

UTRIP 2026 Host Laboratory Information

Department	Name and Title of Hosting Faculty Member	Laboratory Website	Research Topic & Research Description
Chemistry	Shin-ichi OHKOSHI (Professor)	https://www.chem.s.u-tokyo.ac.jp/users/ssphys/english/index.html	We are working on the development of novel functional materials responding to light and electromagnetic waves and materials for solving environmental and energy issues. Various materials from metal complexes, such as Prussian blue, to metal oxides and metal alloys have been investigated by chemical synthetic approach. Regarding correlation phenomena of magnetism and light/electromagnetic wave, we have been promoting research on magneto-optical and nonlinear optical magnetism. By utilizing nano-scale chemical synthesis, novel functional materials were synthesized from abundant elements such as iron or titanium; epsilon-iron oxide, ε-Fe2O3, showing huge coercive field and high-frequency millimeter wave absorption, and lambda-titanium oxide, λ-Ti3O5, exhibiting photo-induced metal-semiconductor transition at room temperature as well as heat storage properties that proposes a novel concept of preserving heat energy for a prolonged period. We are working on environmentally friendly research with a view to technology applications contributing to big data, IoT, and renewable energy.
			Special Academic Conditions Required for Research
			1) Prerequisite knowledge and/or specific skills, and required level of proficiency Basics of inorganic chemistry and physical chemistry
			2) Required major field(s) of study Chemistry / Physics
			3) Academic background or research project experience to be considered during selection
			4) Selection and evaluation criteria (if any)
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Chemistry	Takeaki OZAWA (Professor)	https://analyt.chem.s.u-tokyo.ac.jp/en/	Fluorescence Imaging and/or Optogenetic technologies The research focuses on developing novel analytical methods and applying them to single-cell level analysis. This is achieved by artificially modifying natural proteins to create 'next-generation biosensors' with new functions. Analytical chemistry laboratory offers you the opportunity to study either the visualization of live biomolecules using fluorescence imaging or the spatiotemporal manipulation of biomolecules to analyze their functions in living cells using optogenetics.
			Special Academic Conditions Required for Research
			1) Prerequisite knowledge and/or specific skills, and required level of proficiency Certification of the English ability to communicate on chemistry/biology research.
			2) Required major field(s) of study Analytical chemistry, molecular biology, cell biology
			3) Academic background or research project experience to be considered during selection It is better for the student to have a basic knowledge of molecular biology and cell biology.
			4) Selection and evaluation criteria (if any) None

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Chemistry	Keisuke GODA (Professor)	https://www.goda.chem.s.u-tokyo.ac.jp/	At Goda Lab, our primary mission is "Serendipity Engineering" - creating technologies that enable unexpected discoveries, inspired by Louis Pasteur's insight that "chance favors the prepared mind." We develop innovative molecular tools by integrating photonics, nanotechnology, microfluidics, and data science. These tools allow us to discover unknown phenomena, elucidate mechanisms, and explore new applications in science, industry, and medicine. We employ theoretical, experimental, and computational techniques to tackle critical problems. Additionally, we are committed to cultivating the next generation of global leaders who will shape the world in the 21st century. We foster an international and interdisciplinary research environment that values flat human relationships, and we actively seek out talented individuals from any university or company, regardless of their field of study.
			Special Academic Conditions Required for Research
			1) Prerequisite knowledge and/or specific skills, and required level of proficiency 1. Applicants must possess foundational knowledge in molecular imaging, spectroscopy, photonics, nanotechnology, microfluidics, and/or data science, as our lab extensively works on integrating these domains to develop innovative tools. 2. Demonstrated skills in theoretical, experimental, and computational techniques are highly beneficial. 3. Ability to work in an international and interdisciplinary research environment with a cooperative mindset is crucial. 4. Applicants should be ready to engage actively in discovering unknown phenomena, elucidating mechanisms, and exploring new applications in science, industry, and medicine.
			2) Required major field(s) of study 1. We encourage applications from candidates majoring in fields related to, but not limited to, physics, chemistry, biology, data science, materials science, electrical engineering, mechanical engineering, chemical engineering, bioengineering, or a closely related field. 2. Given the interdisciplinary nature of our work, individuals from various scientific and engineering disciplines who possess a strong interest and background in the areas we focus on are welcome to apply.
			3) Academic background or research project experience to be considered during selection 1. Applicants should have a strong academic record with coursework or research experience that aligns with the areas of molecular imaging, spectroscopy, photonics, nanotechnology, microfluidics, and data science. 2. Experience in working on projects or research that involves theoretical, experimental, and computational techniques to solve critical problems is highly desirable. 3. Participation in projects that demonstrate the ability to discover, elucidate, and explore in science, industry, and medicine is an added advantage.
Chemistry	Hiroki OGURII (Professor)	https://natural.chem.s.u-tokyo.ac.jp/	4) Selection and evaluation criteria (if any) 1. Academic Excellence: Strong GPA and coursework in relevant fields. 2. Research Experience: Prior involvement in projects or research in areas like molecular imaging, spectroscopy, photonics, nanotechnology, microfluidics, and data science. 3. Technical Skills: Proficiency in theoretical, experimental, and computational techniques related to our lab's focus. 4. Interpersonal Skills: Ability to thrive in an international, interdisciplinary research environment with strong communication and collaboration skills. 5. Alignment with Lab's Mission: Demonstrated interest and commitment to developing technologies that enable discovery and exploration in science, industry, and medicine. 6. Leadership Potential: Evidence of potential to become a future global leader in academia, industry, or entrepreneurship.
			Special Academic Conditions Required for Research
			1) Prerequisite knowledge and/or specific skills, and required level of proficiency Basic knowledge of organic chemistry, and synthetic chemistry, and basic experimental technique of organic chemistry.
			2) Required major field(s) of study Organic chemistry, Synthetic chemistry, Chemical biology
			3) Academic background or research project experience to be considered during selection Students should have a basic knowledge of organic chemistry, synthetic chemistry and chemical biology.
			4) Selection and evaluation criteria (if any) None

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Chemistry	Taro HITOSUGI (Professor)	https://solid-state-chemistry.jp/english/index.html	Studies on inorganic and organic solid materials. We are interested in both synthesis and functions.
			Special Academic Conditions Required for Research
			1) Prerequisite knowledge and/or specific skills, and required level of proficiency Basic understanding of physics and/or chemistry is required.
			2) Required major field(s) of study One of the following fields: physics, chemistry, computer science, mechanical engineering, electrical engineering, chemical engineering, mathematical science etc.
			3) Academic background or research project experience to be considered during selection Basic understanding of physics and/or chemistry is required.
			4) Selection and evaluation criteria (if any) None