

Categories	Reference number	Title of Research Project	Affiliation	Principle Researcher	Key Person in IAE
Planned joint research	ZE2025A-01	Chemical dicing of semiconductors by non-metal catalysts	Kyoto University	Kazuhiro Fukami	Hiroshi Sakaguchi
Planned joint research	ZE2025A-02	Development of Innovative Neutron Shielding Materials for Miniaturization of Fusion Reactors	Tohoku University	Ryuta Kasada	Juro Yagi
Planned joint research	ZE2025A-03	Study on development of compound-based anode for K-ion battery and on compatibility with ionic liquid electrolyte	Tottori University	Yasuhiro Domi	Takayuki Yamamoto
Planned joint research	ZE2025A-04	Structural analysis of lignocellulosic biomass by NMR spectroscopy toward decarbonized society	Kyoto University	Hiroshi Nishimura	Masato Katahira
Planned joint research	ZE2025A-05	Emission properties and photoinduced electron-transfer reactions of photosensitizers bound to the reaction site of enzyme	Nara Women's University	Hiroshi Takashima	Eiji Nakata
Planned joint research	ZE2025A-06	Elucidation of the highly efficient energy production system utilized by intracellular organelle	University of Occupational and Environmental Health, Japan	Reiko Sakaguchi	Eiji Nakata
Planned joint research	ZE2025A-07	Study on textile degradation by using infrared free electron laser	High Energy Accelerator Research Organization (KEK)	Takayasu Kawasaki	Heishun Zen
Planned joint research	ZE2025A-08	Research on the Creation of Functional Peptides to Control Cell Proliferation Based on Complex Structures	National Institute of Infectious Diseases (NIID)	Hideki Kusunoki	Takashi Nagata
Planned joint research	ZE2025A-09	The quantitative estimation of coherent phonon on wide-bandgap semiconductors	Kumamoto Industrial Research Institute	Kyohei Yoshida	Hideaki Ohgaki
Planned joint research	ZE2025A-10	Determining the conditions of heat treatments for extending the lifetime of nuclear reactors (4)	Kumamoto University	Yoshitaka Matsukawa	Kazunori Morishita
Planned joint research	ZE2025A-11	Elucidation of the mechanism of electronic conduction in lithium ion conductive solid electrolytes by rf-GD-OES analysis	Hirosaki University	Kazuya Sasaki	Juro Yagi
Planned joint research	ZE2025A-12	Control of behavior of organic fluorescent molecules via strong Mid-IR irradiation	Kyoto University	Yusuke Tsutsui	Heishun Zen

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Planned joint research	ZE2025A-13	Structural basis of G-quadruplex recognition by the replication initiator ORC	Japan Women's University	Shou Waga	Yudai Yamaoki
Planned joint research	ZE2025A-14	Experimental verification of hydrogen adsorption and desorption behavior for advanced neutron multipliers	National Institutes for Quantum Science and Technology(QST)	Jae-Hwan Kim	Juro Yagi
Planned joint research	ZE2025A-15	Novel Na-storage materials based on construction of electrode-electrolyte interface	Tottori University	Hiroyuki Usui	Toshiyuki Nohira
Planned joint research	ZE2025A-16	Effect of mechanical alloying treatment on thermal changes on oxide dispersion strengthened alloy powder	National Institute of Technology, Kurume College	Noriyuki Iwata	Juro Yagi
Planned joint research	ZE2025A-17	NMR analysis for the development of biomolecules that control the growth of plants or microorganisms	Chiba Institute of Technology	Taiichi Sakamoto	Takashi Nagata
Planned joint research	ZE2025A-18	Development of Organic Luminescent Materials for Luminescent Solar Concentrators	Kyoto Institute of Technology	Masaki Shimizu	Hiroshi Sakaguchi
Planned joint research	ZE2025A-19	Innovative Approach for Lignin Utilization: Precise Reaction Behavior Analysis by Selective Stable Isotope Labeling Technique	Tokyo University of Agriculture and Technology	Yasuyuki Matsushita	Masato Katahira
Planned joint research	ZE2025A-20	Tunable Surface Engineering of Electrochemically Grown Quantum Dots via Free Electron Laser Irradiation in the IR Range for PSCs	Chiang Mai University, Thailand	Sukrit Sucharitakul	Hideaki Ohgaki
Planned joint research	ZE2025A-21	Construction of fluorescent biosensor for visualizing zinc finger structure of transcription factor Sp1 participating in metabolic reaction control	Fukuoka University	Shunsuke Tajima	Eiji Nakata
Planned joint research	ZE2025A-22	Dynamic process of trivalent/tetravalent cerium valence change in multi-component oxide garnet crystals investigated by photoinduced transient absorption spectroscopy	Yamagata University	Mamoru Kitaura	Heishun Zen
Planned joint research	ZE2025A-23	Hydrogen isotope release behavior of accident-tolerant hybrid ceramics	National Institute for Fusion Science (NIFS)	Keisuke Mukai	Juro Yagi
Planned joint research	ZE2025A-24	Enzymatic degradation of crystalline PET using quantum beams	Kyoto University	Daisuke Tadokoro	Heishun Zen

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Planned joint research	ZE2025A-25	Impact of Irradiation on the Structural and Functional Properties of Polymer-Based Nanoparticles for Drug Delivery Applications	Chiang Mai University, Thailand	Winita Punyodom	Hideaki Ohgaki
Planned joint research	ZE2025A-26	Analysis of interaction between TLS and RNA that induces liquid-liquid phase separation caused by TLS	Saitama Medical University	Riki Kurokawa	Masato Katahira
Planned joint research	ZE2025A-27	Novel pulsed terahertz source by super-radiance free electron laser oscillator	The University of Tokyo	Kazuyuki Sakaue	Heishun Zen
Planned joint research	ZE2025A-28	Structural analysis of noncanonical/damaged nucleic acids	Nagahama Institute of Bio-Science and Technology	Hiroshi Imamura	Yudai Yamaoki
Planned joint research	ZE2025A-29	Elucidation of polymerization mechanism and chemical structure of lignin	Kyoto University	Takao Kishimoto	Masato Katahira
Planned joint research	ZE2025A-30	Fabrication of All-Solid-State Battery by Photo-Induced Chemical Solution Process	Chiba Institute of Technology	Ikuma Takahashi	Juro Yagi
Planned joint research	ZE2025A-31	Study of Hydrogen Isotope Separation Technology by Molten Salt	Hokkaido University	Hisayoshi Matsushima	Toshiyuki Nohira
Planned joint research	ZE2025A-32	Study of the crystalline cellulose degradation system consisting of the psychrophilic fungus-type cellulase.	Health Sciences University of Hokkaido	Masataka Horiuchi	Takashi Nagata
Planned joint research	ZE2025A-33	Enhancing mechanical properties of PCL-based sutures using selective-wavelength mid-infrared free-electron laser irradiation	Chiang Mai University, Thailand	Sakhorn Rimjaem	Hideaki Ohgaki
Planned joint research	ZE2025A-34	Characterization of E.coli-Derived G-quadruplexes Capable of Regulating gene expression.	Yokohama National University	Yoichiro Tanaka	Takashi Nagata
Planned joint research	ZE2025A-35	Variation of atomic density distribution of sintered two-phase mixture of tritium breeders Li ₈ ZrO ₆ and Li ₂ O	Hirosaki University	Kiyoto Shin-Mura	Juro Yagi
Planned joint research	ZE2025A-36	Thermal Expansion Coefficients of PbWO ₄ -BiVO ₄ -based Oxide Ion Conductors with Oxygen Excess and Oxygen Deficient Compositions	Kyoto University	Shigeomi Takai	Toshiyuki Nohira

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Planned joint research	ZE2025A-37	Selective ablation and surge reaction analysis of composite resin material	Tokyo University of Science	Jun Fujioka	Heishun Zen
Planned joint research	ZE2025N-01	Fermentative production of a novel polysaccharide from fishery processing by-products	Yokohama National University	Minoru Takeda	Masato Katahira
Planned joint research	ZE2025N-02	Experimental research on the sophistication of advanced information infrastructure for the operation and maintenance of complex energy systems	Utsunomiya University	Takeshi Matsuoka	Kazunori Morishita
Planned joint research	ZE2025N-03	Achieving Carbon-Neutral Organic Coffee Cultivation through Biocontrol	National University of Laos	Keonakhone Khounvilay	Hideaki Ohgaki
Planned joint research	ZE2025N-04	Renewable Energy (Solar & Wind) Transition in Indonesia: Perspective of Policy and Community Empowerment	National Research and Innovation Agency of Indonesia (BRIN)	Anugerah Yuka Asmara	Hideaki Ohgaki
Planned joint research	ZE2025N-05	Electricity Usage Behavior and Habits for Rural and Urban Community to Facilitate Lifestyle Life Cycle Assessment Research	UMPEDAC, University of Malaya, Malaysia	Chia-Kwang Tan	Hideaki Ohgaki
Proposal based project	ZE2025B-01	Calcium phosphate coating on aluminum-free magnesium alloys and microstructure evaluation	Kyoto University	Takeshi Yabutsuka	Juro Yagi
Proposal based project	ZE2025B-02	Elucidation of free electron laser interactions by observing coherent edge radiation	National Institute of Advanced Industrial Science and Technology (AIST)	Norihiro Sei	Hideaki Ohgaki
Proposal based project	ZE2025B-03	Compatibility of Li-Br/F/I based low-melting point molten salt applied for fusion reactors' liquid blanket	Tohoku University	Yasuyuki Ogino	Juro Yagi
Proposal based project	ZE2025B-04	Investigation of the physical properties of atomic layer materials induced by structural imperfections	University of Tsukuba	Susumu Okada	Kazunari Matsuda
Proposal based project	ZE2025B-05	Exploring Quantum Materials for High-Efficiency and High-Performance Energy Conversion	Hosei University	Satoru Konabe	Yuhei Miyauchi
Proposal based project	ZE2025B-06	Highly efficient laser-induced photochemical processes by using machine-learning approaches combined with quantum optimal control	Tohoku University	Yukiyoshi Ohtsuki	Takashi Nakajima

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Proposal based project	ZE2025B-07	Basic study on pulse water surface discharge with needle electrodes and its improvement	Osaka Metropolitan University	Hiroto Matsuura	Shinichiro Kado
Proposal based project	ZE2025B-08	Clarifying the difference in the dynamics of hydrogen and oxygen bubbles during water electrolysis for hydrogen evolution	Japan Synchrotron Radiation Research Institute (JASRI)	Kota Ando	Takashi Nakajima
Proposal based project	ZE2025B-09	Gas ionization by high-repetition rate infrared pulses	National Institutes for Quantum Science and Technology(QST)	Ryoichi Hajima	Heishun Zen
Proposal based project	ZE2025B-10	Development of 3 dimensional radiative distribution measurement system using incoherent digital holography in Heliotron J.	National Institute of Technology, Kagawa College	Hayato Kawazome	Shinichiro Kado
Proposal based project	ZE2025B-11	Development of RNA Editing Technology Targeting Energy-Producing Genes	Fukuoka University	Masatora Fukuda	Eiji Nakata
Proposal based project	ZE2025B-12	Fabrication of high-quality tin chalcogenide single-crystals and evaluation of their physical properties	Kyoto University	Sakiko Kawanishi	Yuhei Miyauchi
Proposal based project	ZE2025B-13	Enhancing optical thermometric sensitivity of single-walled carbon nanotubes by oxygen doping	Hyogo Prefectural Institute of Technology	Shun Aota	Yuhei Miyauchi
Proposal based project	ZE2025B-14	Synthesis and optical properties of semiconductor moiré superlattices	National Institute for Materials Science (NIMS)	Wenjin Zhang	Yuhei Miyauchi
Proposal based project	ZE2025B-15	Structural studies on hierarchical molecular architectures created in microfluidic device	Kyoto Prefectural University	Munenori Numata	Eiji Nakata
Proposal based project	ZE2025B-16	Generation and sustainment of high-energy density plasmas via the interaction between high power laser and structured medium	Kyoto University	Yasuaki Kishimoto	Hiroshi Sakaguchi
Proposal based project	ZE2025B-17	In-situ measurement of periodic nanostructures on semiconductor surface induced by mid-infrared free electron lasers	Tokai University/Kyoto University	Masaki Hashida	Heishun Zen
Proposal based project	ZE2025B-18	Development of an On-Site Simple and Rapid Detection Method for Virus and Viroid Infections.	Hirosaki University	Masaki Hagihara	Eiji Nakata

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Proposal based project	ZE2025B-19	Towards Zero-Emission Agriculture: Advanced Hyperspectral Imaging for Early Detection of Coffee Paramyothecium Leaf Blotch	Chiang Mai University, Thailand	Ratchadawan Cheewangkoon	Tomijiro Hara
Proposal based project	ZE2025B-20	AFM/EM imaging of intracellular metals with nanostructures constructed via signal amplification systems	National Institute of Technology, Hakodate College	Ippei Takashima	Eiji Nakata
Proposal based project	ZE2025B-21	Innovation of Decision-Making Processes in Transscience Issues Promoting Social Cohesion	University of the Ryukyus	Hiroto Iwakiri	Kazunori Morishita
Proposal based project	ZE2025B-22	An artificial-nucleic-acid probe for live-cell imaging of energy metabolism	Kumamoto University	Shinichi Sato	Eiji Nakata
Proposal based project	ZE2025B-23	Residential Microgrid Design and Management with Open-Source Tool and GIS	Department of Electrical and Energy Engineering, Institute of Technology of Cambodia	Vannak Vai	Hideaki Ohgaki
Proposal based project	ZE2025B-24	Efficient removal of infected layers by FEL irradiation of Gram-positive bacteria infected layers	Kanagawa Dental University	Toshizo Toyama	Heishun Zen
Proposal based project	ZE2025B-25	Study and experiment of the high-energy electron generation by the high-power laser-irradiation to the structured target	Kyoto University	Ryutaro Matsui	Kazunari Matsuda
Proposal based project	ZE2025B-26	Whole genome analysis and culture method development of Thai coffee leaf rust fungus	Pibulsongkram Rajabhat University, Thailand	Rampai Kodsueb	Yumiko Takatsuka
Proposal based project	ZE2025B-27	Developing the in-situ technique to measure the size of radioactive fragments during nanosecond pulsed laser decontamination	Japan Atomic Energy Agency (JAEA)	Atsushi Kosuge	Takashi Nakajima
Proposal based project	ZE2025B-28	High-resolution observation of exciton transport in atomically thin layered materials	University of Yamanashi	Masaru Sakai	Kazunari Matsuda
Proposal based project	ZE2025B-29	Application of Model Inclusive Learning to Fusion Plasma Science - Equilibrium Reconstruction of Plasma -	Doshisha University	Yasuaki Kuroe	Shinji Kobayashi
Proposal based project	ZE2025B-30	Analysis of direct energy conversion method using charge separation by cyclotron motion	Bauhutte Co. Ltd.	Nobuhiro Nishino	Shinichiro Kado

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Proposal based project	ZE2025B-31	Regulatory systems of biological functions elucidated through the transport mechanisms of polysulfide	Nara Women's University	Takayuki Shimizu	Eiji Nakata
Proposal based project	ZE2025B-32	Analysis of the Base Pair Opening/Closing Dynamics in DNA Triplex Structures under Molecular Crowding Conditions	Tokyo University of Pharmacy and Life Sciences	Tomoki Sakamoto	Yudai Yamaoki
Joint usage of facilities	ZE2025C-01	Study on the mechanism of direct conversion of cellulosic materials into glucose under microwave irradiation condition	National Institute for Fusion Science (NIFS)	Sadatsugu Takayama	Juro Yagi
Joint usage of facilities	ZE2025C-02	FEL irradiation-induced changes in biofilm formation by human resident bacteria.	Nihon University	Tetsuro Kono	Hideaki Ohgaki
Joint usage of facilities	ZE2025C-03	Elucidation of inhibitor action mechanism of Na ⁺ -transporting NADH-quinone oxidoreductase and development of new inhibitors	Kyoto University	Takahiro Masuya	Eiji Nakata
Joint usage of facilities	ZE2025C-04	Study on ultrafast measurement of relativistic electromagnetic fields	National Institute for Fusion Science (NIFS)	Masato Ota	Heishun Zen
Joint usage of facilities	ZE2025C-05	Regulatory systems of biological functions elucidated through the transport mechanisms of polysulfide	Nara Women's University	Takayuki Shimizu	Eiji Nakata
Joint usage of facilities	ZE2025C-06	Analysis of the Base Pair Opening/Closing Dynamics in DNA Triplex Structures under Molecular Crowding Conditions	Tokyo University of Pharmacy and Life Sciences	Tomoki Sakamoto	Yudai Yamaoki
Research meetings	ZE2025D-01	The 2nd KU-FEL User Meeting	Yamagata University	Mamoru Kitaura	Heishun Zen
Research meetings	ZE2025D-02	Biothermology Workshop 2025	University of Occupational and Environmental Health, Japan	Reiko Sakaguchi	Eiji Nakata
Research meetings	ZE2025D-03	Distributed Workshop on "Physics and control of non-linear and non-equilibrium plasma based on the concept of broad-band energy science"	Kyoto University	Yasuaki Kishimoto	Kazunari Matsuda
Research meetings	ZE2025D-04	22nd International Workshop on the Ceramic Breeder Blanket Interactions (CBBI-22)	National Institute for Fusion Science (NIFS)	Keisuke Mukai	Juro Yagi