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Graduate School of Science and Faculty of Science Tohoku University Japan

Faculty of Science Guide and Dean's Greeting

Nobuo Tsuzuki Dean of the Faculty of Science

The Faculty of Science of Tohoku University consists of seven departments: Mathematics, Physics, Geophysics, Chemistry, Geoenvironmental Science, Earth and Planetary Materials Science, and Biology. Since its founding in 1907, the university has upheld the basic principles of "research first" and "open doors" and has opened this place of research and education to society as an international base for the creation of knowledge in science. In the Admissions Policy, "Science is the most fundamental discipline wherein the mechanisms of the natural world are investigated, and we hope to enroll people who have a strong interest in science, flexible minds, thinking skills, a high ability to solve problems, and strong intellectual curiosity and ambition." As mentioned above, the Faculty of Science welcomes those who are surprised by the wonders of natural phenomena and have the desire to investigate their origins. In undergraduate education, students learn the knowledge and methods of their predecessors and conduct research aimed at investigating new natural phenomena. Students will acquire a wide range of knowledge and how to utilize it. More than 80% of students go on to graduate school, learn more advanced systems of scientific knowledge, and engage in cutting-edge research.

Environmental problems, explosive epidemics of infectious diseases, and the instability of the world situation have led to a sense of uncertainty about the sustainable development of society and the economy, and modern society is facing many challenges. These issues are intricately intertwined and cannot be easily solved, but science, which is the foundation of various academic fields and the common intellectual property of humankind, directly or indirectly contributes to solving problems. The Faculty of Science and the Graduate School of Science explore the laws of nature in a wide range of fields of science, such as the microscopic world of elementary particles, nuclei, atoms, and molecules, the macroscopic world, such as living life, the earth, and the universe, and mathematical scientific phenomena. We cultivate human resources who have scientific thinking abilities and practical skills necessary to overcome problems. Through these activities, we contribute to the development of science and support the foundation of science, technology, and innovation.

As the name suggests, the Aobayama Campus, where the Faculty of Science is located, is rich in greenery. The renovation of the campus library and the co-op cafeteria is scheduled to be completed this summer, further enhancing the educational and research environment. We look forward to taking on the challenge of physical research with you on this campus.



School of Science, Tohoku University

"Research First" and "Open Door"

Tohoku Imperial University, College of Science (currently, the Faculty of Science) was founded in 1907 as the third Imperial University after Tokyo and Kyoto. Since then, it has made remarkable achievements in research and has provided important human resources to our society. Of special note in our history are the ideas of "Research First" and "Open Door". "Research First" is our policy of giving research our highest priority, meaning that research is our ultimate mission. We believe that it is possible to provide true education to students through research. This long-standing philosophy of creativity and originality has been proven by producing many recipients of the Order of Culture, the Japan Academy Medal, and so on. Our door is always widely open to the world. In other words, we have always operated with an "Open Door" policy. We willingly give our educational and research resources back to society, which in turn helps us to find undiscovered genius and develop it. In the early years of our history, on the bases of competence and ability without adherence to custom, we accepted female students and those who had not graduated from high schools of the old education system, such as graduates of technical institutes. The latter were called "collateral" during that era. This is an example of the "Open Door" policy, which allowed Chika KURODA, Ume TANGE, and Raku MAKITA to join us as the first three Japanese female students. Seiji KAYA, former President of the University of Tokyo, is an example of "collateral" and is a graduate from the Kuramae Institute of Technology (the former Tokyo Institute of Technology). In addition, Professors Cheng Jian Gong and Su Bu Qing, prominent people in Mathematics in China, are both graduates from our Faculty and the first two foreign people to obtain doctorate degrees in Japan. Those two philosophies are indispensable for distinguished and productive research. Some 40%–45% of our teaching staff each year are not graduates from Tohoku University, which is another example of our "Open Door."

Faculty of Science

The Faculty of Science is responsible for education and research in the basic sciences. It encompasses all disciplines of natural science. Our activities are rooted in original questions about nature and are centered around a strong appetite for learning. The outcomes of our activities contribute to the welfare of humankind after they have been applied to technology. Original and creative research done in the Faculty of Science will be extremely important in the coming age as society increasingly focuses on concerns other than economic ones, such as a sustainable global environment and an improved quality of life. Doors to great success are open wide before you.

Graduate School of Science

The Graduate School of Science provides high-quality educational and high-level research opportunities to foster professionals so that they can become proficient in specialized knowledge and research methodologies. Scholars from the Research Institutes of Tohoku University and other domestic and foreign research institutes are working jointly with us. All six of our departments adopted the "Program for Leading Graduate Schools" in 2014. We have developed an "attractive campus" and have made this university a highly advanced center of education and scientific research in the world based on the fruits of the "Program for Leading Graduate Schools". The "Program for Leading Graduate Schools" has been designed and implemented in order to guide top students in their efforts to become global leaders with a commanding and creative presence in industry, academia, and government. By bringing together first class educators and students from all over the world and with the participation of industry, academia, and government, the program supports the radical reform of doctoral degree curriculums to go beyond specialized fields in order to develop internationally recognized degree programs. Moreover, the program is designed to promote the formation of graduate schools worthy of the highest institutes of education.

**Jun MUTO**

Research Area

I have been studying the rheology of crustal and mantle rocks through laboratory experiments on rock deformation and numerical modeling. Now I am focusing on the post-seismic deformation of the 2011 Tohoku-Oki earthquake to illuminate the rheological behaviors of the lower crust and upper mantle from geodetic observations.

Research Topics

- 1 Structural geology
- 2 Laboratory rock deformation
- 3 Rheology of crust and mantle
- 4 Postseismic deformation

On March 11, 2011, a massive earthquake and subsequent gigantic tsunami hit the coastal areas of Tohoku, including Miyagi Prefecture. However, the 2011 earthquake is not over yet, and the ground is still moving even ten years after the quake. The movement of the earth after an earthquake is called postseismic deformation, and it is caused by the slow movement of rocks at depths as deep as 100 km underground. The movement is such that the earth is conducting an enormous experiment all over Japan. The ground motion during and after the earthquake has been observed with the world's densest GPS network employed all over Japan, and valuable data that can be the edifice of human knowledge has been collected. We are looking for highly motivated students who can fully use this precious data and clarify what is happening underground after a major earthquake that occurs once every 1,000 years.

**Masahiro TERADA**

Research Area

My research interests are in the field of synthetic organic chemistry, especially the development of new and useful synthetic methodologies based on the design of novel organocatalysts and the utilization of transition metal catalysts. I have been applying these methodologies to efficient syntheses of biologically active molecules, extended π -system functional materials, and relevant compounds.

Research Topics

- 1 Design of organocatalysts
- 2 Development of novel molecular transformations
- 3 Synthesis of biologically active molecules
- 4 Synthesis of extended π -system functional materials

The results of chemistry are utilized in all natural science disciplines and in a wide range of fields such as engineering, medicine, pharmacy, and agriculture, hence chemistry is sometimes called the central science because of its central location amongst these fields. In fact, modern civilized society is supported by all kinds of substances that make up food, detergents, pharmaceuticals, clothing, furniture, information equipment, automobiles, buildings, and so on. Chemistry is deeply involved in the research, development, commercialization, and production of these substances. It can also contribute to solve environmental issues, for instance, the development of chemical processes with minimizing chemical wastes. In the face of declared to reduce carbon dioxide emissions, the role of chemistry is becoming increasingly important to solve problems of energy demand. Chemistry, which can make substances, has the potential to change the world by creating new useful substances. Tohoku University welcomes highly motivated international students who are interested in creating substances with new functions through the power of chemistry.

Master's student in Chemistry from Indonesia

I have always been drawn to how our understanding of the world has progressed so far thanks to science and numerous innovations that have been born from it. Studying at Tohoku university has given me the opportunity to receive a top-class education and participate in cutting-edge research. In 2017, I started studying chemistry here as an undergraduate student in the Advanced Molecular Chemistry (AMC) course. Since then, the university has provided me with classes taught by world-class professors and a laboratory that is very supportive of my study.

My supervisor, Professor Nagatsugi, is a very kind and outgoing person who is very keen on getting to know the lab members and support us. The lab members come from various backgrounds and nationalities, and yet we make a great team. Despite the differences, we have formed a bond through similar interests and life experiences. Sometimes, we even hang out on the weekends, and we have created enjoyable memories here. It is very fulfilling to interact and be around with people who share the same passion for science.

I am currently focusing on functional nucleic acid analogs. In this university, I have many opportunities to use advanced facilities and equipment to synthesize new

molecules through organic synthesis and investigate their functions. Through this research, I have gained a deeper knowledge of organic and nucleic acid chemistries. I recently presented my research at a conference in Tokyo, and it was the first conference that I attended on-site since the COVID-19 outbreak. Meeting various researchers from all over Japan and overseas has broadened my perspective and given me helpful insight into further improving my research. All these experiences are indispensable to my future.

Tohoku university and Sendai have provided a great environment for international students. In the School of Science, there is the DiRECT office which has kind and dedicated staff members who have assisted me many times in academic and daily life matters. In addition, there are a myriad of international exchange groups either in school or out of school where you can meet more people who are eager to interact with foreign people. Sendai city has a lot of trees and beautiful nature, which makes the atmosphere here is very refreshing and comfortable to live in. I would recommend Tohoku University for students looking to further their academic experience in a prestigious and research-oriented university while surrounded by brilliant people from all over the world.

Nadya Soemawisastra



Doctoral student in Physics from China

Tohoku University is a well-known university for Chinese students because Lu Xun, a famous author in China, used to study at Tohoku university. At the same time, Tohoku university is known for being one of the top universities in material research about which I was very interested. Therefore, I applied to study at Tohoku University and am very grateful that the professors here are knowledgeable and never hesitate to share all they know with students. Of course, the technical and analytical facilities at Tohoku University are always up to date. In addition, there are many opportunities for students to have discussions with other top laboratories in the world. Furthermore, students are encouraged to do research about which they are interested under the instruction from their supervisors. Moreover, we can use the large database and libraries provided by Tohoku University for free. All these reasons make it a great experience to do research at Tohoku University. I started my study about crystal growth of multi-crystalline silicon used for solar cells two years ago. Although I did not know much about crystal growth at the beginning, I quickly learned thanks to the large database from Tohoku University and the kind help offered by every professor, staff and senpai in our laboratory and could begin doing experiments using the top facilities developed by our group. I found it very interesting when I observed unpredicted phenomena while doing experiments, although it is difficult and challenging to explain everything, which motivated me to do research.

As a foreign student, Tohoku University provides me lots of opportunities to learn Japanese and experience the Japanese culture. Last year, I participated in the Yukata event held during the Tanabata festival, which is the most famous festival in Sendai and involves large streamers set along the shopping arcade. We were provided and helped to wear various beautiful yukata by professionals. It was a very nice experience wearing a yukata and walking along the streets.

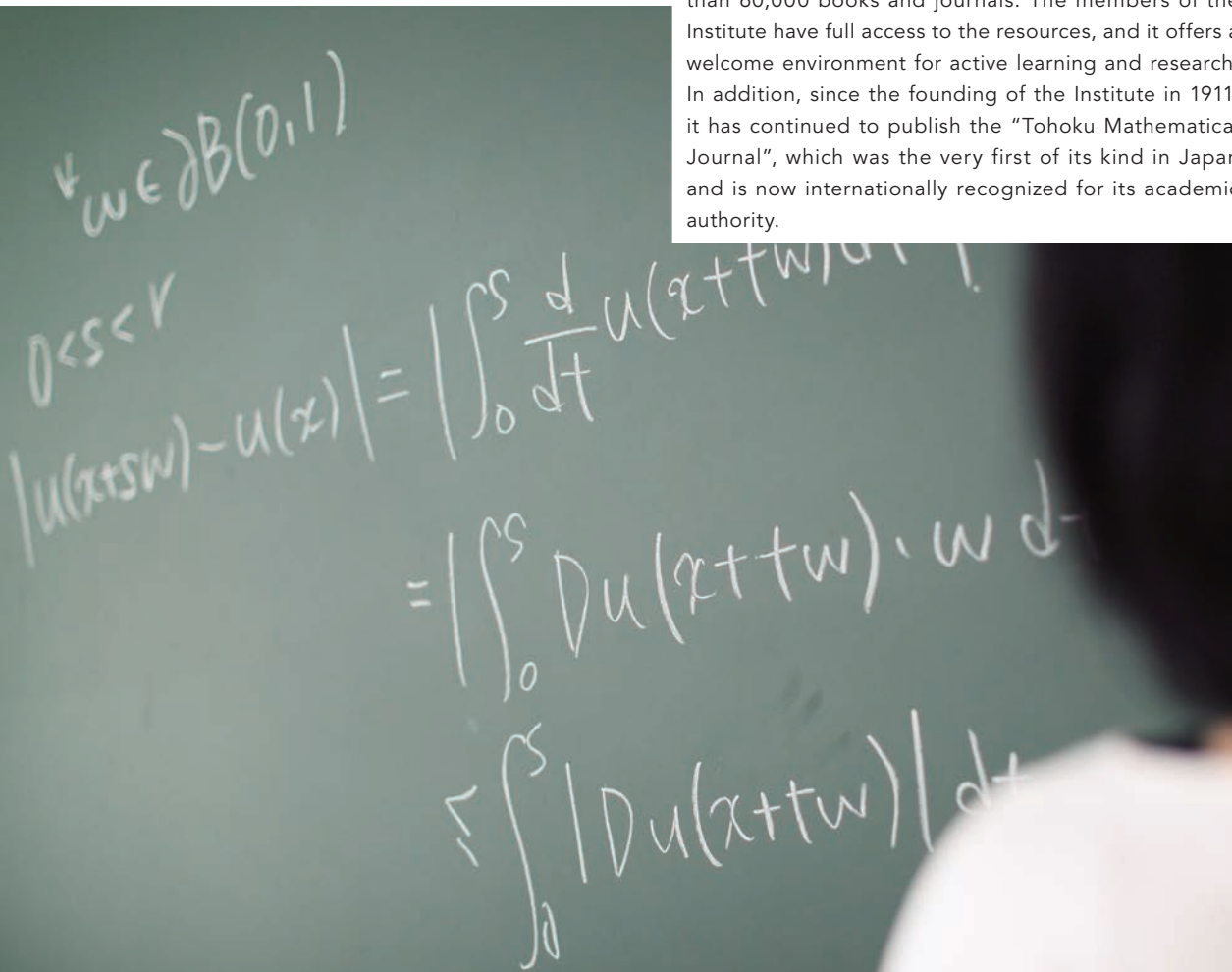
Moreover, life in Sendai is very enjoyable. Sendai is not as big as Tokyo, but the facilities here are well equipped and can satisfy most needs. What is more attractive is that there are abundant natural resources around Sendai. For example, we can enjoy one of the Three Views of Japan, Matsushima, during the summer by taking a boat tour and can enjoy snowboarding at the nearest mountains during winter. However, there indeed are many big and small earthquakes happening in Sendai, but Tohoku University always provides all students with prompt support.

Therefore, I would like to recommend prospective students to do research at Tohoku University where you are encouraged to do your best in research with the generous support for both your professional and personal lives from the university.

MATHEMATICS

Algebra
Geometry
Analysis
Manifold Theory
Applied Mathematics
Integrative Applied Analysis and Computation

Mathematics is the language for describing the natural world. Its progress has been directly linked to that of other scientific fields, as notably seen in the case of Einstein's formulation of general relativity, which was made possible by the timely development of Riemannian geometry. The Mathematical Institute of Tohoku University was established in 1911. Many important contributions to various fields of modern mathematics have since originated from the Institute. Among these are Tannaka's Duality Theorem by Tadao Tannaka and the concept of Sasakian Manifolds by Shigeo Sasaki, which has recently drawn renewed interest due to its connection to Superstring Theory. The Institute is currently a base of many researchers and students, both undergraduate and graduate, who are actively engaged in a wide range of research fields, which cover algebra, analysis, geometry, and logic. The Institute houses one of the best libraries in the country, which holds more than 60,000 books and journals. The members of the Institute have full access to the resources, and it offers a welcome environment for active learning and research. In addition, since the founding of the Institute in 1911, it has continued to publish the "Tohoku Mathematical Journal", which was the very first of its kind in Japan and is now internationally recognized for its academic authority.



PHYSICS

Theoretical Physics

- Particle Physics and Cosmology
- Condensed Matter Physics
- Nuclear Physics
- Statistical Physics

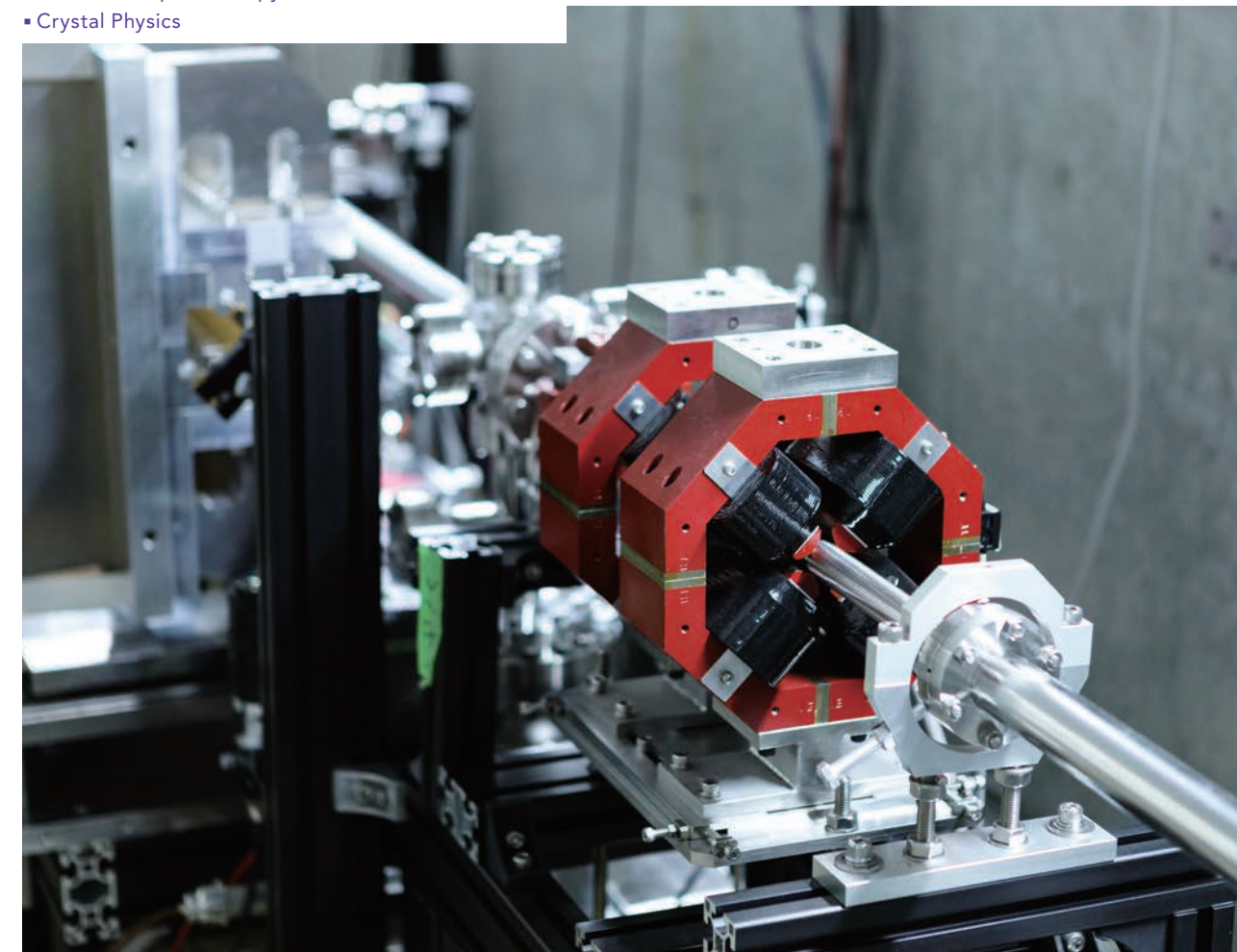
Experimental Nuclear and Particle Physics

- High Energy Physics
- Neutrino Science
- Nuclear and Hadron Physics
- Accelerator Science

Experimental Condensed Matter Physics

- Electronic Properties of Condensed Matter
- Metal Physics
- Quantum Condensed Matter Physics
- Soft Matter and Biophysics
- Solid State Spectroscopy
- Crystal Physics

The Department of Physics at Tohoku University is one of the oldest and largest in Japan, having more than a 100-year history since its foundation in 1911, and it now has a faculty of over 160 professors and about 250 students in the graduate school. Not only the faculty members but also those from research institutes and laboratories are actively involved in the school's programs. Research in our department covers all fields of physics from particle and nuclear physics to condensed-matter physics and extends even further to biophysics and industrial physics. Our graduate students are undertaking world-class research at the highest levels at the frontiers of physics under the guidance of their experienced supervisors. The advanced research facilities of our department assist in their activities.



ASTRONOMY

Cosmology
Galactic Astronomy
Stellar Physics
Astronomical Instrumentation

A total of about 100 members in the institute, including faculty members, postdoctoral researchers, and students, are working on a wide variety of research topics related to astronomical objects. The research activities cover 1) understanding formation processes of stars and planets, 2) understanding the physics and lifecycle of stars, 3) revealing the formation and evolution processes of galaxies, and 4) understanding the cosmological framework of the universe. These subjects are studied mainly in two ways. The first is through theoretical research, where models are developed and analyzed to understand a variety of fundamental astronomical phenomena on the basis of physics and mathematics, often using computer simulations. The second is through observational research. Astronomical phenomena are mainly observed with electromagnetic waves at all wavelengths, such as radio, infrared, optical, ultraviolet, X-ray, and gamma-rays, using various modern telescopes, such as the 8.2m Subaru Telescope at the summit of the 4,200-m Mauna Kea on the island of Hawaii. The data obtained with such observations are analyzed and compared with physical models to gain deeper understanding of the astronomical phenomena. Moreover, the development of new telescopes and cutting-edge instruments is a unique and important activity in the institute.



GEOPHYSICS

Solid Earth Physics
Atmospheric and Oceanic Science
Planetary and Space Physics

Affiliated Centers

- Center for Atmospheric and Oceanic Studies (CAOS)
- Planetary Plasma and Atmospheric Research Center (PPARC)
- Research Center for Prediction of Earthquakes and Volcanic Eruptions

Geophysics is a broad research field involving studies on solid Earth, oceans, atmosphere, upper atmosphere, ionosphere, and planets. Geophysicists use physical approaches to investigate various phenomena in these areas and study their structures as well as their long-term and short-term variations in order to clarify the formation and evolution processes of our mother Earth and the solar system. In recent years, as a natural science, geophysics has been developing in close relation with human society. Since its founding in 1945, the Department of Geophysics has made great efforts and important contributions to establishing the framework of geophysics. We treasure the history and traditions of many of our seniors in our department, and at the same time, we are working to open new frontiers of geophysics.



CHEMISTRY

Inorganic and Analytical Chemistry

Organic Chemistry

Physical Chemistry

Interdisciplinary Chemistry

Advanced Atomic and Molecular Science

Reaction Mechanism and Dynamics

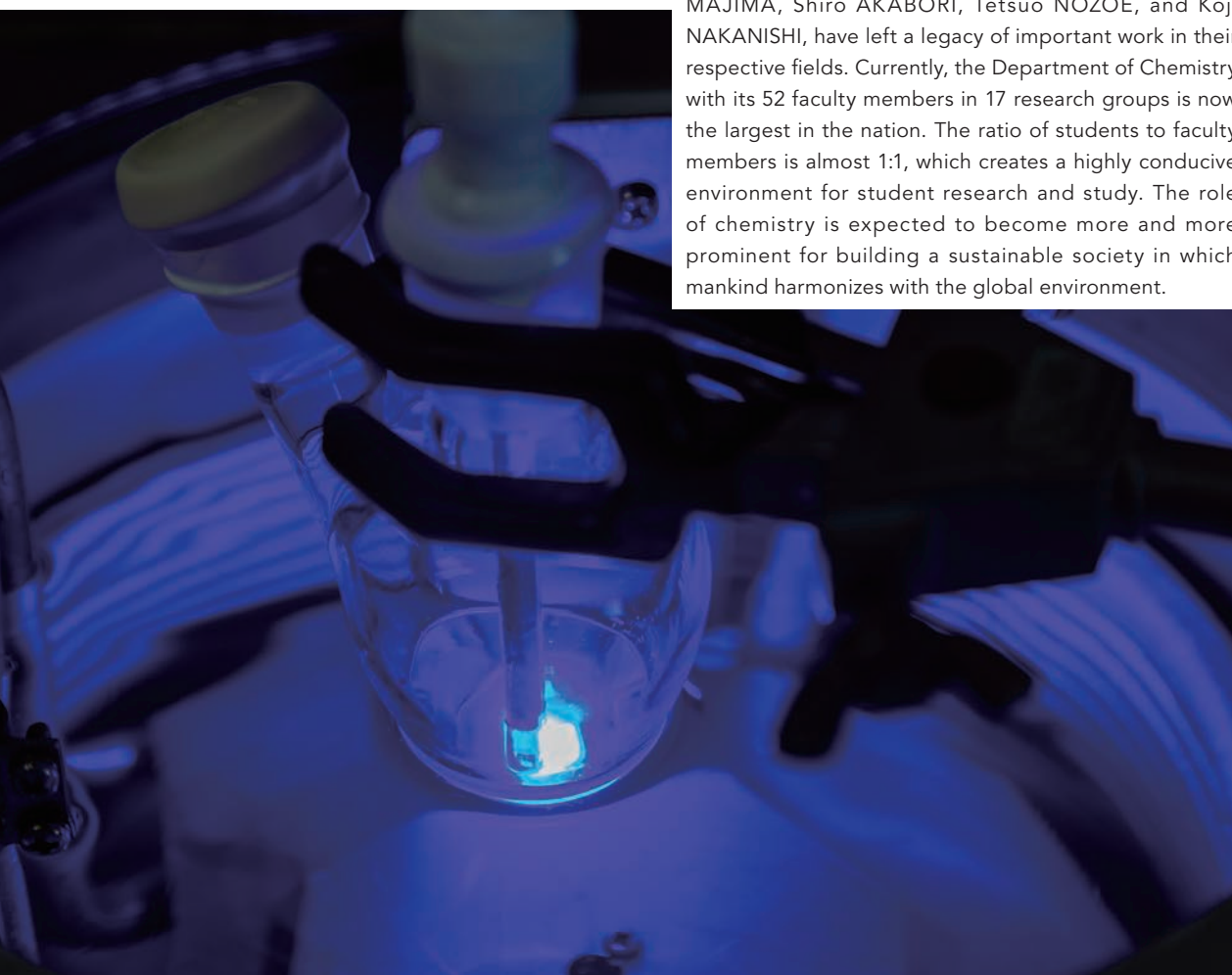
Solid-State Chemistry

Biofunctional Chemistry

Affiliated Centers

- Research and Analytical Center for Giant Molecules

Chemistry is an academic field in which researchers strive to understand substances at the atomic and molecular level, serving as a basis for not only basic science but also a variety of fields, such as engineering, life science, medical science, and pharmaceutical science. Therefore, chemistry is often called “the central science”. The Department of Chemistry is proud of our academic culture wherein our researchers actively study unexplored fields and create new chemistry. In the Department of Chemistry, we aim to learn the truths of chemistry through the synthesis of new molecules, discovery of new properties, theoretical prediction and understanding of chemical phenomena, microscopic observation of atoms and molecules, development of methods for chemical analysis, and solving the mysteries of life and nature. Since the founding of the Department of Chemistry in 1911, more than 4000 chemists, including four recipients of the National Culture Award; Riko MAJIMA, Shiro AKABORI, Tetsuo NOZOE, and Koji NAKANISHI, have left a legacy of important work in their respective fields. Currently, the Department of Chemistry with its 52 faculty members in 17 research groups is now the largest in the nation. The ratio of students to faculty members is almost 1:1, which creates a highly conducive environment for student research and study. The role of chemistry is expected to become more and more prominent for building a sustainable society in which mankind harmonizes with the global environment.



EARTH SCIENCE

Division of GeoEnvironmental Science

Paleo-Environment Change

Paleo-Bioevents and Paleontology

Fault and Crustal Dynamics

Geomorphology

Human Geography

The Earth's integrated system of the atmosphere, hydrosphere, and biosphere is driven by the energy of solar radiation just as we are, whereas the solid Earth (lithosphere) is driven by the decay energy of the radioactive elements in the Earth. The boundary between these four spheres is called the Geosphere, and these four spheres interact through the circulation of energy and materials. A huge variety of episodes has occurred and evolved in the Geosphere during the long history of the Earth, and we human beings are the newest product of this sphere. The Department of Geoenvironmental Science is looking at the past, present, and future in the Geosphere's environment, examining ancient rocks and sediments with a current knowledge of physics, chemistry, and biology. However, these changes cannot yet be fully understood by using today's observational techniques alone since they only produce snapshots of the evolving Geosphere. Our Department is coming to a better understanding of the Earth's environmental system in order to combat the serious problems caused by human activities.

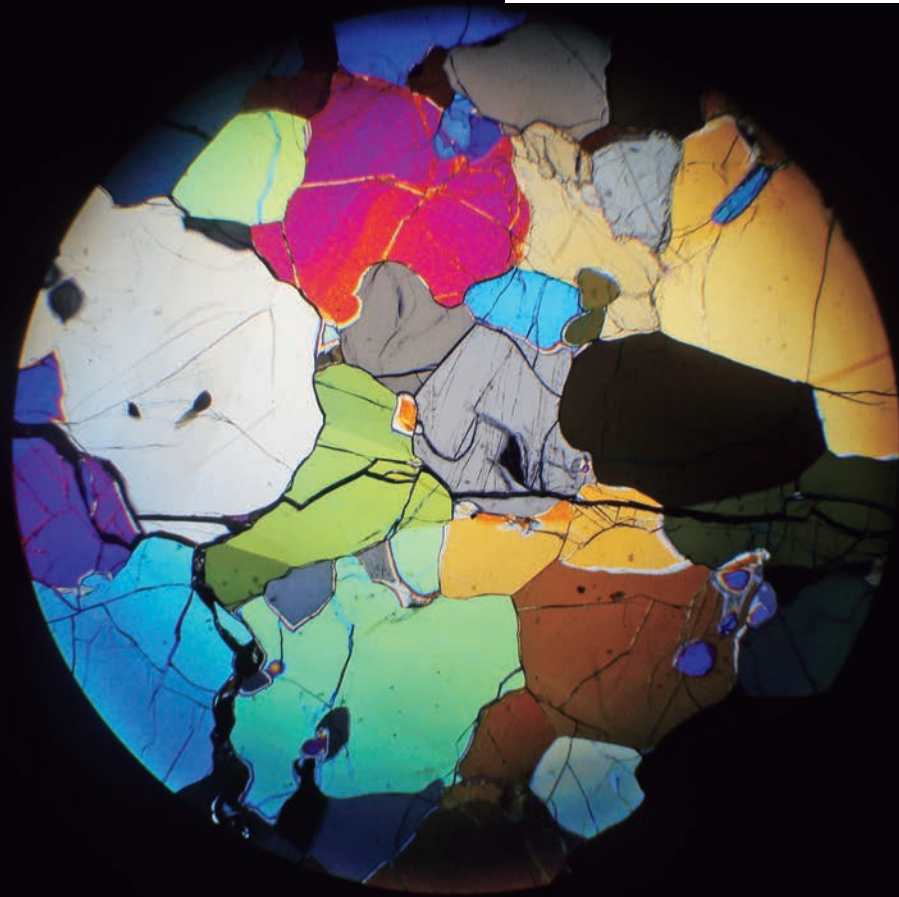


EARTH SCIENCE

Division of Earth and Planetary Materials Science

Mineral
**Natural Resources and Environmental
Geochemistry**
Early Solar System Evolution
Quantum-beam Earth Science and Technology
Volcanology and Geofluids
Petrotectonics Research
Global Crystal Science

The Division of Earth and Planetary Materials Science at Tohoku University aims to comprehend the origin, composition, and phenomena of the Earth and other planets in the solar system. Our research topics are diverse, including the study of volcanic and seismic activity, and the measurement of physical properties of materials in the Earth's deep interior. In addition, we conduct experiments on organic synthesis under early Earth conditions and study meteorites and return samples from extra-terrestrial locations to understand the evolution of life. In accordance with our research themes, we also conduct field research in Japan and other parts of the world. We use atomic-level observation of minerals, rocks, and meteorites, as well as extensive geological surveys, to study various phenomena that have occurred on Earth from billions of years ago to the present day. Our research contributes to understanding the scientific backgrounds and mechanisms of current social problems related to natural resources and disasters.



BIOLOGY

Biomolecular Sciences **Developmental Biology and Neurosciences** **Environmental Life Sciences**

The land that we stand on, the air that we breathe, the food that we eat are all products of the past 4.6 billion years of the Earth's history. We human beings too. How were we created? Where will we go? The Department of Biology was established in 1922 and has been producing a number of graduates and postgraduates active in both academic and non-academic worlds. Since the Department was founded, the priority-in-research and open-door spirits of Tohoku University have governed the Department as well. Although the Department has kept the spirit and tradition founded by the pioneers, it has promoted updated research activities in response to the ever-developing area of biological sciences. Present research activities cover a wide range of basic biology from molecular and cellular biologies through ecology and evolutionary biology. Three facilities, the Asamushi Laboratory of Marine Biology, the Mount Hakkoda Botanical Laboratory, and the Botanical Garden, contribute to the education and research activities in the department. In 2001, the whole department was reorganized to establish the Graduate School of Life Sciences. We are more than happy to welcome talented biologists and students to promote and enjoy biological sciences in Sendai.



Educational Programs

Degree Programs

- [Undergraduate]**
 - AMC (Advanced Molecular Chemistry Course):
A four-year undergraduate chemistry course (English)
 - Privately Financed International Students Entrance Exam
A four-year undergraduate course (Japanese)
- [Graduate: Master's & Doctoral Course]**
 - IGPAS : International Graduate Program for Advanced Science (English)
 - Special Selection for International Students (English/Japanese)

- [International Joint Graduate Programs]**
 - Graduate Program in Spintronics (GP-Spin)
 - International Joint Graduate Program in Earth and Environmental Sciences (GP-EES)
 - Graduate Program on Physics for the Universe (GP-PU)
 - Graduate Program in Data Science (GP-DS)
 - International Joint Graduate Program in Materials Science (GP-MS)
 - International Joint Graduate Program in Integrated Chemistry (GP-Chem)

- [Academia-Industry Collaborating Graduate Programs]**
 - WISE Program for AI Electronics (AIE)
 - WISE Program for Sustainability in the Dynamic Earth (SyDE)
 - Graduate Program for Green and Digital Innovation (GreDi)

Non-degree Programs

- [Exchange Programs with Partner Institutions]**
 - JYPE: Junior Year Program in English (Undergraduate)
 - DEEP: Direct Enrollment Education Program for Natural Science Students (Undergraduate)
 - COLABS: Cooperative Laboratory Study Program (Graduate)
 - Special Auditing Student (Undergraduate)
 - Special Research Student (Graduate)

- [Others]**
 - Research Student (Undergraduate/Graduate)
 - Credited Auditor
 - Short-term Visiting Trainee

Financial Support

Fee Waivers

Degree students who find it difficult to pay the admission fee and/or tuition for economic reasons may be granted a waiver on application and screening. And doctoral students who belong to certain programs designated by the university are considered “Exceptional Students” and those students’ tuition will be waived.

Financial Aid / Scholarships

A variety of financial support opportunities are offered to international students. Most applications are accepted after admission.

- Tohoku University Advanced Graduate School Pioneering Research Support Project for PhD Students
 - Tohoku University Advanced Graduate School Doctoral Fellowship
 - Tohoku University President Fellowship
- Tohoku University Global Hagi Scholarship
 - Japanese Government (MEXT) Scholarship
 - Monbukagakusho Honors Scholarship
 - Private Organization Scholarships

*Financial support information is subject to change.

Number of Students

(As of May 1, 2022)

	Undergraduate	Graduate	
		Master’s Program/ Profession Degree Program	Doctoral Program
Science	1,370 [33]	544 [55]	265 [76]
TU Total	10,629 [189]	3,954 [691]	2,730 [832]

[] indicates the number of international students included in the counts.

Affiliated Research Facilities

- Research Center for Prediction of Earthquakes and Volcanic Eruptions**
<https://www.aob.gp.tohoku.ac.jp/aob-e/>

Center for Atmospheric and Oceanic Studies (CAOS)
<https://caos.sakura.ne.jp/top>
- Planetary Plasma and Atmospheric Research Center (PPARC)**
<https://pparc.gp.tohoku.ac.jp/?lang=en>

Museum of Natural History
http://www.museum.tohoku.ac.jp/english/english_index.html
- Research and Analytical Center for Giant Molecules**
<https://kiki.chem.tohoku.ac.jp/en/>

Related Research Facilities

- Research Center for Neutrino Science**
https://www.awa.tohoku.ac.jp/rcns/INDEX_TOP_eng.html

Research Center for Electron Photon Science (ELPH)
<https://www.lns.tohoku.ac.jp/en/>



Academic Exchange Agreements

Department Level
Partner Institutions

(As of Dec. 19, 2022)

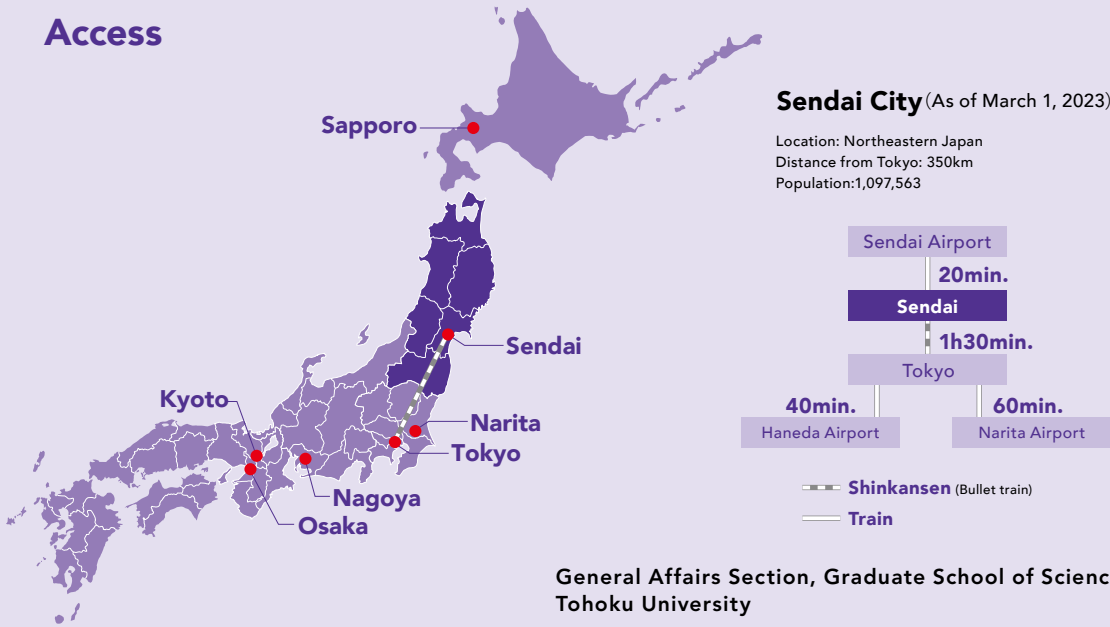
Area	Country/Region	Institution	Date of Agreement
Africa	Nigeria	University of Nigeria, Nsukka (Faculty of Physical Sciences)	Feb. 26, 2016
	South Africa	Rhodes University (Faculty of Science)	Sep. 16, 2013
	South Africa	University of the Witwatersrand, Johannesburg	Apr. 19, 2017
Asia	Indonesia	University of Brawijaya (Faculty of Mathematics and Natural Sciences)	Nov. 17, 2013
	Korea	Korea Polar Research Institute	Dec. 11, 2017
	Taiwan	Institute of Earth Sciences (Academia Sinica)	Dec. 4, 2008
	Taiwan	National Taipei University of Technology (College of Engineering)	May 2, 2015
Europe	Belgium	Université Catholique de Louvain (Faculty of Sciences)	Aug. 29, 2007
	France	Université Claude Bernard Lyon 1	Sep. 9, 2011
	France	Ecole Nationale Supérieure de Chimie de Rennes	Jan. 4, 2016
	France	Université Clermont Auvergne (l'Ecole de l'Observatoire de Physique du Globe de Clermont-Ferrand/Clermont Risk Center)	Sep. 4, 2020
	Germany	University of Bayreuth	Feb. 5, 2016
	Germany	Mainz University (School of Physics, Mathematics, and Computer Science)	May 3, 2012
	Germany	Wuppertal University (Faculty of Mathematics and Natural Sciences)	Jan. 23, 2012
	Italy	University of Ferrara	Jun. 27, 2012
	Italy	Scuola Normale Superiore (Centro di Ricerca Matematica Ennio De Giorgi)	Jun. 25, 2013
	Italy	Sapienza University of Roma (Faculty of Mathematics, Physics and Natural Sciences)	Mar. 24, 2017
	Netherlands	University of Amsterdam (Faculty of Science)	Jul. 11, 2013
	Netherlands	Utrecht University (Department of Earth Sciences)	Jun. 25, 2021
	Russia	Siberian Branch of the Russian Academy of Sciences (V.S. Sobolev Institute of Geology and Mineralogy)	Nov. 7, 2008
	Spain	Universitat de València	Jul. 21, 2021
North America	United States	Carnegie Institution of Washington (Geophysical Laboratory)	Dec. 1, 2008
	United States	University of Illinois at Chicago	May 1, 2000
Oceania	New Zealand	Institute of Geological and Nuclear Sciences Limited (GNS Science)	Mar. 19, 2008
	New Zealand	Massey University	Mar. 10, 2020

University Level and other faculties' partner institutions
<https://web.tohoku.ac.jp/ged/partners>

Sendai City

Sendai with a population of more than one million is a political and economic center of the Tohoku (northeast) Region in Japan. It is a large city, and it is known throughout Japan as a modern city in harmony with nature. The city possesses beautiful scenery, such as the Hirose River, which runs the center of the city, and lush Zelkova trees throughout the city. Greenery is especially abundant in the center of the city, which has tree-lined streets and parks. As a result, Sendai is called the “City of Trees.” In summer, Sendai’s Tanabata Festival, in which decorations are displayed on long upright bamboo poles throughout the downtown and surrounding areas. In December, the trees are decorated with thousands of lights for the Pageant of Starlight.

Access



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