Recruitment Field for Researcher

101	(1) Theme and Contents	**Measurement, Anlysis and Simulation Technologies for FDNPS Decommissioning** You will contribute to building the scientific foundation that supports the decommissioning of the Fukushima Daiichi Nuclear Power Station (FDNPS). For this purpose, you will be conducting comprehensive measurements and analyses of fuel debris, structures, waste, and the environment, and using simulations to clarify the various phenomena that occur within these processes. The work spans three interconnected areas: (1) Characterization and behavior analysis of fuel debris, structural materials, and solid waste; (2) Dust behavior analysis in work environments and treatment processes; (3) Advanced analysis, inspection and simulation technologies for remote and autonomous operations. You will combine a wide range of expertise, including physics, chemistry, measurement/analysis, materials, and simulation, to conduct research and development of technologies that can be implemented at the Fukushima Daiichi Nuclear Power Plant site and in the decommissioning process.
	(2) The ideal type of human resources being sought	We welcome applicants with strengths in any of the following: physical chemistry, radiochemistry, measurement technologies, chemical analysis, fine particle and powder mechanics, material properties, imaging, or computational modeling. Candidates should be comfortable working across disciplinary boundaries and collaborating with diverse teams. A positive attitude toward field tests and research activities connected directly to real decommissioning operations is highly expected.
	(3) The attraction of our department	This role provides a rare opportunity to conduct research directly linked to one of the world's most challenging and socially significant engineering projects. You will work with leading universities, research institutes, and industry partners in Japan and abroad. The position offers an excellent environment for developing broad and internationally relevant expertise. Research outcomes can have immediate practical impact on operational safety and efficiency at Fukushima Daiichi, enabling you to experience real-world implementation of your work.
	(4) Branches of knowledge related to this theme	(Major Category) Energy Engineering (Subcategory) Nuclear engineering (Major Category) Nanotechnology/Materials (Subcategory) Metallic material properties (Major Category) Manufacturing Technology (Subcategory) Control and system engineering (Major Category) Informatics (Subcategory) Robotics and intelligent system, Software
	(5) Place of employment (tentative)	Fukushima (Tomioka town), Ibaraki (Tokai village)
	(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027
	(7) Contact person about the theme	(Name) Yukihisa SANADA (Department) Collaborative Laboratories for Advanced Decommissioning Science (Position) Group Leader (E-mail) jaea-jinji2027@jaea.go.jp
	(8) Related HP	https://clads.jaea.go.jp/en/

Recruitment Field for Researcher

102	(1) Theme and Contents	**Safety Research on Risk Assessment for Nuclear Installations** Nuclear Safety Research Center conducts multifaceted and comprehensive research on nuclear facilities such as light water reactors and nuclear fuel reprocessing plants. This research includes understanding thermal-hydraulic phenomena during accidents, evaluating the integrity of fuel and structural materials, safety assessment during accidents at nuclear fuel cycle facilities, and providing technical support for IAEA safeguards activities. Considering current situation, our research focuses on long-term operation, promotion of isk-informed applications, environmental safety associated with decommissioning, and optimization of measures nuclear or radiological emergencies.			
	(2) The ideal type of human resources being sought	Persons who are motivated by scientific interests on nuclear safety research field.			
	(3) The attraction of our department	Nuclear Safety Research Center aims to be trusted by society by developing human resources of specialists who are able to respond to the social needs such as nuclear safety and nuclear emergency preparedness. The center offers a wide range of research opportunities, such as activities using large experimental facilities, conducting elemental experiments, developintg codes, etc. Every researcher in the center enjoys the freedom to utilize his/her own personality and strengths in the wide variety of research fields. The center encourages researchers to be autonomous, allows them to propose and expand research even early in their careers. In addition, through joint researches with utility companies, manufacturers and/or foreign organizations, they will be able to tackle issues in the worldwide nuclear indsutry and to gain knowledge by studying in foreign research institutes or universities.			
	(4) Branches of knowledge related to this theme	(Major Category)	Energy Engineering	(Subcategory)	Nuclear engineering
		(Major Category)	Manufacturing Technology	(Subcategory)	Mechanics of materials and materials, Fluid engineering, Control and system engineering
		(Major Category)	Social Infrastructure	(Subcategory)	Structure engineering and earthquake engineering, Safety engineering, Disaster prevention engineering
	(5) Place of employment (tentative)	Ibaraki (Tokai village)			
	(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027			
	(7) Contact person about the theme	(Name)	HATA Kuniki		
		(Department)	Research Planning and Co-ordination Office, Nuclear Safety Research Center		
		(Position)	Director		
		(E-mail)	jaea-jinji2027@jaea.go.jp		
	(8) Related HP	https://www.jaea.go.jp/04/anzen/			

Recruitment Field for Researcher

103	(1) Theme and Contents	**Development of new technology to realize Nuclear x Renewable** We pursue the vision of “Nuclear × Renewable,” aiming for unprecedented utilization of nuclear energy and conducting research and development with a view toward social implementation in renewable energy, space, medicine, and industry. Specifically, our R&D focuses on three pillars: the development of large-scale energy storage systems using uranium (renewable energy), the development of RI heat sources for semi-permanent batteries (space), and the recycling of radioactive waste into resources (medicine and industry). In addition, we oversee these three R&D projects, engaging in management tasks such as progress monitoring, stakeholder identification, and coordination.			
	(2) The ideal type of human resources being sought	The candidate must be willing and able to work on research and technological development regardless of his/her field of study. Experience and enthusiasm for research and development focused on experimental work are particularly desirable. Additionally, candidates who are motivated to take on roles in project management, technical sales, and technology transfer in the future are also preferred.			
	(3) The attraction of our department	In order to realize our vision of “Nuclear x Renewable”, we will develop cutting-edge technologies that represent our organization to open the way to the future of nuclear energy.			
	(4) Branches of knowledge related to this theme	(Major Category)	Life Science	(Subcategory)	Hygiene and public health: including laboratory approach
		(Major Category)	Informatics	(Subcategory)	Mechanics and mechatronics
		(Major Category)	Environmental science	(Subcategory)	Sound material-cycle social systems
		(Major Category)	Nanotechnology/Materials	(Subcategory)	Green sustainable chemistry and environmental chemistry
		(Major Category)	Manufacturing Technology	(Subcategory)	Catalyst and resource chemical process
	(5) Place of employment (tentative)	Ibaraki (Tokai village)			
	(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027			
	(7) Contact person about the theme	(Name)	Takanori SUGAWARA		
		(Department)	NXR Development Center		
		(Position)	Deputy Director		
		(E-mail)	jaea-jinji2027@jaea.go.jp		
	(8) Related HP	https://www.jaea.go.jp/04/nxr/en/index.html			

Recruitment Field for Researcher

104	(1) Theme and Contents	**Research on Deuterium Enrichment Technology** Our group aims to develop technologies that enable the low-cost, large-scale production of deuterium, an isotope of hydrogen, using electrochemical devices. Deuterium (D), which is present only in trace amounts in natural water, is an important substance used in semiconductors, OLEDs, optical fibers, pharmaceutical development, and as a potential fuel for future fusion energy. However, almost all deuterium used in Japan is currently imported, which poses serious challenges in terms of price volatility and supply risk. In our group, we are working to establish domestically produced deuterium technologies that are both low-cost and suitable for mass production, using polymer electrolyte membrane (PEM)–based electrochemical devices. We conduct integrated research and development from fundamental studies to applied research with an eye toward practical implementation. The main duties include: ・Development of innovative water electrolysis technologies that enable simultaneous production of hydrogen and deuterium, contributing to carbon-neutral energy systems ・Design and evaluation of efficient deuterium enrichment processes using water electrolysis technologies ・Design and development of electrode catalysts optimized for efficient deuterium enrichment ・Characterization of the physical and electrochemical properties of developed catalysts and electrolysis cells, and elucidation of the mechanisms of deuterium enrichment
	(2) The ideal type of human resources being sought	We do not require any specific expertise or knowledge level at the time of joining. We welcome highly motivated individuals who are interested in research and development in either applied or fundamental science (or both), who are curious about research in general beyond this specific theme, who would like to tackle their own original topics and make an impact, who are eager to take on new challenges, who are interested in carbon neutrality, the SDGs, and energy issues, or who wish to contribute to Japanese industry. Questions and lab visits are always welcome, so please feel free to contact us.
	(3) The attraction of our department	The distinctive feature of our lab is that we integrate knowledge and technologies from various fields, such as chemistry, physics, and engineering. This environment allows you to acquire a wide range of skills, from fundamental science to practical applications in areas such as material separation and energy conversion. For example, you can gain experience in carbon-neutral technologies such as water electrolysis and fuel cells, in the design and mechanistic analysis of catalyst materials that support these technologies, and in surface analysis techniques that are essential for understanding reaction mechanisms. These are all part of the latest scientific knowledge and technology. Furthermore, we place strong emphasis on your career development through the above-mentioned activities. You don't need to worry if you lack specialized knowledge when you join. The lab leader has extensive teaching experience at the university level and has supervised many master's and doctoral students, providing careful guidance and support tailored to each individual's pace. We offer practical support ranging from basic skills, such as scientific writing and presentation techniques, to mentoring for conference presentations and paper writing, depending on your needs. If you are interested in research, we would be delighted to have you join us in shaping the future together.
	(4) Branches of knowledge related to this theme	(Major Category) Nanotechnology/Materials (Subcategory) Applied condensed matter physics, Green sustainable chemistry and environmental chemistry, Energy chemistry
	(5) Place of employment (tentative)	Ibaraki (Tokai village)
	(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027
	(7) Contact person about the theme	(Name) Satoshi Yasuda (Department) Advanced Science Research Center (Position) Principal Researcher, Pioneer Lab. Lab leader (E-mail) jaea-jinji2027@jaea.go.jp
	(8) Related HP	https://asrc.jaea.go.jp/soshiki/gr/Nanoscale-gr/Nanomaterial-team/index_e.html

Recruitment Field for Researcher

105	(1) Theme and Contents	**Advanced materials characterization and synchrotron-based measurement techniques for nuclear decommissioning** To support the safe and steady decommissioning of the Fukushima Daiichi Nuclear Power Station, it is essential to precisely characterize the property changes of materials such as fuel debris, structural components, and concrete that experienced extreme conditions. Using high-precision structural and chemical-state analyses at large synchrotron radistion facility (SPring-8) and other facilities, this research seeks to clarify the long-term stability and reaction mechanisms of these materials and provide scientific insights for future waste treatment and disposal strategies. The project also advances synchrotron analytical techniques and develops new measurement methods to enhance long-term safety assessment.
	(2) The ideal type of human resources being sought	Candidates with an interest in materials science or synchrotron-based measurement techniques, and with a motivation to contribute to the societal mission of nuclear decommissioning, are encouraged to apply. No specific academic background is required. Curiosity, creativity, and a flexible, forward-looking approach to developing new technologies are highly valued.
	(3) The attraction of our department	This research provides opportunities to investigate a wide range of materials relevant to decommissioning using state-of-the-art synchrotron-based analytical techniques. The outcomes contribute directly to improving the safety and long-term planning of decommissioning activities, supporting a national project from scientific and technical perspectives. The work also involves advancing measurement methodologies, enabling professional growth in both materials science and photon-based analytical technologies.
	(4) Branches of knowledge related to this theme	(Major Category) Nanotechnology/Materials (Subcategory) Structural materials and functional materials (Major Category) Energy Engineering (Subcategory) Nuclear engineering, Quantum beam science
	(5) Place of employment (tentative)	Hyogo(Sayo Town)
	(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027
	(7) Contact person about the theme	(Name) Dr. Masaaki KOBATA (Department) Synchrotron Radiation Research Group, Materials Sciences Research Center, Nuclear Science Research Institute (Position) Assistant Principal Engineer (E-mail) jaea-jinji2027@jaea.go.jp
	(8) Related HP	https://msrc.jaea.go.jp/en/index.html

Recruitment Field for Researcher

106	(1) Theme and Contents	**Research on Fabrication, Management, Storage, and Enhancement of Target Vessels for the J-PARC Spallation Neutron Source** The Spallation Neutron Source at J-PARC provides world-class pulsed neutron beams using a proton beam accelerated by a high-intensity proton accelerator. It supplies these beams to neutron instruments, contributing to cutting-edge research across broad fields of materials science and life sciences. This theme involves research activities related to the fabrication of replacement devices, such as mercury target vessels, management during operation including mercury circulation systems, storage of this devices, and enhancement efforts such as extending operation life and improving durability. Specifically, you will engage in one or more of the following: ordering the manufacture of target vessels and other devices; performing structural and flow analysis related to manufacturing and enhancement; conducting related maintenance; managing equipment upkeep,device disposal, operation, and troubleshooting; planning replacements and managing operations; while simultaneously conducting research and development on target vessels with extended lifetime and high durability.
	(2) The ideal type of human resources being sought	This spallation neutron source requires expertise in radiation-related knowledge and consists of diverse equipment. Beyond specialized knowledge of the target equipment, familiarity with other systems is essential. We seek individuals with a spirit of self-directed inquiry, a proactive desire to incorporate new knowledge, and the ability to approach their duties with seriousness and enthusiasm.
	(3) The attraction of our department	Due to its unique nature, this spallation neutron source involves significant international collaboration, offering numerous opportunities for global engagement. Beyond specialized expertise, it provides frequent exposure to knowledge across diverse fields. We actively support the acquisition of necessary qualifications and skills required for the job.
	(4) Branches of knowledge related to this theme	(Major Category) Nanotechnology/Materials (Subcategory) Metallic material properties (Major Category) Energy Engineering (Subcategory) Nuclear engineering (Major Category) Manufacturing Technology (Subcategory) Mechanics of materials and materials, Fluid engineering, Thermal engineering
	(5) Place of employment (tentative)	Ibaraki (Tokai village)
	(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027
	(7) Contact person about the theme	(Name) Masahide HARADA (Department) Neutron Source Section, Mateials and Life Science Devision, J-PARC Center (Position) Section Leader (E-mail) jaea-jinji2027@jaea.go.jp
	(8) Related HP	https://mlfinfo.jp/en/facility/sources.html#23072ac4

Recruitment Field for Researcher

107

(1) Theme and Contents	**Research and Development of MOX Fuel Fabrication Technology and Backend Technologies for the Realization of the Nuclear Fuel Cycle** JAEA's vision is "Exploring the Future through Nuclear and Renewable Synergy." We focus on R&D to enhance nuclear energy sustainability through the nuclear fuel cycle—processing used nuclear fuel for reuse in power plants. Our research excludes reactor technology, concentrating on fuel fabrication and back-end areas such as reprocessing and waste treatment. We also design, upgrade, and maintain essential R&D equipment through hands-on work, creating valuable results and innovations.. The specific research areas are as follows: ○ MOX Fuel Fabrication R&Ds to establish oxide fuel fabrication technology for fast reactors, including characterization of oxide powder materials and development of new fabrication methods. ○ Reprocessing Equipment for Fast Reactor Cycle R&Ds to improve and develop fuel reprocessing advanced equipments for practical application with considerations for safety and remote operability. ○ Treatment of Low-Level Radioactive Waste R&Ds to establish treatment technologies for low-level waste, including stabilization and solidification, evaluation of hydrogen gas behavior in TRU waste, and technologies contributing to Fukushima decommissioning process.
(2) The ideal type of human resources being sought	Individuals who are passionate and motivated to take on challenging research themes, capable of identifying engineering issues and working proactively to solve them. Those who can deliver results through conducting experiments and developing or improving equipment. People who can communicate effectively with domestic and international researchers and diverse specialists, and collaborate to address challenges.
(3) The attraction of our department	In R&D on fast reactor fuel, we carry out projects based on the government's "Strategic Roadmap" for the fast reactor demonstration. Fast reactors are an important technology that contributes to energy self-sufficiency and the reduction of radioactive waste. Establishing a stable fuel fabrication technology is research and development directly linked to solving national challenges. In addition, developping equipment for practical implementation of advanced reprocessing technology is a globally challenging theme, led by JAEA. Large-scale research to develop engineering equipment and demonstrate effectiveness through testing is a unique and rewarding aspect of working at a national research institute. Furthermore, R&D on radioactive waste treatment technologies involves collaboration with domestic and international organizations, tackling a wide range of themes directly linked to solving critical issues—making this work highly rewarding. Moreover, we are exploring the application of generative AI and robotics, providing an environment where flexible and innovative thinking can thrive. Our workplace is vibrant, with many young researchers and active participation from women and international staff. Beyond writing papers, you will have the opportunity to engage in hands-on experiments, another attractive feature of this position.
(4) Branches of knowledge related to this theme	(Major Category) Manufacturing Technology (Subcategory) Mechanics of materials and materials, Control and system engineering, Design engineering (Major Category) Environmental science (Subcategory) Environmental load reduction and remediation, Environmental materials and recycle technology (Major Category) Nanotechnology/Materials (Subcategory) Inorganic materials and properties, Structural materials and functional materials, Green sustainable chemistry and environmental chemistry, Polymer materials, Inorganic compounds and inorganic materials chemistry
(5) Place of employment (tentative)	Ibaraki (Tokai village)
(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027
(7) Contact person about the theme	(Name) Kazunori Nomura (Department) Nuclear Fuel Cycle Engineering Laboratories (Position) Deputy Director General (E-mail) ncl-saiyo@jaea.go.jp
(8) Related HP	

Recruitment Field for Researcher

108	(1) Theme and Contents	**R&Ds on applied laser technologies for decommissioning** Our main mission is the research and development of laser processing technologies that can be applied to the decommissioning of nuclear reactor facilities, such as laser cutting and laser decontamination. In addition to experiments, we also develop numerical analysis techniques for laser processing, and by combining experiments and analysis, we understand the various phenomena that occur during laser irradiation and conduct research to deside appropriate laser irradiation conditions for various laser processing for metals and other materials. On the other hand, laser processing is a technology widely used in many kinds of industrial fields, and in order to enable the technology developed at our institute to be used in various fields, we are conducting research into its application not only to the cutting and decontamination mentioned above, but also to heat treatment, rust removal and rust prevention treatment, welding and joining technology, etc.
	(2) The ideal type of human resources being sought	The ideal candidate is expected to have the following qualifications:- * Regardless of the major studied at universities or other research institutes, applicants must have the motivation and enthusiasm to work on new research and development and the application of technologies. * Willingness to actively acquire knowledge and skills. * Willingness to tackle difficult challenges. * Excellent communication skills to work cooperatively with colleagues.
	(3) The attraction of our department	* Lasers have a high energy density and enable high-precision non-contact processing. In addition, depending on the wavelength, they can be transmitted through optical fiber, making them suitable for remote processing technology, and they are expected to be used in a variety of industrial fields. For the time being, we aim to continue contributing to the achievement of the SDGs by not limiting our research to laser cutting and laser decontamination for the decommissioning of nuclear facilities, but by encouraging young researchers to take on new challenges with their own free ideas. * It is important that the results of our research and development be widely utilized in industry and be useful to society. We actively make our research results public through presentations at academic societies both in Japan and overseas and through the submission of papers. We also actively pursue joint research not only with other departments within the organization, but also with companies, research institutes, universities, and other organizations.
	(4) Branches of knowledge related to this theme	(Major Category) Manufacturing Technology (Subcategory) Mechanics of materials and materials, Manufacturing and production engineering, Thermal engineering (Major Category) Nanotechnology/Materials (Subcategory) Material processing and microstructure control, Applied condensed matter physics, Optical engineering and photon science
	(5) Place of employment (tentative)	Fukui (Tsuruga city)
	(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027
	(7) Contact person about the theme	(Name) Hiroaki MORI (Department) Tsuruga Comprehensive Research and Development Center, Tsuruga Head Office (Position) Principal Researcher (E-mail) tsuruga-hq-recruit@jaea.go.jp
	(8) Related HP	https://www.jaea.go.jp/04/tsk/english/kenkyu/kenkyu-1.html

Recruitment Field for Researcher

109	(1) Theme and Contents	**Research on Nuclear Characteristics Analysis of Research Reactors** The New Research Reactor Promotion Office is advancing a project to construct a new research reactor for neutron applications at the Monju site. To achieve a world-class level of stable thermal neutron flux, highly skilled personnel are required not only to perform analytical tasks—such as neutron transport, criticality, burnup, and shielding calculations—but also to contribute to the R&D of advanced computational methods and tools. As existing computational codes have become legacy systems and the number of developers continues to decline, there is a growing need for personnel who can bridge research and design/operations divisions while driving the development of next-generation computational codes that incorporate modern analytical methodologies. These roles are essential for supporting reactor safety assessments and advancing reactor design.
	(2) The ideal type of human resources being sought	* Personnel who recognize their role in supporting the foundation of nuclear technology and who have the resilience to advance research and development by bridging research and technical divisions. * Personnel with broad technical knowledge spanning electrical and mechanical engineering, materials science, physics, chemistry, and nuclear engineering. * Personnel with curiosity and a strong desire for growth, who are willing to take on new challenges in developing advanced technologies.
	(3) The attraction of our department	As the number of neutron research facilities decreases in Japan, this project marks Japan's first new research reactor in about 30 years. It is expected to strengthen national technological capabilities and has drawn strong expectations from academia, industry, and the local community. Opportunities to take part in constructing a new reactor are extremely rare. Join us in advancing this project and realizing a reactor that will contribute broadly to society.
	(4) Branches of knowledge related to this theme	(Major Category) Energy Engineering (Subcategory) Nuclear engineering (Major Category) Manufacturing Technology (Subcategory) Fluid engineering, Measurement engineering (Major Category) Informatics (Subcategory) Software, Computational science, High performance computing
	(5) Place of employment (tentative)	Ibaraki (Tokai village)* *Due to the progress of the project, the primary business location may be relocated to Fukui Prefecture (Tsuruga City) in the future.
	(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027
	(7) Contact person about the theme	(Name) IZAWA Kazuhiko (Department) New Research Reactor Promotion Office, Design & Engineering Group (Position) Group Leader (E-mail) jaea-jinji2027@jaea.go.jp
	(8) Related HP	https://www.jaea.go.jp/04/nrr/en/index.html

Recruitment Field for Researcher

110	(1) Theme and Contents	**Fundamental R&D of Geological Disposal Technologies for High-level Radioactie Waste** Fundamental research to support the geological disposal program of high-level radioactive waste (HLW) in the following areas: 1. Characterization of the geological environment (e.g. groundwater flow, groundwater chemistry, mass transport, groundwater chemistry, behavior of microorganisms, rock mechanics) 2. Studies on long-term stability of the geological environment (including development of dating techniques) 3. Repository engineering technologies 4. Long-term behavior of engineered barriers (metals, clay minerals, cementitious materials etc.) 5. Physicochemical behavior of radioactive nuclides, such as solubility, sorption etc. 6. Safety assessment technologies for geological disposal system. Application of state-of-the-art technologies (e.g., digital twin technologies) to those area is recommended.
	(2) The ideal type of human resources being sought	Researcher who has strong sense of mission to pursue the research on deep geological disposal of high-level radioactive waste. In order to enhance the reliability of geological disposal technology for high-level radioactive waste, we are looking for people with high motivations to take on the challenge of solving problems in various scientific and technological fields and with high activities toward a single goal in cooperation with others.
	(3) The attraction of our department	Although the term "disposal" sometimes imagines negative, geological disposal is one of the important subjects due to the final process in nuclear fuel cycle. Various professional areas, e.g., geoscience, civil engineering, rock engineering, hydrology and solution chemistry, are required in R&D on geological disposal. Everyone who has any professional areas mainly in science and technology can play an active role. We look forward to your application!
	(4) Branches of knowledge related to this theme	(Major Category) Energy Engineering — (Subcategory) Nuclear engineering, Earth resource engineering, Energy sciences (Major Category) Social Infrastructure — (Subcategory) Environmental systems for civil engineering, Geotechnical engineering, Civil engineering material, execution and construction management (Major Category) Natural Science — (Subcategory) Human geosciences, Solid earth sciences (Major Category) Nanotechnology/Materials — (Subcategory) Analytical chemistry (Major Category) Environmental science — (Subcategory) Environmental dynamic analysis (Major Category) Informatics — (Subcategory) Computational Science (Major Category) Others — (Subcategory) Radiochemistry
	(5) Place of employment (tentative)	The position will be based at one of the following locations: Ibaraki (Tokai village), Hokkaido(Horonobe Town), Gifu (Toki City)
	(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027
	(7) Contact person about the theme	(Name) KITAMURA Akira (Department) Nuclear Backend Technology Development Department, Nuclear Fuel Cycle Engineering Laboratories (Position) Deputy Director (E-mail) jaea-jinji2027@jaea.go.jp
	(8) Related HP	https://www.jaea.go.jp/04/tisou/english/index/e-index.html

Recruitment Field for Researcher

111	(1) Theme and Contents	**Research and development for the realization on fast reactor cycle systems** Our institute is engaged in research and development of fast reactor cycle systems for social implementation with the aim of realizing sustainable carbon neutrality. In the R&D of fast reactor cycle, JAEA utilizes its fast reactor cycle-related development infrastructure (reactor facilities, post-irradiation examination facilities, fuel fabrication facilities, reprocessing facilities, thermal-hydraulics test facilities, structure and material test facilities, etc.) to conduct: 1) experimental research on fast reactor safety measures, core, fuel and materials, equipment and systems, instrumentation, fuel fabrication and reprocessing, etc., and 2) development of fast reactor cycle analysis methods. You will be responsible for the following areas: ・Core design ・Safety assessment, including severe accident analysis, sodium-water reaction evaluation, and source term analysis ・Development of Integrated systems utilizing artificial intelligence (AI) and advanced simulations ・In-core thermal hydraulics ・High temperature structures and materials, including the establishment of codes and standards ・Production of medical radioisotopes (RI) ・Minor actinide(MA) fuel irradiation test
	(2) The ideal type of human resources being sought	We are looking for persons who are aspiring and motivated to actively participate in our research activities for the sustainable energy system. Under this theme, knowledge and skills in nuclear engineering, mechanical engineering, etc. will be the base, but any major from your student days is acceptable.
	(3) The attraction of our department	The fast reactor cycle is an innovative system that makes the most efficient use of uranium and supplies energy for us for thousands of years as a domestic technology. It also significantly reduces the toxicity of radioactive waste so that it can solve the spent fuel issue from nuclear power plants in operation today. Our experimental fast reactor Joyo is planned to resume soon, and the Japanese government's Strategic Roadmap clarifies a wide range of research activities to come for the start of a demonstration reactor around 2050. We, therefore, need passionate and creative youths to work with as a team.
	(4) Branches of knowledge related to this theme	(Major Category) Energy Engineering (Subcategory) Nuclear engineering (Major Category) Natural Science (Subcategory) Mathematical physics and fundamental theory of condensed matter physics (Major Category) Manufacturing Technology (Subcategory) Fluid engineering, Control and system engineering, Chemical reaction and process system engineering (Major Category) Nanotechnology/Materials (Subcategory) Metallic material properties (Major Category) Others (Subcategory) Reactor Physics, Nuclear Fuel, Irradiation Behavior, Artificial Intelligence (AI)
	(5) Place of employment (tentative)	Ibaraki (Oarai town)
	(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027
	(7) Contact person about the theme	(Name) Kozo Katsuyama (Department) Strategy and Management Department (Position) Director (E-mail) jaea-jinji2027@jaea.go.jp
	(8) Related HP	https://www.jaea.go.jp/04/sefard/

Recruitment Field for Resercher

112	(1) Theme and Contents	**Development of 'High-temperature gas-cooled reactor' capable of supplying large scale, domestic, carbon-free hydrogen** Significant reductions in CO2 emissions from industrial sectors such as iron and steel and chemicals are required to achieve carbon neutrality. To realise the societal implementation of high temperature gas-ccoled reactor (HTGR), we will tackle the following challenges. This technology enables the domestic production of the massive quantities of carbon-free hydrogen needed to decarbonise these high-emission industries: (1) The world's first demonstration of hydrogen production using HTGR (2) Advancing reactor design technologies using the test reactor "HTTR" (3) Enhancing the performance of 'ceramic-coated particle fuel' for HTGR (4) Development of carbon free hydrogen prduction technologies using high temperature heat
	(2) The ideal type of human resources being sought	Individuals with the collaborative skills and flexibility to drive the HTGR hydrogen demonstration project, working effectively with domestic and international stakeholders. Individuals who think independently, take initiative and proactively pursue their goals.
	(3) The attraction of our department	Our project enables participants to acquire experience and knowledge in a wide range of technologies, including experiments, numerical simulations, design, component manufacturing, and demonstration tests in a wide variety of fields such as fuels and materials, thermal fluid, reactor physics, instrumentation and control, chemical engineering, etc., through the HTGR development. In addition, we provide an environment for international activities through collaboration with overseas organizations such as the UK National Nuclear Laboratory and participation in projects of international organizations such as the IAEA.
	(4) Branches of knowledge related to this theme	(Major Category) Energy Engineering (Subcategory) Nuclear engineering, Earth resource engineering, Energy sciences (Major Category) Manufacturing Technology (Subcategory) Design engineering, Mechanics of materials and materials, Chemical reaction and process system engineering, Fluid engineering, Thermal engineering (Major Category) Social Infrastructure (Subcategory) Safety engineering
	(5) Place of employment (tentative)	Ibaraki (Oarai town)
	(6) Qualification Requirements	Having a master or a doctor degree / To be expected to complete a master's or a doctor's course in March 2027
	(7) Contact person about the theme	(Name) SATO Hiroyuki (Department) Nuclear Energy Research and Development Domain, HTGR Project Management Office (Position) Deputy Director (E-mail) jaea-jinji2027@jaea.go.jp
	(8) Related HP	https://www.jaea.go.jp/04/o-arai/nhc/en/