

# SELECTED GRANTS

## DIVISION OF SYNTHETIC CHEMISTRY

### — Organoelement Chemistry —

TOKITOH, Norihiro  
New Main Group Element Chemistry and Materials Science  
Based on Heavy Aryl Anions  
Grant-in-Aid for Scientific Research (S)  
26 June 2019–31 March 2024

YAMADA, Hiroko  
Development Organic Donor-Acceptor Materials for the Control  
of Dynamic Exciton  
Grant-in-Aid for Transformative Research Areas (A)  
19 November 2020–31 March 2025

YAMADA, Hiroko  
Development of Pi-Expanded Aromatic Compounds Based on  
Precursor Approach  
Grant-in-Aid for Scientific Research (A)  
1 April 2020–31 March 2023

MATSUO, Kyohei  
Development of n-Type Organic Semiconductors Using Main  
Group Element Complexes of Tetrabenzoporphyrins  
Grant-in-Aid for Scientific Research (C)  
1 April 2022–31 March 2025

YAMAUCHI, Mitsuaki  
Control of Helical Arrangement of Quantum Dots Using Supra-  
molecular Templates and the Realization of Circular Polarized  
Emission  
Grant-in-Aid for Early-Career Scientists  
1 April 2022–31 March 2025

YUKIMOTO, Mariko  
Creation of Tautomerizable Heavy Amides Compounds  
Grant-in-Aid for Early-Career Scientists  
1 April 2022–31 March 2024

### — Structural Organic Chemistry —

MURATA, Yasujiro  
Developments of Nanoscale Laboratory by Sophisticated  
Chemical Transformation of Fullerenes  
Grant-in-Aid for Scientific Research (B)  
1 April 2023–31 March 2026

MURATA, Yasujiro  
Synthesis and Photophysical Properties of Novel Chiral Nanocar-  
bons  
Grant-in-Aid for Challenging Research (Exploratory)  
30 June 2023–31 March 2025

HIROSE, Takashi  
Investigation on Chiral Molecular Wire Properties Based on  
pi-Extended Helical Molecules  
Grant-in-Aid for Scientific Research (B)  
1 April 2023–31 March 2026

HIROSE, Takashi  
Creation of Chiral Molecular Functions Based on Precise  
Arrangement of Helical pi-Conjugated Molecules  
PRESTO, (Precursory Research for Embryonic Science and  
Technology), JST  
1 December 2020–31 March 2024

HASHIKAWA, Yoshifumi  
Creation of Experimental Hydration Models Based on Spherical  
pi-Systems  
Grant-in-Aid for Scientific Research on Innovative Areas  
(Research in a Proposed Research Area)  
1 April 2022–31 March 2024

### — Synthetic Organic Chemistry —

OHMIYA, Hirohisa  
Flexible Conversion of Complex and Bulky Molecules Using  
Light Energy  
Grant-in-Aid for Transformative Research Areas (A)  
1 April 2023–31 March 2028

OHMIYA, Hirohisa  
Radical-Enabled Organocatalytic Chemistry  
Grant-in-Aid for Scientific Research (A)  
5 April 2021- 31 March 2025

NAGAO, Kazunori  
Catalytic Generation of Sulfur Cation Radical Species by Dynamic  
Exciton and its Application to Bond Formation Reactions  
Grant-in-Aid for Transformative Research Areas (A)  
10 September 2021–31 March 2023

NAGAO, Kazunori  
Catalytic Generation of Carbocation without Acids and the Appli-  
cation to Bond Formation Reactions  
Grant-in-Aid for Early-Career Scientists  
1 April 2021–31 March 2024

### Abbreviations and Acronyms

AMED : Japan Agency for Medical Research and Development  
JSPS : Japan Society for the Promotion of Science  
JST : Japan Science and Technology Agency  
MEXT : Ministry of Education, Culture, Sports, Science and Technology  
NEDO : New Energy and Industrial Technology Development Organization  
METI : Ministry of Economy, Trade and Industry

— **Advanced Inorganic Synthesis** —

TERANISHI, Toshiharu  
Nanoscale Element Replacement Science: Structural Transformation of Nanocrystalline Phases and Development of Novel Functions

Grant-in-Aid for Scientific Research (S)  
26 June 2019–31 March 2024

TERANISHI, Toshiharu  
Synthesis of Unprecedented Ordered Alloy Nanoparticles and Development of Their Structure-Specific Properties

Grant-in-Aid for Challenging Research (Exploratory)  
28 June 2019–31 March 2023

TERANISHI, Toshiharu  
Creation of Unprecedented Nanomaterials by Precious Arrangement of Atomic Layers and Crystal Phase

CREST (Core Research for Evolutional Science and Technology), JST  
1 November 2021–31 March 2027

TERANISHI, Toshiharu  
Fabrication of Unprecedented Alloy Cathode Catalysts Development of Technologies for Realizing a Hydrogen Society,

NEDO  
31 July 2020–31 March 2025

TAKAHATA, Ryo  
Modeling of Defects and Exploration of Novel Materials by Using Cadmium Chalcogenide Clusters with Definite Structures

Grant-in-Aid for Early-Career Scientists  
1 April 2021–31 March 2024

TAKAHATA, Ryo  
Development of Precise Control Methods for Nanomaterials with Multi-Functions

Uncharted Territory Challenge 2050, NEDO  
1 November 2021–30 September 2026

TAKEKUMA, Haruka  
Controlling Plasmonic Properties of Novel Ordered Alloy Nanoparticles

Grant-in-Aid for Early-Career Scientists  
1 April 2023–31 March 2026

TAKEKUMA, Haruka  
Creation of Platinum-Based Bimetallic Nanoparticles IRCCS Young Scientists Co-Creation Proposal Research Fund  
1 April 2022–31 March 2023

SARUYAMA, Masaki  
Chemical Synthesis and Exploration of Concerted Optical Properties of Anisotropic Three-Dimensional Quantum Dot Superlattices

Grant-in-Aid for Scientific Research (B)  
1 April 2023–31 March 2027

SARUYAMA, Masaki  
Synthesis and Function of Diverse Three-Dimensional Inorganic Nanoparticle Superstructures

Grant-in-Aid for Challenging Research (Exploratory)  
30 July 2020–31 March 2023

SARUYAMA, Masaki  
Creation of Structure Specific Reaction Fields through Self-Assembly of Nanocrystals

FOREST (Fusion Oriented Research for Disruptive Science and Technology), JST  
1 April 2022–31 March 2025

SATO, Ryota  
Principle Study of Plasmonic Ordered Nanoalloys  
Grant-in-Aid for Scientific Research (B)  
1 April 2023–31 March 2027

MATSUMOTO, Kenshi  
Inter-Element Miscibility Driven Rearrangement from Disordered to Long-Range Ordered Alloy Structures

Grant-in-Aid for Early-Career Scientists  
1 April 2022–31 March 2025

**DIVISION OF MATERIALS CHEMISTRY**  
— **Chemistry of Polymer Materials** —

TSUJII, Yoshinobu  
Development of Next-Generation Monolithic Membrane Columns to Reduce Biopharmaceutical Purification Costs

Go-Tech Project, The Small and Medium Enterprise Agency, METI  
1 August 2023–1 May 2025

TSUJII, Yoshinobu  
Development of High-Performance Sliding Parts by Imparting Concentrated Polymer Brushes (CPB) and Their Application to Equipment

A-STEP (Adaptable and Seamless Technology Transfer Program through Target-driven R&D), JST  
1 December 2020–31 March 2023

TSUJII, Yoshinobu  
Hierarchical Understanding and Control of Wear Phenomena on Ultra-Low Friction Polymer Brushes

CREST (Core Research for Evolutional Science and Technology), JST  
1 October 2021–31 March 2027

TSUJII, Yoshinobu  
Development of Next-Generation Ship-Bottom Coating Films and Coating Processes for Energy Saving and Reduced Environmental Impact

Environment Research and Technology Development Fund, ERCA (Environmental Restoration and Conservation Agency)  
1 April 2022–31 March 2024

KINOSE, Yuji  
Synthesis of Asymmetric Polymer-Brush-Modified Nanorods and Formation of Their Ordered Structures

Grant-in-Aid for Early-Career Scientists  
1 April 2023–31 March 2026

ISHIDA, Koichiro  
Construction of Polysaccharide-Nanofiber Monolayers by Interfacial Architectonics and Creation of Novel Scaffold Functions

Grant-in-Aid for JSPS Research Fellow  
8 April 2022–31 March 2024

— **Polymer Controlled Synthesis** —

YAMAGO, Shigeru  
Development of New Fabrication Methods of Polymer Materials Based on the Structurally Controlled Hyperbranched Polymers

Grant-in-Aid for Scientific Research (S)  
5 July 2021–31 March 2026

YAMAGO, Shigeru  
International Research Center for Basic Organic Device Chemistry  
by True Integration of Synthesis and Device  
Core-to-Core Program, JSPS  
1 April 2022–31 March 2026

TOSAKA, Masatoshi  
Aggregation Structure of Hyper-branched Block Copolymers in  
Solution  
Grant-in-Aid for Scientific Research (C)  
1 April 2021–31 March 2024

KAYAHARA, Eiichi  
Creation of New Cyclic  $\pi$ -Conjugated Molecules for Realization  
of High Density Conjugation  
Grant-in-Aid for Transformative Research Areas (A)  
10 September 2021–31 March 2023

KAYAHARA, Eiichi  
Pioneering Chemistry of Totally Conjugated Cyclic Polymers  
FOREST (Fusion Oriented Research for Disruptive Science and  
Technology), JST  
1 April 2022–31 March 2025

— Inorganic Photonics Materials —

MIZUOCHI, Norikazu  
Research of Quantum Sensing by Advanced Control of the  
Quantum State of NV Center in Diamond  
Grant-in-Aid for Scientific Research (A)  
5 April 2021–31 March 2024

MIZUOCHI, Norikazu  
Development of Innovative Sensor Systems by Highly Sophisti-  
cated Control of Solid Quantum Sensors  
Q-LEAP (Quantum Leap Flagship Program), MEXT  
1 November 2018–31 March 2028

MIZUOCHI, Norikazu  
Innovations Medicine and Life Sciences through the Application  
of Quantum Technology  
Q-LEAP (Quantum Leap Flagship Program), MEXT  
1 April 2020–31 March 2030

MIZUOCHI, Norikazu  
Highly Sensitive Quantum Sensing Microscope Development  
Research for Elucidating Biological Phenomena  
CREST (Core Research for Evolutional Science and Technology),  
JST  
1 October 2023–31 March 2029

MIZUOCHI, Norikazu  
Development of an Ultra-Sensitive Quantum Magnetic Sensing  
System That Enables High Sensitivity NMR without the Need for  
Cooling  
A-STEP (Adaptable and Seamless Technology Transfer Program  
through Target-driven R&D), JST  
1 October 2023–31 March 2027

MORIOKA, Naoya  
Study of Spin-Optical-Charge Dynamics of Defects in Silicon  
Carbide for Highly Efficient Electrical Spin Readout  
Grant-in-Aid for Scientific Research (B)  
1 April 2022–31 March 2025

MORIOKA, Naoya  
Exploring Control of Localized Spins Based on Electrical Spin  
Injection in Silicon Carbide  
Grant-in-Aid for Research Activity Start-up  
30 August 2021–31 March 2023

HERBSCHLEB, Ernst David  
Enhanced Quantum Sensing with a Nitrogen-Vacancy Centre as  
Gateway to the Electron Spin of Phosphorus  
Grant-in-Aid for Early-Career Scientists  
1 April 2022–31 March 2024

NISHIKAWA, Tetsuri  
Investigation of Carrier Transport Mechanism for Photocurrent-  
Detected Magnetic Resonance on Color-Center Spins in Silicon  
Carbide  
Grant-in-Aid for Research Activity Start-up  
31 August 2023–31 March 2025

— Nanospintronics —

ONO, Teruo  
Ferrimagnetic Spintronics and Device Application  
Grant-in-Aid for Scientific Research (S)  
31 August 2020–31 March 2025

ONO, Teruo  
Unraveling the Mechanism of Superconductive Diode Effect and  
Creating Non-Volatile Superconductive Diode  
Grant-in-Aid for Challenging Research (Pioneering)  
9 July 2021–31 March 2024

ONO, Teruo  
Development of 3D Magnetic Memory  
CREST (Core Research for Evolutionary Science and Technology),  
JST  
1 October 2021–31 March 2025

SHIOTA, Yoichi  
Polarization Control of Spin Wave Spin Current and Its Device  
Application  
Grant-in-Aid for Scientific Research (B)  
1 April 2022–31 March 2025

HISATOMI, Ryusuke  
Creation of Highly Efficient Optical Photon-Microwave Con-  
version Using Disk-Shaped Ferromagnetic Thin Films  
Grant-in-Aid for Early-Career Scientists  
1 April 2022–31 March 2024

HISATOMI, Ryusuke  
Opto-Spin-Mechanics Using Surface Acoustic Waves  
PRESTO (Precursory Research for Embryonic Science and  
Technology), JST  
1 November 2020–31 March 2024

KARUBE, Shutaro  
Development of Novel Spin Current Control Technology Based  
on Exchange Interaction  
Grant-in-Aid for Early-Career Scientists  
1 April 2022–31 March 2025

KARUBE, Shutaro  
Creation of Innovative Information Carrier Devices by Multi-  
functional Spin Oxides  
PRESTO (Precursory Research for Embryonic Science and  
Technology), JST  
1 October 2022–31 March 2025

NARITA, Hideki  
Control of Superconductivity by Noncollinear Magnetism  
Grant-in-Aid for Early-Career Scientists  
1 April 2021–31 March 2024

NARITA, Hideki  
Creation of Innovative Quantum Control Technology Using Hybrid Superconductors  
PRESTO (Precursory Research for Embryonic Science and Technology), JST  
1 October 2023–31 March 2025

## **DIVISION OF BIOCHEMISTRY** — **Biofunctional Design-Chemistry** —

FUTAKI, Shiroh  
Intracellular Fate of Extracellular Fine Particles and the Control System  
CREST (Core Research for Evolutionary Science and Technology), JST  
1 October 2018–1 March 2024

IMANISHI, Miki  
Biological Function of Non-Canonical Nucleic Acids  
Grant-in-Aid for Transformative Research Areas (B)  
23 August 2021–31 March 2024

KAWAGUCHI, Yoshimasa  
Intracellular Delivery and Phase Separation Control of Antibodies Based on Coa  
Strategic Basic Research Programs ACT-X, JST  
1 April 2022–31 March 2025

HIROSE, Hisaaki  
Search for Peptides that Promote Internalization and Endoplasmic Release of Extracellular Vesicles  
Grant-in-Aid for Scientific Research (C)  
1 April 2022–31 March 2025

## — **Chemistry of Molecular Biocatalysts** —

MASHIGUCHI, Kiyoshi  
Investigation of the Cytochrome P450 Enzyme Family Involved in the Biosynthesis of Non-Canonical Strigolactones  
Grant-in-Aid for Scientific Research (B)  
1 April 2019–31 March 2023

MASHIGUCHI, Kiyoshi  
Investigation of the Physiological Significance of the Structural Diversity of Strigolactones  
Grant-in-Aid for Scientific Research (B)  
1 April 2023–31 March 2028

## — **Molecular Biology** —

AOYAMA, Takashi  
Roles of Phosphoinositid Signaling in Plant Cell Morphogenesis  
Grant-in-Aid for Scientific Research (B)  
1 April 2021–31 March 2024

TSUGE, Tomohiko  
Molecular Mechanism Governing Plant Plasticity through Pre-mRNA 3'UTR Regulation  
Grant-in-Aid for Scientific Research (C)  
1 April 2022–31 March 2025

KATO, Mariko  
Study on the Involvement of Phosphoinositides in Pollen Germination  
Grant-in-Aid for Scientific Research (C)  
1 April 2021–31 March 2025

## — **Chemical Biology** —

UESUGI, Motonari  
Development of Artificial Chaperones  
Grant-in-Aid for Transformative Research Areas (A)  
16 June 2022–31 March 2024

UESUGI, Motonari  
Chemical Biology of Cellular Self-Assemblies  
Grant-in-Aid for Scientific Research (A)  
1 April 2022–31 March 2025

UESUGI, Motonari  
Designer Melanin for Analyzing and Controlling Cells  
Grant-in-Aid for Challenging Research (Exploratory)  
9 July 2021–31 March 2023

UESUGI, Motonari  
Intracellular Analysis of LLPS Status  
Grant-in-Aid for Challenging Research (Exploratory)  
30 June 2023–31 March 2025

UESUGI, Motonari  
Asian Chemical Biology Initiative  
Core-to-Core Program, JSPS  
1 April 2022–31 March 2025

UESUGI, Motonari  
PD-1 Blockade Cancer Immunotherapy Combined with Small Molecule Activators of T Cell Fatty Acid Oxidation  
P-PROMOTE (Project for Promotion of Cancer Research and Therapeutic Evolution), AMED  
20 May 2022–31 March 2024

UESUGI, Motonari  
Grand Design Platform and Database for the Development of Innovative Adjuvant and Vaccine Carrier  
Program on R&D of New Generation Vaccine Including New Modality Application, AMED  
1 July 2022–31 March 2027

SATO, Shinichi  
Understanding Cellular Function with Short RNAs and Small Molecules  
Grant-in-Aid for Scientific Research (B)  
1 April 2020–31 March 2023

SATO, Shinichi  
New Technologies for RNA Structural Regulation that Enables the Control and Analysis of Cellular Function  
Grant-in-Aid for Scientific Research (B)  
1 April 2023–31 March 2026

SATO, Shinich  
A New Oligonucleotide Therapeutics that Induces a Cooperative RNA G-Quadruplex Formation for Gene Silencing  
Grant-in-Aid for Challenging Research (Pioneering)  
9 July 2021–31 March 2025

PERRON, Amelie  
Live and Let Die: Orchestrating Aggregation of Eye Pigments  
with Organic Molecules  
Grant-in-Aid for Scientific Research (C)  
1 April 2023–31 March 2026

ABO, Masahiro  
Development of Self-Assembling Chemicals which Have  
Chaperone Activity in Live Cells  
Grant-in-Aid for Scientific Research (C)  
1 April 2021–31 March 2024

TAKEMOTO, Yasushi  
Exploration of Radical-Sensitive Signal Peptide  
Grant-in-Aid for Scientific Research (C)  
1 April 2022–31 March 2025

TAKEMOTO, Yasushi  
Understanding and Application of Radical-Sensitive Peptide  
Takeda Science Foundation  
1 September 2021–31 May 2024

TAKEMOTO, Misao  
Mechanistic Analysis for the Immune Activation of T Cells by  
Covalent Natural Compounds  
Grant-in-Aid for Scientific Research (C)  
1 April 2022–31 March 2025

#### **DIVISION OF ENVIRONMENTAL CHEMISTRY** — Molecular Materials Chemistry —

KAJI, Hironori  
Material Design Based on Dynamic Excitation and their Applica-  
tions  
Grant-in-Aid for Transformative Research Areas (A)  
19 November 2020–31 March 2025

SHIZU, Katsuyuki  
A Unified Theory of Electronic Transition Rate Constants for  
High Throughput Materials Screening  
Grant-in-Aid for Scientific Research (C)  
1 April 2022–31 March 2025

SUZUKI, Katsuaki  
Spatiotemporal Analysis of Dynamic Excitation by Solid-State NMR  
Grant-in-Aid for Transformative Research Areas (A)  
19 November 2020–31 March 2025

TANAKA, Hiroyuki  
Development of Multiple-Resonance Thermally Activated  
Delayed Fluorescent Molecules with Excellent Circularly Polar-  
ized Luminescence Property  
Grant-in-Aid for Challenging Research (Exploratory)  
1 July 2023–31 March 2025

#### — Hydrospheric Environment Analytical Chemistry —

SOHRIN, Yoshiki  
Ocean Section Diagnosis on the Basis of Stoichiometry and  
Stable Isotope Ratios of Trace Metals  
Grant-in-Aid for Scientific Research (A)  
1 April 2019–31 March 2023

TAKANO, Shotaro  
Isotopic Analysis for Estimating the Sources of Particulate Trace  
Metals in the Ocean  
Grant-in-Aid for Early-Career Scientists  
1 April 2020–31 March 2023

ZHENG, Linjie  
Speciation and Sectional Distribution of Al, Mn, Fe, Co, Ni, Cu,  
Zn, Cd, and Pb in the South Pacific and Indian Oceans  
Grant-in-Aid for Early-Career Scientists  
1 April 2021–31 March 2024

#### — Chemistry for Functionalized Surfaces —

HASEGAWA, Takeshi  
Evolution of Near-Infrared Spectroscopy for Materials Structure  
Analysis: Development of NIR-MAIRS  
Grant-in-Aid for Scientific Research (B)  
1 April 2022–31 March 2026

HASEGAWA, Takeshi  
Innovation in Control of Physical Properties of Polymer Thin-  
Film Materials by Micro-Morphology Analysis of Amorphous  
Grant-in-Aid for Challenging Research (Exploratory)  
9 July 2021–31 March 2024

MORI, Taizo  
Dynamic Response of Molecular Machines at the Air-Water  
Interface Using Second Harmonic Generation  
Grant-in-Aid for Scientific Research (C)  
1 April 2023–31 March 2028

SHIOYA, Nobutaka  
Visualization of Monolayer Structures Specifically Formed by  
Functional Organic Materials at the Substrate Interface  
Grant-in-Aid for Early-Career Scientists  
1 April 2022–31 March 2025

#### — Molecular Microbial Science —

KURIHARA, Tatsuo  
Molecular Basis for Generation of the Diversity of Bacterial  
Membrane Phospholipid Acyl Chains and Mechanisms Underlying  
Their Physiological Functions  
Grant-in-Aid for Scientific Research (B)  
1 April 2021–31 March 2024

KURIHARA, Tatsuo  
Dissection of the Molecular Basis of Membrane Vesicle Biogenesis  
and Construction of an Extracellular Platform for Substance  
Production by Using a Hyper-Vesiculating Bacterium  
Grant-in-Aid for Challenging Research (Pioneering)  
30 July 2020–31 March 2023

KURIHARA, Tatsuo  
Enzymatic Manipulation of Biomembrane Lipids to Enhance  
Cellular Function  
Grant-in-Aid for Challenging Research (Exploratory)  
30 June 2023–31 March 2025

KAWAMOTO, Jun  
Elucidation of Molecular Mechanism of Extracellular Membrane  
Vesicle Production by Bacteria and Its Application  
Grant-in-Aid for Scientific Research (B)  
1 April 2023–31 March 2026

KAWAMOTO, Jun  
A Novel Platform for Functional Nanoparticle -the Synthesis  
Mechanism of Unique Outer-Membrane Vesicles of Bacteria and  
Its Application-  
Grant-in-Aid for Scientific Research (C)  
1 April 2020–31 March 2023

KAWAMOTO, Jun  
Exploration and Application of Outer Membrane Vesicle-Producing Bacteria as a Foundation for New Nano-Material Development Fund for the Promotion of Joint International Research (International Collaborative Research)  
8 September 2023–31 March 2027

OGAWA, Takuya  
Study on the Metabolic Conversion of Omega-3 Polyunsaturated Fatty Acids through a Reconsideration of Beta-Oxidation Pathway  
Grant-in-Aid for Scientific Research (C)  
1 April 2021–31 March 2024

**DIVISION OF MULTIDISCIPLINARY CHEMISTRY**  
— **Polymer Materials Science** —

TAKENAKA, Mikihiro  
4D Analysis of Grazing Incidence Scattering to Reveal Adhesion Processes at the Adhesive Interface  
Mirai Program, JST  
1 November 2018–31 March 2028

OGAWA, Hiroki  
Non-Equilibrium MI Scheme Shortens Future Material Development Feasibility Study Program, NEDO  
10 May 2023–31 March 2025

OGAWA, Hiroki  
Development of a Recycled Plastics Databank to Improve the Circularity  
SIP, ERCA (Environmental Restoration and Conservation Agency)  
1 October 2023–31 March 2028

— **Molecular Rheology** —

MATSUMIYA, Yumi  
Molecular Dynamics of Associative Polymers and Its Experimental Validation: Effect of Dissociation Equilibrium on Entanglement Relaxation Modes  
Grant-in-Aid for Scientific Research (B)  
1 April 2021–31 March 2024

SATO, Takeshi  
Development of Coarse-Grained Molecular Model for Predicting Dynamics of Entangled Associating Polymers  
Grant-in-Aid for Early-Career Scientists  
1 April 2021–31 March 2024

SATO, Takeshi  
A New Fluid Science for Non-Newtonian/Non-Uniform/Non-Equilibrium Flows  
PRESTO (Preliminary Research for Embryonic Science and Technology), JST  
1 October 2022–31 March 2026

— **Molecular Aggregates** —

WAKAMIYA, Atsushi  
Fundamental Chemical Research for Efficient Lead Free Perovskite Solar Cells  
Grant-in-Aid for Scientific Research (A)  
5 April 2021–31 March 2024

WAKAMIYA, Atsushi  
Pb-Free Perovskite Solar Cells Consisting of Sn  
Mirai Full-scale R&D Project, JST  
1 April 2022–31 March 2027

WAKAMIYA, Atsushi  
Development of Practical Technology for Perovskite Solar Module with High Installation Flexibility  
Green Innovation Fund Projects, NEDO  
27 December 2021–31 March 2026

WAKAMIYA, Atsushi  
Development of Film-Type Perovskite Solar Module with High Degree of Freedom Design  
Development of Technologies to Promote Photovoltaic Power Generation as a Primary Power Source, NEDO  
13 July 2020–31 March 2025

MURDEY, Richard  
Ageing and Passivation Effects in Perovskite Solar Cells  
Grant-in-Aid for Scientific Research (C)  
1 April 2019–31 March 2023

NAKAMURA, Tomoya  
Two-Dimensionally Expanded pi-Systems for High-Performance Tin Perovskite Solar Cells  
Grant-in-Aid for Early-Career Scientists  
1 April 2021–31 March 2023

TRUONG, Minh Anh  
Development of Multipodal Hole-Transporting Monolayer Materials for High Performance Perovskite Solar Cells  
Grant-in-Aid for Early-Career Scientists  
1 April 2022–31 March 2024

**ADVANCED RESEARCH CENTER FOR BEAM SCIENCE**  
— **Particle Beam Science** —

WAKASUGI, Masanori  
Precise Measurement of Charge Density Distribution of Sn Unstable Isotopes by Advanced Innovative SCIT Electron Scattering  
Grant-in-Aid for Scientific Research (S)  
12 April 2023–31 March 2028

WAKASUGI, Masanori  
Development of Stationary Target for Unstable Nuclei for Application to Research of Nuclear Reaction  
Grant-in-Aid for Challenging Research (Pioneering)  
30 July 2020–31 March 2023

WAKASUGI, Masanori  
Development of RFQ-Type Isobar Filters Leading Innovative Research on Unstable Nuclear Reactions  
Grant-in-Aid for Challenging Research (Pioneering)  
30 June 2023–31 March 2026

TSUKADA, Kyo  
Isotope Dependences of Nuclear Charge Distributions and Neutron Radius by Electron Scattering  
Grant-in-Aid for Scientific Research (A)  
1 April 2020–31 March 2025

OGAWARA, Ryo  
Development of Internal Active Target for Beam Recycle Techniques  
Grant-in-Aid for Early-Career Scientists  
1 April 2022–31 March 2024

OGAWARA, Ryo  
Development of Beam Recycle Techniques for Advanced Research on Nuclear Reactions with Rare RI  
FOREST (Fusion Oriented Research for Disruptive Science and Technology), JST  
1 April 2023–31 March 2030

TONGU, Hiromu  
Mapping System Using High-Speed Scanning in Cryogenic Environment for Superconductor State Inspection  
Grant-in-Aid for Scientific Research (C)  
1 April 2022–31 March 2025

— **Laser Matter Interaction Science** —

TOKITA, Shigeki  
Development of Mid-Infrared High-Power Ultrashort Pulse Lasers and Its Application to Soft-Matter Micro-Processing  
Grant-in-Aid for Scientific Research (B)  
1 April 2021–31 March 2024

TOKITA, Shigeki  
The Power Laser DX Platform  
Project for Promoting Public Utilization of Advanced Research, MEXT  
1 April 2021–31 March 2026

TOKITA, Shigeki  
Formation of Ultrashort Femtosecond Pulses in the Mid-Infrared Range Based on Iron-Doped Chalcogenides for Problems of Nonlinear Optics of Media with a Reduced Dimension  
Bilateral Joint Research Projects, JSPS  
1 April 2021–31 March 2023

TOKITA, Shigeki  
Development of an Industrial Femtosecond Laser  
Intensive Support Program for Young Promising Researchers, NEDO  
15 January 2021–31 March 2023

TOKITA, Shigeki  
Pioneering of a High-Intensity Coherent X-Ray Generation Method Using an Ultrahigh-Intensity Mid-Infrared Laser  
Matsuo Academic Research Grant, MATSUO Foundation  
1 December 2023–31 March 2025

TOKITA, Shigeki  
Development of Compact and Highly Efficient Mid-Infrared Femtosecond Lasers  
Research Grant, The Asahi Glass Foundation  
1 April 2023–31 March 2025

TOKITA, Shigeki  
Development of High-Intensity Mid-Infrared Lasers for Realizing Compact Coherent X-Ray Sources  
Research Grant, Research Foundation for Opto-Science and Technology  
1 January 2023–31 December 2024

TOKITA, Shigeki  
Micromachining of Transparent Resin Using Mid-Infrared Pulsed Lasers  
AMADA Research and Development Grant, The AMADA Foundation  
26 September 2020–31 March 2024

TOKITA, Shigeki  
Development of High-Intensity Coherent X-Ray Generation Method Supporting Program for Unique Exploratory Investigation Team Studies (SPIRIT2), Kyoto University  
1 April 2023–31 March 2025

OKAZAKI, Daiki  
Exploring Multispectral Peak Light Source Technology Using High-Intensity Lasers  
Grant-in-Aid for Research Activity Start-up  
31 August 2023–31 March 2025

OKAZAKI, Daiki  
Development of High Power 3 Micron Fiber Lasers Pumped by Laser Diodes  
Resarch Support 2023, Yamada Science Foundation  
4 August 2023–31 March 2026

OKAZAKI, Daiki  
Research on a Novel Burst Pulse Generation Technique for Efficient Femtosecond Laser Processing  
Encouragement Research Grant, The Amada Foundation  
1 October 2023–31 March 2026

OKAZAKI, Daiki  
Development of Wavelength-Tunable Mid-IR Burst Pulse Lasers  
Basic Science Research Projects, The Sumitomo Foundation  
7 December 2023–30 November 2026

KANAI, Tsuneto  
Development of a Mid-IR Laser Driven X-Ray Spectroscopic System for Zeptosecond Atomic, Molecular, Particle Physics  
Grant-in-Aid for Scientific Research (B)  
1 April 2023–31 March 2026

KANAI, Tsuneto  
Optical Poling-Based Microfabrication of Plastic Materials Using Carrier Wave Envelope Phase Stabilized, Wavelength Tunable Mid-Infrared Femtosecond Lasers  
AMADA Research and Development Grant, The AMADA Foundation  
1 October 2022–31 March 2026

KANAI, Tsuneto  
Development of a Mid-IR Laser-Driven X-Ray Source for Zeptosecond Particle Physics  
Matsuo Academic Research Grant, MATSUO Foundation  
1 December 2022–31 March 2024

KANAI, Tsuneto  
Development of High Power Mid-IR Lasers for Zeptosecond Particle Physics  
SPIRITS 2022  
1 April 2022–31 March 2023

HASHIDA, Masaki  
Operando Measurements Using Advanced Beams to Study the Mechanism of Fine Structure Formation  
Basic Foundational Research: “Next-Generation Laser” Projects, Q-LEAP (Quantum Leap Flagship Program), MEXT  
1 April 2020–31 March 2029

— **Electron Microscopy and Crystal Chemistry** —

HARUTA, Mitsutaka  
Visualization of Electron Orbital Using TEM  
Grant-in-Aid for Scientific Research (B)  
1 April 2022–31 March 2025

**INTERNATIONAL RESEARCH CENTER FOR ELEMENTS SCIENCE**

— **Synthetic Organotransformation** —

NAKAMURA, Masaharu  
Iron-Catalyzed Cross Coupling: Quantum Control on Multi-Spin Pathways  
Grant-in-Aid for Scientific Research (B)  
1 April 2023–31 March 2026

ISOZAKI, Katsuhiko  
Triple-Layer Core-Shell Metal Nanocluster Synthesis Driven by Interligand Hydrogen Bonds  
Grant-in-Aid for Challenging Research (Exploratory)  
30 June 2023–31 March 2025

DOBA, Takahiro  
Iron-Catalyzed Carbon–Heteroatom Bond Formation Reactions through pi-Plane Activation  
Research Activity Start-up  
31 August 2023–31 March 2025

DOBA, Takahiro  
Development of Iron-Catalyzed Carbon–Heteroatom Bond Formation Reactions  
Research grant from the Institute of Synthetic Organic Chemistry  
1 October 2023–30 September 2024

NAKAGAWA, Yuka  
Pioneering Catalytic Reactions for Direct Synthesis of Functional Polymers from Wood  
Grant-in-Aid for Early-Career Scientists  
1 April 2023–31 March 2026

NAKAGAWA, Yuka  
Development of Molecular Complex Catalysts for Converting Wood into Functional Materials  
PRESTO, (Precursory Research for Embryonic Science and Technology), JST  
30 September 2023–30 March 2027

MINEO, Keito  
Integrated Scenario Analysis of Environmental Impacts and Economic Potential of Forest Management and Wood Uses  
Daigas Research Grants for Young Researchers, Kyoto University Open Innovation Institute  
8 February 2023–7 February 2024

IMAI, Makiko  
Analysis of Lignin Decomposition Mechanism That Produce Nanosheet Cellulose  
Grant-in-Aid for Early-Career Scientists  
1 April 2023–31 March 2026

— **Advanced Solid State Chemistry** —

SHIMAKAWA, Yuichi  
Construction of Physical Property Correlation Based on Entropy and Creation of New Thermal Control Materials  
Grant-in-Aid for Scientific Research (S)  
12 April 2023–31 March 2028

SHIMAKAWA, Yuichi  
Exploration of Functional Transition-Metal Oxides and Their Structure-Property Relationships  
AdCORP (Advanced International Collaborative Research Program), JST  
1 April 2023–31 March 2027

— **Organometallic Chemistry** —

OHKI, Yasuhiro  
Synthesis and Reactions of Bio-Inspired Molecular Metal-Hydride Compounds  
Grant-in-Aid for Scientific Research on Innovative Areas (Research in a Proposed Research Area)  
1 April 2021–31 March 2023

OHKI, Yasuhiro  
Synthesis of Iron-Containing Cluster Complexes and Reducing Reactions with Multiple Metals  
Grant-in-Aid for Scientific Research (B)  
1 April 2023–31 March 2026

OHKI, Yasuhiro  
Synthesis of Metal-Nanoclusters of Iron Group Metals  
Grant-in-Aid for Challenging Research (Exploratory)  
30 July 2020–31 March 2023

OHKI, Yasuhiro  
Fuel Regeneration from CO<sub>2</sub> by Grid-Aligned Biomimetic Catalysts on Functionalized Silica  
Grant-in-Aid for JSPS Fellows  
8 March 2023–31 March 2025

OHKI, Yasuhiro  
Electron Transfer Networks of Transition Metal Cluster Complexes for Catalytic Applications  
CREST (Core Research for Evolutional Science and Technology), JST  
1 October 2021–31 March 2027

TANIFUJI, Kazuki  
CO<sub>2</sub>/CO Reduction into Short-Chain Hydrocarbons Promoted by Cuboidal Metal-Sulfur Clusters  
Grant-in-Aid for Scientific Research (C)  
1 April 2022–31 March 2025

TANIFUJI, Kazuki  
Structure-Function Relationships of a Fe/Mo-S-C Cluster Unique to N<sub>2</sub>-Reducing Enzymes  
Grant-in-Aid for Research Activity Start-up  
30 August 2021–31 March 2023

HIGAKI, Tatsuya  
Creation of Novel Cluster Nanomagnets with Strong Exchange Interactions  
Grant-in-Aid for Early-Career Scientists  
1 April 2023–31 March 2025

HIGAKI, Tatsuya  
Atomically Precise Synthesis of Iron-Group Metal Nanoclusters to Probe the Origin of Superparamagnetism  
Grant-in-Aid for Research Activity Start-up  
31 August 2022–31 March 2024

IZU, Hitoshi  
Catalytic System for Carbon Dioxide Reduction Utilizing Sequence Control of Cubane-Type Complexes  
Grant-in-Aid for Early-Career Scientists  
1 April 2023–31 March 2025



— Nanophotonics —

KANEMITSU, Yoshihiko  
Fusing Nanomaterials and Strong Electric Field Nonlinear Optics for New Advances in Photonics  
Grant-in-Aid for Specially Promoted Research  
23 April 2019–31 March 2024

KANEMITSU, Yoshihiko  
Optical Responses of Ordered Alloy Nanomaterials and Nanomaterial-Based Superstructures  
CREST (Core Research for Evolutional Science and Technology), JST  
1 October 2021–31 March 2027

HIRORI, Hideki  
Phononic Strong Coupling by THz Metamaterial and Its Applications to Material Control  
Grant-in-Aid for Scientific Research (B)  
1 April 2021–31 March 2025

YUMOTO, Go  
Development of Polarization-Resolved Pump-Probe Microscopy and Study of Rashba Spin-Optoelectronics in Atomically Thin Materials  
Grant-in-Aid for Early-Career Scientists  
1 April 2023–31 March 2025

TAHARA, Hirokazu  
Spatial and Temporal Super-Resolution Method for Revealing Quantum Cooperative Processes in Semiconductor Nanostructures  
Grant-in-Aid for Scientific Research (B)  
1 April 2022–31 March 2026

TAHARA, Hirokazu  
Development of Nanostructured Semiconductor-Photon Coupled Systems for Giant Optoelectronic Amplification  
Grant-in-Aid for Challenging Research (Exploratory)  
30 June 2023–31 March 2025

TAHARA, Hirokazu  
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PRESTO (Precursory Research for Embryonic Science and Technology), JST  
1 October 2023–31 March 2027

**BIOINFORMATICS CENTER**

— Chemical Life Science —

OGATA, Hiroyuki  
Virus-Driven Clockwork in Lower Tropic Level Marine Ecosystem and Its Impact on the Ocean  
Grant-in-Aid for Scientific Research (S)  
5 July 2021–31 March 2026

OGATA, Hiroyuki  
Aggregate-Biosphere: Unveiling Hidden Regulatory Processes in the Oceanic Carbon Cycle  
Grant-in-Aid for Scientific Research (S)  
26 June 2019–31 March 2024

OGATA, Hiroyuki  
Ecology of Giant viruses Inhabiting the Aphotic Zone of the Sea  
Grant-in-Aid for Scientific Research (A)  
1 April 2022–31 March 2026

OGATA, Hiroyuki  
Molecular Ecological Mechanism of Bloom Disintegration by Viral Infection  
Grant-in-Aid for Scientific Research (A)  
1 April 2022–31 March 2027

OGATA, Hiroyuki  
Study of Giant Virus Ecology and Virus-Host Interaction in Aquatic Environments  
Grant-in-Aid for Scientific Research (B)  
1 April 2020–31 March 2023

OGATA, Hiroyuki  
Virus-Host Database  
Grant-in-Aid for Publication of Scientific Research Results (Database)  
1 April 2020–31 March 2025

ENDO, Hisashi  
Viral Infection and Its Control Mechanisms of Marine Plankton Communities as Revealed by Dissolved Ribosomal RNA  
Grant-in-Aid for Scientific Research (B)  
1 April 2022–31 March 2026

ENDO, Hisashi  
Plankton Communities Contributing to Marine Biological Pump on the Global Scale  
Grant-in-Aid for Scientific Research (B)  
1 April 2022–31 March 2025

ENDO, Hisashi  
Experimental Investigation of the Effects of Phytoplankton Diversity on Ecosystem Functioning in the Ocean  
Grant-in-Aid for Early-Career Scientists  
1 April 2019–31 March 2023

ENDO, Hisashi  
A Novel Dynamics Analysis of Marine Plankton Based on Genetic Information in the Dissolved Fraction of Seawater  
CREST (Core Research for Evolutional Science and Technology), JST  
1 October 2023–31 March 2029

ENDO, Hisashi  
A Novel Dynamics Analysis of Marine Plankton Based on Genetic Information in the Dissolved Fraction of Seawater  
PRESTO (Precursory Research for Embryonic Science and Technology), JST  
1 October 2023–31 March 2027

OKAZAKI, Yusuke  
Unveiling the Organic Matter Dynamics Functioning in Lake Hypolimnion  
Grant-in-Aid for Scientific Research (A)  
1 April 2022–31 March 2026

OKAZAKI, Yusuke  
Elucidating the Molecular Heterogeneity of Dissolved Organic Matter That Governs Its Long-Term Persistence  
Grant-in-Aid for Scientific Research (B)  
1 April 2022–31 March 2025

OKAZAKI, Yusuke  
Microbial Nitrogen Pump: Bacterial Semi-Labile Dissolved Organic Nitrogen as a Nutrient Transport Pathway in Aquatic Systems  
Grant-in-Aid for Scientific Research (B)  
1 April 2021–31 March 2024

OKAZAKI, Yusuke  
Who is the Host of Uncultivated Viruses? Linking Viral and Bacterial Genomes in the Environment  
Grant-in-Aid for Early-Career Scientists  
1 April 2022–31 March 2025

OKAZAKI, Yusuke  
Developing a High-Resolution Eco-Genomics Platform through Inter-Lake Comparisons  
FOREST (Fusion Oriented Research for Disruptive Science and Technology), JST  
1 April 2023–31 March 2030

OKAZAKI, Yusuke  
Challenging Dry Questions in Environmental Microbiology and Virology from Wet  
Kyoto University 125th Anniversary Fund Kusunoki 125  
13 September 2021–31 March 2025

HIKIDA, Hiroyuki  
Diversity of Giant Virus Infection Strategy  
Grant-in-Aid for Early-Career Scientists  
1 April 2022–31 March 2025

HIKIDA, Hiroyuki  
Development of Novel Gene Engineering Technology Utilizing Giant Viruses  
Strategic Basic Research Programs ACT-X, JST  
1 October 2022–31 March 2025

#### — Mathematical Bioinformatics —

AKUTSU, Tatsuya  
Advanced Studies and Developments on Discrete Preimage Problems  
Grant-in-Aid for Scientific Research (A)  
1 April 2022–31 March 2027

AKUTSU, Tatsuya  
Analysis and Control of Steady States of Multiple Biological Networks  
Grant-in-Aid for Challenging Research (Exploratory)  
30 June 2022–31 March 2025

TAMURA, Takeyuki  
Algorithms for Metabolic Network Design for Producing Useful Substances  
Grant-in-Aid for Scientific Research (B)  
1 April 2020–31 March 2025

MORI, Tomoya  
Establishment of the Method for Biological Tissue Domain Estimation and Analysis Based on Spatial Omics Data  
Grant-in-Aid for Scientific Research (C)  
1 April 2023–31 March 2026

#### — Bio-knowledge Engineering —

MAMITSUKA, Hiroshi  
Development of Next Generation Plastic Materials Based on Structurally Controlled Hyperbranched Polymers  
Grant-in-Aid for Scientific Research (S)  
5 July 2021–31 March 2026

MAMITSUKA, Hiroshi  
Latent Data Structure Estimation through Integrating Diverse Data  
Grant-in-Aid for Scientific Research (B)  
1 April 2022–31 March 2025

MAMITSUKA, Hiroshi  
Developing Machine Learning Based Bioinformatics to Decipher Hidden Biology of Depression Symptoms  
Grant-in-Aid for JSPS Fellows  
13 November 2020–31 March 2023

NGUYEN, Hao Canh  
Machine Learning on Large Graphs  
Grant-in-Aid for Scientific Research (C)  
1 April 2018–31 March 2023

NGUYEN, Hao Canh  
Machine Learning for Structure-Rich Data-Scarce Domains  
Grant-in-Aid for Scientific Research (C)  
1 April 2022–31 March 2025