

Outline of the Graduate School of Engineering

[Division of Aerospace and Marine-System Engineering]

Through the interdisciplinary linkage of Aerospace Engineering and Marine System Engineering, we aim to carry out research into sustainable development with the preservation of a globally harmonious environment. Our mission is to educate future engineers and researchers who will be responsible for new and innovative fields of research and will be active in the international community. This academic major is composed of two departments of Aerospace Engineering and Marine System Engineering.

[Department of Aerospace Engineering]

The department of Aerospace Engineering aims to educate future key players who will be responsible for comprehensive developments in the innovative field of aerospace engineering with harmonization of sustainable development of our society and natural environments based on a deep understanding of both fundamental and cutting-edge aerospace engineering.

◆Nakamozu Campus

Research Group	Title	Name	Education and Research Fields	E-mail address
1 Space Engineering	Professor	KOGISO Nozomu	Systems Engineering, Reliability Engineering, Resilient Engineering, Optimum Design, Space Structural Systems, Space Engineering, Laminated Composite, Morphing Wing	kogiso[at]omu.ac.jp
	Associate Professor	NAKAMURA Masao	Space Environment Technology, Space Plasma Simulation and Analysis, Space Weather	m.n[at]omu.ac.jp
2 Aerospace Control Engineering	Professor	SHIMOMURA Takashi	Aerospace Control Engineering, Dynamics / Kinematics / Guidance / Control of Aircraft / Spacecraft, Vibration Control of Flexible Space Structures, Numerical Optimization	takashi.shimomura[at]omu.ac.jp
	Associate Professor	KANATA Sayaka	System Control Engineering, System Identification, Multi-Rotor Helicopters, Mobile Robots under Uncertain Environment	kanata[at]omu.ac.jp
3 Aerospace System Engineering	Professor	TSUJII Toshiaki	Aerospace Navigation Systems, Satellite Navigation and Positioning, Aerospace Information Technology, Optimal Estimation	tsujii.toshiaki[at]omu.ac.jp
	Associate Professor	ANDREEVA-MORI Adriana	Air Traffic Management, Optimization, Operations of Uncrewed Aerial Systems, Advanced Air Mobility	andreevamori[at]omu.ac.jp
4 Aerodynamics	Professor	SASAKI Daisuke	Aerodynamics, Low Reynolds Number Flow, Computational Fluid Dynamics, Computational Aeroacoustics, Aerodynamic Design, Design Optimization, Evolutionary Algorithms, Machine Learning	daisuke.sasaki[at]omu.ac.jp
	Associate Professor	SAKAUE Shoji	Aerodynamics, Laminar-Turbulent Transition, Turbulent Flow Control, Supersonic Mixing Enhancement, Computational Fluid Dynamics	shoji-sakaue[at]omu.ac.jp
5 Aerospace Structure Engineering	Professor	IWASA Takashi	Aerospace Structure Engineering, Dynamics for Thin-Walled Flexible Structures, Photogrammetry, Shock Response, Membrane Structures	iwasa.takashi[at]omu.ac.jp
	Lecturer	YAMANO Akio	Dynamics for Fluid-Structure Interaction, Dynamics for Thin-Walled Flexible Structures, Rovers for Small Planetary Bodies	yamano_aero[at]omu.ac.jp
6 Aerospace Propulsion Engineering	Professor	MORI Koichi	Aerospace Propulsion Engineering, Thermo-fluid Engineering, Space Transportation System, Beamed Propulsion, Plasma Propulsion, Space Debris	koichimori[at]omu.ac.jp
	Associate Professor	HIEJIMA Toshihiko	Aerospace Propulsion System, Compressible Fluid Dynamics, Computational Fluid Dynamics, Instability of Vortices, Scramjet Engine	hiejima[at]omu.ac.jp
	Lecturer	OGAWA Shinichiro	Aerospace Propulsion Engineering, Supersonic Combustion, Combustion Engineering, Computational Fluid Dynamics, Biojet fuel, Combustion diagnostics, Jet engine, Rocket engine	shinichiro.ogawa[at]omu.ac.jp

(As of April 1, 2026)

Please replace [at] with @ in the "E-mail address" field.

[Department of Marine System Engineering]

The department of Marine System Engineering aims to develop human resources who will be responsible for comprehensive technological developments in the ocean with harmonization of the nature and human activities, based on a deep understanding of both artificial systems related to the ocean and natural systems of the ocean.

◆ Nakamozu Campus

Research Group	Title	Name	Education and Research Fields	E-mail address
1 Marine Transportation Engineering	Professor	KATAYAMA Toru	Seakeeping & Safety of High Speed Craft, Ship Stability in Wave, Instabilities of Planing Craft, Nonlinear Motions and Hydrodynamics of Floating Structures, Wind Powerd Ship, Tank Test	katayama.marine[at]omu.ac.jp
	Lecture	TANIGUCHI Tomoki	Motion Dynamics of Marine Craft and Floating Structure, Ocean Engenneing, Control strategy of Wave Energy Converter, Floating Type Wave Energy Converter, Tank Test	taniguchi.marine[at]omu.ac.jp
	Assistant Professor	Hasan Islam Copuroglu	Ship Motions, Stability and Operational Safety of Ships, CFD Applications in Ocean Engineering, Hydrodynamics of Wave Energy Converters, Aerodynamics of Marine Crafts, Wind-Assisted Ship Propulsion, Towing Tank Tests.	p26709n[at]omu.ac.jp
2 Marine Stractual Engineering	Assosiate Professor	IKUSHIMA Kazuki ^b	Structural Engineering, Structural Analysis of Ships, Nonlinear Finite Element Analysis, Large Scale Numerical Simulation, Parallel Computation	ikushima.marine[at]omu.ac.jp
	Assosiate Professor	TSUBOGO Takashi	Wave Resistance, Offshore Structure, Hydroelasticity, Very Large Floating Structures	tsubogo.marine[at]omu.ac.jp
3 Marine System Planing	Professor	ARIMA Masakazu	Marine System Planning, Human Factors, Underwater Robotics, Ocean Policy Research	marima.marine[at]omu.ac.jp
4 Ocean Space Utilization Engineering	Professor	HASHIMOTO Hirota	Marine System Control, Marine Resources Engineering, Ship Stability and Maneuverability, Marine Computational Fluid Dynamics	hashimoto.marine[at]omu.ac.jp
	Assosiate Professor	NIHEI Yasunori	Self-navigating vessels in marine aquaculture farms, Floating offshore wind turines, Hydrodynamic Force acting on Offshore Structures, Mechanization and automation of primary industries	nihei[at]omu.ac.jp
	Assistant Professor	HIGAKI Takefumi	Maritime Autonomous Surface Ship, Machine Learning, Computational Fluid Dynamics	higaki.marine[at]omu.ac.jp
5 Marine Environmental Information Engineering	Professor	NAKATANI Naoki	Marine Environmental Monitoring, Ocean Environmental Measurement, Marine Ecosystem Engineering, Ecosystem Modeling, Planning of Marine Resource Development	nakatani.marine[at]omu.ac.jp
	Assosiate Professor	ARAI Rei	Marine Environmental Measurement, Marine Acoustic Engineering, Marine Optics, Instrumentation Engineering	arai.marine[at]omu.ac.jp
6 Marine Advanced System Engineering	Professor	SHIBAHARA Masakazu ^b	Welding Mechanics, Thermal-Elastic-Plastic FEM, Measurement using Image Processing, Structural Strength of Ships and Offshore Structures, Structural Analysis for Ultra-Scale Problems	shibahara.marine[at]omu.ac.jp

(As of June 1, 2026)

Please replace [at] with @ in the "E-mail address" field.

The staff(s) marked with b are cross-appointed faculty members (not accepting new students)

[Division of Mechanical Engineering]

The Department of Mechanical Engineering nurtures researchers and engineers who recognize and consider important issues in mechanical engineering from a multifaceted and bird's-eye view and lead the way in thinking and practicing overcoming and solving these issues to build a sustainable society that is friendly to both people and the environment. This department consists of one field of mechanical engineering.

[Department of Mechanical Engineering]

◆Nakamozu Campus

Research Group	Title	Name	Education and Research Fields	E-mail address
1 Fluid Physics	Professor	WAKIMOTO Tatsuro	Drag reduction of fluid flow by adding surfactant, Development of wave-power generation system, Stability of soap film, Removal of fine particles on a wall by air jet	wakimoto[at]omu.ac.jp
	Associate Professor	OMORI Takeshi	Micro- and nano-fluid mechanics, Mechanics of solid-liquid wetting and friction, Molecular dynamics, Computational fluid dynamics	t.omori[at]omu.ac.jp
2 Fluid Mechanics	Professor	TAKAHIRA Hiroyuki**	Fluid Mechanics, Cavitation, Bubble Dynamics, Gas-Liquid Two-Phase Flow, Focused Ultrasound	takahira[at]omu.ac.jp
	Associate Professor	OGASAWARA Toshiyuki	Fluid Mechanics, Gas-Liquid Two-Phase Flow, Bubble Dynamics, Flow Measurement	ogasawara[at]omu.ac.jp
3 Thermal Processing and Engineering	Professor	IYOTA Hiroyuki	Heat Transfer, Measurement Engineering, Drying, Color Science, Advanced Use of Superheated Steam, Food Process Engineering, Food Management	h-iyota[at]omu.ac.jp
	Associate Professor	MASUDA Hayato	Transport phenomena, Heat transfer, Complex fluid, Food engineering	hayato-masuda[at]omu.ac.jp
4 Heat Transfer	Associate Professor	KANEDA Masayuki	Natural Convection, Computational Fluid Dynamics, Sessile Droplet, Magnetizing Convection, Magnetohydrodynamics	mkaneda[at]omu.ac.jp
	Associate Professor	KUWATA Yusuke	Modeling and Understanding of Turbulent Heat Transfer over Rough and Permeable walls, Heat Transfer Control by Roughness and Porous Media, Simulations and Measurements of Complex Turbulent Heat Transfer	kuwata[at]omu.ac.jp
5 Applied Mathematics	Professor	MATSUOKA Chihiro	Fluid Dynamics, Pattern formation, Nonlinear Science, Dynamical systems, Numerical analysis of nonlinear motion of vortex sheets	cmatsuoka[at]omu.ac.jp
6 Engine and Combustion Engineering	Professor	SEGAWA Daisuke	Combustion, Combustion Diagnostics, Internal Combustion Engines, Space Environment Experiments	segawa.daisuke[at]omu.ac.jp
	Lecturer	KATAOKA Hidefumi	Detonation, Combustion, Shock Wave, Internal Combustion Engines	hkataoka[at]omu.ac.jp
7 Energy Systems Analysis	Professor	WAKUI Tetsuya	Energy Systems Engineering, Mathematical Optimization, Energy Management, Cycle Simulation, Zero-Carbon Energy Network, Renewable Energy	t-wakui[at]omu.ac.jp
8 Thermal Environment Systems	Professor	KINOSHITA Shinichi	Environmental Engineering, Countermeasure to Urban Heat Island, Thermophysical Properties, Thermal Science in Human Physiology, Radiative Heat Transfer	kinosita[at]omu.ac.jp
	Assistant Professor	YASUDA Ryusuke*	Environmental Engineering, Atmospheric Diffusion, Air Pollution, Local Climate	ryasuda[at]omu.ac.jp
9 Environmental Protection Engineering	Professor	OKUBO Masaaki*	Environmental protection engineering, Plasmas for environmental improvement, Zero-carbon energy conversion, Plasma material processing	mokubo[at]omu.ac.jp
	Associate Professor	KUROKI Tomoyuki	Environmental protection engineering, Application of nonthermal plasma technology, Exhaust gas treatment, Waste water treatment	kuroki[at]omu.ac.jp
	Associate Professor	YAMASAKI Haruhiko	Environmental protection engineering, Energy conversions with low environmental load, Magnetic functional fluid, Carbon dioxide cycle	hyamasaki[at]omu.ac.jp
10 Applied Mechanics and Design	Professor	ISHIHARA Masayuki	Mathematical analysis of solid mechanics, Hygrothermoelasticity, Electroelasticity, Solid mechanics in green materials	ishihara[at]omu.ac.jp
	Lecturer	YAMADA Kaori	Engineering Design, Kansei Engineering, Creativity, Human behavior, Product development, Design Thinking	kyama[at]omu.ac.jp

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Research Group	Title	Name	Education and Research Fields	E-mail address
11 Measurement Engineering	Lecturer	MIZUTANI Akio	Measurement Engineering, Applied Optics, Nanophotonic Devices	mizutani[at]omu.ac.jp
12 Bioproduction Systems Engineering	Professor	FUKUDA Hirokazu	Agricultural Digital Twin, Agricultural XR Robotics, Biological Rhythm Control Engineering, Plant Factory	fukuda[at]omu.ac.jp
	Assistant Professor	FUJINAGA Takuya	Field Robotics, Agricultural Robots (Harvesting and Pruning of Crops such as Tomatoes and Strawberries, Multifunctional and Compact), Marine Robots (Underwater and Surface), Digital Twin	tfujinaga[at]omu.ac.jp
13 Intelligent Systems	Lecturer	IMADU Atsushi	Assistive robotics, Mobile robotics, Tethered multicopter,	imadu[at]omu.ac.jp
	Assistant Professor	TAKAI Asuka	Human movement analysis and assistive engineering, Musculoskeletal rehabilitation system, Human-human and human-robot interaction	ataikai[at]omu.ac.jp
14 Mechanical Dynamics	Professor	SHINTANI Atsuhiko	Vibration Engineering, Seismic Engineering, Fluid-Structure Interaction, Active Vibration Control, Human Engineering, Application of Vibration	shintani[at]omu.ac.jp
15 Dynamics Design	Professor	NAKAGAWA Chihiro	Kinematics of Mechanical Systems, Mobile Vehicle System, Kinematics-related System	chihiro[at]omu.ac.jp
16 Robotics	Professor	TAKADA Yogo	Researching and developing compact mobile robots which can be used in inspections in hard-to-reach places such as underwater as well as under bridges. Analysis on underwater robots is performed using numerical fluid dynamics to improve driving thrust	takada[at]omu.ac.jp
17 Systems and Control	Lecturer	KOBAYASHI Tomoaki	Systems and Control, Real-Time Control, Optimal Control, Control Theory and Applications, Mechatronics	kobayashi[at]omu.ac.jp
18 Smart Composites Engineering	Associate Professor	NAKATANI Hayato	Composite Materials Engineering, Fracture Mechanics, Carbon Fiber Composites, Molding Process, Damage Tolerance, Joining of Dissimilar Materials, Multi-material Design	hayatonakatani[at]omu.ac.jp
19 Mechanics of Materials	Associate Professor	UMEDA Tsutomu	Mechanics of Materials, Solid Mechanics, Impact Engineering, Dynamic Structural Analysis, Damage Mechanics	umeda[at]omu.ac.jp
20 Materials Modeling and Evaluation	Professor	YAMASAKI Tomohiro*	Nondestructive Evaluation of Materials, Mechanics of Materials, Strength of Materials	t-yamasaki[at]omu.ac.jp
	Assistant Professor	OSHIMA Nobuo	Functional fluid, Control devices, Vibration control	nobuo-oshima[at]omu.ac.jp
21 Solid Mechanics	Professor	UCHIDA Makoto	Solid Mechanics, Continuum Mechanics, Computational Mechanics, Experimental Mechanics, Finite Element Method, Digital Image Correlation	m_uchida[at]omu.ac.jp
22 Materials Physics and Mechanics	Professor	KANEKO Yoshihisa	Materials Engineering, Fatigue, Advanced scanning electron microscopy, Electrodeposition of nanostructured films, Stacking structures	kaneko[at]omu.ac.jp
23 Production Engineering	Professor	KANASAKI Junichi**	Solid state analysis based on surface science and optical science, Optical control of material structure at the atom level to create novel structural phase	kanasaki[at]omu.ac.jp
	Associate Professor	KAWAKAMI Hiroshi	Antibacterial metals, Microbial control, Microbiologically influenced corrosion, Microbial fuel cells	hkawakam[at]omu.ac.jp
24 Materials Physics and Engineering	Lecturer	MIYOSHI Eisuke	Engineering Materials, Computational Mechanics, Microstructural Control, Phase-Field Method, Molecular Dynamics	e-miyoshi[at]omu.ac.jp
25 Materials Advancing Engineering	Lecturer	KUWAHARA Takuya	Multiscale Materials Modeling, Tribology of Carbon Materials, Ceramics, and Metals, Mechanochemistry	kuwa[at]omu.ac.jp

(As of April 1, 2026)

Please replace [at] with @ in the "E-mail address" field.

The staff(s) marked with * are scheduled to retire in March 2027.

The staff(s) marked with ** are scheduled to retire in March 2028.

[Division of Urban Engineering]

The Division of Urban Engineering aims to foster highly qualified professionals and researchers with a broad perspective and the ability to make comprehensive judgments based on scientific evidence, which are required at the transitional period when modern cities are moving from the growth stage to the mature stage. In addition, the division has a collaborative structure to formulate project research on cutting-edge issues in mature cities beyond the conventional framework of architecture and civil engineering.

This division consists of two fields of study: Architecture and Urban engineering.

[Department of Architecture and Building Engineering/Urban Design and Engineering]

◆Sugimoto Campus

Research Group	Title	Name	Education and Research Fields	E-mail address
1 Architectural Planning and Building System	Professor	TOKUONO Tetsu	Planning of housing complexes, creation of wood communities, building stock renovation and regional regeneration through such renovation, building system design, building system development, and durability design, focused on wooden structures, and process design for space creation that integrates the above.	tokuono[at]omu.ac.jp
	Professor	ISHIYAMA Hiroki		ishiyama[at]omu.ac.jp
	Lecturer	NISHINO Yuichiro		nishino.y[at]omu.ac.jp
2 Architectural Design and History	Professor	KURAKATA Shunsuke	Architectural design, theory and history	kurakata[at]omu.ac.jp
	Lecturer	YAMAGUCHI Akito		yamaguchi-ak[at]omu.ac.jp
3 Urban Planning and Design	Professor	KANA Koichi	Urban Planning, Urban Regeneration and Design, Cityscape and Landscape, History of Urban Planning and Design, Community Design	kana[at]omu.ac.jp
	Lecturer	TAKAGI Yuri		takagi-yu[at]omu.ac.jp
4 Infrastructure Planning and Transportation Engineering	Professor	UCHIDA Takashi	Construction and operation management on transportation facilities, Universal design, Analysis on urban travel behavior and development of travel support systems.	uchida-ur[at]omu.ac.jp
	Associate Professor	YOSHIDA Nagahiro	Active transportation policies, urban transportation planning, performance evaluation of urban transportation systems, and geometric design related to traffic engineering.	yoshida-na[at]omu.ac.jp
5 Architectural Environmental Engineering	Professor	NGUYEN THU LAN	Assessment of urban noise and sound environments in public spaces and residences, Global noise control measures, Design of architectural acoustics toward comprehensive improvements in living environments.	lan[at]omu.ac.jp
	Associate Professor	KISHIMOTO Yoshihiko	Control of indoor heat and humidity environment using material properties, Prediction of deterioration progression of building materials.	kishimoto[at]omu.ac.jp
6 Architectural Informatics	Lecturer	KOBAYASHI Yuki	Application of information technology in architecture, Search for analysis and design methods of architecture and city based on mathematics such as geometry and combinatorics	kobayashi-y[at]omu.ac.jp
7 Regional Environmental Planning	Professor	NISHIOKA Masatoshi *	Heat transfer analysis of buildings and urban structures, Urban heat island measures, Urban thermal environment assessment, Analysis and evaluation of energy supply-demand system for net-zero carbon cities	mnishioka[at]omu.ac.jp
	Professor	NABESHIMA Minako	Heat source network system for district air conditioning and hot water supply, Development of the evaluation system for improving the urban thermal environment, Net-zero energy method for urban agriculture	nabeshima[at]omu.ac.jp
8 Water Environmental Engineering *1	Professor	SOHMA Akio	Aquatic ecosystem science and engineering, Mathematical ecosystem modeling, Elucidation of the mechanism and prediction of the dynamics in social and natural ecosystems	sohma[at]omu.ac.jp
	Associate Professor	ENDO Toru	Urban estuarine and coastal environmental engineering, Monitoring and dynamics analysis of coastal environment, Ecosystem services and environmental restorations in urban coastal shallow waters	t.endo[at]omu.ac.jp
9 Recycling Engineering in Urban Area *2	Professor	MIZUTANI Satoshi	Environmental safety evaluation in utilization of solid waste, by-products, and recycled materials, Chemicals management under natural disaster	miz[at]omu.ac.jp
	Lecturer	KOMAKI Yukako	Toxicity evaluation of drinking water disinfection by-products, sustainable water systems	ykomaki[at]omu.ac.jp

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Research Group	Title	Name	Education and Research Fields	E-mail address
10 Disaster Prevention and Materials for Buildings * ³	Professor	SUZUKI Yusuke	Improvement of seismic performance by combination of various materials (steel, concrete, and wood) and structural forms. Development of sustainable and self-centering structural system using new materials such as geopolymer and superelastic alloy.	y-suzuki[at]omu.ac.jp
11 Structural Control for Buildings * ³	Lecturer	KANEKO Kensaku	Development of vibration control devices for base-isolated and damped structures and structural design methods using them, post-earthquake residual performance assessment of buildings based on structural monitoring using IoT sensors, and development of next-generation building technologies based on digital twins and data-driven methods	kanekok[at]omu.ac.jp
12 Composite Structures for Buildings * ³	Lecturer	FURUKAWA Sachi	Investigation of load-resisting mechanisms and failure modes in steel structures and composite structures consisting of steel, concrete, and timber materials; evaluation of structural responses considering soil–foundation–superstructure interaction; and development of rational design methodologies for structures subjected to external actions such as strong winds and earthquakes.	furukawa-s[at]omu.ac.jp
13 Concrete Engineering * ⁴	Professor	TSUNOKAKE Hisao	Concrete repair / reinforcement, Seismic, Durability evaluation, Composite structure, Maintenance, Low environmental burden material	tsuno[at]omu.ac.jp
14 Bridge and Steel Structural Engineering * ⁴	Professor	YAMAGUCHI Takashi	Load-carrying capacity and design method for steel and composite bridges, Repair and reinforcement method of existing bridges, seismic design, Maintenance systems, Environment for bridge construction, Load-carrying capacity and design method of buckling, Load-carrying capacity and design method of bolted and riveted connections	yamaguti-t[at]omu.ac.jp
	Associate Professor	MORIYAMA Hitoshi		moriyama-h[at]omu.ac.jp
15 Geotechnical Engineering	Professor	NABESHIMA Yasuyuki	Application of digital sensing technology in geotechnical engineering, Soil improvement and slope reinforcement technology, Geotomechanical properties of wasted-recycled materials, Road pavement for global climate change	yass[at]omu.ac.jp
	Associate Professor	YAMADA Suguru	Investigation prediction and countermeasures for earthquake-induced liquefaction, Geotomechanical properties of wasted-recycled materials, Geo-acoustic engineering -sounds at soil failure, Small strain deformation of soil, Geo-informatics database	ymdsgr[at]omu.ac.jp
	Assistant Professor	OKADA Hirohisa	Prediction of consolidation settlement in clayey ground, Consolidation behavior of vertical drains, Mechanisms of rainfall-induced natural slope failures, Geotomechanical properties of wasted-recycled materials	okada-hr[at]omu.ac.jp
16 River and Coastal Engineering * ⁵	Professor	SHIGEMATSU Takaaki	Fluid-structure interaction, Wave power generation, Impact assessment of coastal disaster, Recover of environmental structure in ports and harbors, Future of Inner Bay environment, Climate change impact assessment and adaptation, composite disaster over wide area	shige[at]omu.ac.jp
	Associate Professor	NAKAJO Sota	Survey and computational analysis and prediction of meteorological and coastal disasters, Tropical cyclone, Storm surge, High wave, Climate change impact, Numerical simulation of fluid dynamics, Image velocimetry, Image analysis, Beach monitoring, Educational tool for disaster prevention	nakajo[at]omu.ac.jp
17 Spatial Informatics	Professor	YONEZAWA Go	Urban spatial analysis using GIS (Geographic Information System) and Remote Sensing, DEM Generation based on optimal determination, Spatial modeling for urban development, Application of spatial information for sustainable urban development	yonezawa[at]omu.ac.jp
	Associate Professor	SUGIMOTO Kenji	Spatial analysis of civil engineering structures with GIS and remote sensing, Spatio-temporal analysis of urban structure and material stock and flow, Nighttime light and human activities, Estimation of dynamic anthropogenic disturbance with DEM	sugimoto[at]omu.ac.jp

(As of April 1, 2026)

Please replace [at] with @ in the "E-mail address" field.

The staff(s) marked with * are scheduled to retire in March 2027.

*1 Specialized subject is [Aquatic Ecosystem Engineering / Aquatic Environmental Engineering]

*2 Specialized subject is [Water & Waste Treatment Engineering]

*3 Specialized subject is [Building Structures and Disaster Prevention]

*4 Specialized subject is [Structural and Bridge Engineering]

*5 Specialized subject is [River and Coastal Engineering]

[Division of Physics and Electronics]

We prepare students who can be global leaders in science and technology through research-led education for mastering advanced physics and electronics that form the backbone of our technology-intensive nation and for mastering the fundamentals and applications of mathematical science that underlies entire modern engineering.

The Division of Physics and Electronics covers the research field of Physics and Electronics and offers two courses of Physics for Electronics and Electronic Materials.

[Department of Physics and Electronics]

We emphasize teaching and research the fundamentals and advanced applications in nanoscience and nanotechnologies and prepare excellent researchers and engineers who will contribute to high-tech society through the development of the latest technology based on physics and electronics.

◆Nakamozu Campus (Course of Physics for Electronics)

Research Group	Title	Name	Education and Research Fields	E-mail address
1 Quantum physics of condensed matter	Professor	TOGAWA Yoshihiko	Spin Electronics, Magnetism, Superconductivity, Electron microscopy, Electron physics, Control and manipulation of electromagnetic fields response	ytogawa[at]omu.ac.jp
	Associate Professor	KOUSAHA Yusuke	Magnetism, Crystal growth, Synchrotron Radiation, Neutron scattering	koyu[at]omu.ac.jp
2 Semiconductor Device Physics	Professor	HIGASHIWAKI Masataka	Semiconductor device engineering, Semiconductor physics, Oxide and compound semiconductor electronics, Power device, High-frequency device	higashiwaki[at]omu.ac.jp
	Associate Professor	TSUTSUMI Takuya	Semiconductor device engineering, Device fabrication process, High-frequency device, Device physics, Compound semiconductor electronics, Millimeter-wave application	takuya.tsutsumi[at]omu.ac.jp
3 Physics of Organic Semiconductors	Associate Professor	KOBAYASHI Takashi	Organic semiconductors, Organic Photovoltaics, Organic Light-emitting Diodes, Device Physics	tkobaya[at]omu.ac.jp
	Associate Professor	NAGASE Takasni	Organic semiconductor, Molecular electronics, Nanoelectronics, Semiconductor physics, Nanofabrication	nagase[at]omu.ac.jp
4 Nanodevice	Professor	AKITA Seiji **	Solid state physics in nanoscale, Nanomaterials, Electronic properties in nanoscale	akita[at]omu.ac.jp
	Associate Professor	ARIE Takayuki	Low dimensional materials and devices Phonon engineering, Phononic crystals, Nanoscale thermophysics and thermoelectronics	arie[at]omu.ac.jp
	Associate Professor	YOKOSHI Nobuhiko	Solid state photophysics in nanoscale, Nanostructured semiconductor, Quantum information theory	n.yokoshi[at]omu.ac.jp
5 Integrated Device	Professor	ANDO Yuichiro	Semiconductor spin devices, Spintronics, Spin-related phenomena, Topological materials, Integrated circuits, Integrated devices	yuichiro.ando[at]omu.ac.jp
	Associate Professor	YASUDA Masaaki	Electron beam engineering, Semiconductor lithography, Scanning electron microscopy, Computational nanoscience	yasuda.masaaki[at]omu.ac.jp
6 Quantum and Optical Device Engineering	Professor	OKAMOTO Koichi	Plasmonics, Nano-photonics, Quantum and optical device engineering, Laser application	okamot[at]omu.ac.jp
	Lecturer	MURAI Shunsuke	Nanoantenna, Metasurface, Metronics, Photoluminescence engineering, Nanoimprint	murai[at]omu.ac.jp
	Assistant Professor	MATSUYAMA Tetsuya	Quantum and optical device engineering, Optical Properties of Semiconductors, Laser application	matsuyama.tetsuya[at]omu.ac.jp
8 Nonlinear Dynamics	Professor	HORITA Takehiko **	Nonlinear Dynamics, Chaos, Basin Structure, Stochastic Resonance	t.horita[at]omu.ac.jp
	Associate Professor	OIKAWA Noriko	Nonlinear Physics, Reaction-Diffusion Systems, Softmatter Physics	noriko.oikawa[at]omu.ac.jp
	Associate Professor	HAGA Taiki	Nonequilibrium statistical mechanics, Fundamental theory of condensed matter physics, Nonlinear dynamics	taiki.haga[at]omu.ac.jp

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Research Groups	Job Title	Name	Research Interests	E-mail address
9 Quantum Physics	Professor	UOZUMI Takayuki	Theoretical solid-state physics, Strongly correlated electron systems, Optical physics	uozumi[at]omu.ac.jp
	Associate Professor	HARIKI Atsushi	Correlated electron systems, Density functional theory calculation, Theory of x-ray spectroscopies (photoemission, absorption, resonant inelastic x-ray scattering)	hariki[at]omu.ac.jp
10 Solid State Physics	Professor	MIMURA Kojiro	Photoemission Spectroscopy, X-Ray Spectroscopy, Electronic State, Synchrotron Radiation, Strongly Correlated Electron System	k.mimura[at]omu.ac.jp
	Associate Professor	ANZAI Hiroaki	Strongly Correlated Electron System, Electronic State, Synchrotron Radiation	anzai[at]omu.ac.jp
	Associate Professor	TAGUCHI Yukihiro	Photoemission and Inverse-Photoemission Spectroscopies, Electron Spectroscopy for Solid Surface, Synchrotron Radiation, Strongly Correlated Electron System	y.taguchi[at]omu.ac.jp
12 Surface/Interface Science	Associate Professor	NOUCHI Ryo	Field-effect surface science, Nano interface control, 2D atomic layer devices, Organic molecular devices	r-nouchi[at]omu.ac.jp

◆Nakamozu Campus (Course of Electronic Materials)

Research Groups	Job Title	Name	Research Interests	E-mail address
13 Optical Science and Engineering	Professor	KIM DaeGwi	Quantum dots, Nanoparticles, Optical properties of condensed matter, Advanced optical nanomaterials	kimtegi[at]omu.ac.jp
	Associate Professor	SHIBUTA Masahiro	Functional thin film, Ultrafast spectroscopy, Electronic property, Electron dynamics	shibuta[at]omu.ac.jp
	Associate Professor	TAKEUCHI Hideo	Optical properties and functions of semiconductor bulk crystals, epitaxial structures (multiple quantum wells, superlattices and so on) nanometer-order ultrathin films	Hideo.Takeuchi_PhD[at]omu.ac.jp
	Lecturer	NASHIMA Shigeki	Ultrashort optical pulse technology, Terahertz spectroscopic technology, Terahertz spectroscopic sensing	nashima[at]omu.ac.jp
14 Mathematical Physics	Associate professor	SUGITA Ayumu	Nonequilibrium Statistical Physics, Quantum Chaos, Quantum Information	a.sugita[at]omu.ac.jp
15 Spin Engineering	Professor	SHIKOH Eiji	Spintronics, Magnetic materials, Metals, Semiconductors, Organic molecules, Thin films, Multi-layers	shikoh[at]omu.ac.jp
	Associate Professor	KOMORI Sachio	Superconductivity, Spintronics, Strongly correlated electron system, Thin film deposition, Low temperature physics	skomori[at]omu.ac.jp
	Assistant professor	TANAKA Kenji	Surface science, Scanning probe microscopy, Organic-inorganic hybrid electronic devices	tanaka-knj[at]omu.ac.jp
16 Power electronics	Professor	SHIGEKAWA Naoteru *	Photovoltaics and power devices based on heterogeneous integration of foreign materials	shigekawa[at]omu.ac.jp
	Associate professor	TAKECHI Seiji	Cosmic dust, Radiation, Particle detector	takechi[at]omu.ac.jp
17 Plasma Engineering	Professor	SHIRAFUJI Tatsuru	Plasma materials processing, Plasma physics, Plasma chemistry	shirafuji[at]omu.ac.jp
	Professor	OH Jun-Seok	Atmospheric-pressure plasma materials processing, Plasma diagnostics, Plasma life science	jsoh[at]omu.ac.jp
Quantum Beam Energy Reaction Science ^{&}	Professor	HORI Fuminobu ^{&}	Positron physics, Lattice defects, Radiation effects, Hydrogen storage, Metals, Semiconductors, Nano materials, Amorphous alloys, Functional materials, Quantum beam	horif[at]omu.ac.jp
	Associate professor	YOSHIOKA Satoru ^{&}	Metal/Ceramics, Radiation effects, X-ray structural analysis, First principles calculations	satoru.yoshioka [at]omu.ac.jp

(As of April 1, 2026)

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The staff(s) marked with * are scheduled to retire in March 2027.

The staff(s) marked with ** are scheduled to retire in March 2028.

The staff(s) and research group marked with & have concurrent positions with the Department of Quantum and Radiation Engineering from April 2026.

[Division of Electrical and Electronic Engineering]

The Division of Electrical and Electronic Engineering fosters researchers and engineers who will acquire highly specialized expertise related to electric power systems, electrical-electronic systems, system control, information and communications, networks, electronic information systems, intelligent robotics and design/management of product systems, and be able to proceed research activities themselves and create new leading fields of electrical and electronic system engineering.

The Division of Electrical and Electronic Engineering comprise Department of Electrical and Electronic Engineering.

[Department of Electrical and Electronic Systems Engineering]

◆Nakamozu Campus

Research Group	Title	Name	Education and Research Fields	E-mail address
1 Motor Drive System	Professor	SANADA Masayuki	Motor Drive, Motor Design, Electro-Magnetic Field Analysis	m.snd[at]omu.ac.jp
	Associate Professor	INOUE Yukinori	Motor Drives, Power Electronics, Energy Conversion	yukinori.inoue[at]omu.ac.jp
2 Power System	Professor	ISHIGAME Atsushi	Power System Analysis and Control, Optimization Technique, Intelligent Control	ishigame[at]omu.ac.jp
	Associate Professor	TAKAYAMA Satoshi	Power System Operation and Control, Renewable Energy System Operation and Control	takayama[at]omu.ac.jp
3 Electrical Control Systems	Professor	KONISHI Keiji	Control Systems, Complex (Chaotic) Systems, System Dynamics	konishi-ees[at]omu.ac.jp
	Associate Professor	HARA Naoyuki	Control Systems, Model Predictive Control, Control Applications	naoyuki.hara[at]omu.ac.jp
	Associate Professor	SUGITANI Yoshiki	Control Systems, Nonlinear Dynamics, Complex Network	sugitani[at]omu.ac.jp
4 Photonic Innovative Systems	Professor	KOYAMA Osanori	IP Network System, Optical Fiber Sensing System	koyama[at]omu.ac.jp
	Associate Professor	IKEDA Kanami	Optical Sensing, Optical Computing, Optical Signal Processing , Optical Functional System	kanami[at]omu.ac.jp
6 Smart Information and Communication Systems	Professor	LIN Hai	Wireless Communication, Signal Processing	lin[at]omu.ac.jp
	Associate Professor	CHIANG Yi-Han	Wireless Network, Edge Computing	chiang[at]omu.ac.jp
7 Management Systems	Professor	MORIZAWA Kazuko	System Optimization, Production Management Systems, Scheduling, Operations Research, Multi-objective Decision Support	morizawa[at]omu.ac.jp
	Associate Professor	KUSUKAWA Etsuko	Supply Chain Management, Operations Research, System Optimization, Quality Control	Etsuko-Kusukawa[at]omu.ac.jp
	Lecturer	MORITA Daisuke	Scheduling, Project Management, Production Management	morita[at]omu.ac.jp
8 Electrical Information Systems	Professor	NOGUCHI Hiroshi	Nursing Engineering, IoT, Unrestrained Physiology Measurement, Human Behavior Measurement, Sensor Network, Mechatronics, Healthcare Engineering (Mimamori engineering)	hnoguchi[at]omu.ac.jp
	Associate Professor	MIYAZAKI Daisuke	3D-Display System, 3D-Optical Measurement, Optical Functional Device, Optical Biometric Measurement, High-Performance Image Measurement	miyazaki[at]omu.ac.jp
	Lecturer	YOSHIMOTO Kayo	Biometric Information Sensing, Medical Image Processing, Medical Support Systems, 3-Dimensional Measurement	yoshimoto[at]omu.ac.jp
9 Intelligent Robotics	Professor	TAKUBO Tomohito	Robotics, Motion Control, Autonomous Mobile Robots, Intelligent Systems	takubo[at]omu.ac.jp
	Associate Professor	TSUJIOKA Tetsuo	Communication Systems, Web Databases, Measurement Systems, Application of Wireless Communications	tsujioka-R4[at]omu.ac.jp

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[Division of Science and Engineering for Materials, Chemistry and Biology]

Sustainable development of human society requires the evolution of new materials and the effective and recyclable use of finite resources. The program aims to foster engineers and researchers who can create new science and technologies of materials, and also who can play an active role on the international stage.

Division of Science and Engineering for Materials, Chemistry and Biology consists of four fields: Applied Chemistry, Chemical Engineering, Materials Science, and Chemistry and Bioengineering.

[Department of Applied Chemistry]

In the Department of Applied Chemistry, you will study everything from the basics of chemistry to state-of-the-art advanced chemistry comprehensively. Our program will grow an intelligent and energetic chemist with a wide range of knowledges and skills in chemical analysis, synthesis, and characterization, as well as with rich humanity and profound ethics.

◆Nakamozu Campus

Research Group	Title	Name	Education and Research Fields	E-mail address
1 Analytical Chemistry	Professor	HISAMOTO Hideaki	Chemical sensing, Biosensing, Molecular recognition, Color-changeable dyes for chemical sensing, Microanalytical devices	hisamoto[at]omu.a c.jp
	Associate Professor	ENDO Tatsuro	Biosensor, Nanophotonics, Plasmonics, Micro total analysis systems	t_endo[at]omu.ac.jp
2 Inorganic Chemistry	Professor	HAYASHI Akitoshi	Inorganic materials science, Glass materials, Solid electrolytes, All-solid-state energy storage devices	akitoshihayashi[at]o mu.ac.jp
	Associate Professor	SAKUDA Atsushi	Inorganic materials science, Electrode materials, All-solid-state batteries	saku[at]omu.ac.jp
	Assistant Professor	MOTOHASHI Kota	Solid state ionics, Solid electrolytes, All-solid-state batteries	kota.motohashi[at]o mu.ac.jp
3 Physical Chemistry	Professor	MATSUOKA Masaya	Catalyst chemistry (H ₂ · CO ₂ utilization) , Metal-organic frameworks (MOFs), Solar energy Conversion, DFT · MD Calculations	matsuoka[at]omu.a c.jp
	Associate Professor	KAMEGAWA Takashi	Physical chemistry, Catalyst chemistry, Environmental catalysts, Nanostructured catalysts, Chemistry of porous materials, Spectrochemistry, Computational chemistry	kamegawa[at]omu.a c.jp
	Associate Professor	TAKEUCHI Masato	Visible-light-responsive photocatalysts, Environmental purification, FT-IR spectroscopy, Near-infrared spectroscopy, Surface wettability, Reaction mechanism	masato.takeuchi[at] omu.ac.jp
	Associate Professor	HORIUCHI Yu	Solar energy conversion, Photocatalytic H ₂ production, Visible-light-responsive photocatalysts, Metal-organic frameworks	yu.horiuchi[at]omu. ac.jp
4 Electrochemistry	Professor	INOUE Hiroshi	Electrochemical energy conversion, Rechargeable batteries/capacitors, Electrocatalysts for fuel cells, Hydrogen generation/storage	inoue-chem[at]omu. ac.jp
	Associate Professor	CHIKU Masanobu	Electrochemistry, Rechargeable battery, Electrochemical capacitor	chiku[at]omu.ac.jp
	Associate Professor	HIGUCHI Eiji	Electrocatalysts for fuel cells, Electrochemical energy conversion, Battery and electrochemical materials	higuchi[at]omu.ac.j p
5 Physical Organic Chemistry	Professor	IKEDA Hiroshi **	Photochemistry, Organic electron-transfer chemistry, Heteroelement chemistry, Organic reaction mechanism, Organic synthetic chemistry, Functional organic materials	hiroshi_ikeda[at]om u.ac.jp
	Associate Professor	MATSUI Yasunori	Organic photochemistry, Photochemical energy conversion, Laser chemistry, Kinetics, Computational chemistry, Organometallic chemistry	matsui_yasunori[at] omu.ac.jp
6 Organic Functional Materials Chemistry	Professor	YAGI Shigeyuki	Organic materials chemistry, Functional dyes, Organic electronics, Organic light-emitting diode, Fluorescent materials, Phosphorescent materials	yagi[at]omu.ac.jp
	Associate Professor	KATO Shin-ichiro	Structural organic chemistry, Organic π -electron systems, Open-shell molecules, Noncovalent interactions, Supramolecular materials	shin-ichiro.kato[at] omu.ac.jp
	Associate Professor	KODAMA Shintaro	Synthetic organic chemistry, Coordination chemistry, Organometallic chemistry, Oxidation reaction, Metal oxide cluster	skodama[at]omu.ac. jp
	Associate Professor	MAEDA Takeshi	Functional dyes, Supramolecular chemistry, Organic electronics, Organic solar cell, Chemosensor	tmaeda[at]omu.ac.j p

continued on the next page

Research Group	Title	Name	Education and Research Fields	E-mail address
7 Polymer Chemistry	Associate Professor	OKAMURA Haruyuki	Polymer materials chemistry, Photofunctional polymers, Crosslinking and degradation of polymers	okamura[at]omu.ac.jp
	Associate Professor	SUZUKI Yasuhito	Advanced polymeric materials, Glass transition, Polymer crystallization, Reaction kinetics, Polymer interfaces, Composite materials	suzuki_y[at]omu.ac.jp
8 Biopolymer Chemistry	Professor	HARADA Atsushi	Biofunctional materials chemistry, Self-assembled polymers, Nanomedicine, Drug delivery system	atsushi_harada[at]omu.ac.jp
	Associate Professor	KITAYAMA Yukiya	Colloid and interface chemistry, Polymer synthesis, Drug delivery system, Photo reaction, Molecular recognition	kitayama[at]omu.ac.jp
	Lecturer	ANDO Mitsuru	Biomaterial chemistry, Drug delivery system, Membrane protein engineering, Artificial cell, Synthetic biology	mitsuru.ando[at]omu.ac.jp
9 Surface Analytical Chemistry	Professor	SHIIGI Hiroshi	Bioelectrochemistry, Bioanalysis, Surface chemistry, Molecular recognition, Molecular imprinting, Nanobiomaterials	shii[at]omu.ac.jp
10 Atmospheric Reaction Chemistry	Professor	SADANAGA Yasuhiro	Atmospheric chemistry, Reaction chemistry, Atmospheric measurements, Reaction kinetics, Transboundary air pollutants, Photochemical oxidants, Nitrogen oxides	sadanaga[at]omu.ac.jp

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[Department of Chemical Engineering]

In chemical engineering department, we develop engineers and researchers having specialized knowledge and practical skill that can meet the demands of a recycling-oriented society based on the cutting-edge and systematic disciplinarity of chemical engineering with its basic philosophy of constructing a chemical process that takes resource recycling into comprehensive consideration

◆Nakamozu Campus

Research Group	Title	Name	Education and Research Fields	E-mail address
1 Particle Science and Engineering	Professor	NOMURA Toshiyuki	Fine particle engineering, Nano / Meso material creation, Microbial colloid, Aerosol engineering	tsnomura[at]omu.ac.jp
	Associate Professor	YAMAMOTO Takuya	Fine particle engineering, Interfacial transport phenomena, Numerical analysis, Phase change, Sonochemistry	takuya.yamamoto[at]omu.ac.jp
2 Resource Engineering	Professor	IWASAKI Tomohiro	Resource engineering, Powder engineering, Functional nanoparticles, Mechanical chemistry, Numerical simulation	tomohiro.iwasaki[at]omu.ac.jp
3 Process Systems Engineering	Professor	WATANO Satoru	Equipment engineering, Process systems engineering, Powder engineering, Fluidized bed engineering, Nanotechnology, Instrumentation engineering, Pharmaceuticals / Pharmaceutics	watano[at]omu.ac.jp
	Associate Professor	OHSAKI Shuji	Equipment engineering, Process systems engineering, Powder engineering, Computational particle engineering, Materials engineering	shuji.ohsaki[at]omu.ac.jp
4 Chemical Reaction Engineering	Professor	OGINO Hiroyasu	Reaction engineering, Biochemical engineering, Microbial engineering, Protein engineering, Enzyme engineering	ogino[at]omu.ac.jp
	Associate Professor	YAMADA Ryosuke	Reaction engineering, Biochemical engineering, Microbial engineering, Protein engineering, Enzyme engineering	ryamada[at]omu.ac.jp
	Associate Professor	MATSUMOTO Takuya	Reaction engineering, Biochemical engineering, Microbial engineering, Protein engineering, Enzyme engineering	t_matsumoto[at]omu.ac.jp
5 Computational Chemical Engineering	Professor	NAKAMURA Hideya	Numerical simulation, Computational modeling of granular flow, Molecular dynamics, Machine learning, Powder technology, All-solid-state battery	hideyanakamura[at]omu.ac.jp
6 Materials Process Engineering	Professor	SAITO Takeyasu	Materials process engineering, Plating, CVD reaction engineering, Ferroelectric materials, Wide bandgap materials, Process engineering of wiring materials for semiconductor devices	tsaito[at]omu.ac.jp
	Associate Professor	OKAMOTO Naoki	Material process engineering, Electrochemical engineering, Microplating, Plating process (electric folding, electroless), Materials engineering	w21056[at]omu.ac.jp
7 Environment and Energy Process Engineering	Professor	YASUDA Masahiro	Environmental energy process engineering, Reaction engineering, Biochemical engineering, Polymerization engineering, Biotissue engineering	m-yasuda[at]omu.ac.jp
	Associate Professor	HORIE Takafumi	Environmental energy process engineering, Transport phenomenon engineering, Reaction engineering, Process intensification, Microreactor, Crystallization	horie[at]omu.ac.jp
	Associate Professor	AKIYOSHI Masafumi	Infection control using quantum radiation, Odor control measures, Applications of photocatalysis, Radiation safety management, Divertor materials for fusion reactor, Radiological education	akiyoshi-masafumi[at]omu.ac.jp
8 Nano Chemical Systems Engineering	Professor	XU Yan	Nanochemical systems engineering, Micro-/Nanofluidics, Single-molecule chemistry and engineering, Single cell analysis, Biomaterials, Analytical chemistry, Nanomedicine	xuy[at]omu.ac.jp

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[Department of Materials Science]

Department of Materials Science offers a comprehensive curriculum covering metals, ceramics, polymer materials to cultivate experts who can flexibly respond to the demands of a society via the development of advanced materials.

◆Nakamozu Campus

Research Group	Title	Name	Education and Research Fields	E-mail address
1 Materials Structure and Physics	Professor	MORI Shigeo	Structure Physics, Nanoscale Structure Analysis, Electron Microscopy, Solid State Battery Materials, Ferroic Materials	moris[at]omu.ac.jp
	Associate Professor	KASAI Hidetaka	In situ Synchrotron X-ray Diffraction Monitoring, X-ray Crystallography, Materials Structure Science, Energy Materials, Process of Material Synthesis	kasai.hidetaka[at]omu.ac.jp
2 Materials Science and Nanotechnology	Professor	TAKAHASHI Masahide	Organic-inorganic hybrid, Self-organization, Nano materials, Smart materials, Solution processing, Soft actuators, Optical and electronics materials	masa[at]omu.ac.jp
	Associate Professor	OKADA Kenji	Nanomaterials, Porous materials, Inorganic materials, Organic-inorganic hybrid materials, Organic-inorganic interface	k_okada[at]omu.ac.jp
	Assistant Professor	FUKATSU Arisa	Organic-inorganic hybrid materials, Nanomaterials, Soft actuators, DNA materials, Self-organization, Coordination chemistry	fukatsu[at]omu.ac.jp
3 Industrial Materials Innovation	Professor	KANENO Yasuyuki *	High temperature structural materials, Intermetallics, Alloy design, Microstructure design, Crystal plasticity	y_kaneno[at]omu.ac.jp
	Associate Professor	INOUE Hiroyuki **	Corrosion of metals and its prevention, Electrochemical measurement, Geological disposal of radioactive waste, Electrochemical noise technique, Corrosion monitoring	hiro-inoue[at]omu.ac.jp
4 Reliable Materials	Professor	TAKIGAWA Yorinobu	Nanocrystalline and Amorphous Materials Processing, Grain Boundary Plasticity, High-temperature Deformation	takigawa[at]omu.ac.jp
	Assistant Professor	WATANABE Atsuya	Nanocrystalline alloys, Electrodeposition, Deformation and embrittlement behavior, Net shape	wtnb[at]omu.ac.jp
5 Advanced Polymer Materials	Professor	OHNO Kohji	Polymer, Controlled polymerization, Fine particle, Colloid, Self-assembly	kohji.ohno[at]omu.ac.jp
	Assistant Professor	KINOSE Yuji	Polymer, Controlled polymerization, Polymer brush, Cellulose, Liquid crystal	yuji.kinose[at]omu.ac.jp
6 Materials Design Theory	Professor	SUZUKI Michito	Material design, Condensed matter theory, Magnetism, Strongly correlated materials, First-principles calculation, Materials informatics	mts[at]omu.ac.jp
	Assistant Professor	TERADA Ibuki	First-principles calculation, Magnetism, Non-equilibrium physics, Quantum transport phenomena, Optical properties	iterada[at]omu.ac.jp
7 Biomaterials	Professor	TOKUDOME Yasuaki	Solid acid/base catalysts, Liquid-phase reaction, Colloid & Interface, Bionanotechnology, Clay minerals, Layered materials	tokudome[at]omu.ac.jp
8 Computational Materials Science	Professor	IKENO Hidekazu	Computational materials science, First-principles calculations, Materials informatics, Electron spectroscopy, Catalysts, Inorganic phosphors	h-ikeno[at]omu.ac.jp
9 Bioelectronics Materials	Professor	TOKONAMI Shiho	Biosensor, Optical analysis, Micro- and nanostructure, Useful bacteria, Microbial power generation, Environment/Energy	tokonami[at]omu.ac.jp
10 Electromagnetic Responsive Materials	Associate Professor	KIMURA Kenta	Magnetism, Ferroelectricity, Chirality, Multiferroics, Optical functional Materials, Transition metal compounds, Materials Exploration	kentakimura[at]omu.ac.jp

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The staff(s) marked with ** are scheduled to retire in March 2028.

[Department of Chemistry and Bioengineering]

The program aims to foster human resources who can elucidate the diverse properties of molecules and materials from the perspectives of both chemistry and life science, design and create molecules and materials, innovate in the field of medicine such as antibodies, nucleic acids, and cells, solve various problems in the environment and health, and create a sustainable future.

◆Sugimoto Campus

Research Group	Title	Name	Education and Research Fields	E-mail address
1 Physical and Analytical Chemistry	Professor	TSUJI Kouichi	Development of X-ray trace elemental analysis and XRF elemental imaging methods, and their applications to characterization of materials and environmental analysis	k-tsuji[at]omu.ac.jp
2 Inorganic Materials Chemistry	Professor	YAMADA Yusuke	Heterogeneous catalysts utilizing metal complexes and nanoparticles for energy and environmental issues	ymd[at]omu.ac.jp
	Associate Professor	ARIYOSHI Kingo	Lithium-ion battery, Electrode materials for advanced batteries, Solid-state electrochemistry for insertion materials	ariyoshi[at]omu.ac.jp
3 Organic Materials Chemistry	Professor	KOBATAKE Seiya	Design of photofunctional organic crystal materials and control of their solid physical properties, synthesis of photofunctional polymer materials and evaluation of their physical properties, development of molecular functional devices	kobatake[at]omu.ac.jp
	Associate Professor	KITAGAWA Daichi		kitagawa[at]omu.ac.jp
4 Functional Molecular Chemistry	Professor	SATO Eriko	Development of controlled polymer synthesis, precise control of polymer reactions, biomass utilization, design and development of stimuli-responsive-, functional adhesive-, and interfacial functional-materials	sato-eriko[at]omu.ac.jp
5 Polymer Chemistry	Professor	HORIBE Hideo *	Compatibility and crystal structure analysis of multi-component polymers, conductivity of filler-dispersed polymers, resist development with high resolution and sensitivity, chemical reaction analysis of active species with organic compounds	hhoribe[at]omu.ac.jp
6 Chemical Reaction Engineering	Professor	KOMETANI Noritsugu	Reaction analysis in subcritical and supercritical fluids and its engineering application, physicochemical study of biomass in extreme environments, application of photocatalysts to environmental chemistry	kometani[at]omu.ac.jp
7 Immuno-engineering	Associate Professor	YUBA Eiji	Nanomedicine, Drug delivery, Functional polymer chemistry, Biomaterial, Vaccine, Immunotherapy, Autoimmune diseases	yuba[at]omu.ac.jp
8 Biochemical Engineering/Separation Engineering	Associate Professor	IGARASHI Koichi	Advanced crystallization for organic compounds such as pharmaceutical, functional foods, production of useful substances from biomass	igarashi[at]omu.ac.jp
9 Cell Engineering	Professor	AZUMA Masayuki **	Discovery of new functions of cells and construction of new functional cells by synthetic biotechnology, development to the fields of medicine, environment, energy, and food from engineering applications of these useful cells. [Keywords: microorganisms and cell surface]	azuma[at]omu.ac.jp
	Associate Professor	OJIMA Yoshihiro		ojima[at]omu.ac.jp
10 Biomolecular Engineering	Professor	KITAMURA Masaya	Structure-function relationship of redox proteins, Industrial application of enzymes	kitamura[at]omu.ac.jp
	Associate Professor	NAKANISHI Takeshi	Design of artificial antibodies for development of biologics and their production using genetic engineering techniques	nakanishi[at]omu.ac.jp
11 Biomaterials	Professor	TACHIBANA Akira	Development of biological medicine using RNA interference, RNA editing, genome editing and synthetic biology methods, syntheses of novel anti-cancer agents and protein crosslinkers based on various natural products.	akira-tachibana[at]omu.ac.jp
	Lecturer	AZUMA Hideki		azumah[at]omu.ac.jp
12 Antibody Engineering for Drug Discovery	Professor	TACHIBANA Taro	Biotechnology-based drug discovery and the development of methods for generating highly functional monoclonal antibodies and biopharmaceuticals	taro-tachibana[at]omu.ac.jp
	Associate Professor	YOKOYAMA Chikako		c-yokoyama[at]omu.ac.jp
13 Heterogeneous Catalysts	Professor	ISHIDA Tamao ¹⁾	Design of novel nanostructured heterogeneous catalysts, catalysis by metal nanoparticles and clusters, and development of environmentally benign chemical processes over heterogeneous metal catalysts	tishida[at]omu.ac.jp
14 Biological Control Engineering	Associate Professor	ASADA Ryoko	Microbial Control, Sterilization Engineering, Food Hygiene, Infection Control, Radiation Biology, Hyperthermia (Cancer Thermotherapy)	asada.ryoko[at]omu.ac.jp

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1) Professor, Research Center for Artificial Photosynthesis and Graduate School of Engineering (Concurrent post)

Division of Quantum and Radiation Engineering has discontinued applications with the 2025 academic year intake.

[Division of Quantum and Radiation Engineering]

The Division of Quantum and Radiation is an engineering field that applies quantum beams such as radiation, ions, and electrons to various fields. Through practical education using our large-scale radiation facilities, students acquire advanced scientific technology and research skills related to quantum and radiation, and are trained to become engineers and researchers who understand radiation safety and contribute to the development of modern society.

[Department of Quantum and Radiation Engineering]

◆Nakamoze Campus

Research Group	Title	Name	Education and Research Fields	E-mail address
3 Quantum beam energy reaction science	Professor	HORI Fuminobu	Positron Physics, Lattice Defects, Radiation Effects, Hydrogen Storage, Metals, Semiconductors, Nano Materials, Amorphous Alloys, Functional Materials, Accelerator Irradiation	horif[at]omu.ac.jp
	Associate Professor	YOSHIOKA Satoru	Metal/Ceramics, Radiation effects, X-ray structural analysis, Frist principles calculations	satoru.yoshioka[at]omu.ac.jp
4 Quantum Science of Nanoscale Materials and Devices	Associate Professor	TSUKUI Shigeki *	Quantum solid-state science engineering, Energy Conversion Materials (fuel cells, thermoelectric power generation devices, hydrogen absorbing alloy, solar cells, etc), Functional Thin Film Materials &. Devices	a21630n[at]omu.ac.jp
5 Radiation Safety Management	Associate Professor	AKIYOSHI Masafumi	Radiation safety management, Radiometry, Development of divertor materials for fusion reactor, Infection control using quantum radiation, Radiological education	akiyoshi-masafumi[at]omu.ac.jp
	Associate Professor	ASADA Ryoko	Radiation Biology, Food Science, Microbial Control Science, Sterilization Engineering, Hyperthermia	asada.ryoko[at]omu.ac.jp

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