

Categories	Reference number	Title of Research Project (English)	Affiliation	Principle Researcher	Key Person in IAE
Planned joint research	ZE31A-01	Improvement of Protonic Properties of Hydronium Solvate Ionic Liquids	Kyoto University	Atsushi Kitada	Masato Katahira
Planned joint research	ZE31A-02	Standardarization of Ion-Irradiation Field	Tohoku University	Ryuta Kasada	Kiyohiro Yabuuchi
Planned joint research	ZE31A-03	Study of formation process of solute clusters in stainless steel with ion irradiation	RINE/ University of Fukui	Ken-ichi Fukumoto	Kiyohiro Yabuuchi
Planned joint research	ZE31A-04	Development of an eco-conscious amination process for functionalization of cellulose biomass	Yokohama National University	Minoru Takeda	Masato Katahira
Planned joint research	ZE31A-05	Crystal Growth of Silicon from Liquid Si-Zn alloy for the Production of Solar-grade Silicon	Kyoto University	Kouji Yasuda	Toshiyuki Nohira
Planned joint research	ZE31A-06	Photoinduced electron-transfer reactions of metal complexes as photosensitizers bound to the active site of enzyme	Nara Women's University	Hiroshi Takashima	Eiji Nakata
Planned joint research	ZE31A-07	Development of anode/electrolyte interface for advanced Na-ion battery	Tottori University	Hiroki Sakaguchi	Toshiyuki Nohira
Planned joint research	ZE31A-08	Study on development of compound-based anode for K-ion battery and on compatibility with molten salt electrolyte	Tottori University	Yasuhiro Domi	Takayuki Yamamoto
Planned joint research	ZE31A-09	Effects of Magnetic Field and Metal Nanoparticles on Photoproperties of Dye-Metal Nanoparticle Composite Films	Sojo University	Hiroaki Yonemura	Hiroshi Sakaguchi

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Planned joint research	ZE31A-10	Design and development of functional organic materials for energy conservation-directed light-emitting devices	Kyoto Institute of Technology	Masaki Shimizu	Hiroshi Sakaguchi
Planned joint research	ZE31A-11	Development of a compact THz laser and its applications using energy-chirping-cell attached rf electron gun	Photon Science Center, The University of Tokyo	Kazuyuki Sakaue	Heishun Zen
Planned joint research	ZE31A-12	Development of hyper-efficient degradation method of biomass-related compounds by using mid-infrared free electron laser	IR-FEL Research Center ,Tokyo University of Science	Takayasu Kawasaki	Heishun Zen
Planned joint research	ZE31A-13	Development of thermal diffusivity evaluation method using miniature laminated specimens.	Osaka Prefecture University	Masafumi Akiyoshi	Tatsuya Hinoki
Planned joint research	ZE31A-14	Valence electric structures of oxidation resistant beryllides	National Institutes for Quantum and Radiological Science and Technology	Masaru Nakamichi	Keisuke Mukai
Planned joint research	ZE31A-15	Feasibility study and development of novel technique of measuring tranverse velocity field using optical vortex emitted from photonic crystal laser	Kyoto Institute of Technology	Haruhiko Himura	Shinichiro Kado
Planned joint research	ZE31A-16	Stability of oxide particles in oxide dispersion strengthened (ODS) alloys under irradiation	Hokkaido University	Naoko OONO-HORI	Kiyohiro Yabuuchi
Planned joint research	ZE31A-17	Mode-selective phonon excitation in semiconductors of energy functionality with mid-infrared free-electron laser	Kyoto University	Kan Hachiya	Hideaki Ohgaki
Planned joint research	ZE31A-18	Photoenergy Conversion System Based on Hybrid DNA/Inorganic Nanomaterials	University of Hyogo	Kazushige Yamana	Takashi Morii

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Planned joint research	ZE31A-19	Development of radiation measurement method for the detection of special nuclear materials with IEC device	Institute for Integrated Radiation and Nuclear Science, Kyoto University	Tsuyoshi Misawa	Satoshi Konishi
Planned joint research	ZE31A-20	Electrodeposition of Si films in molten salts for low-cost manufacturing of solar cells	The University of Tokyo	Xiao Yang	Toshiyuki Nohira
Planned joint research	ZE31A-21	Analysis of transition from axisymmetric torus to helical axis toroidal plasma	Kyoto Institute of Technology	Akio Sanpei	Kazunobu Nagasaki
Planned joint research	ZE31A-22	Synergistic effects of electronic excitation and displacement damage in oxide/nitride ceramics	Kyushu university	Kazuhiro Yasuda	Kiyohiro Yabuuchi
Planned joint research	ZE31A-23	Combined effect of high-temperature irradiation with heavy ion and helium on hydrogen permeation behavior in functional coating for fusion reactor blanket	Shizuoka University	Takumi Chikada	Kiyohiro Yabuuchi
Planned joint research	ZE31A-24	Valence electron structure of Li-containing ceramic breeder for fusion application	Hirosaki University	Kazuya Sasaki	Keisuke Mukai
Planned joint research	ZE31A-25	Influence of alloying elements on radiation damage formation and hydrogen isotope trapping in tungsten	Hydrogen Isotope Research Center, Organization for Promotion of Research, University of Toyama	Yuji Hatano	Tatsuya Hinoki
Planned joint research	ZE31A-26	Development of Organic-Inorganic Hybrid Film toward High-Performance Organic Thin-Film Solar Cells	The University of Shiga Prefecture	Tsuyoshi Akiyama	Hiroshi Sakaguchi
Planned joint research	ZE31A-27	Development of high ductile ODS ferritic steel for advanced energy system	Kurume College	Noriyuki Iwata	Kiyohiro Yabuuchi

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Planned joint research	ZE31A-28	High-Fluence Irradiation Behavior of Reduced Activation Fusion Reactor Materials	National Institutes for Quantum and Radiological Science and Technology	Hiroyasu Tanigawa	Tatsuya Hinoki
Planned joint research	ZE31A-29	Modeling and Experimental Study on Damage Rate Effects on Bubbles/Voids Formation in Fusion Reactor Structural Materials	University of California Santa Barbara	Takuya Yamamoto	Kiyohiro Yabuuchi
Planned joint research	ZE31A-30	Effect of high energy He ion implantation on hydrogen isotope behavior in tungsten	Shizuoka University	Yasuhisa Oya	Tatsuya Hinoki
Planned joint research	ZE31A-31	Hydrogen Isotope Retention in Tungsten by Continual Pulsed Plasma Irradiation in Fusion Reactor	Osaka University	Yoshio Ueda	Tatsuya Hinoki
Planned joint research	ZE31A-32	Study of high energy particle irradiation effects on Tungsten materials for fusion applications	Tohoku University	Akira Hasegawa	Kiyohiro Yabuuchi
Planned joint research	ZE31A-33	The role of lattice defects in ceramics on the corrosion	Tohoku University	Sosuke Kondo	Tatsuya Hinoki
Planned joint research	ZE31A-34	Evaluation of the stability of irradiation induced point defect clusters during annealing	Fukushima college	Shiro Jitsukawa	Tatsuya Hinoki
Planned joint research	ZE31A-35	Strengthening and improvement of ductility by precipitation control for low-activation vanadium alloy for fusion reactors	National Institute for Fusion Science	Takuya Nagasaka	Kiyohiro Yabuuchi
Planned joint research	ZE31A-36	Maximizing energy production from a household grid-connected PV system in Phnom Pehh, Cambodia	Institute of Technology of Cambodia	Vannak Vai	Hideaki Ohgaki

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Planned joint research	ZE31A-37	Interaction analysis between cellulase carbohydrate-binding module and lignin by ultra-high sensitivity NMR for biorefinery	Kyoto University	Takashi Watanabe	Masato Katahira
Planned joint research	ZE31A-38	Elucidation of exciton formation and dissociation processes exclusively in polymer crystalline domain, featuring high-degree of molecular ordering in ultrafast time-scale	Kyoto University	Jaehong Park	Kazunari Matsuda
Proposal based project	ZE31B-01	Development of a system that induces Ribosomal Shunting	Kumamoto University	Yousuke Katsuda	Takashi Morii
Proposal based project	ZE31B-02	Study of Hydrogen Isotope Separation Technology by Molten Salt	Hokkaido University	Hisayoshi Matsushima	Toshiyuki Nohira
Proposal based project	ZE31B-03	Identification and characterization of novel antimicrobial cyclic lipopeptides derived from Bacillus sp.	Tokyo University of Agriculture	Kenji Yokota	Tomijiro Hara
Proposal based project	ZE31B-04	Thermal properties of sugar alcohol phase change material	Kobe University	Makoto Shibahara	Tatsuya Hinoki
Proposal based project	ZE31B-05	Influence of Wire Spacer on Natural Convection Heat Transfer from Vertical Rod Bundle in Liquid Metal (Part 2)	Kobe University	Koichi Hata	Takashi Nakajima
Proposal based project	ZE31B-06	Analysis of high-speed camera data based on magnetic flux information	Hiroshima University	Nobuhiro Nishino	Hiroyuki Okada
Proposal based project	ZE31B-07	Highly efficient photochemical reactions induced by optimal laser pulses	Tohoku University	Yukiyoshi Ohtsuki	Takashi Nakajima

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Proposal based project	ZE31B-08	Effect of the orientation of poly(lactic acid)/zinc oxide electrospun fibers on the antimicrobial properties	Faculty of science at Sriracha, Kasetsart University, Thailand	Tongsai Jamnongkan	Tomijiro Hara
Proposal based project	ZE31B-09	Development of functional peptides and RNAs by using NMR	Chiba Institute of Technology	Taiichi Sakamoto	Takashi Nagata
Proposal based project	ZE31B-10	Higher vibronic excited states of bridging cyanides in prussian blue realized by ultra short pulse train from a mid infrared free electron laer	Yamagata University	Mamoru Kitaura	Heishun Zen
Proposal based project	ZE31B-11	Development of HeI image reconstruction technique using neural network in Heliotoron J	Kagawa College	Hayato Kawazome	Shinichiro Kado
Proposal based project	ZE31B-12	Behavior of hydrogen on the surface of fusion reactor materials by computer simulations.	University of the Ryukyus	Hiroto Iwakiri	Kazunori Morishita
Proposal based project	ZE31B-13	Study of electron bunch length by measuring coherent synchrotron radiation with narrow-band detectors	National Institute of Advanced Industrial Science and Tecnology	Norihiro Sei	Hideaki Ohgaki
Proposal based project	ZE31B-14	Development of single-electron irradiation technique for microscopic track structure study	Kyushu university	Yusuke Uozumi	Hideaki Ohgaki
Proposal based project	ZE31B-15	Observation of fine temperature structure by using digital ECE	Research Institute for Applied Mechanics , Kyushu university	Shigeru Inagaki	Kazunobu Nagasaki
Proposal based project	ZE31B-16	Analysis of radiation indudced nano-clustesr in RPV steels	Research Institute for Applied Mechanics , Kyushu university	Hideo Watanabe	Kiyohiro Yabuuchi

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Proposal based project	ZE31B-17	Analysis of reaction mechanism of haloacid dehalogenase	Nagahama Institute of Bio-Science and Technology	Takashi Nakamura	Takashi Morii
Proposal based project	ZE31B-18	Structural studies on hierarchical molecular architectures created in microfluidic device	Kyoto Prefectural University	Munenori Numata	Eiji Nakata
Proposal based project	ZE31B-19	R&D of BN/CNTs heat dissipation sheets as heat transfer	National Institute for Materials Science	Kazuya Shimoda	Tatsuya Hinoki
Proposal based project	ZE31B-20	Development of an RNA editing technology for regulating an intracellular energy production system.	Fukuoka University	Masatora Fukuda	Takashi Morii
Proposal based project	ZE31B-21	Study on the microbial community structure in medical plant and its application to biological pesticides	Shimane University	Makoto Ueno	Tomijiro Hara
Proposal based project	ZE31B-22	Cooperative effects of pigmented and non-pigmented Bacillus spores on growth, quality and health of shrimp	VNU University of Science, Vietnam National University, Hanoi	Anh Thi Van Nguyen	Yumiko Takatsuka
Proposal based project	ZE31B-23	Production and transport control of reactive radicals with atmospheric pressure plasma	Osaka Prefecture University	Hiroto Matsuura	Shinichiro Kado
Proposal based project	ZE31B-24	Analysis of the mechanism of ultrasound-enhanced cellular internalization of bioactive molecules	Okayama University	Takashi Ohtsuki	Eiji Nakata
Proposal based project	ZE31B-25	Nondestructive evaluation of residual elastic strain on non-irradiated areas by defects caused by ion irradiation	Hokkaido University	Tamaki Shibayama	Tatsuya Hinoki

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Proposal based project	ZE31B-26	Clarification on retention processes of He and H in ion irradiated pyrochlore oxides	Meijo University	Bun Tsuchiya	Tatsuya Hinoki
Proposal based project	ZE31B-27	Measurement of the ablation threshold fluence of materials interacted with intense THz waves and mid-infrared laser	Kyoto University	Masaki Hashida	Heishun Zen
Proposal based project	ZE31B-28	Effect of irradiation on explosion bonded Cu/steel joint	University of Science and Technology Beijing	Somei Ohnuki	Kiyohiro Yabuuchi
Proposal based project	ZE31B-29	Effect of hydrogen on surface hardness in ion-irradiated tungsten	Kagoshima University	Koichi Sato	Kiyohiro Yabuuchi
Proposal based project	ZE31B-30	Staple Antisense-Induced RNA Folding for Specific Gene Regulation	Hirosaki University	Masaki Hagihara	Takashi Morii
Proposal based project	ZE31B-31	Development of quadruplex-based gene expression regulation method	Yokohama National University	Yoichiro Tanaka	Takashi Nagata
Proposal based project	ZE31B-32	Fabrication of 2D-3D hybrid quantum well structure towards energy conversion devices	Ritsumeikan University	Shinichiro Mouri	Kazunari Matsuda
Proposal based project	ZE31B-33	Physical properties of heterostructures of 2D materials	University of Tsukuba	Susumu Okada	Kazunari Matsuda
Proposal based project	ZE31B-34	Supramolecular assembling regulation of bacterial cell division protein FtsZ on DNA nanostructures	Osaka University	Akira Onoda	Eiji Nakata

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Proposal based project	ZE31B-35	Development of intracellular thermosensors for the understanding of energy production in mitochondria	Kyoto University	Reiko Sakaguchi	Takashi Morii
Proposal based project	ZE31B-36	Spatially resolved measurement of helium atom 23S-23P emission line intensity using near-infrared Zeeman spectroscopy	Kyoto University	Taiichi Shikama	Shinichiro Kado
Proposal based project	ZE31B-37	Research for improving the efficiency of hydrogen release from titanium hydride particles	Akashi College	Yoshihiro Kajimura	Juro Yagi
Proposal based project	ZE31B-38	A small-molecule-based technology for live-cell imaging of energy metabolism.	Kyoto University	Shinichi Sato	Takashi Morii
Proposal based project	ZE31B-39	Real-time NMR analysis of the continuous degradation process of azo dyes using azoreductase in cooperation with the NADPH regeneration system.	Health Sciences University of Hokkaido	Masataka Horiuchi	Takashi Nagata
Proposal based project	ZE31B-40	Digital Imaging Spectrometry for Visible Spetra in Fusion Plasma Based on the Atomic/Molecular Process	Institute of Electro-Magnetic Application	Masaru Irie	Shinichiro Kado
Proposal based project	ZE31B-41	Nanopore formation by electrochemical dissolution of SiC caused by selective activation of lattice vibration	Kyoto University	Kazuhiro Fukami	Masahiro Kinoshita
Proposal based project	ZE31B-42	Study of nanomaterials toward efficient and high-performance energy conversion	Hosei University	Satoru Konabe	Yuhei Miyauchi
Proposal based project	ZE31B-43	Study of high performance plasmas using neutral beam injection in advanced heliotorn configuration	University of Tsukuba	Masayuki Yoshikawa	Shinji Kobayashi

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Proposal based project	ZE31B-44	Modeling and simulation study on radiation damage of reduced activation ferritic/martensitic steel for fusion application	National Institutes for Quantum and Radiological Science and Technology	Yoshiyuki Watanabe	Kazunori Morishita
Proposal based project	ZE31B-45	Design and construction of external stimuli-responsive protein materials	Kyoto University	Yuta Suzuki	Eiji Nakata
Proposal based project	ZE31B-46	Evaluation of effect of condensation heat transfer on wall temperature under high pressure conditions	Hokkaido University	Yasunori Yamamoto	Kazunori Morishita
Proposal based project	ZE31B-47	Mechanical Property of Ion-irradiated RAFMs by Ultra Micro-tensile Test	National Institutes for Quantum and Radiological Science and Technology	Masami Ando	Kiyohiro Yabuuchi
Proposal based project	ZE31B-48	Study on Rural Electrification by Renewable Energy in Sarawak and it's Impact on QOL	University of Malaya, Malaysia	Nasrudin Abd Rahim	Hideaki Ohgaki
Proposal based project	ZE31B-49	Generation of high energy density plasma state by the interaction between highly ordered silicon rod array target and high power laser	Kyoto University	Yasuaki Kishimoto	Hiroshi Sakaguchi
Proposal based project	ZE31B-50	Development of multi-channel spectroscopic system for turbulence measurement	Kyushu university	Akihide Fujisawa	Shinsuke Ohshima
Proposal based project	ZE31B-51	Iontronic devices using dynamic heterogeneous phase	University of the Ryukyus	Nobuaki Yonekura	Takashi Nakajima

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Proposal based project	ZE31B-52	Development of reduced activation high entropy materials for high energy reactor	Hokkaido University	Naoyuki Hashimoto	Kiyohiro Yabuuchi
Joint usage of facilities	ZE31C-01	Development of novel laser nanoprocessing with Bessel-like few-cycle laser pulses	Tokyo University of Agriculture and Technology	Godai Miyaji	Kazunari Matsuda
Joint usage of facilities	ZE31C-02	Exploitaion of Lignin- and Cellulose-Binding Peptide Library toward Biorefinery of Wood Baiomass	Kyoto University	Hikaru Takaya	Takashi Morii
Joint usage of facilities	ZE31C-03	Search for nonlinear effects of solid using KU-FEL	Osaka University/ISIR	Akinori Irizawa	Heishun Zen
Joint usage of facilities	ZE31C-04	Lithium distribution analysis for the corrosion of liquid breeding material using soft X-ray spectrometer	National Institute for Fusion Science	Teruya Tanaka	Juro Yagi
Joint usage of facilities	ZE31C-05	Excess Capacity and Reaction Mechanism of Fe ₂ O ₃ -Al ₂ O ₃ Solid Solution Anode at the Al-rich Region	Kyoto University	Shigeomi Takai	Takashi Morii
Joint usage of facilities	ZE31C-06	Study on emission process of scintillation material using the one electron beam and evaluation of scintillation properties for darkmater search	Tohoku University	Shunsuke Kurosawa	Hideaki Ohgaki
Joint usage of facilities	ZE31C-07	Statistical analysis on edge turbulence fluctuation data in a toroidal plasma	Research Institute for Applied Mechanics ,Kyushu university	Yoshihiko Nagashima	Shinsuke Ohshima
Joint usage of facilities	ZE31C-08	Artificial reconstruction of cyanobacterial phycobilisome.	Tokyo University of Agriculture	Satoru Watanabe	Eiji Nakata

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Joint usage of facilities	ZE31C-09	Bio-Physical Reactions of Crayfish's Compound Eye Stimulated by Mid-Infrared Radiation of Free-Electron Lasers	Nihon University	Fumio Shishikura	Hideaki Ohgaki
Joint usage of facilities	ZE31C-10	Saturation of an infrared semiconductor detector and pulse structure of a light source	Japan Synchrotron Radiation Insitute	Yuka Ikemoto	Heishun Zen
Joint usage of facilities	ZE31C-11	Boundary diagnostics using field corresponding double probe in Heriotron J	JAEA	Kazuya Uehara	Shinsuke Ohshima
Joint usage of facilities	ZE31C-12	Study for polarization control of coherent THz undulator radiation	Tohoku University	Shigeru Kashiwagi	Heishun Zen
Joint usage of facilities	ZE31C-13	Enhancement of carbon dioxide gas fixation in the atmosphere by promoting shell formation of snails (gastropoda)	Nihon University	Tetsuro Kono	Hideaki Ohgaki
Joint usage of facilities	ZE31C-14	Determination of the free energy of the late-blooming phase	Kumamoto University	Yoshitaka Matsukawa	Kiyohiro Yabuuchi
Joint usage of facilities	ZE31C-15	TEM-STEM Characterization of Oxide Nanoparticles in ODS Steels for advanced electric power plants	School of Materials Science and Engineering, Chongqing University	Peng DOU	Kiyohiro Yabuuchi
Joint usage of facilities	ZE31C-16	The ion irradiation damage of 3C-SiC	Southwest University of Science and Technology	Bingsheng Li	Kiyohiro Yabuuchi
Research meetings	ZE31D-01	International symposium of Biofunctional Chemistry: Towards the understanding of biological energy system	Kyoto University	Reiko Sakaguchi	Takashi Morii