Laboratory List

NAGOYA UNIVERSITY GLOBAL 30 INTERNATIONAL PROGRAMS

G30 Chemistry Program at Department of Chemistry and Biotechnology is managed by the cooperation of the following 3 departments:
・Molecular & Macromolecular Chemistry
・Materials Chemistry
・Biomolecular Engineering

＊Note: Graduate students under G30 Chem-Eng Program will be nominally enrolled in “Materials Chemistry”. However, undergraduate G30 Chem-Eng students can belong to all research groups in the following three departments: the Department of Molecular and Macromolecular Chemistry, the Department of Materials Chemistry, and the Department of Biomolecular Engineering.

Chemistry

Graduate Sch	Department	Research Grou	Research Area	Job title	Name	Email	Research Interests
Engineering	Molecular and Macromolecular Chemistry	Molecular Chemistry	Organic Materials	Professor	Hiroshi Shinokubo	hshino[at]chembio.nagoya-u.ac.jp	・Synthesis of Novel Porphyrin Analogues ・Synthesis of New Functional π-Systems
Engineering	Molecular and Macromolecular Chemistry	Molecular Chemistry	Organic Reactions	Professor	Takashi Ooi	tooi[at]chembio.nagoya-u.ac.jp	・Design of Molecular Catalysts for Development of Selective Organic Transformations and Mechanistic Elucidation ・Development of Small Organic Molecules for Understanding and Controlling Biological Systems
Engineering	Molecular and Macromolecular Chemistry	Molecular Chemistry	Catalysis in Organic Synthesis	Professor	Kazuaki Ishihara	ishihara[at]cc.nagoya-u.ac.jp	・Design of tailor-made conformationally flexible chiral supramolecular catalysts beyond enzymes ・Redox catalysis: Design of environmentally benign halogen or iron catalysts
Engineering	Molecular and Macromolecular Chemistry	Macromolecular Chemistry	Organic Chemistry of Macromolecules	Professor	Masami Kamigaito	kamigait[at]chembio.nagoya-u.ac.jp	・Living Cationic Polymerization via Reversible Addition-Fragmentation Chain Transfer Mechanism ・Controlled Radical Polymerization of Pinocarvone Derived from Naturally-Occurring α-Pinene
Engineering	Molecular and Macromolecular Chemistry	Macromolecular Chemistry	Supramolecular Polymer Chemistry	Professsor	Tomoyuki Ikai	ikai[at]chembio.nagoya-u.ac.jp	・Synthesis and application of defect-free ladder polymers/graphene nanoribbons with specific secondary structures ・Chiral supramolecular polymers composed of macromolecular repeating units and their amplification of chirality
Engineering	Molecular and Macromolecular Chemistry		Molecular Structures and Structural Dynamics	Professor	Ji-Young Shin	j yshin[at]chembio.nagoya-u.ac.jp	・Electronic and Magnetic Properties of Organic Compounds and Metal-Organic Complexes. ・Exploration of Novel Functional Molecules Created with Polypyrrolyl Oligomers
Engineering	Materials Chemistry	Applied Physical Chemistry	Supramolecular Design	Professor	Yoko Sakata	sakata[at]chembio.nagoya-u.ac.jp	・Precise control of self-assembly processes of new supramolecular complexes ・Construction of new supramolecules with unique molecular recognition site
Engineering	Materials Chemistry	Applied Physical Chemistry	Catalyst Design	Professor	Atsushi Satsuma	satsuma[at]chembio.nagoya-u.ac.jp	・Development of solid catalysts for clean automotive exhaust, methane selective oxidation, and hydrogen storage-Reaction mechanism of solid catalysts studied by in-situ spectroscopies and theoretical calculations
Engineering	Materials Chemistry	Applied Physical Chemistry	Material Design Chemistry	Professor	Tsukasa Torimoto	torimoto[at]chembio.nagoya-u.ac.jp	・Development of Novel Metal Alloy Nanoparticles for Next Generation Fuel Cells ・Preparation of Multinary Semiconductor Quantum Dots for Exploring Novel Photoluminesence Materials
Engineering	Materials Chemistry	Solid State Chemistry	Structural and Functional Chemistry	Professor	Ryotaro Matsuda	ryotaro.matsuda[at]chembio.nagoya-u.ac.jp	・Nanospace Design of Metal Organic Frameworks ・Development of Energy Related Materials Based on Molecular Adsorption
Engineering	Materials Chemistry	Solid State Chemistry	Functional Materials Chemistry	Professor	Chikara Ohtsuki	ohtsuki[at]chembio.nagoya-u.ac.jp	・Development of Inorganic-Organic Hybrid Nanomaterials for Biomaterials Application ・Computational chemistry for the analysis and development of novel functional materials.
Engineering	Materials Chemistry	Solid State Chemistry	Porous Materials Chemistry	Professor	Kazuki Nakanishi	dknakanishi[at]imass.nagoya-u.ac.jp	・Liquid-phase synthesis of hierarchically porous materials and their application to analytical science ・Low-density solids with organic-organic hybrid compositions for super thermal insulation
Engineering	Materials Chemistry	Solid State Chemistry	Functional Materials Engineering	Professor	Minoru Osada	mosada[at]imass.nagoya-u.ac.jp	・Exploration of novel functional materials based on 2D oxide nanosheets ・Controlled assembly of 2D oxide nanosheets and their applications to electronic materials
Engineering	Biomolecular Engineering	Biomolecular Chemistry	Chemical Biotechnology	Professor	Hiroshi Murakami	murah[at]chembio.nagoya-u.ac.jp	・In Vitro Selection of Functional Biomolecules ・Chemical Protein Synthesis
Engineering	Biomolecular Engineering	Biomolecular Chemistry	Supramolecular Biochemistry	Professor	Hiroyuki Asanuma	asanuma[at]chembio.nagoya-u.ac.jp	・Design of acyclic artificial nucleic acid (XNA) for biotechnology ・Functional reinstallation of DNA with base-surrogates
Engineering	Biomolecular Engineering	Biosystem Engineering	Chemical Genetics	Professor	Shigeki Kiyonaka	kiyonaka[at]chembio.nagoya-u.ac.jp	・Chemical Biology for neurotransmitter receptors ・Development of new chemical genetics tools
Engineering	Biomolecular Engineering	Biosystem Engineering	Biochemical Engineering	Professor	Hiroyuki Honda	honda[at]chembio.nagoya-u.ac.jp	・Screening of novel functional peptides using peptide array ・Cells/tissues/organs on chips using BioMEMS
Engineering	Biomolecular Engineering	Biosystem Engineering	Environmental Biotechnology	Professor	Katsutoshi Hori	khori[at]chembio.nagoya-u.ac.jp	・Molecular mechanism of bacterial adhesion to solid surfaces ・Application of adhesive bacterionanofibers for microbial immobilization