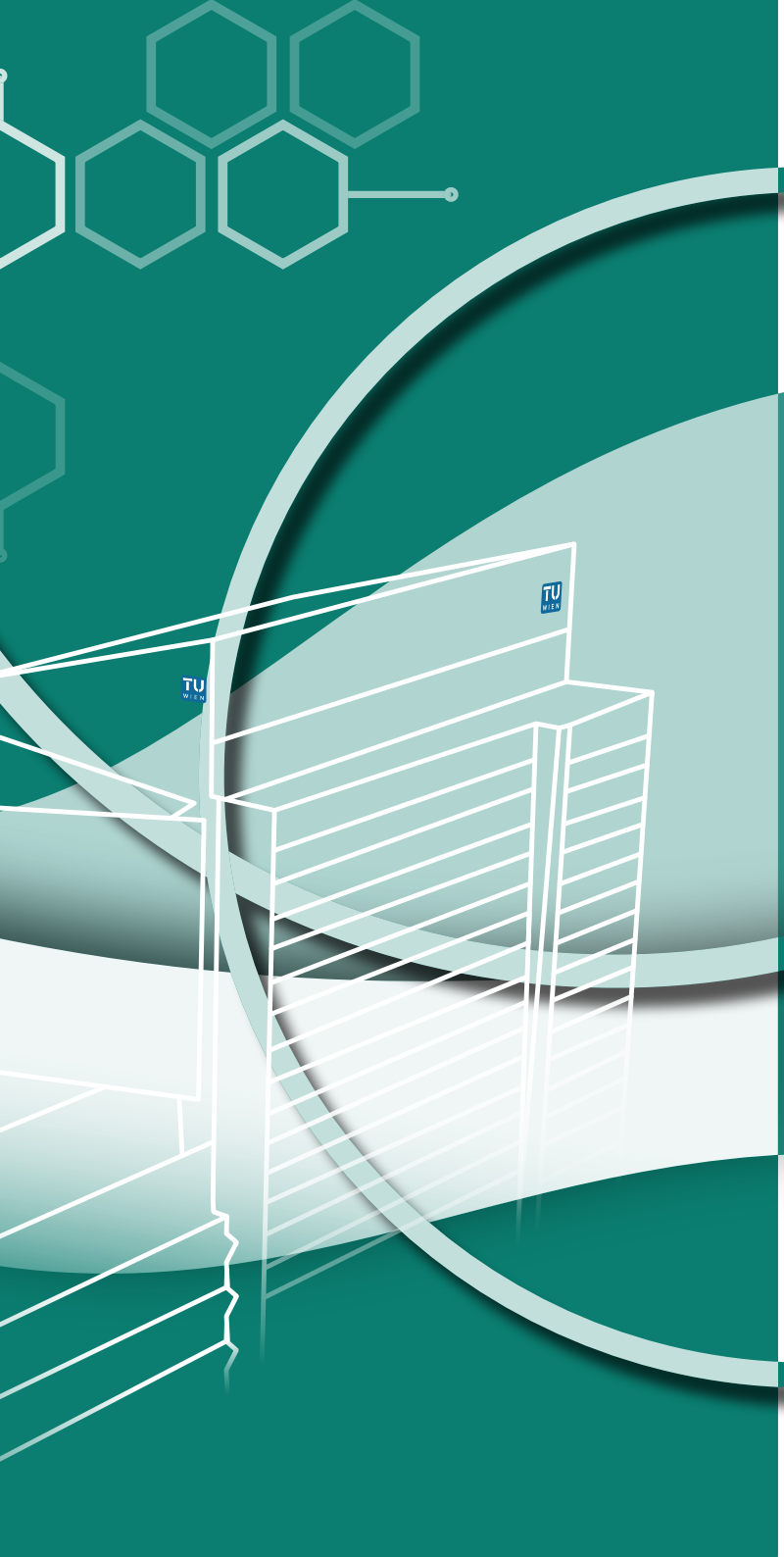


2004-2024

20 Years Faculty of Technical Chemistry at TU Wien

CONTENTS

Image: Gregor Mihovilovic

EDITORIAL

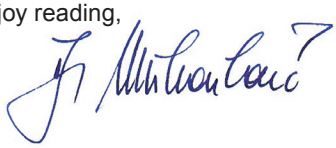
Image: TU Wien

This year, we are celebrating the 20th anniversary of the Faculty of Technical Chemistry (TCH) at TU Wien. We are a quite young faculty, which was founded in the course of a major organizational reform in 2004 as a spin-out of the former Faculty of Technical Natural Sciences & Informatics, a true administration monster covering more than half of TU Wien at that time. However, the tradition of conducting science and education in the field of chemistry dates back to the foundation of TU Wien in 1815, and applied research represents a major stronghold since then. While in 2004 the faculty was the smallest of the newly formed administrative entities, the development during the past two decades has been nothing short of impressive. TCH hosts some 700 researchers and staff at various levels, and is responsible for approx. 2000 students in core and collaborative curricula. It was thanks to founding Dean Johannes Fröhlich, that a major renovation program was initiated at Getreidemarkt, rendering a highly modern campus environment with several integral core facilities. His successor Dean Herbert Danninger laid the basis for a most dynamic development of faculty staff.

Today, the Faculty of Technical Chemistry is a most vibrant environment to conduct cutting-edge research in materials chemistry, sustainability and environmental sciences, as well as in bioscience technologies. Our third-party funding is among the top faculties, equally strong in basic science as well as in applied research projects. We are setting out to harness synergies of these focal areas within our emerging fields in energy conversion, systems engineering, and biomedical chemistry, to further expand our portfolio from the home-base in chemistry towards biology and medical technology. The faculty hosts a remarkable number of high-profile international grantees in basic research and is most successful in cooperating with industry, underscored by an unmatched number of operating Christian Doppler laboratories.

This booklet may provide you with the facts and figures of the rapid development of TCH, but it may also give you an idea of the vibrant energy of our institution. By looking back at the past 20 years we start shaping the third decade. This initiates the TCH-vision process in order to excel the faculty and the many people working, researching, teaching, and learning at Campus Getreidemarkt with our new motto: Evnisioneering the Future of Chemistry!

Enjoy reading,

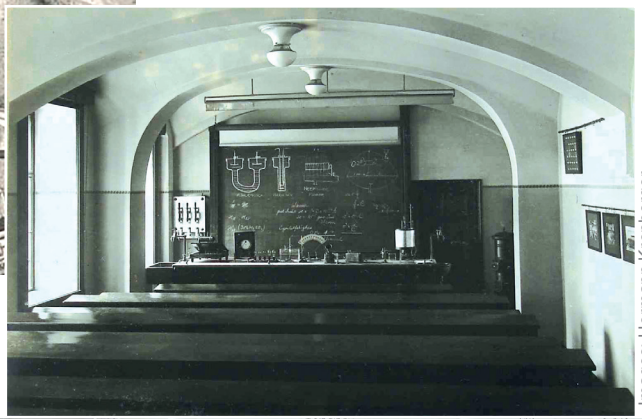


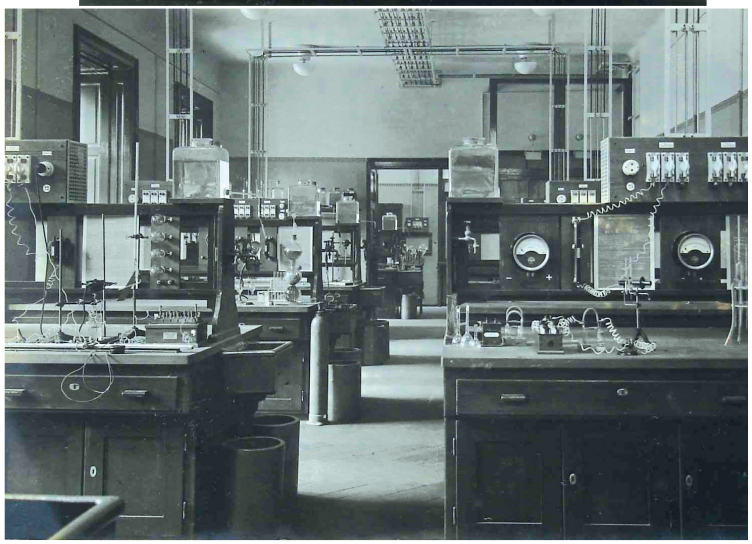
Marko D. Mihovilovic, Dean

#Technologyforpeople

#Chemistry_TUW

≈ 1770 The glacis from Karlskirche (bottom left) to today's inner Mariahilfer Strasse (top right) [Wilhelm Maximilian Kisch, Die alten Straßen und Plätze von Wiens Vorstädten und ihre historisch interessanten Häuser, Band II, Wien 1883, 286]





Images: Hermann Kronberger

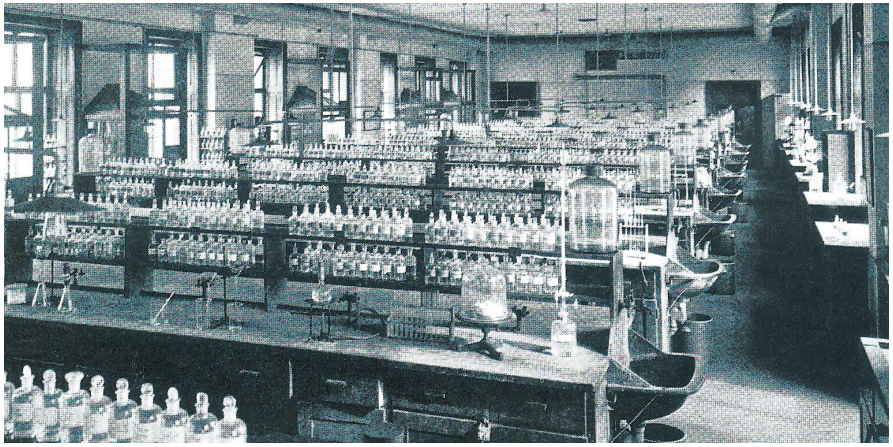
Teaching laboratory (bottom) and lecture hall (top) of the former Institute of Technical Electrochemistry, which was situated on the ground floor of the historic "Lehartrakt".

Development 1919–2024

Today's Getreidemarkt Campus is located on the site of a former Jesuit court, which was situated in the suburbs outside the city wall until 1776. After the dissolution of the Jesuit order and the interim use of the site as an imperial wagon wood depot, 1862–1864 the "k.u.k. Geniedirektion" (its name originating from "Genie", the root word of "Ingenieur"; the art of fortification at this time was summarized under the term "Geniewesen") and 1863–1865 the Imperial Military Academy ("k.u.k. Kriegsschule") was built between Dreihufeisengasse (now Lehargasse), Getreidemarkt and Gumpendorfer Straße as part of the development of the former glacis outside Vienna's city walls. After the military site on Getreidemarkt was handed over to the then called "Technische Hochschule Wien", laboratories were gradually set up. The first was the chemistry laboratory on the 3rd floor of the "Lehartrakt", the former Imperial Military Academy. The main wing of the Genie building was occupied by the "Lehrkanzel und Versuchsanstalt für Brennstoffe, Feuerungsanlagen und Gasbeleuchtung", which later became the Institute of Chemical, Environmental and Bioscience Engineering (E166).

DEVELOPMENT

≈ 1870 The “Geniedirektion” at Getreidemarkt shortly after completion



1919 A newly equipped chemistry laboratory on the 3rd floor of the historic “Lehartrakt”, the former Imperial Military Academy

≈ 1920 Historic “Lehartrakt”, the former Imperial Military Academy; view from former Dreihufeisengasse, now Lehargasse

Image: Hermann Kronberger

≈ 1930 View from the "Lehartrakt" to today's Bio-Science building BH (left), the still three-storey "Winkelbau BB" (built in 1927) and the former crew building (today "Loschmidt-Trakt BI"). [H. Seidler, Die maschinelle Einrichtung des Laboratoriums für Wärmekraftmaschinen, in: Die Technische Hochschule Wien, ed. by Robert Findeis, Küßnacht and Düsseldorf 1931, 13ff].

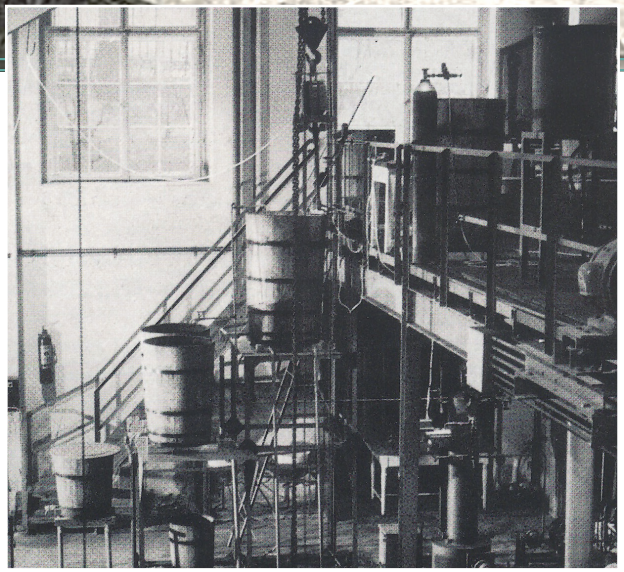
In the courtyard between today's buildings BB, BI, BF, and BH there was originally a stable building in which a training workshop with two compound steam engines, a diesel engine and, from **1932**, a steam turbine with coupled generator was set up.

≈ 1940 One-litre glass flask from the NS era.

Image: Peter Weinberger

≈ 1945 View of the old, still three-storey "Winkelbau BB" (on the left behind the destroyed tram) from Eschenbachgasse at the end of the war in 1945 [W. Göhring, R. Machacek, F. Stadelmann, Aufbruch aus dem Nichts, AK OÖ 1980]

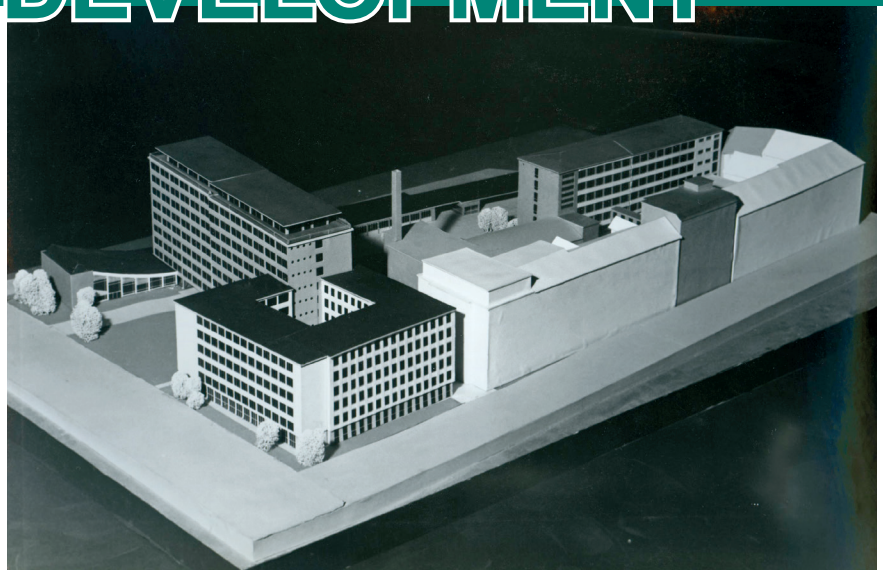
As the training workshop at Getreidemarkt operated as an armaments factory (production of callipers) from **1940** and a four-year Institute for Mineral Oil Research was set up on the site under the direction of H. Suida, the campus area became the focus of Allied bombing raids.



≈ 1930 Technology lab at the Getreidemarkt

By the end of the second world war, the "Geniegetrakt" and the mechanical engineering training workshop had been substantially damaged, while the machine hall in the former riding arena was completely destroyed. The laboratories of the Institute for Organic Chemistry on the 3rd floor of the "Lehartrakt" were completely burnt out, while the remaining buildings survived the war unscathed.

DEVELOPMENT



1957 Planning for the new Getreidemarkt Campus according to Kupsky and Lehmann

1960–1963 Extension of the Winkelbau BB to 5 storeys.

After the provisional reconstruction of the “Genietrakt” and “Lehartrakt” after **1945**, extensive planning began in 1957 to remodel the entire site according to plans by the architects Kupsky and Lehmann (see photo of the model on the top).

Only the left-hand tower section of the highrise building (today BA) was built between **1967** and **1972**. Previously, stable buildings on the site were replaced by a sixstorey structure on Gumpendorferstrasse in 1926/27 (now “Lückenbau BE”). Between **1961** and **1963**, a new building (BD) was added on the courtyard side to accommodate mechanical engineering institutes, and the “Winkelbau” was extended to five storeys during the same period.

It was not until **1992–1995** that the excavation pit next to the BA tower block, which was dug in place of the old staff building for the planned twin tower block, was built on with the “Loschmidt-Trakt BI”, so that the Institute of Organic Chemistry could relocate from the dilapidated “Lehartrakt”. Furthermore, the rear of the “Genietrakt” (now BZ) was demolished and the Institute of Process Engineering located there was relocated to the upper floors 3 to 5 in the “Loschmidt-Trakt”. This created the new “Geniehof” between BZ, BB and BI. In the meantime, Physical Chemistry was relocated to the University of Veterinary Medicine in Vienna Floridsdorf for many years, and Electrochemistry was divided between BH and BA, so that the old “Lehartrakt” could be demolished in **2001**.

2001 The old “Lehartrakt” shortly before its demolition; view from Lehargasse to the left of the old “Chemiehochhaus” (now BA)

2001 The former Imperial Military Academy, which was later used as a chemistry building shortly before its demolition; view from the entrance area of building BI across the courtyard.

2001 The demolition of the “Lehartrakt” is progressing (June).

After the new “Lehartrakt” was put into operation in **2010**, the refurbishment of building BI, formerly the “Chemie-neubau”, took place in the summer months of **2011**. The installation or renewal of the room air cooling and cooling water supply was carried out across all floors. Surfaces such as walls, ceilings and floors were partially refurbished and the rooms were fitted with an energy-efficient lighting system. After completion the name of the property was changed to “Loschmidt Trakt (BI)”. The urgently needed refurbishment of the “Winkelbau BB” took place at virtually the same time. All wall, ceiling and floor structures, all window and door constructions and the entire building services were demolished across all floors and completely renewed. The office and laboratory areas were sensibly reorganised within the building.

2007 Ground-breaking ceremony for the new “Lehartrakt” with federal minister Hahn and former rector Skalicky.

DEVELOPMENT

Image: TU Wien

The old "Chemiehochhaus" in its appearance until 2012 (photo from 1997). The building underwent a complete renovation in 2012–2014 and is now in operation as an office building (Plus-Energy High-Rise Building BA).

In operation since 2010: The new "Lehartrakt BC"
View from the courtyard-side (top) and view from the Lehargasse in 2024 (buttom).

Image: Alexander Opitz

NOW View from the “Lehartrakt” to today’s Bio-Science building BH

The refurbishment of the “Geniegebäude” was also started practically in parallel. New rooms for the chemistry department were created on the ground floor and new laboratories on the second floor. Following completion of the work in mid-**2012**, parts of the Institute of Chemical, Environmental and Bioscience Engineering and groups from the Institute of Chemical Technologies and Analytics were relocated to the newly adapted rooms.

Demolition work for the general refurbishment of the old “Chemiehochhaus” started in the first quarter of 2012. To take account of modern safety concepts, the building was converted into an office building. Austria’s largest building

NOW View of the Winkelbau BB from Eschenbachgasse in its current state after the urgently needed renovation was completed in 2012

NOW The new Plus-Energy High-Rise Building BA together with the Audimax and the “Genietrakt BZ”

to its right-hand side – view from Getreidemarkt.

and façade-integrated photovoltaic system (2200 m² incl. roof) generates more energy than the building needs for its operation. Instead of the old ventilation centre, a modern event room (“TUtheSky”) for around 180 people was created on the eleventh floor. The completely renovated and modernised building was opened on 6th November **2014**. The new Plus-Energy High-Rise Building (BA) was occupied by the Institutes of the Faculty of Mechanical and Industrial Engineering. The Technical Chemistry Library, extended by the Mechanical Engineering Library, returned to the rooms above the Audimax and the third floor was used from then on by the Getreidemarkt Dean’s Office Centre.

The final milestone (for the time being) on the Getreidemarkt campus is the BF building, which stands in place of the old building “Tonne”. Parts of it are already in operation since the beginning of **2024**. Final completion is planned for **2025**.

The new “Geniehof” between “Loschmidt-Trakt BI”, “Winkelbau BB”, and the “Genietrakt BZ”.

DEVELOPMENT

Image: Gregor Mihovilovic

Shaping the Third Decade

Already in 2018 former Dean Herbert Danninger proposed the idea of starting a vision process within the leadership team of the Faculty of Technical Chemistry (TCH) with the major aim to support the long-term strategic thematic and personnel planning with an emotional dimension. During early meetings accompanied by our coach Peter Lendl, the analysis of key developments of the past two decades after the foundation of the Faculty of Technical Chemistry was conducted in view of identifying novel perspectives for the years to come. Several scenarios were drafted, discussed, dismissed, and re-drafted with the aim to provide a framework to be presented to the faculty staff after reaching a more mature stage. This work in progress was ultimately handed over to Marko Mihovilovic in his new function as Dean in early 2020.

The disruptive challenge of the Covid-pandemic brought this process to an abrupt halt with the immediate requirement to manage this most severe crisis in the recent history of TU Wien. As it turned out this was just the start of a period of uncertainty for the entire university, and in particular for this faculty based on the paramount role of lab-based experiments in chemical sciences. Having coped with the first lock-down during the pandemic, the faculty managed to resume lab-based research early on, just to face additional obstacles during the subsequent crises imposed by the energy price developments, the escalating inflation, and the university budget crisis at the end of 2022. Nevertheless, both TU Wien and TCH-faculty proved resilient to tackle these challenges and return standard operations in research and teaching. In fact, TCH-faculty demonstrated a remarkable come-back in particular in the scientific arena securing a number of highly prestigious grants in the post-Covid period.

During these phases of hardship, the desire of reviving the TCH vision process was always present. And as soon as a light at the end of the tunnel became visible after the multiple crisis situations, the leadership team of the faculty started to re-assess all available material and to bring it into context of recent developments. The appointment of a new rectorate at TU Wien and the announcement of a new strategy development process at university level introduced additional momentum. During several focused meetings and retreats since 2023, ultimately the key aspects of a new vision for TCH materialized and are now matured enough to be brought into the open. The 20 years anniversary of the faculty provides a perfect opportunity to unveil the work, so far, and to enter into the new phase of filling this vision with life by individual action and contributions. One may ask, why our faculty requires “a new vision”, and the typically Viennese proverb comes to mind according to which “a person with a vision may as well require treatment for hallucinations”. In particular, in view of the many strategic documents circulating at various levels of administration outlining thematic directions, fields of cooperation, and human resources planning, this seems to be highly redundant.

Yet, a vision is clearly more than the operative strategy. Actually, the vision should be at the beginning of all thoughts of future developments. As only with a vision, a clear picture about a mission can be obtained. The operative strategy represents the particular manifestation under certain circumstances and for certain time periods; it requires the vision as its foundation and the mission as its direction.

Looking back at developments in science, teaching, and outreach within TCH, we have indeed adopted a remarkable upward trend during recent years: personnel has increased by more than 25 % especially in third-party funded staff; the number of professors has tripled since 2010; third party funding has doubled within 10 years especially by a substantial increase of so-called excellence grants (ERC-grants, CD-labs, etc.); TCH is contributing to a growing number of curricula providing excellent job-opportunities for its graduates; the faculty managed to become an increasingly attractive employer in particular for female scientists; the list can be continued …

So why do we then need a new vision? And are we expected to do things completely different?

Rest assured: Nothing will deter us from our successful path and it is by no means the goal to throw everything overboard. It is apparent, that we are already on a promising and prosperous path. However, there are many research lines not necessarily taking advantage of each other. Better aligning ongoing activities offers the prospect of synergy and efficiency. It was the particular aim of the leadership team to identify the success factors of activities during the past years in order to provide a clearer direction to the top for those in earlier stages of their career. It is our intention to showcase individuals and approaches that developed well in our environment in order to display promising directions. We want to converge our efforts in science and teaching in order to strengthen our strengths and identify novel opportunities based on synergy and collaboration. We want to sharpen our view towards unmet challenges in our science and present chemistry as a problem solver in the ongoing transformation of our industry and society. The vision outlines a general direction that the faculty will take in the next decade, and we invite you to plot your individual pathway towards this goal. This all is expressed in our new vision:

We make chemistry a game-changer – creating responsible breakthrough solutions securing everyone's future!

We do hope that many of you can align with this statement, take inspiration by the many testimonials who ventured already down this pathway, so this new vision and motto will stimulate and motivate people working at our faculty to go the extra mile to evoke change.

In order to provide guidance towards the vision, we have provided some "beacons" to highlight the way, which we refer to as our future endeavours. We have identified these statements by analyzing our existing strengths complemented by future aspects for improvement. We understand these endeavors as achievements to be reached requiring our efforts, dedication, and active input. There is no specific order or ranking, but the endeavors should be understood as comprehensive goals covering aspects of our scientific aims, individual career development, as well as our role vis-à-vis the society.

Look, what's new … >>

Our New Endeavors

- We embrace the freedom of curiosity-driven science; co-operation and inter-disciplinary exchange are crucial in our task to achieve groundbreaking new knowledge.
- It is our goal to identify perspectives of application for the knowledge we generate, and embrace new opportunities by translational research. In doing so, we go for strategic gains rather than quick wins.
- We develop chemical know-how and technologies, changing the perception of our discipline towards a key science that solves problems.
- We critically reflect on our work and question standards; moving beyond the established and aiming for the unexpected are key success factors for us.
- Resilience and endurance are our success factors; we tackle the big challenges in order to achieve innovation by disruptive advances.
- In our passion for teaching, we strive to equip the next generations to be able to recognize and address the challenges facing them.
  We want to achieve excellence and attain a high impact in teaching for our graduates.
- We want to encourage, empower, and develop the potential of individuals and enhance their ability to contribute to teams and networks.
- We build bridges between the different fields of expertise and overcome the fragmentation of knowledge. In doing so, we bring together applied and basic research inside and outside of our institution in pursuing one overarching vision and focusing our resources on that vision.
- We consider ourselves as essential to society and want to be recognized as being relevant also on broader political level. We want to increase, deepen, and sustain trust for science in society.
- We want to be more visible and recognized at an international level, advocating our understanding of an institution promoting and embodying diversity, openness, mobility, and exchange.

With the endeavors representing our beacons on the horizon, the vision also comes with signposts pointing towards our aims: our Guiding Principles. Their role is to indicate prosperous directions in case of required decisions, sharpening our perception:

Our Guiding Principles

- Solve a problem by innovation
- Move beyond boundaries – act responsibly
- Co-create & co-operate
- Be agile, take action, and cross the finish line
- Embrace feedback & understand mistakes as opportunities to improve
- Communicate, inspire, and be passionate
- Generate expertise & future experts
- Foster blue-sky ideas in exploratory and translational research
- Rethink chemistry as a trailblazer in sustainability & technological transformation
- Effectuate our resources, in a manner compatible with SDGs

With this new vision, together with the endeavors and the guiding principles as accompanying items, we aim to provide a framework to continue the upward trend of our faculty – nothing more, nothing less. To make this vision alive, commitment by everybody is required. Consequently, each and everybody in the faculty should identify her/his space in the landscape covered by the vision – there is room for everyone. The launch of the vision at the 20 years anniversary of TCH is not the final chapter, but rather the starting point of an ongoing process to render the vision into a mission into a strategy. It is the kick-off for general participation to fine-tune and further develop the vision with its items – now we want to collect your input. The event comes with the invitation to actively contribute to the living process defining our future aims.

Let's shape the third decade of TCH together!

PROCESS

Image: Matthias Heiser

RESEARCH FOCAL AREAS

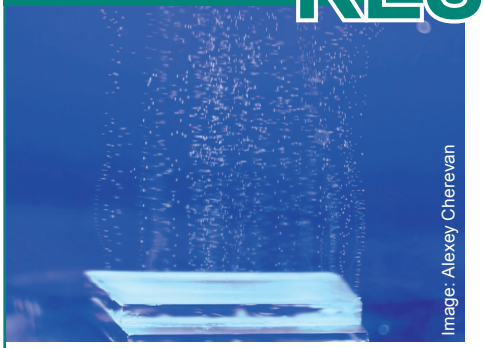


Image: Alexey Cherevan

Chemistry & Technology of Materials

Technical progress essentially depends on the availability of suitable and the development of new materials. In this research focus, modern materials science and technology is combined with chemical, i.e. preparative-synthetic and analytical approaches. A wide range of high-quality manufacturing, processing and testing methods is available for this purpose. The range of materials includes all material groups and is focused on future-oriented and sustainable material developments that save raw materials and energy.

Synthesis and Application of Functional Materials | Surface and Interface Science and Technology | Materials Design and Processing Technologies | Materials Characterization under Operation


Image: Robert Mach

Sustainability, Energy, Environment

The future of humankind will be determined by the design of chemical and biotechnological processes in such a way that they are available and affordable for future generations and do not cause any ecological damage. The provision of products and energy on a large industrial scale is one of the major tasks of technical chemistry, and it implies the responsibility of considering and evaluating the social and ecological effects of these (bio) chemical processes. The research focus is aimed at the sustainable use of all primary raw materials, high energetic efficiency and minimum waste of the processes involved. This includes research on recycling strategies, integration of renewable energies in industrial processes and environmentally friendly disposal of the products brought into circulation at the end of their service life cycle.

Decarbonization & Electrification of Chemical Processes | Natural Resources & Biorefinery Technologies | Environmental Analytics, Monitoring & Remediation | Green Chemistry & Sustainable Fuels

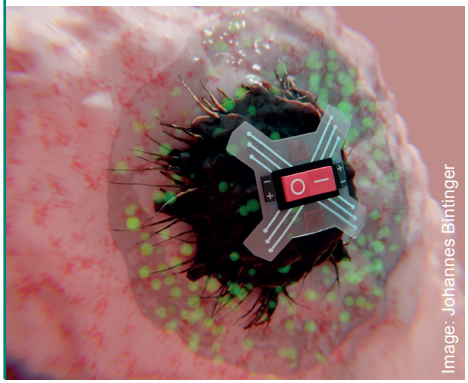


Image: Johannes Binfinger

Bioscience Technologies

Bioscientific technologies are building the basis for the implementation of theoretical principles of biochemistry, molecular biology, medicine and biology in specific applications. Findings in connection with bioprocess engineering are used for the production of a wide variety of molecules. The research activities currently carried out at the faculty range from knowledge- and application-oriented basic research to process developments in cooperation with relevant industry.

Cell factories | Bioprocess Engineering
Medical Life-Sciences | Molecular Diagnostics

AND EMERGING FIELDS

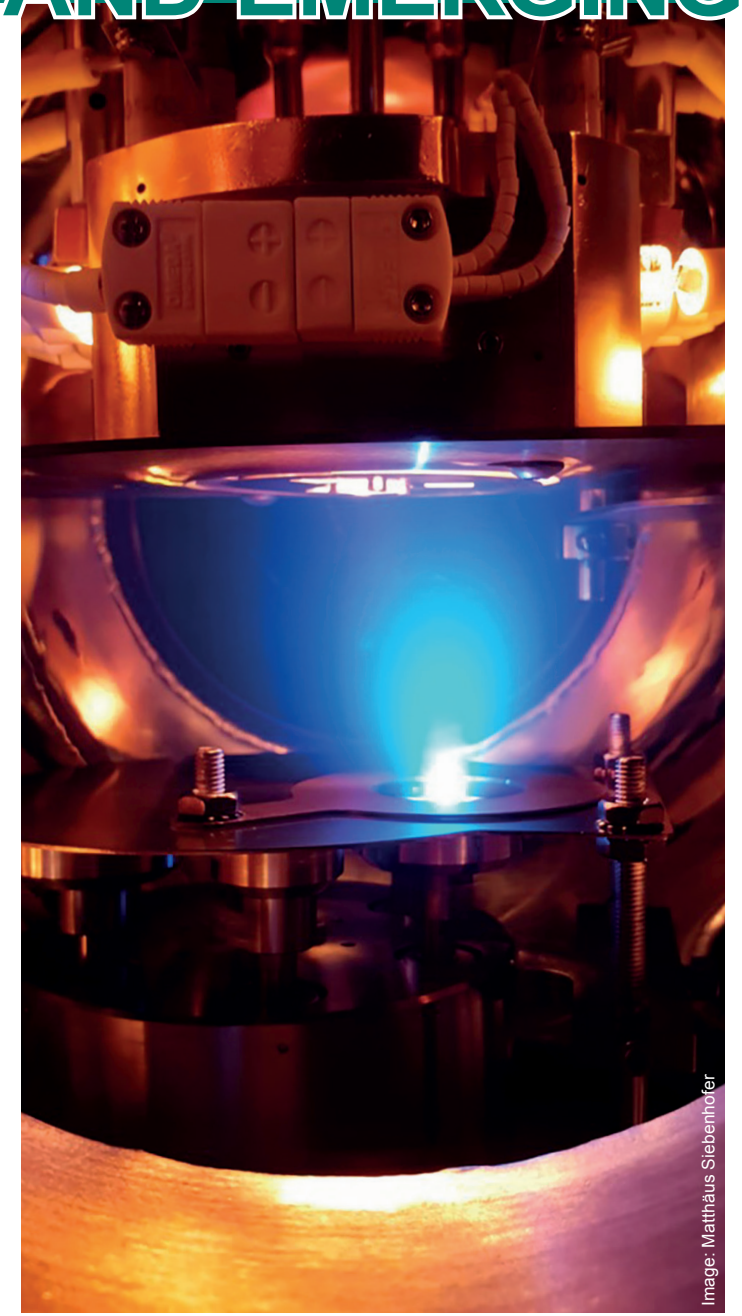


Image: Matthäus Siebenhofer

In addition, the faculty is pursuing the expansion of three development fields, which will play key roles in the research profile in the future. These areas are designed both as bridging programs between our existing main research fields to maximize synergies from established expertise, and as avenues for exploring new, promising topics. They are developed in collaboration with other TU Wien faculties and through external research partnerships.

Materials for Energy Conversion Technologies

We must re-cycle elements already present in the atmosphere or biosphere to produce recyclable carriers for renewable energy, paving the way towards a fossil fuel-free society. Most-promising are electrocatalysis and photocatalysis, but in the current technology one must replace rare with abundant elements or discover alternative, inexpensive high-performance catalysts.

Systems Engineering

The development of biorefinery concepts, where renewable feedstock is processed and (bio)chemically converted into a range of marketable chemical and energy products, is seen as a bio-based and promising integrator of paradigms of industrial ecology and the circular economy. At the same time, systems process engineering enables a transformation towards sustainable production by taking a holistic view of the entire process chain.

Biomedical Chemistry & Theranostics

This area focuses on developing innovative molecular technologies to precisely study and manipulate biological systems. It encompasses next-generation bioanalytical methods and biocompatible chemical tools for controlling biological processes. These advancements aim to drive breakthroughs in medical diagnostics and therapies.

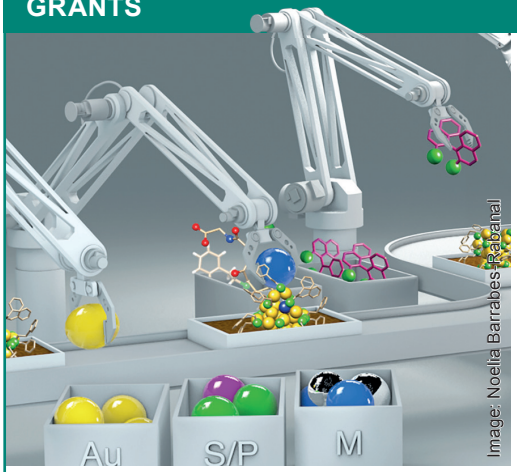


Image: Noelia Barrabes-Rabanal


Image: Bernhard Bayer-Skoff


Image: Johannes Bintinger

Noelia Barrabes-Rabanal

ERC-Consolidator Grant HAND: Unraveling Chirality at the Atomic Level

The HAND project, led by Noelia Barrabés, focuses on understanding and controlling chirality, a property where molecules exist as mirror images with distinct behaviors. Chirality plays a crucial role in fields like medicine, and understanding how to control it is key to advancements in materials science and catalysis. Noelia's innovative approach uses atomically precise chiral metal nanoclusters to create chiral surfaces, enabling more efficient, sustainable chemical reactions, in concrete on heterogeneous enantioselective catalysis. By controlling chirality at the atomic level, the project seeks to enhance sensitivity in chiral spectroscopy and enable the production of pure enantiomers, marking a major advancement in catalysis and materials science.

Bernhard Bayer-Skoff

ERC Consolidator Grant HighEntropy2D: Two-dimensional high entropy alloys and ceramics

In the ERC CoG project HighEntropy2D Bernhard Bayer-Skoff's team is for the first time fabricating two-dimensional (2D) high entropy materials (HEMs) to assess their novel properties and test their applicability for electronic devices and catalysis. Via the unprecedented combination of the fruitful concepts of "entropy engineering" and "2D materials", 2D HEMs are established as a new materials class. Reducing the dimensionality of HEMs to 2D enables, for the first time, in situ atomic-scale studies of previously unknown fundamental mechanisms (such as diffusion, crystallization, and phase transition/separation) in HEMs. These insights are relevant even beyond the newly introduced 2D HEMs.

Johannes Bintinger

ERC Starting Grant Time2SWITCH

Drug delivery with electronic precision is the focus of Johannes Bintinger's Time2SWITCH project. His team is developing novel techniques that combine advancements in electronics and chemistry. Using small ion pumps as implantable "switches", they aim for a programmable delivery of the right doses, at the right place, and at the right time to minimize side effects and maximize therapeutic impact. Traditional treatments like pills or injections disperse drugs uncontrollably throughout the body, leading to severe side effects, especially in cancer therapy. By precisely controlling the release of multiple drugs simultaneously, this technology will enhance safety and pave the way for more effective treatments.

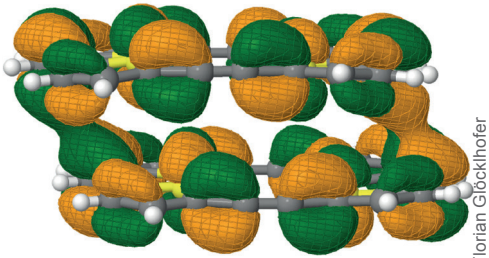


Image: Florian Glöcklhofer

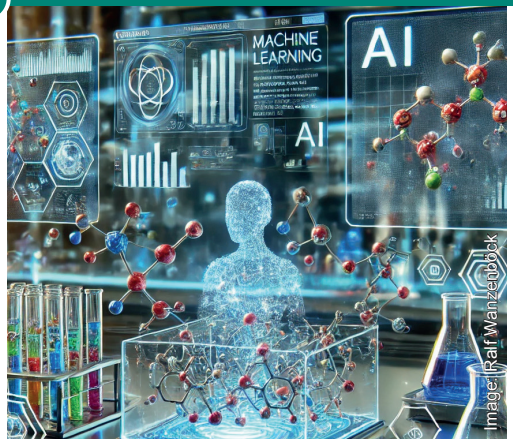


Image: Ralf Wanzenböck

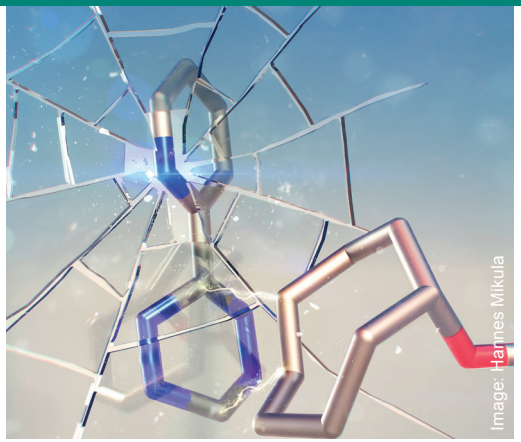


Image: Hannes Mikula

Florian Glöcklhofer

ERC Starting Grant INTERCHAIN

The ERC project INTERCHAIN is pioneering a new approach to improve conjugated polymers, materials essential for organic electronics, by exploring stacked-ring aromaticity – a special type of intermolecular interactions. These interactions could lead to polymers with enhanced charge transport abilities, which are key for their performance in devices like solar cells, transistors, and batteries. Unlike currently applied strategies to achieve stacked-ring aromaticity, INTERCHAIN's approach avoids the use of unstable antiaromatic molecules, making the polymers more stable and easier to produce. This groundbreaking work will not only deepen our understanding of molecular interactions but will also lead to advanced materials for high-performance, sustainable energy applications.

Esther Heid

ERC Starting Grant & FWF START Prize DeepRxn

Sustainable chemistry per mouse-click: The chemist and programmer Esther Heid is working on establishing a virtual lab to study chemical reactions using recent advances in machine learning and artificial intelligence. Her project DeepRxn was initially awarded with an FWF START prize, and then transitioned to an ERC Starting Grant soon after. Her research focuses on organo- and biocatalytic reactions, i.e., reactions that are catalyzed by either small organic molecules or enzymes. These types of reactions are essential for establishing a more sustainable chemistry, but notoriously difficult to predict. The project seeks to develop new, data-driven, chemistry-specific machine learning models which can account for the delicate interactions between the reactants and the catalyst.

Hannes Mikula

ERC Starting Grant & FWF START Prize bioTARGET

Most cancer treatments rely on drugs that act more as toxins than medicines, causing severe side effects and often insufficient therapeutic outcomes. Drug targeting provides a promising strategy for directing highly potent therapeutics to disease sites, with antibodies emerging as the preferred ligands to target cancer cells, leading to antibody-drug conjugates now used in the clinic. However, limited target availability and strict ligand requirements hinder optimization. In this project, we develop the concept of "cascade targeting" based on next-level bioorthogonal reactions to "choreograph" the selective delivery and release of the drug in cancer cells. Thereby, we aim to selectively navigate drug molecules into cancer cells and achieve "preprogrammed" activation only where and when it is needed.

More Grants … >>

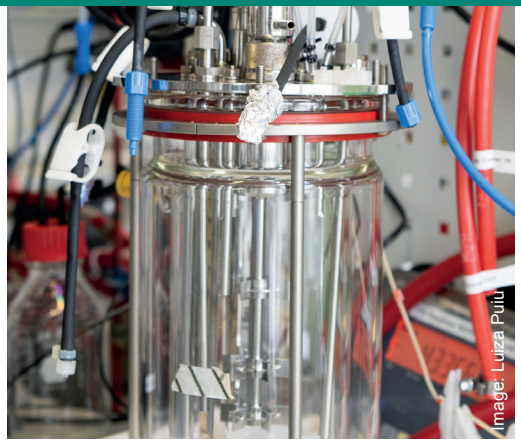


Image: Luiza Puiu

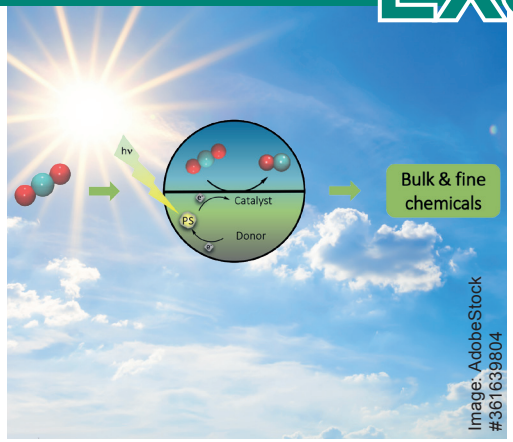


Image: AdobeStock #361639804

Image: Daniel Hawelka

Stefan Pflügl

FWF START Prize
FORBIX

Formate (formic acid) and methanol can be efficiently generated from CO_2 and renewable energy via electrocatalysis and are excellent feedstocks for acetogens, a special type of bacteria tracing back to the origins of life. One of them, Acetobacterium woodii utilizes formate and methanol with high carbon and energy efficiency. The FWF START prize project “FORBIX” exploits this natural ability by combining microbiology, genetic and process engineering as well as computational modeling to enable production of a wide range of chemicals and fuels from formate (and methanol). Replacing current petrochemical production by sustainable bioproduction routes to every day needed products will ultimately enable a circular carbon economy based on CO_2, either from industrial sources or directly captured from air.

Katharina Schröder

ERC Consolidator Grant
CARBOFLOW

Hardly any industrial process can use carbon dioxide (CO_2) directly as a raw material, but why is it so difficult to convert CO_2 into something useful? K. Schröder’s research group at the Institute of Applied Synthetic Chemistry is dedicated to the development of sustainable chemical processes. In the “CARBOFLOW” project, light is used as an alternative form of energy to convert excess carbon dioxide (CO_2) into more valuable chemicals. This requires the development of new catalysts and reaction techniques that enable the photocatalytic conversion of carbon dioxide at low temperatures. The resulting carbon monoxide (CO) serves as a universal building block for numerous basic and fine chemicals and is immediately converted further.

Dominik Stolzenburg

WWTF-funded Vienna Research Group
ACAI

Imagine the city of the future … How does it smell? Less traffic, different cars, rising temperatures and urban greening action change the atmospheric chemistry of future cities. Substances not originating from combustion become more important. Released from paints, cleaning agents, hygiene products or even asphalt, so-called volatile chemical products are responsible for a variety of urban odors. Once in the air, they oxidize, and the resulting products stick together, forming nano- to micrometer sized particles. These aerosols can impact human health and the climate footprint of the city. The WWTF-funded Vienna Research Group headed by Dominik Stolzenburg investigates for the first time how emissions from everyday products influence our future air quality.


Image: Barbara Dellago

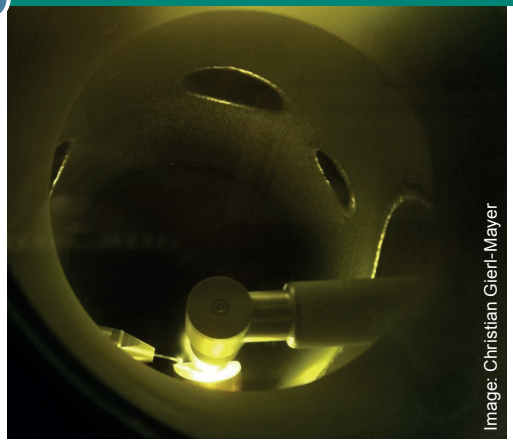


Image: Christian Gierl-Mayer

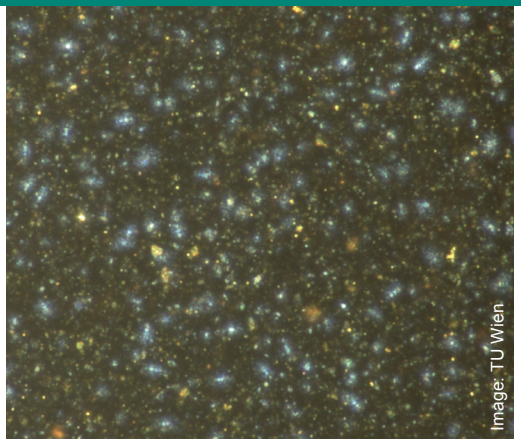


Image: TU Wien

Stefan Baudis

Christian Doppler Laboratory for Advanced Polymers for Biomaterials and 3D Printing

The Christian Doppler Lab for Advanced Polymers for Biomaterials and 3D Printing focuses on two key research areas in maxillofacial surgery: 3D-printed implant materials and bone adhesives. Significant advancements in 3D-printed implants allow for individual production based on CT scans. These implants serve as scaffolds, gradually replaced by the patient's own bone while degrading. Key requirements include non-toxicity, strength, porosity, and the ability to incorporate nutrient matrices. Bone adhesives are necessary where traditional fixation is not possible. Studies in both areas aim to address scientific questions within macromolecular chemistry to improve material properties.

Christian Gierl-Mayer

Christian Doppler Laboratory for Powder Metallurgical Soft Magnets

This CD lab is dedicated to special soft magnetic iron-based materials. Soft magnetic compounds (SMC) extend the concept of laminated steel sheets to the third dimension by substituting these with insulated iron powder particles. All metallic soft magnets currently still have too high eddy current losses at high frequencies. The aim is to improve magnetic efficiency through special manufacturing concepts and thus extend the application range of SMCs to significantly higher frequencies (1MHz). This requires special alloy concepts and insulating coatings at the level of the powder particle, which remains stable even with moderate temperature treatment. New alloy powders will be produced on a lab-scale by ultrasonic atomisation of a melt produced by melting a rod or bolt of proper composition.

Hinrich Grothe

Christian Doppler Laboratory for Chemo-Mechanical Analysis of Bituminous Materials

Researchers at the CD Laboratory for Chemo-Mechanical Analysis of Bituminous Materials are not looking into space, but into the microstructure of bitumen to find out more about the material. Bitumen ensures our mobility in asphalt pavements and keeps our houses dry as a sealant. Methods for the quality control of bitumen and for the development of additives to optimize product properties are researched here. Bitumen is a heterogeneous petroleum derivative. As a fossilized organic product, it is subject to ageing processes due to weather-related oxidation, which leads to long-term changes in its properties and composition and thus to challenges with product liability and recyclability. The aim is to minimize the risk associated with bitumen, and to optimize its properties in a targeted manner.

More CD ... >>

EXCELLENCE


Image: WoodComp3D


Image: Felix Feher


Image: Caroline Danner

Michael Harasek

Christian Doppler Laboratory for Next-Generation Wood-Based Biocomposites (Module)

In the production process of classic wood-based materials, at least 50 % of wood waste such as sawdust and bark is generated, most of which is currently used as fuel through pellets combustion. In the Christian Doppler (CD) Laboratory for Next-Generation Wood-Based Biocomposites (WoodComp3D), new concepts are investigated together with corporate partner HS Timber Group to produce a 3D-printable biocomposite material from this feedstock that can be used as a sustainable and high-quality material in the construction industry. The interdisciplinary research approach includes innovative processes for the pre-treatment and fractionation of biomass, chemical and mechanical material characterization as well as new modelling and simulation concepts for biocomposites for construction applications.

Jakob Lederer

Christian Doppler Laboratory for Design and Assessment of an Efficient, Recycling-based Circular Economy

Circular Economy aims to reduce raw material imports and the environmental impacts of waste management. This should be achieved by different means, including higher recycling targets for waste materials such as glass, metals, minerals, paper, plastics, and textiles. The CD Laboratory for design and assessment of an efficient, recycling-based Circular Economy aims to provide the scientific knowledge base to achieve these targets. In the first step, wastes are characterized to assess their quality and quantity in different waste streams. Then, experiments are carried out to recover recyclable wastes by extended separate collection, improved mixed waste sorting, and enhanced waste incineration bottom ash treatment. The results of these experiments are used to model future recycling systems.

Astrid Mach-Aigner

Christian Doppler Laboratory for Optimized Expression of Carbohydrate-Active Enzymes

Biotechnological processes have long been used beneficially by and for humans (beer! wine! cheese!) and are based on the use of organisms, often a microorganism, which produces the target substance in the course of its biochemical synthesis pathways. The CD Laboratory CAZy is pursuing three directions in which useful substances can be made available to humans through the development of new or optimization of existing biotechnological processes. Specifically, these are enzymes, in particular cellulases, the sweetener erythritol and the lactic acid. In its 8 years of operation the CD laboratory has an output of 19 scientific publications and 5 patents. The involved company partners were Novozymes, Conzil GmbH, Circe, and Genencor.

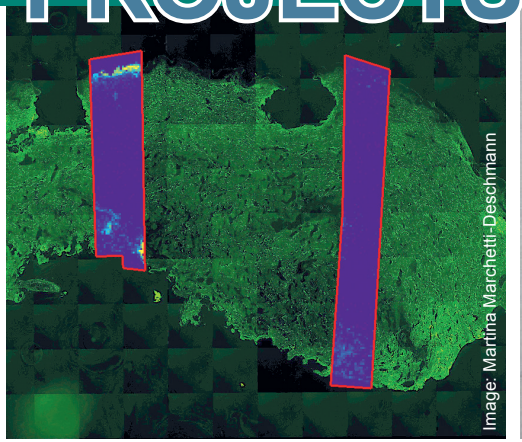


Image: Martina Marchetti-Deschmann


Image: Oliver Spadiut

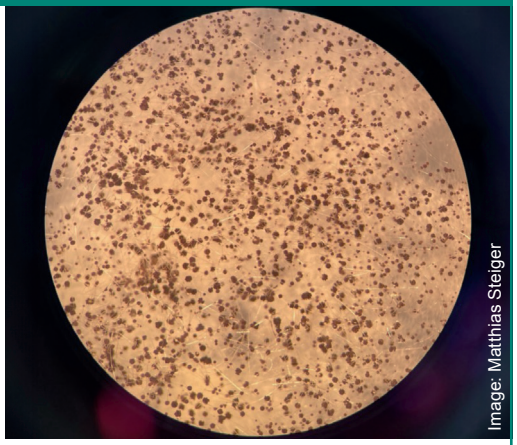


Image: Matthias Steiger

Martina Marchetti-Deschmann

Christian Doppler Laboratory SKINMAGINE
(Module)

The CD Lab SKINMAGINE uses state-of-the-art technologies to gain unique insights into the cellular ageing of the skin. Together with us, the Medical University of Vienna is researching the fundamental mechanisms of skin ageing triggered by urban environmental pollution. We combine innovative techniques such as mass spectrometric imaging with automated immunofluorescence and microscopy to analyse metabolic activity, as well as non-invasive imaging techniques and tissue-integrated reporter systems. These methods enable us to analyse the effects of pollutants and UV radiation. Our co-operation with CHANEL Parfums Beauté helps to translate scientific findings into innovative skin care products.

Oliver Spadiut

Christian Doppler Laboratory for Inclusion Body Processing 4.0

In the CD Laboratory for Inclusion Body Processing 4.0 the research group Integrated Bioprocess Development (IBD) at TU Wien and Boehringer Ingelheim Regional Centre Vienna (BI RCV) are investigating the current big challenges of Inclusion Body (IB) processes for the manufacturing of biopharmaceuticals. The whole IB process is being analysed in an integrated manner thereby generating basic in-depth knowledge for each unit operation. Platform tools and methods along the entire IB process are developed and data is transformed to knowledge. Process understanding is being generated and described by sound Data Science and Modelling techniques to ultimately elaborate a Digital Twin of selected IB processes and consequently make them fit for Industry 4.0.

Matthias Steiger

CD Laboratory for the Sustainable Bioproduction with Fungal Systems through Targeted Strain Development

The latest addition to the family of CD laboratories at the faculty with the company Jungbunzlauer Austria AG focuses on investigating the biochemistry of fungi to optimise the industrial production of citric acid. Instead of extracting citric acid from lemons, it is produced efficiently using the mould *Aspergillus niger*, which under the right conditions converts sugar into valuable biochemical substances. The aim is to understand the metabolic processes and how they are regulated by the respective genes of the fungus. Instead of genetic modification, the approach relies on the use of natural selection conditions to encourage the fungi to evolve favorably. This process is supported by advanced measurement techniques that monitor the biochemical reactions during production and ultimately strive to increase the efficiency of citric acid production.

FWF CLUSTERS OF

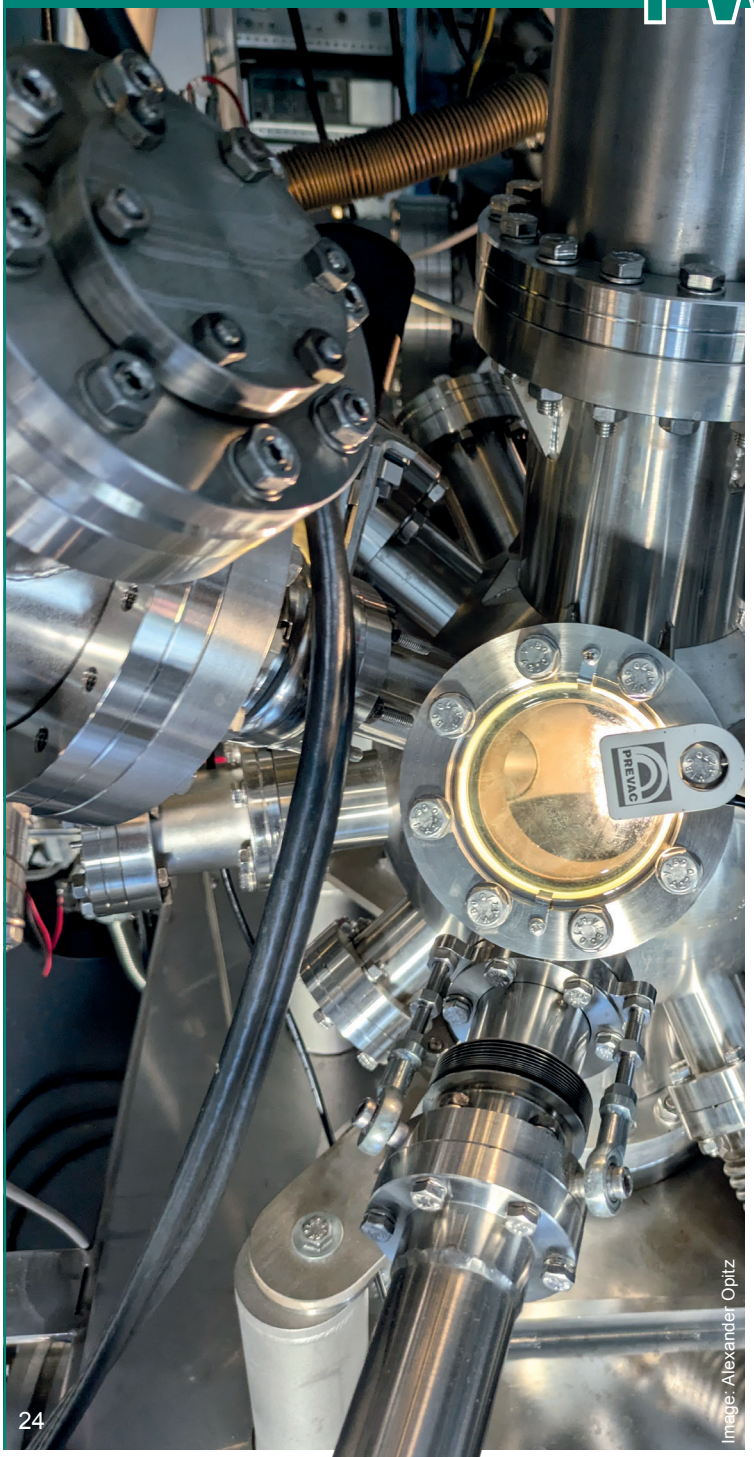


Image: Alexander Opitz

Materials for Energy Conversion and Storage – MECS: Research for the Energy Storage of Tomorrow

Since October 2023, our Faculty has been at the forefront of groundbreaking research within a prestigious “Cluster of Excellence” funded by the FWF. Seven research groups from our Faculty are actively contributing to this high-impact project.

The Faculty of Technical Chemistry at TU Wien is proud to be at the forefront of a groundbreaking initiative with the launch of the Cluster of Excellence “Materials for Energy Conversion and Storage (MECS)”. This ambitious research project, which began in October 2023, is dedicated to developing innovative materials that will play a crucial role in the energy transition, particularly in the areas of hydrogen production, carbon dioxide conversion, and energy storage. The project has been awarded a substantial budget of € 35 million over 5 years (including partner institutions), with funding provided by the Austrian Science Fund (FWF) and the participating institutions.

At the helm of this pioneering effort is Professor Günther Rupprechter, the Head of the Institute of Materials Chemistry at TU Wien. His leadership is a testament to the Faculty of Technical Chemistry’s significant contribution to the cluster. An impressive seven PIs from the Faculty of Technical Chemistry are actively involved with their groups, underscoring the faculty’s pivotal role in advancing the MECS initiative, particularly in developing new electrocatalysts and photocatalysts for energy conversion. These catalysts are vital for enhancing the efficiency of processes such as water splitting to produce hydrogen and the conversion of carbon dioxide into valuable chemicals and fuels. The faculty’s expertise in catalysis, surface science, electrochemistry, and computational chemistry is instrumental in understanding and improving the physical and chemical processes at the atomic and molecular levels, which are key to creating more efficient and sustainable energy solutions.

The MECS initiative not only advances fundamental scientific knowledge but also aims to bridge the gap between research and real-world applications. By fostering interdisciplinary collaboration among top scientists from TU Wien, Universität Wien, Universität Innsbruck, ISTA, and Montanuniversität Leoben, and promoting the career of young researchers through structured doctorate programs and postdoctoral training, the Faculty of Technical Chemistry is playing a leading role in shaping the future of sustainable energy.

This initiative represents a major step forward in the global effort to transition to a fossil fuel-free society, positioning TU Wien and its Faculty of Technical Chemistry as key players in the development of next-generation energy materials.

Contributing Groups at TCH:

Research Group for Model Catalysis and Applied Catalysis: Günther Rupprechter (Director of Research)
Research Group for Molecular Materials Chemistry: Dominik Eder, Alexey Cherevan
Research Group for Sustainable Organic Chemistry and Catalysis: Katharina Schröder
Research Group for Solid State Ionics: Jürgen Fleig
Research Group for Electrochemical Energy Conversion: Alexander K. Opitz
Research Group for Theoretical Materials Chemistry: Georg Madsen

Image: Matthias Heisler

FWF CLUSTERS OF

Image: Dagmar Kolb and Christine Moissl-Eichinger

microPlanet

Microorganisms, the Earth's oldest inhabitants, hold the secret to planetary health. Found in every ecosystem, these tiny organisms form microbiomes – complex communities that surpass the biomass of all animals and humans combined. Microbiomes not only shape the biosphere but also regulate Earth's biogeochemical cycles, influencing global change. As symbionts, they are essential to the health of plants, animals, and humans.

Planetary health connects human well-being to the natural systems we depend on. Microbiomes are crucial to this link, ensuring the health of all higher organisms and providing vital ecosystem services. Despite their importance, the relationship between microbiomes and planetary health remains largely unexplored.

At TU Wien's TCH faculty, we develop advanced analytical technologies to study host-microbiome interactions. The Lendl lab uses nanometer-resolved chemical imaging to reveal molecular host-microbe communication. The Ertl lab develops microfluidic platforms that simulate host-microbiome environments, while the Birner-Gruenberger lab decodes the molecular mechanisms driving microbiome function by mass spectrometry. These innovations support the CoE microPlanet, helping to deepening our understanding of the links between microbiomes and planetary health.

Contributing Groups at TCH:

Research Group for Process Analytics: Bernhard Lendl (BOD member)
Research Group for Bioanalytics: Ruth Birner-Grünberger
Research Group for Cell Chip: Peter Ertl

MICRO PLANET

Circular Bioengineering

The objective of the Cluster of Excellence (COE) Circular Bioengineering is to reform the production and the life-cycle of goods by disaggregation, reconstruction and synthesis of bio-based materials. Circular bioengineering is an emerging interdisciplinary field that combines bioengineering, materials science and chemistry to develop sustainable bioprocesses that utilise and regenerate biomaterials. The aim is to realize closed-loop cycles of material flows to achieve a zero-waste stream, and substance- and energy efficiency. The cluster builds on around three major interconnected pillars of circular bioengineering: natural resources, microbial and enzymatic conversion methodologies, and process sustainability and circularity. Engineering biological tools for the most efficient use of natural resources guides the entire cluster. Driven by the ambition to significantly impact how natural resources are transformed, each program aims to unlock the potential of nature-based solutions for a wide range of applications with far-reaching socio-economic benefits. Unique in its composition, the COE is best equipped to successfully establish, train, and communicate transformative bioengineering solutions to address modern societal challenges.

The University of Natural Resources and Life Sciences, Vienna (BOKU) as consortium leader is joined by the University of Graz, the Technical University of Graz, the University of Vienna, and TU Wien.

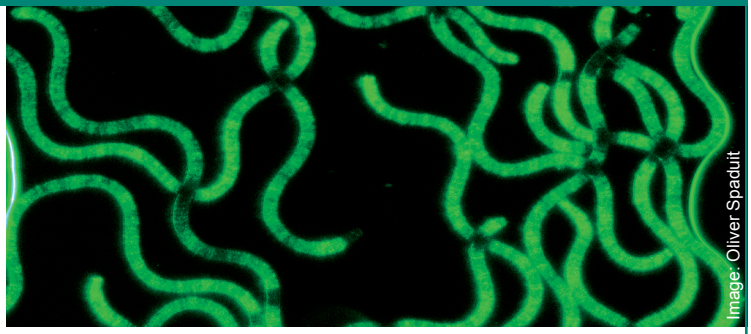


Image: Oliver Spaduit

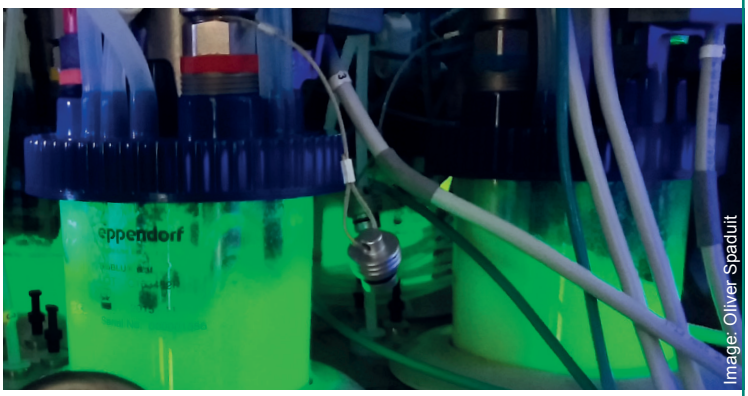


Image: Oliver Spaduit

Five key researchers from the Faculty of Technical Chemistry, namely Katharina Schröder, Florian Rudroff, Oliver Spadiut, Matthias Steiger and Ruth Birner-Grünberger, as well as Marko Mihovilovic as a member of the board of directors of the COE Circular Bioengineering, contribute with their expertise in highly complementary fields covering synthetic chemistry, bioengineering, biochemistry and bioanalytics.

Contributing Groups at TCH:

Research Group for Bioorganic Synthetic Chemistry: Marko Mihovilovic (BOD member), Florian Rudroff
Research Group for Sustainable Organic Chemistry and Catalysis: Katharina Schröder
Research Group for Bioanalytics: Ruth Birner-Grünberger
Research Group for Biochemistry: Matthias Steiger
Research Group for Integrated Bioprocess Development: Oliver Spadiut

TEACHING

At TU Wien the faculty contributes significantly to 3 Bachelor's programs … and 6 Master's degree programs

- Technical Chemistry
- Chemical and Process Engineering, together with:
  the Faculty of Mechanical and Industrial Engineering
- Environmental Engineering (established in 2019), together with:
  the Faculty of Civil and Environmental Engineering,
  the Faculty of Mathematics and Geoinformation

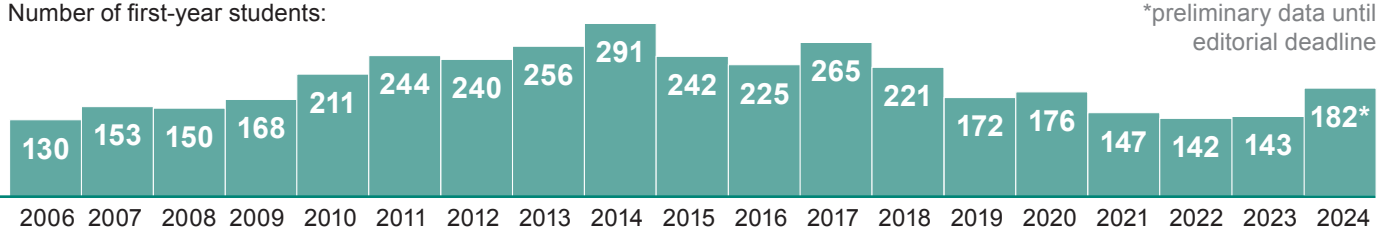
The Bachelor's degree courses teach basic chemical knowledge, practical skills for working in a chemical laboratory, an understanding of the implementation of chemical processes on an industrial scale and the framework conditions that apply.
The Master's degree program in Technical Chemistry provides an in-depth, scientifically and methodologically high-quality education geared towards long-term knowledge, which opens the way for graduates to pursue further scientific and technical qualifications – for example as part of a relevant doctoral program – as well as enabling them to work in the chemical industry in particular and in all branches of industry in which chemical processes are important, making them internationally competitive.
Research-led teaching is an essential component and leads to a Master's thesis, which is designed as a small research project and introduces students to high-quality research.

- Technical Chemistry
- Chemical and Process Engineering and Sustainable Production, together with:
  the Faculty of Mechanical and Industrial Engineering
- Materials Sciences (established in 2006), together with:
  the Faculties of Physics,
  Civil and Environmental Engineering,
  Mathematics and Geoinformation,
  Mechanical and Industrial Engineering,
  Electrical Engineering and Information Technology
- Biomedical Engineering (established in 2008), together with:
  the Faculties of Civil and Environmental Engineering
  Electrical Engineering and Information Technology,
  Informatics, Mechanical and Industrial Engineering,
  Mathematics and Geoinformation,
  Physics
- Computational Science and Engineering (established in 2019), together with:
  the Faculties of Civil and Environmental Engineering,
  Electrical Engineering and Information Technology,
  Informatics,
  Mechanical and Industrial Engineering,
  Mathematics and Geoinformation,
  Physics
- Environmental Engineering (established in 2021) together with:
  the Faculties of Civil and Environmental Engineering,
  Mathematics and Geoinformation

Bachelor's degree in Technical Chemistry in the last 18 years

(Bachelor's degree program was established in 2006; before that 5-year diploma program)
Number of first-year students:

*preliminary data until editorial deadline



The faculty is also involved in 2 inter-university Master's programs …

- Chemistry and Technology of Materials (jointly with the University of Vienna; established in 2011)
- Green Chemistry (together with the University of Vienna and the University of Natural Resources and Life Sciences; led by the Faculty of Technical Chemistry; established in 2022)

and in addition, the Faculty of Technical Chemistry offers 2 doctoral programs

- Doctoral studies in technical sciences
- Doctoral studies in natural sciences

Students – Bachelor's Master's Doctorate

in the individual degree programs WS 2023 (in brackets men:women)

	Bachelor		Master		PhD	
Technical Chemistry	690	(412:278)	264	(148:116)	316	(185:131)
Chemistry and Technology of Materials			27	(17:10)		
Green Chemistry			32	(18:14)		
Chemical and Process Engineering	290	(209:81)	140	(113:27)	73	(40:33)
Environmental Engineering	534	(306:228)	78	(48:30)		
Materials Sciences			86	(65:21)	30	(21:9)
Biomedical Engineering			360	(207:153)		
Computational Science and Engineering			129	(106:23)		

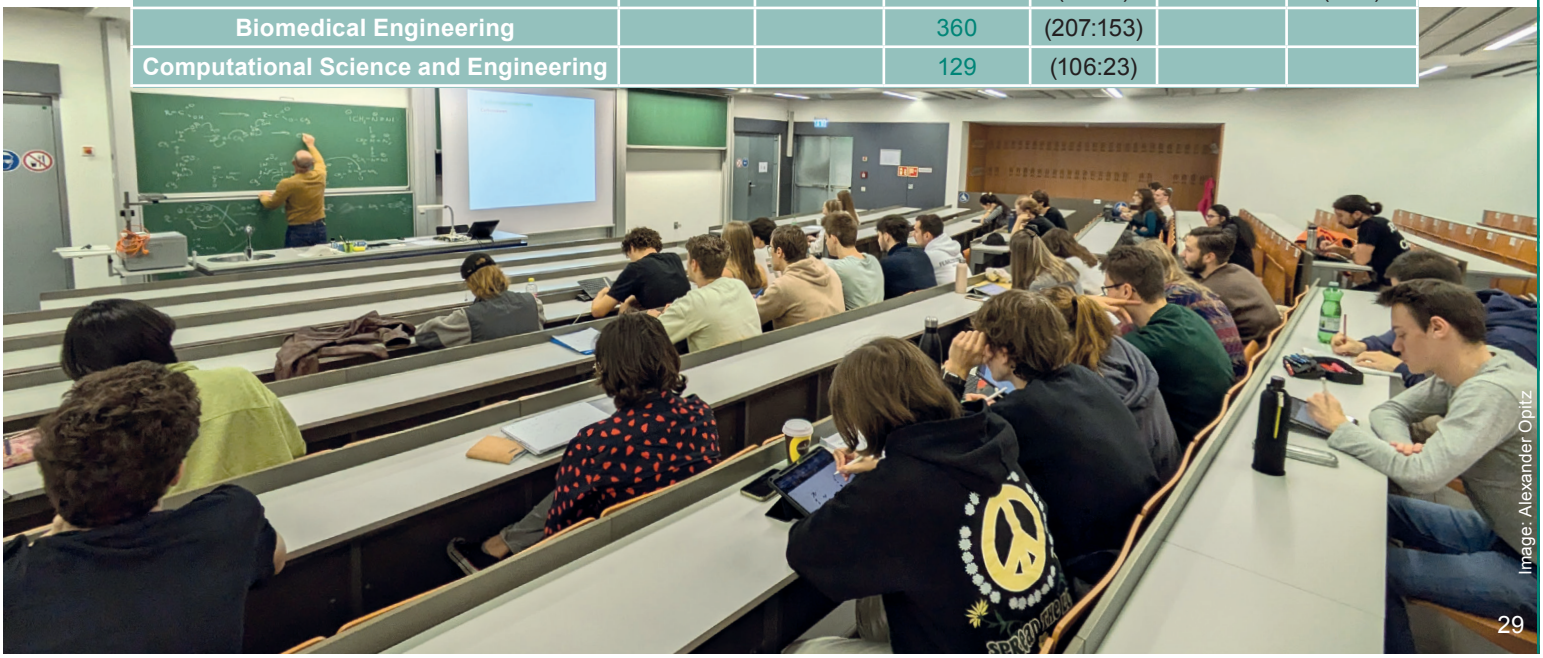


Image: Alexander Opitz

Here's to the next 20 years of learning, friendship, and discovery at the Faculty of Technical Chemistry!

A Balance at the Faculty of TCH

As we celebrate 20 years of excellence at the Faculty of Technical Chemistry, it's important to reflect on not only the academic achievements but also the vibrant social experiences that have shaped student life here. Studying chemistry is no easy task, and the rigor of the program demands dedication, curiosity, and hard work. However, what makes this faculty truly special is the way it fosters a balance between academic excellence and an enriching social life.

A strong sense of community is woven into the fabric of our faculty. From the basketball and American football teams, the TU Robots, to the many social groups and activities, students have countless opportunities to bond and support one another outside of the classroom. These experiences foster connections that last well beyond the university years, creating a network of friends and colleagues who share more than just an academic journey. At the heart of this balance is "die Fachschaft" – our student council. The "Fachschaft" is more than just a group of students supporting their peers; it's a vital part of the faculty's spirit. They organize events that bring everyone together, from welcome gatherings for new students to exciting semester parties. They also provide guidance, support, and a sense of community, ensuring that no one feels lost amidst the academic demands. With their efforts, the "Fachschaft" adds a touch of magic, making sure that student life here is as fulfilling socially as it is academically.

Beyond "Fachschaft", students can also get involved with the HTU (Hochschüler*innenschaft). The HTU offers opportunities for volunteering in various areas, such as helping Erasmus students, promoting diversity, and supporting other students in need. This organization allows students to give back, build leadership skills, and make a tangible difference within the university community. Chemistry students often find themselves immersed in complex theories, experiments, and research projects, but this intensity is counterbalanced by a strong sense of community. The student life here is about more than just hitting the books. It's about forming connections – whether in study groups, at campus events, or simply during coffee breaks between lectures. Many lifelong friendships have been forged in our laboratories and lecture halls, as students come together to help each other through challenges and share in successes.

Clubs, events, and informal gatherings provide opportunities for students to relax, share ideas, and gain new perspectives. Whether it's attending faculty-organized seminars or enjoying a night out with friends, these moments create memories that last well beyond the classroom and also beyond graduation, being refreshed e.g. in the annual "Homecoming events" jointly organized by the Faculty and the TU Wien Alumni Club (TUWac).

Over the past 20 years, this faculty has not only been a place for academic growth but also a nurturing ground for personal development. Our alumni consistently remark on how their experiences here shaped their careers and their lives. The balance between rigorous academics and a supportive social environment has allowed our students to thrive, not just as scientists but as individuals. As we look toward the future, we remain committed to maintaining this balance. We will continue to provide an outstanding education while fostering a sense of belonging and community for all our students. After all, success in life is not just about what you learn but also about the connections you make and the experiences you share.

Image: Fachschaft Che

Anno 2008
first semester students in the old TNF lecture hall

& SOCIAL LIFE

Image: Boryana Badinska

Image: TU Wien

“Mitmachlabor” – School Classes visiting TCH since 25 years

Chemistry is not just about smells and bangs! In the TCH’s hands-on laboratory, children and young people can discover their chemical environment and find out in how many areas of everyday life science plays a role. The hands-on laboratory was founded jointly by TU Wien and the Austrian Association of Chemistry Teachers in order to offer children and young people the opportunity to carry out independent, experimental work at an early age. The aim is to make discovery and exploration possible in a playful way, thereby developing and promoting interest in the natural sciences.


Image: Melanie Bosch

OEAD Science Ambassador Program – Inspiring the Next Gen of Scientists

“The workshop was super interesting! The best was when we made the cloud in the bottle. I really saw how the cloud was forming. Now, I know what is going on in the sky!”, one of the pupils gave this feedback after a workshop. As part of the OEAD Science Ambassador program, scientists from Technical Chemistry visit schools to talk about their research and give workshops on exciting chemistry topics. For us, this is a great opportunity to get young people interested in science. Often, it is the first time they meet a scientist, and they can ask all the questions about our everyday work. The school visits are a welcome change to our daily work and offer us new perspectives on our research topics. Interested teachers can book the visits and workshops through the website of the OaeD.

Internationalization – at the Faculty of TCH

Good things get better! The TCH Faculty takes its internationalization mission very seriously. Since 2023, Prof. Georg Steinhauser has been responsible for efforts to increase the globalization of our faculty’s networks. Cooperation agreements with both long-standing and new partner institutions are an important aspect of our internationalization strategy. The focus here is on Japan and the USA. The next generation should be introduced to international thinking at a young age. The Erasmus and other exchange programs are an important instrument for promoting these activities. An important milestone for incoming students was the switch to English for the Master’s degree courses in the summer semester of 2024.

FemChem – TCH's Feminist Network

FemChem was established in 2016 as part of the Faculty's gender promotion plan. Starting there, a handful of women went to work shaping the network's structure, vision and mission. Since then, FemChem has made great progress, initiating and accompanying two scientific studies, hosting scientific workshops, and awarding over 40 travel grants to young female researchers. The mission of the network is to improve the working environment for female scientists and support the next generation of female researchers. With the dedication of around 40 active members (female and recently also male colleagues), we remain committed to improve the work environment for women in science and supporting their career development.

www.tuwien.at/tch/femchem

Image: FemChem

The initiatives to support women at TCH …

… had already a substantial impact, contributing to the success of advancing female scientific careers:

3 on-top excellence tenure track positions by acquisition of a Herta Firnberg or Elise Richter Grant:
Noelia Barrabés, Brigitte Holzer, Zita Szentkiralyi

3 female tenure track positions:
Anne Conibear, Irina Delidovich, Maren Podewitz

1 female professorship (§98): Ruth Birner-Grünberger

The Young Investigator Academy at TCH – Shaping the Future of Early-Career Researchers

The Young Investigator Academy (YIA) is a newly established network representing young investigators at the postdoctoral and assistant professor levels within the Faculty of Technical Chemistry at TU Wien. The academy aims to facilitate exchange, relay information, provide peer support, and improve the conditions for young scientists at the university.

Adopting a bottom-up approach, the academy is organized into three working groups: Networking & Visibility, Career Development, and Funding & Resources. It is led by a six-member board, currently comprising Noelia Barrabés Rabanal, Stefan Baudis, Dennis Svatunek, Dogukan Apaydin, Alexey Cherevan, and Brigitte Holzer.

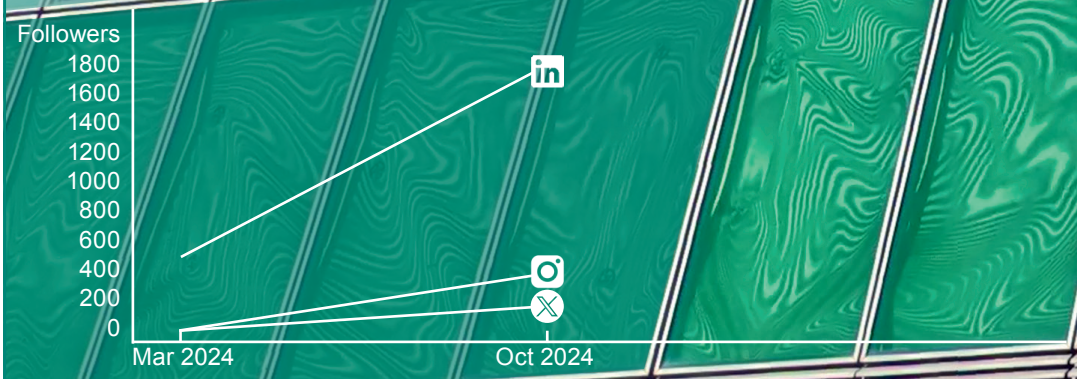
Image: Agnes Lenz

The academy organizes various events and programs, including informational sessions in collaboration with Funding Support & Industry Relations at TU Wien, networking get-togethers, thesis and internship fairs, and the Faculty of Technical Chemistry Science Days.

www.tuwien.at/tch/yia

Since March 2024, our student assistants Stefanie and Gregor have been revitalizing the Faculty of Technical Chemistry's social media presence. Thanks to their creative content and strategic communication, we've seen impressive growth. On LinkedIn, we've gained over 1,700 followers since we started, focusing on connecting with experts and sharing research and career opportunities. Our Instagram and X accounts are also thriving, offering glimpses into lab life and showcasing our scientific achievements to engage with the broader chemistry community.

Image: Gregor Mihovilovic



CONTACT!

LinkedIn

Instagram

X

Image: Alexander Opitz

With heartfelt thanks and great tribute, flowers to all who did contribute:

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Committed to sustainability, this brochure is printed on recycled paper, reflecting our true belief that chemistry in 2024 is all about solving problems, not creating them!