



SCS
Swiss Chemical
Society
SCS Academy

SCS Academy
Schweizerische Chemische Gesellschaft



SCS Academy

Aus- und Weiterbildungsangebot der Schweizerischen Chemischen Gesellschaft

Unser Ausbildungsangebot

Die SCS Academy der Schweizerischen Chemischen Gesellschaft (SCG) bietet Weiterbildungskurse in diversen Gebieten der chemischen und pharmazeutischen Wissenschaften an. Neben dem etablierten Angebot in der Analytik (Spektroskopie, Trenntechnik, Qualitätssicherung und Informationsbeschaffung) werden neu auch Kurse in den Bereichen Labor Basics und Umweltwissenschaften angeboten.

Die Kurse werden in Zusammenarbeit mit unseren Industriepartnern durchgeführt und richten sich sowohl an Einsteiger wie auch an Experten.

Trenntechnik

- Einführung in die Gaschromatographie (GC) [TR-4]
- Grundlagen der GC/ MS mit Quadrupol-Systemen [TR-6]
- GC für Fortgeschr.: Einspritztechniken Theorie und Praxis [TR-4b]
- GC für Fortgeschr.: Methodenentwicklung [TR-4c]
- GC für Fortgeschr.: Headspace Injektionstechniken [TR-4d]
- GC für Fortgeschr.: Grossvolumige Einspritztechniken [TR-4e]
- GC-Troubleshooting: Fehlerbehebung in der GC & GCMS [TR-5]
- Einführung in die HPLC [TR-9]
- Von der chemischen Struktur zur HPLC-Methode [TR-20]
- HPLC-Troubleshooting – Ergänzungskurs [TR-11]
- LC-MS Kopplungstechniken [TR-24] **NEU**
- Einführung in die Ionenchromatographie (IC) [TR-8]
- HILIC - Trennung von polaren Verbindungen [TR-21]
- Einführung in die Biochromatographie – Trennung von Peptiden und Proteinen [TR-19]
- Chirale HPLC und SFC – von d. ersten Schritten zum Profi [TR-14]
- Präparative Chromatographie [TR-15]
- Charakterisierung von Polymeren und Biopolymeren mit Größenausschlusschromatographie GPC/SEC/GFC [TR-17]

Spektroskopie

- FT-IR Spektroskopie: Interpret. von IR-Spektren & Applikationen mit FT-IR-Messtechniken für organ. Substanzen [SP-14]
- Messung und Interpret. v. IR-Spektren / Organ. Chemie [SP-9]
- Interpretationstraining IR Spektren / Polymerchemie [SP-10b]
- Interpretation von FT- IR-Spektren /Applikationen in der Polymerchemie [SP-10a]
- Strukturaufklärung von Kleinmolekülen mittels
- Massenspektrometrie [SP-8] **NEU**
- NMR-Spektroskopie [SP-12]

Labor Basics

- Grundlagen zur Lagerung und Entsorgung von Sonderabfällen im Chemielabor (LB-1) **NEU**

Spezielle Techniken

- Elektrochemische Titrationsmethoden: Einführung in die Praxis [AA-1]
- Karl-Fischer-Titration (KFT) [AA-2]
- Rasterelektronenmikroskopie und energiedispersive
- Röntgenanalyse [AA-3]
- Grundlagen der thermischen Analyse (DSC, TGA, TMA und DMA) [AA-14] **NEU**
- Extraktion - Probenvorbereitung für jede Analytik [AA-15] **NEU**

Qualitätssicherung

- Messunsicherheit in der Analytischen Chemie [QS-5]
- GMP-Praxis in der Qualitätskontrolle [QS-10]
- Qualifizieren von Analysengeräten mit praktischen Beispielen [QS-7]
- Validieren von Analysenverfahren I – Grundlagen [QS-8]
- Validieren von Analysenverfahren II – Praktische Beispiele [QS-9]
- In-House Referenzmaterialien zur Methodvalidierung und Gerätequalifizierung [QS-14]
- Validieren von IT-Systemen und Datenintegrität [QS-15]
- Innovation und Regulierung: Regulatorische Toxikologie für Chemiker [QS-20]
- Führungsschulung Basiskompetenzen: effiziente Führung kleiner Gruppen [QS-16]
- Einkaufswissen für chemische Berufe und Labore [QS-17]
- Gute Kommunikation ist die halbe Verhandlung [QS-21]
- Effiziente Qualitätssysteme im regulierten Umfeld mit praktischen Beispielen [QS-22]
- Risk Management in Manufacturing and Quality Assurance in the Analytical Laboratory [QS-23] **NEU**

Registration & aktuelle Informationen

Auf unserer Webseite ist das gesamte Programm mit laufend aktualisierten Kursdaten publiziert.

Kontakt und Management

Falls Sie Ideen oder Bedarf an einem neuen Kursthema haben, nehmen wir Ihre Vorschläge gerne entgegen.



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Image: pixelfarm

Achieving Gender Equality and Diversity in the Natural Sciences

A seminar series held online on zoom each Monday, 4-5 pm, between 20 September and 15 November 2021, open free of costs to all interested persons.

The Swiss Academy of Sciences unites expert societies of Natural Sciences. The members of these societies usually include professionals in research, technology, and science, who are active in private and public institutions. Whilst many women study Natural Sciences, they are still widely under-represented compared to men in advanced and leading positions.

The Platform Biology of the Swiss Academy of Sciences thus decided to organise a series of nine public webinars to address causes and consequences of this situation, and to propose solutions for achieving a wider diversity in science and research. The Organising Committee members are Astrid Oberson, Swiss Society of Agronomy, Carmen Faso, Swiss Society of Tropical Medicine and Parasitology, Nicole Imesch, Swiss Society of Wildlife Biology, Didier Picard, Life Sciences Switzerland, and Laurent Vallotton, Muséum Genève.

The webinar series will focus on the 'leaky pipeline' that stands for the decreasing proportion of women from university studies towards advanced and leading positions in research and science. We will address topics such as the importance of diversity, recruitment processes, the role of biology, measures to promote gender equality as well as researchers' career stories (from junior to advanced positions, full professors and leading positions).

Each webinar lasts one hour, typically with two to three speakers, and is moderated by Romaine Jean, journalist and communication consultant based in Geneva. Participants will be able to ask questions and to get involved in the discussions. Some webinars will be recorded and published on the website of the Platform Biology, together with a written summary by Romaine Jean.

Registration

Please register on the website <https://scnat.ch>

Upcoming Seminars

04.10.2021, 16:00 - 17:00h

The neurobiological differences between men and women

While gender is socially constructed or influenced, men and women also differ because of pre-existing neurobiological differences, which it would be non-scientific to disregard.

11.10.2021, 16:00 - 17:00h

The gender-equality paradox

Underrepresentation of women in the STEM fields (Science-Technology-Engineering-Mathematics) is more pronounced in more gender-equal countries. This is part of the gender-equality paradox, a well-established phenomenon – yet counterintuitive –, where differences between men and women tend to grow as countries become more developed and gender-equal.

18.10.2021 16:00 - 17:00h

Let's do it! Successful measures to close the gap

Solutions that can help mitigate the social loss of the academic leaky pipeline include recruitment practices at institutions of higher education and research or flexible child care. Recruitment regulation, quality control and important issues to promote women with children in leading positions will be discussed.

25.10.2021, 16:00 - 17:00h

The role of funding policies and the use of quota

The allocation of financial support for research by academic institutions or by funding agencies may have a major impact on gender equality in science and research. This webinar explores the potential and limitations of gender quota in the recruitment and financial support of women in academia.

01.11.2021, 16:00 - 17:00h

Rethinking excellence

The term "excellence" is extensively used in academic research to justify and target funding and recruitment decisions and policies. In this webinar, we invite our participants to an open critique of the concept of excellence. The Better Science Initiative calls for a rethink in academia towards more sustainability, diversity and equal opportunities.

08.11.2021, 16:00 - 17:00h

I did it! Experiences from leading scientists

Women who have attained leading positions may on their career path have been confronted with specific, gender related challenges. During the panel discussion, female professors and leaders will inform about their career path. They will include highlights and motivation of their career, the hurdles that they have encountered, and their solutions to overcome them. The interviews will address the significance of individual versus institutional and societal boundary conditions. Finally, the webinar aims to present experienced leaders to inspire young female scientists.

15.11.2021, 16:00 - 17:00h

I want it! Career experiences by young scientists

Female junior and advanced scientists, yet without a permanent position, share their experiences and their expectations regarding gender equality and diversity. They will present their career path and indicate highlights and hurdles of their professional development. During the panel discussion individual experiences as well as the role of institutional and societal boundary conditions will be addressed.

Contact

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Anton Paar: Great People, Great Instruments

Leading lab instruments, process measuring systems



Anton Paar develops, produces and distributes highly accurate laboratory instruments as well process measuring systems and provides custom-tailored automation and robotic solutions. It is the world leader in the

measurement of density, concentration, dissolved CO₂ and in the field of rheometry. Hunger for progress, pride in high-precision craft and passion for boundary-bursting research drive everything we do. Great instruments are only as good as the great people who use them. Our instruments are born of dialogue with our customers, in answer to the challenges they face.

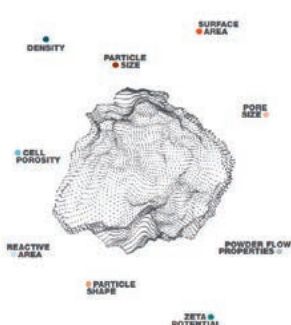
Pharma solutions for the future

The Covid-19 pandemic has underscored the vital contribution of the pharmaceutical industry to safeguarding the future health of humanity. Behind the race for vaccines, and other pharma solutions, is a need to satisfy stringent regulations with completely traceable results. That's why Anton Paar offers Pharma Qualification and Validation Packages following the 4Q model – which fulfils the requirements of the pharmaceutical industry: GMP, 21 CFR Part 11, GAMP 5, and USP <1058>. The packages include risk analysis, design qualification (DQ), installation qualification (IQ), operational qualification (OQ), and performance qualification (PQ), a traceability matrix, standard operating procedure (SOP), user training and qualified support on-site.

It's also why our recently launched lab execution software AP Connect includes an edition specifically designed for the pharmaceuticals sector. AP Connect Pharma helps industry stakeholders kickstart their paperless lab with time-saving, automatic and digital data transfer, the elimination of transcription errors, complete traceability of lab activity, and compliance to data integrity regulations. AP Connect Pharma is more than intuitive, reliable and productivity-boosting. It's liberating.

New horizons in particle analysis

The better we know the particles, the better we can predict materials' behavior. Measurable parameters for these investigations include particle size, pore size, particle shape, internal structure, zeta potential, surface area, reactive area, density, powder flow, and many more. Anton Paar offers instrumentation for all of them and more – it's the broadest particle characterization portfolio available from one single provider worldwide.



XRDynamic 500: Driving XRD

We've directed our expertise – born of more than 60 years' innovation in the field – into our brand-new automated multipurpose powder X-ray diffractometer, XRDynamic 500, launched globally at the end of August. Joining an instrument portfolio trusted by the global X-ray analytics community, XRDynamic 500, with its a fresh, bold design vision, breaks new ground in XRD. Driven by the TruBeam™ concept, XRDynamic 500 is the first X-ray diffractometer to deliver both outstanding measurement speed and resolution, with zero compromises. TruBeam™ allows full automation of beam geometries and X-ray optics, as well as instrument and sample alignment, in combination with flexible instrument setups for an array of applications. Most important, though, is the best-in-class data quality. XRDynamic 500 offers 20 % better measurement resolution out-of-the-box in a standard Bragg-Brentano configuration when compared with other conventional instruments.



XRDynamic 500

Automation and robotics

Anton Paar offers more than 170 analytical solutions and is the market leader in digital density measurement and rheology. Our automation solutions optimize productivity, reproducibility, and precision. In fact, we're the only provider of both laboratory instruments *and* automation – perfectly suited for sensitive automated measurement tasks in industries and applications such as petrochemistry, personal care, and food and beverage. Our HTR rheometer automation is engineered for high sample throughput and complex sample handling.



HTR Compact: rheometer autosampler for high sample throughput.

Based on Anton Paar's MCR 702 rheometer, the extensive set of features and the built-in flexibility are ideal for sophisticated and high-throughput R&D or QC work, and make possible the world's first fully automated high-throughput rheometer

Discover Anton Paar complete portfolio at ILMAC 2021 (19-21 October) in Basel, Hall 1.0, booth C123.

Contact

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Büchi AG – büchiglasuster

Swiss manufacturer of reactor systems and pilot plants for the chemical and pharmaceutical industry as well as research institutions – from lab through pilot to production scale.

Our reactor systems and pilot plants are suitable for the most demanding corrosion and pressure requirements due to our proprietary designs and the use of high-performance materials. With more than 74 years of experience Büchiglas stands for the highest level of quality and reliability. Our offering covers the whole life cycle of the equipment from pre-sales consulting and engineering through manufacturing and installation to after-sales services and plant optimization. Our engineered and tailor-made solutions lead to the highest output of your R&D activities and production processes – Büchiglas is your competent partner.

Pressure reactors / stirred autoclaves



Büchi pressure reactor systems are used for various applications and reactions under pressure including hydrogenation, polymerization, catalyst screening and corrosion testing. Büchiglas pressure reactor systems are designed for intensive daily use in laboratories, pilot plants / kilo labs and small-scale production facilities. Depending on the physical process requirements (i.e. pressure, temperature, volume), the chemical process requirements (i.e. chemical properties of process media) and operational & regulatory requirements the appropriate reactor model is selected. In addition, to the selection of the model, the individual

unit may be customized in various dimensions (i.e. material in contact with media, vessel shape, stirrer drive capacity, stirrer shape etc.). A wide range of reactor accessories for subsequent modification and upgrades is available. The 3 top advantages of the product line:

- Built according to your specifications using highly corrosion resistant materials.
- Modular setup for customized configuration and easy upgradability.
- Smart design features for safe & effortless handling and operation.

Gas dosing unit bpc 2



The Büchi gas dosing unit bpc 2 in combination with Büchi pressure reactors creates an optimal turnkey solution for safe, accurate and reproducible hydrogenations and other gas/liquid reactions.

It allows precise gas dosing, control of the reaction pressure and control of the gas flow rate.

The bpc 2 is optimized for various gas/liquid reactions such as hydrogenation, catalyst development & testing and polymerizations.

The robust technology of the bpc 2 has proven its reliability and performance worldwide in research, scale-up, process development and small-scale production plants of various pharmaceutical and chemical companies and research institutions. The top advantages of the product:

- Easy and safe to operate.
- Dosing of various gases (options).
- Gas uptake is continuously measured until saturation or another predefined limit is reached.
- All process parameters are recorded. In conjunction with the Büchi bls 3 software, the reaction progress can be shown graphically.

Glass reactors & process equipment



Büchi glass reactors and process equipment guarantee best process performance in labs, pilot plants / kilo labs and production. From laboratory synthesis through scale-up to production. Our focus lies with engineered solutions tailored according to your lab, pilot or production needs. Our glass reactor systems are specifically optimized for cGMP API manufacturing and fulfill all regulatory requirements for safe operations incl. ATEX. Büchi apparatus and systems are built with Swiss made highest quality borosilicate glass components and various other components made of highly corrosion-resistant materials such as

glass-lined steel, fluoropolymers and Hastelloy®. Our glass piping remains flexible at all time due to our unique and proprietary flexible joint system “büchiflex”. The 3 top advantages of the product line:

- Customized according to your process and operational requirements.
- cGMP and ATEX compliant.
- Easy and safe operation.

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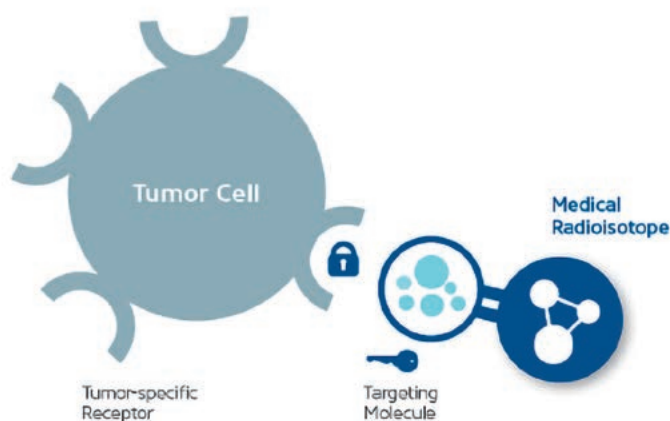
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Harnessing the potential of nuclear medicine in precision oncology

Highly precise Targeted Radionuclide Therapy is a promising new generation of targeted molecular therapy used in cancer treatments. The radiopharmaceutical biotech company ITM Isotope Technologies Munich SE (ITM) develops, produces and distributes medical radioisotopes and radiopharmaceuticals for Targeted Radionuclide Diagnostics and Therapy on a global scale to help patients live longer and better.

Biomedical investigations examining various tumor characteristics and tumor-binding molecules contributed to the evolution of precision oncology, which paved the way for Targeted Radionuclide Therapy, also known as Peptide Receptor Radionuclide Therapy (PRRT), to become a promising new treatment paradigm.

In contrast to conventional external radiotherapy, Targeted Radionuclide Therapy is defined by the intravenous infusion of a radiopharmaceutical. Radiopharmaceuticals consist of a medical radioisotope and a tumor-specific targeting molecule. The targeting molecule binds to tumor-specific characteristics, such as receptors overexpressed on the tumor cell surface, according to a lock-and-key principle. As a result, the radioisotope accumulates at the tumor site and decays, releasing a small amount of ionizing radiation, thereby destroying the tumor. The highly precise localization enables targeted treatment with minimal impact to healthy surrounding tissue.



Often, the targeting molecule can be used in a *theranostic* approach for both **therapeutics** and **diagnostics**. The targeting molecule is linked with a diagnostic radioisotope first and then with a therapeutic one. This allows tumors and metastases to be both precisely localized at an early stage, and subsequently treated following the same mechanism.

Targeted Radionuclide Therapy offers a new, promising possibility to enable nuclear medicine to reach its full potential for improving the lives and treatment outcomes of cancer patients.

ITM – Passion for Precision

ITM aims to provide the most precise cancer radiotherapeutics and diagnostics to fight hard-to-treat tumors. With patient benefit as its driving principle, ITM leverages its leadership to advance a broad pipeline of Targeted Radionuclide Therapies and strives to positively impact the treatment algorithm currently in place for solid tumors. By combining first-class radioisotopes with targeting molecules, ITM develops precision oncology treatments addressing a range of cancers, including neuroendocrine tumors (NETs), glioblastoma, osteosarcoma and bone metastases, prostate cancer as well as folate receptor α positive tumors like lung, ovarian or breast cancer. The company will validate its approach with its lead candidate, n.c.a. ^{177}Lu -Edotreotide, currently in the Phase III clinical trial, COMPETE, evaluating efficacy and safety of Targeted Radionuclide Therapy with n.c.a. ^{177}Lu -Edotreotide compared to standard therapy with Everolimus in patients with NETs of gastroenteric or pancreatic origin.



Parallel to its pipeline, ITM produces high-quality, next-generation medical radioisotopes used as radiopharmaceutical precursors for cancer diagnostics and therapy. ITM has established an industrial-scale method of producing the highly pure therapeutic radioisotope no-carrier-added Lutetium-177 (n.c.a. ^{177}Lu), a synthetically produced low-energy ^{177}Lu radioisotope emitting beta radiation. Combined with a tumor-specific targeting molecule, n.c.a. ^{177}Lu releases energy of cytotoxic beta particles within a maximum radius of 1.7 mm to the tumor tissue, which can then be destroyed. Notably, n.c.a. ^{177}Lu 's high purity is defined by its lack of metastable Lutetium-177m. Compared to other forms of Lutetium, this eliminates cost-intensive storage and logistics associated with handling contaminated waste. Its high purity allows for global use, especially in areas subject to strict radiation protection regulations and release limits of n.c.a. $^{177\text{m}}\text{Lu}$ into public sewage systems.

ITM also offers top-line radiolabeling equipment to enable on-site production of radiopharmaceuticals in clinics and to effectively meet the needs of patients, clinicians and partners alike from diagnosis to treatment plan.

Contact

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