chem.ethz.ch*)!*

Department of Obscure Information
A monthly salary of 3.597 € for an idiot?

Infozine readers are familiar with databases, and we point out the quality of databases again and again.

This also applies – following the successful chemtogether – to salary databases. At gehalt.de you can explore what you can earn in a certain profession. And obviously, an idiot ("Depp" in German) is also a profession. Also as a cow you can find jobs and earn money. Sheep can expect an even higher salary – up to 4.655 € per month. Try it out! Look for "Depp" jobs.

Give researchers a lifetime word limit

Everyone is complaining about the ever-increasing flood of publications. A new proposal, published on October 19, 2017 in *Nature* (Vol. 550, S. 303), is now intended to solve this problem. Medical sociologist Brian C. Martinson suggests that each researcher may only publish a limited number of words in his or her career. This means less time spent on inferior publications, which would reduce the burden on readers, publishers and reviewers. After all, everyone will then consider whether the valuable word contingent should really be invested for this publication. Evaluations of researchers would also become easier, whether for jobs, promotions or scientific awards. At the same time, the influence of the impact factor would finally be reduced. Unfortunately, the short article, which is worth reading, does not reveal how large a contingent of such words could be.

■ Guidance for ETH Zurich researchers on SNF data management plans

The ETH Library offers a step-by-step guide to completing the data management plans for applications to the Swiss National Science Foundation (SNSF). Together with the EPFL Library and the DLCM project partners, the ETH Library has developed recommendations which illustrate the guidelines and information provided by the SNSF for the preparation of data management plans (PDF).

The guidelines of the SNSF, which is constantly supplementing its FAQ, remain binding. The new guide, on the other hand, is intended exclusively as a supportive tool.

The SNSF published further information on September 12, and updated its Frequently Asked Questions (FAQ). They include the following aspects, among others:

- Management plans do not have to be final at the time of submission.
- At this stage, they are considered a draft and are not included in the evaluation of the application.

Further information on the subject of data management plans can be found on the SNSF website and the Data Management page of the Digital Data Retrieval Unit (Fachstelle Digitaler Datenerhalt).

■ New ETH website on research data management

At ETH Zurich there is a new website on research data management. It serves as a source of information and as contact point for questions concerning data management and is maintained by the Fachstelle Digitaler Datenerhalt (ETH Library) and ETH Scientific IT Services.

The website contains information on
- data management plans
- active data management and
- publication and long-term archiving of research data.

In addition, it summarizes training and support opportunities at ETH Zurich.

■ Browzine – the best that could happen to e-journals

Subscribers to our newsletter Infocus already know: after a successful trial the ETH Library has licensed Browzine, initially for two years.
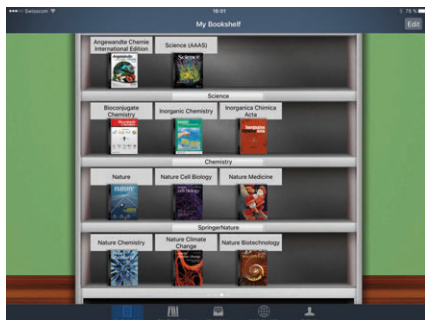
In the age of printing, many researchers were periodically flipping through journals and by reading them (in the library) they often came across something new. Many people have not been able to make the transition to the digital age, despite their good intentions and possibly even with the establishment of e-ToCs. Following journals often remains a dream, and even favorite magazines are no longer read regularly. With Browzine all that changes. Browzine brings thousands of journals to your device, via the browser or as an app on a tablet or smartphone. Favorite magazines (or other important journals) can be placed on shelves, as in the days of paper magazines. The tables of contents are automatically fetched, and the articles can also be saved and annotated for offline reading, forwarded, fed into bibliographical management systems or distributed in the social media, e. g. via Twitter.
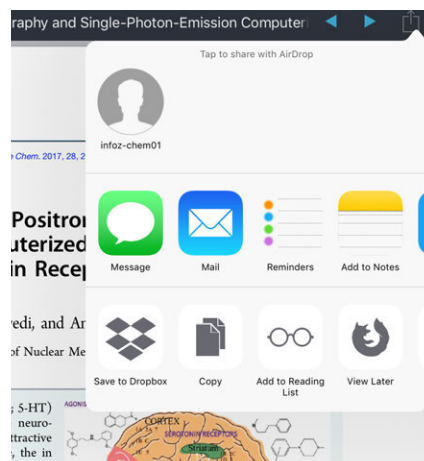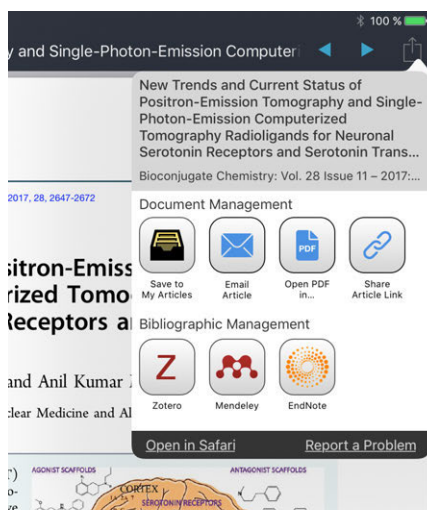
How to use Browzine:
Browzine as a web application for Laptop/PC:
http://browzine.com/libraries/1165/
Browzine as a mobile App:
http://thirdiron.com/download-browzine/
Select "ETH Library" from the list of institutions when opening the app for the first time. You must be in the ETH Zurich network to use the app (this does not apply to offline reading of saved articles).

A video of the ETH Library about Browzine can be found here.

New MeSH Terms: Academic Failure and Cell Phone Use

Several years ago, a good search in Medline or PubMed was only possible with knowledge of the current MeSH terms. These medical subject headings are still constantly being revised and extended. They are usually published on the website of the National Library of Medicine in late autumn. New MeSH terms are, for example, "academic failure" and "cell phone use". A PDF of all new terms can be downloaded from NLM. Today it is sufficient to simply enter a keyword search. PubMed automatically adds matching MeSH terms in the background. Alternatively you can use Qinsight, where a search – thanks to AI – is possible with questions in natural language.

When reading Infozine online you can click or tap on the blue hyperlinks and get directly to the websites.

This is an overview of citations for this author.

303 Cited Documents from "Stark, Wendelin J." + Add to list

Author *h*-index : 57   View *h*-graph ⓘ

News from Scopus

Search for research data and more

Scopus has again received some new functionalities that might be of interest to you.

Article-level metrics are now integrated into Scopus

Some time ago Scopus still contained Altmetrics data from *Altmetric*. These were then replaced by data from the supplier *Snowball*, and since the end of July 2017 you will find for each article data from the service of PlumX Metrics, which has been part of Elsevier since 2017 (An introduction to Research Metrics can be found in the Infozine Special Issue S1). In the article view in Scopus you will find if available – the citations in Scopus – and the logo of PlumX Metrics on the right. A click on it opens the overview with five categories: *Usage*, *Captures*, *Mentions*, *Social Media* und *Citations*.
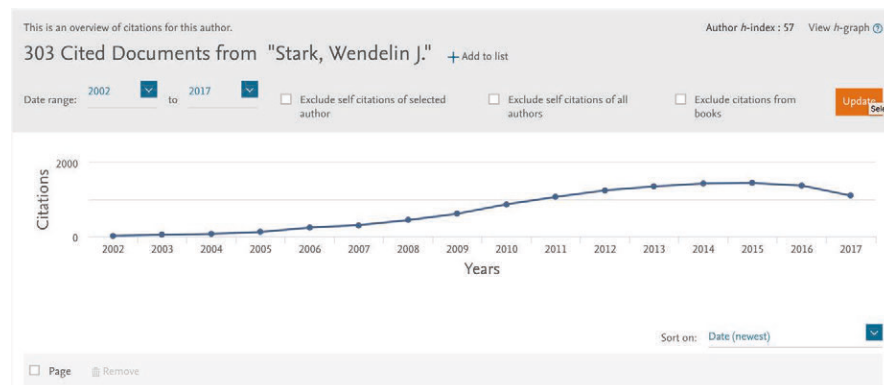
Overview of citations

The "Citation Overview" page has also been redesigned and has essentially the same functions as before. This page is displayed when searching for an author and analyzing his or her publications. However, an analysis is also possible in a document search. The analysis period has been reduced to 15 years. On the other hand, several documents can now be removed from the analysis view at once.

CiteScore

CiteScore is the competitor to Clarivate Analytics' (formerly Thomson Reuters) impact factor. Publishers and editors of a magazine can now present their journal's CiteScore through a widget on their website.

DataSearch

DataSearch (datasearch.elsevier.com/) is a new Elsevier search engine for research data. According to Elsevier, it is the first search engine to search not only in metadata but also in the data itself. It is possible to see a preview of the data and download the data. You can find more information here.

A search in Scopus will now not only perform a search in the literature, but also a search with DataSearch. If research data are found, a link is displayed at the top right of the results page (see arrow below).

A click opens the overview page for data in a new window.

Simple Search and *Advanced Search* are supported. However, Elsevier points out that complicated searches may not yield any results. The rendering of images did not work in the test (9.11.17). The new Data-Search searches only in repositories, but can also search for data in journals. If this is desired, this must be set to the left in the filter. To do this, click on Data Repositories. Only then the Data Source Type "Article Repositories" will become visible!

We will inform you about other new features of Scopus as well as Qinsight in our next issue of Infozine, which is due early next year.

Image search on iOS devices

Do you need a quick illustration, for example of a sheep? It is not necessary to screen thousands of images. Just enter the word "sheep" in the photo app and all existing photos of sheep will be found and displayed. AI, deep learning, machine learning and neural networks make it possible.
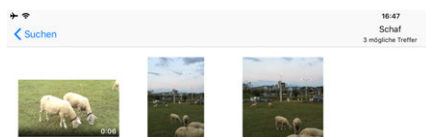

Book recommendation: Storytelling

Video-Storytelling: This book is a practical guide for innovative companies who want to communicate quickly and pragmatically with video. The book was published by vdf Hochschulverlag AG at ETH Zürich. Lending is possible via CLICAPS or ETH Library's Knowledge Portal.


Video Tip
ChemDraw 17: New shortcuts and a new video

The ChemDraw Wizard aka Pierre Morieux shows his magic skills again on YouTube: The recently released ChemDraw 17 has many innovations, including the long-awaited hotkeys for drawing, reaction, and selection tools. Watch all new features in the latest ChemDraw Magic video, online at https://youtu.be/AkkpuW322qo.
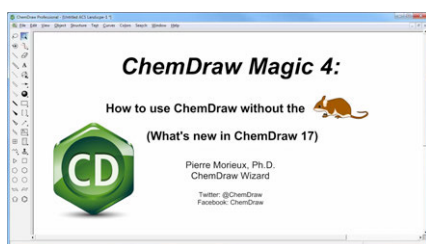

ReactionFlash and apoc social: Learning chemical name reactions in a playful way

After New Year's Day, examination session is coming up again and the learning period begins. This also includes learning the many named reactions of organic chemistry, which should (and for the exams must) be known in order to synthesize complex organic molecules with a high yield and as few steps as possible. You can browse through books, write cheat sheets, write index cards – or use an app. And there are two of them. One was created with the support of Erick Carreira's group – ReactionFlash by Elsevier. The other – apoc social – was developed by a doctoral student of the Carreira group (see Infozine No. 14, p. 7).
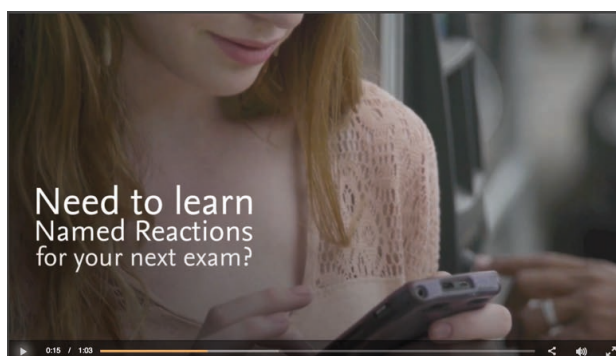
ReactionFlash, a free app for iOS and Android, turns learning 550 name reactions into a game with a flash card quiz like on a slot machine. A video by Elsevier shows how easily and playfully this basic knowledge can be acquired.
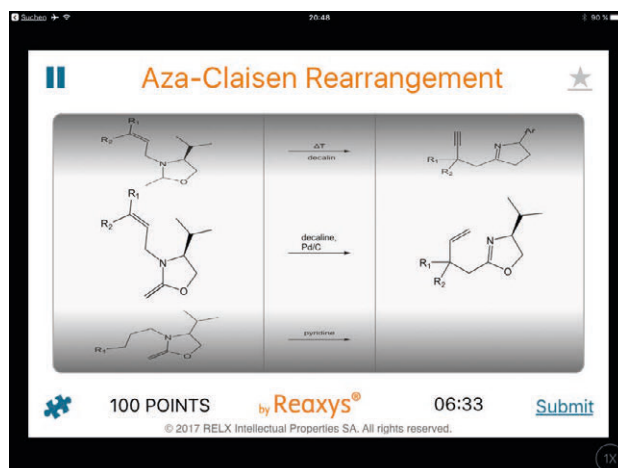
Learn more about ReactionFlash here. An interview with Erick Carreira can be found here, a blog article about the app here.
Download ReactionFlash in the Apple Store
Download ReactionFlash in the Google Play Store
The app "apoc social – Problems in Organic Chemistry" by Niels Sievertsen is also available for iOS and Android:
Download apoc social in the Apple Store
Download apoc social in the Google Play Store

DeepL Translator
An alternative to Google Translate

When translating words automatically, you might have come across Linguee, a search engine that displays word suggestions including context sentences. Linguee is backed by the Cologne-based company DeepL, which released an electronic interpreter this year: DeepL Translator can translate a whole text containing up to 5000 characters. The artificial intelligence behind DeepL uses the huge data set of Linguee and generates very precise translations with the help of neural networks – sometimes much better than Google Translate or Bing Translator. DeepL does not translate word by word but context-based. The resulting translations must still be edited manually, but to a much lesser extent than the results created by the competitors. DeepL Translator is currently available free of charge in seven languages, including German, English, Spanish, and French. The translation of this Infozine, No. 16, was supported by DeepL (www.deepl.com/translator) and was manually revised.

DeepL ☰

GERMAN (detected) ⌄ | Translate into ENGLISH

Endlich ein wenig Konkurrenz für automatische Übersetzungsdienste! | Finally some competition for automatic translation services!
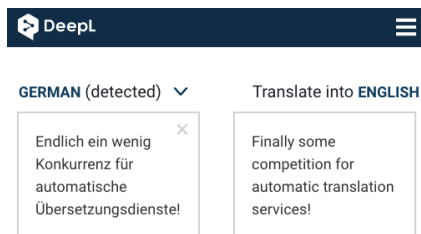
How Academics dress

A university, especially a technical one, is usually not the place where you would expect fancily dressed people. A paper published in The Chronicle of Higher Education – the German *Süddeutsche Zeitung* covered it – discusses „*What We Wear in the Underfunded University*". According to the author, there is "*a gap between the way the professionalized university wants to present itself and the less glossy realities faced by the people who teach within it*". Also, "*a worn sleeve is no longer the proud war wound of long stretches at library desks*" but those blazers can now be bought at department stores.

ScienceDirect Topic Pages

ScienceDirect, the platform for the currently 3970 journals of Publisher Elsevier, has a new feature, the ScienceDirect Topic Pages.

These pages provide concept definitions and subject overviews for researchers who want to expand their knowledge about scholarly and technical terms. Each synopsis provides a series of short, authoritative, excerpts from highly relevant book chapters written by subject matter experts in the field. These topic summaries are – naturally – derived from Elsevier encyclopedias, reference works and books only. The topics can be selected from an A to Z list, and within each character a search is possible. A possibly useful alternative to Google if you want know a bit more about an unknown scientific term.
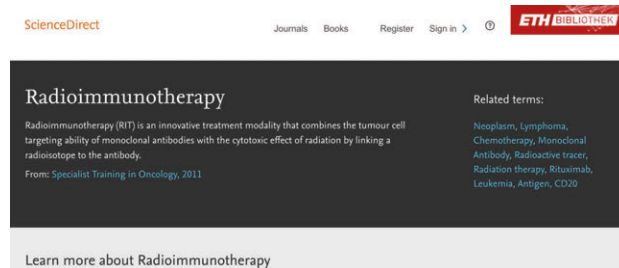
The new web archive of ETH Zürich

Have you ever wanted to visit an ETH Zurich website and had to find out that it no longer exists? It is possible to find it in the web archive of ETH Zurich. The Hochschularchiv systematically selects all ETH Zurich websites and archives them openly accessible. The user guidance to the actual archive is somewhat complicated – we therefore recommend to follow this Blog post. A list of archived pages can be found here. The old D-BIOL website can be found, while the D-CHAB website can not. However, many individual institutes and research groups can be found. An alternative is the Wayback Machine. Here you can even find snapshots for several days of a year, below e.g. the snapshot of the D-CHAB-Website from 13.11.2012.

Explanation in brief

Real fakes

In our introductions for first semester students we show that scientific papers can be falsified or even completely invented. Later, we show examples of publications with manipulated data or publications written by fake authors such as Stronzo Bestiale, or papers written by children whose school essays have even been accepted as scientific papers by predatory publishers. It has never been easier to fake than it is today. This also applies to identities. In the German press, fake identities are currently a hot topic. The *Süddeutsche Zeitung* presents such "realfakes" (also known as catfish in English) in its documentary series "Homo Digitalis" . Unknown persons build up perfect fake profiles in the social media, fill and maintain them and interact with third parties. The first part of the documentary reports about Jasmin Nicoletta Goldmann, a case that has been covered also in other newspapers, because a real user had fallen in love with Jasmin. Jasmin, supposedly 35 years old, was born in Hamburg and worked as a microbiologist at the US pharmaceutical company Merck in Boston. This is what you can read in her online profiles, for example on Facebook, Twitter, Google Plus or Soundcloud. In this case, the figure was developed for 10 years until the unkown creator decided to let it die. For this reason, conferences and other real-life events should continue to be used in order to get to know people personally before interacting with them through the web.

The journal tip (12)

ChemistryViews Magazine

This time not a tip for a "real "journal", but a journal-like portal for chemistry, i.e. ChemistryViews. The service is provided free of charge by ChemPubSoc Europe, an organization of 16 European chemical companies, and is published by Wiley-VCH. On ChemistryViews you can find daily news about current topics from research and the chemical industry, a calendar of events, videos and the online magazine ChemistryViews.

Announcement of the seminars by Reaxys and Novartis

The Information Center | Chemistry | Biology | Pharmacy will again organize events with publishers and companies at the beginning of 2018.

The Secrets of Reaxys Revealed

On January 11, 2018, a workshop on Reaxys will be held by Dr. Robert Niebergall, Customer Consultant, Reaxys, Elsevier. Topics are:

- What is behind the frontend of Reaxys? – The Making of Reaxys
- Information you never thought you could retrieve with Reaxys
- Real chemistry use cases from real scientists

Registration at www.goo.gl/ZV8Scn is required for this workshop. You can make an impact on the agenda by filling in a survey with suggestions for the agenda: http://www.goo.gl/uh98iD.

Further information can be found on our website.

Physico-chemical properties and their application in drug discovery

This course is offered by the *Novartis Institutes of Biomedical Research* PhysChem Lab on January 18, 2018. It covers the key physico-chemical properties of small molecules in context of drug-discovery projects in industry. The following questions will be answered:

- Why are physico-chemical properties of drugs important?
- How are these properties measured experimentally?
- Can we predict them computationally?

Registration is not necessary. Further information can be found on our website.

Autumn leaves and CO_2 – the hassle with the leaves

The leaves fall every autumn and homeowners always particularly annoyed by the heaps of leaves. Others are mad about the noise of the leaf blowers, which more or less effectively pile up the leaves. Often, the final solution is to cut the tree to get rid of the leaves. But trees also have advantages. They produce oxygen, have considerable cooling effects and absorb and bind pollutants and CO_2. But how much is that? O_2 is already abundant in the atmosphere, the cooling can reach up to 75 000 kWh per tree (and is strongly felt in woody gardens in summer).
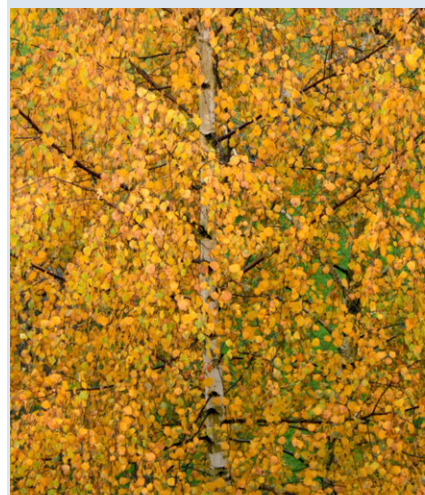
However, the CO_2 absorption is comparatively low. A 10-year-old city linden tree absorbs 88 kg of CO_2 per year, a 100-year-old city linden absorbs about 356 kg of CO_2. According to co2.myclimate.org/ a flight from Zurich to Boston equals 2.2 t CO_2, which would require six old trees for compensation. Thus, trees are making a contribution, especially without leaf blowers. However, the forest at the Käferberg is unlikely to be sufficient for all members of ETH Zurich. We would like to thank the Chair for Forest Growth and Yield Science and the Chair for Strategic Landscape Planning and Management of the Technical University of Munich for the sources and data.

SpringerNature Publishing

According to the usually well-informed circles, SpringerNature's initial public offering (IPO) can be expected very soon.

Limitation of words (2) How many words are known and used?

As far as we know, a proposal to limit the number of spoken words (see page 2) has not yet been published. However, there are papers on how many words are known on average and how much is spoken on average. A 20-year-old English-speaking American knows an average of 42,000 words, according to a publication in Frontiers in Psychology. But how many words are used, for example at work? Google Books, for example, can help us to find the answer. Accordingly, men use 2000 to 3000 words, women 20,000 to 30,000 words a day. Whether this is true is something that everyone can judge for themselves.

Does Open Access work? What about a Plug-in?

According to a report by the UK Open Access Coordination Group, 37% of scientific publications are now freely accessible. 37 does not take into account accessibility through SciHub or ResearchGate. With that, the number would be close to 100%. ResearchGate has been recently sued at a court in Munich by the *Coalition for Responsible Sharing* for copyright infringement. If you want to avoid the library you don't need to go illegal. You can also use a legal plug-in for browsers like e.g. Unpaywall (Infozine No. 15), Open Access Button, Lazy Scholar or Kopernio – the one-click access to PDFs. No more VPNs, login forms – as recently reported in *Nature* (Dalmeet S. Chawla: Need a paper? Get a plug-in, Nature 14.11.2017)

2017 Instagram advent calendar of the Infocenter

Once again, there is an Advent calendar of the Infocenter at Instagram. Every day a door opens and a short video is shown. The theme of this year's video advent calendar is "Working, Living and Researching at the Hönggerberg Campus". It will show you – and your friends – what it's like up there on the Hönggerberg. You can expect unexpected and unusual insights. Places you may not have seen this way or you may not have been able to see at all. A highlight was again the door on December 6, 2017: In this video, one could see how Santa Claus hid chocolate in the Information Center. If you know your way around us and CLICAPS, you could find the chocolate easily.

Visualization of research in G2

In the seminar room HCI G2 you will now find, newly framed, the visualization of the research of the departments D-CHAB and D-BIOL. For the five institutes of the D-CHAB there is comparison of 2013 to 2017.

First-semester survival kits

A small number of the newly designed first-semester survival kits are still available and can be obtained at the Infodesk.

Recherchekompass

The electronic version of our updated Recherchekompass (research compass), which is included in the current first-semester survival kit, is now also available for download on our website.

Coffee Lectures: The 14th series

The 14th series of Coffee Lectures start in early 2018. The exact date will be announced on our website. Would you like to introduce "your" tool to us? It can be a tool developed by you or "only" your favorite tool. We look forward to Coffee Lectures held by you, thus promoting the exchange of knowledge. Please contact Oliver Renn informally. We are also looking forward to suggestions which of the Coffee Lectures we should repeat. The overview of all Coffee Lectures can be found on our website. You can also stop by at the Infodesk to get your personal printed copy of the Collector's Card Album. By the way: Coffee Lectures are meanwhile very popular among other universities and have been adopted and copied by many libraries. Therefore, a first Coffee Lecture User Meeting will take place at the KIT in Karlsruhe (Germany), a very early adopter of the Coffee Lectures.

Save the date: Book exchange early January

Did you get books for Christmas that you do not want? But you also don't want to throw these books into the paper recycling bin? We have the solution! The carpenters of ETH Zurich have built us a book swapping shelf, on which you can place unpopular books, for everyone to take away. And of course, you are welcome to take interesting books you like with you. This is a great opportunity to clean up at home during holidays and bring books, CDs, DVDs, games, etc. which you no longer need to ETH Zurich. The exact date of the book exchange will be announced on our website in due time.