3-2. AWARD

Incentive Award in the 19th AESJ Kansai meeting

Advanced Atomic Energy Research Section Toshiro Sakabe (D3)

The 19th Atomic Energy Society of Japan (AESJ) Kansai meeting, sponsored by the Kansai Branch of AESJ, was held on 4th March 2024 at the Osaka Science and Technology Center. This event provides young researchers and students in nuclear fission and fusion science and engineering and the surrounding area an opportunity to present their works.

Mr. Toshiro Sakabe (D3) attended and made an oral presentation titled "Effect of the water-cooling feedthrough system for the cathode on the neutron production rate in the discharge type of fusion neutron source". He presented the effect of the cathode cooling system on the neutron production rate in the glow discharge type of DD fusion neutron source. In this meeting, he received the Incentive Award from the Kansai Branch of AESJ.



Best Presentation Award in the 17th JEMEA Symposium

Advanced Atomic Energy Research Section Hiroyuki Tamiya (D2)

Hiroyuki Tamiya was awarded Best Presentation from the Japan Society of Electromagnetic Energy Applications (JEMEA) on January 27th, 2024. Best Presentation is annually given to a researcher who has achieved outstanding academic results in the field of electromagnetic energy applications. He was awarded this prize for the achievements of "Novel Reactions in Microwave Heating of Cellulose with Magnetite and Their Applications".

In his award lecture, which was held on October 26th, 2023 at Kitakyushu International Conference Center, he presented the effects of microwave heating of cellulose with magnetite and steam feeding. A series of descriptions of needs, equipment assembly, and product analysis were highly evaluated for a presentation award.



Student Poster Award in the 14th International Symposium of Advanced Energy Science

Functional Materials Science and Engineering Research Section Kaichi Teranishi (M2)

The 14th International Symposium of Advanced Energy Science was held on August 30- September 1st, 2023, jointly by the Institute of Advanced Energy, Kyoto University and Joint Usage/Research Center for Zero-Emission Energy Research. This event provides young researchers and students an opportunity to present their works on energy science related to zero-emission energy.

Kaichi Teranishi (M2) made a poster presentation at the symposium with the topic of "Exciton effects at high temperatures in the transmittance spectra of single-walled carbon nanotube membranes". His presentation was highly evaluated, and he received the Student Poster Award. His research provides the basis for exploiting exciton effects in carbon nanotubes for highly efficient solar and thermal energy harvesting technologies.

Student Poster Award in the 14th International Symposium of Advanced Energy Science

Functional Materials Science and Engineering Research Section Zhirui Liu (M2)

The 14th International Symposium of Advanced Energy Science was held on August 30- September 1st, 2023, jointly by the Institute of Advanced Energy, Kyoto University and Joint Usage/Research Center for Zero-Emission Energy Research. This event provides young researchers and students an opportunity to present their works on energy science related to zero-emission energy.

Zhirui Liu (M2) made a poster presentation at the symposium with the topic of "Fabrication and optical properties of high-purity carbon nanotube membrane without far-infrared absorption". His presentation was highly evaluated, and he received the Student Poster Award. His research provides the basis for exploiting high purity carbon nanotubes for efficient solar and thermal energy harvesting technologies.





Student Poster Award in the 14th International Symposium of Advanced Energy Science

Functional Materials Science and Engineering Research Section Hengkai Wu (D1)

The 14th International Symposium of Advanced Energy Science was held on August 30- September 1st, 2023, jointly by the Institute of Advanced Energy, Kyoto University and Joint Usage/Research Center for Zero-Emission Energy Research. This event provides young researchers and students an opportunity to present their works on energy science related to zero-emission energy.

Hengkai Wu (D1) made a poster presentation at the symposium with the topic of "Determination of the complex refractive index spectra of single-structureenriched carbon nanotube membrane toward solar energy harvesting and utilization". His presentation was highly evaluated, and he received the Student Poster Award. His research provides important information necessary for the practical utilization of carbon nanotubes in various thermal and optical applications including solar thermal energy harvesting.

Young Scientist Poster Award in the 65th Fullerenes-Nanotubes-Graphene General Symposium

Functional Materials Science and Engineering Research Section Hayato Nakamura (M2)

The 65th Fullerenes-Nanotubes-Graphene General Symposium was held on September 4th-6th, 2023. This conference provides researchers and students an opportunity to present their recent studies on nanomaterials science.

Hayato Nakamura (M2) made a poster presentation at the symposium with the topic of "Photoluminescence excitation spectroscopy on carbon nanotubes synthesized by fullerene coalescence in boron nitride nanotubes". His presentation was highly evaluated, and he received the Young Scientist Poster Award. His work revealed that the exciton properties of carbon nanotubes with a protective shell layer of boron nitride can be maintained in their aggregates, providing a basis for exploiting the quantum effects of carbon nanotubes in bulk materials at high temperatures.





Student Session Outstanding Achievement Award in the Japan Society of Maintenology (*Prize for Outstanding Achievements*)

Advanced Energy Structural Materials Research Section Sakura Nishikawa (M2)

The Japan Society of Maintenology was founded in 2003 to establish "Maintenology" of nuclear power plants, other complex artifacts, and the natural environments, emerged by collecting a wide variety of information and knowledge of engineering, technology, natural science, sociology.

At the 2023 annual meeting of this society held at Tohoku University on August 27, 2023, Sakura Nishikawa provided an oral and poster presentation on "Validation of the Advanced prediction method for Irradiation Embrittlement using Deep Learning Technique". This is an effort to explore a new method for predicting irradiation embrittlement, and although the data is small, it is highly innovative research that applies the latest machine learning techniques to material irradiation embrittlement data. Her talk attracted a lot of attention at the meeting, and her presentation eventually won the Student Session Award, "Prize for Outstanding Achievements".



Advanced Energy Structural Materials Research Section Yu Shi (M2)

The Japan Society of Maintenology was founded in 2003 to establish "Maintenology" of nuclear power plants, other complex artifacts, and the natural environments, emerged by collecting a wide variety of information and knowledge of engineering, technology, natural science, sociology.

At 2023 annual meeting of this society held at Tohoku University on August 27, 2023, Yu Shi provided the oral and poster presentations on "Molecular dynamics evaluation of microscopic crack growth conditions". His and his co-workers' effort is to explore the conditions for the propagation of small cracks in metallic materials under external stress from the microscopic point of view. Their effort received high attention from the many reviewers, and his presentation eventually won the Student Session Award, "Prize for Originality".



(Nishikawa is in the middle)



(Shi is on the far right.)

Student Poster Session Encouragement Award in the Atomic Energy Society of Japan Student Network

Advanced Energy Structural Materials Research Section Sakura Nishikawa (M2)

The Atomic Energy Society of Japan was founded in 1959 as the only organization in Japan that aims to contribute towards progress in the development of atomic energy by seeking academic and technological advances pertaining to the peaceful use of atomic energy.

In the 2023 Annual Fall Meeting held at Nagoya University, Sakura Nishikawa made a poster presentation on her and her coworkers' effort on "Validation of Advanced Prediction Methods for Irradiation Embrittlement using Machine Learning Techniques". Her presentation was highly praised by the reviewers and finally received the Student Session Encouragement Achievement Award for their creative research using Machine Learning and Material multiscale modelling techniques. Their research will be the beginning of a fundamental change in the methodology for predicting irradiation embrittlement soon.

Atomic Energy Society of Japan 2023 Fall Meeting Atomic Energy Society of Japan Student Network Excellent Prize

Advanced Energy Structural Materials Research Section Chen Yuting (D3)

The Atomic Energy Society of Japan 2023 Fall Meeting Organized by the Atomic Energy Society of Japan was held at Nagoya University on September 6, 2023. The student poster section aims to provide more opportunities for students in the nuclear field to display and communicate.

Chen Yuting attended and made a poster presentation on the topic of "Mechanisms for the Generation of Large-Size Clusters in Cascade Collisions: Insights from Molecular Dynamics Simulations". This poster mainly discusses the generation process and mechanisms of defect clusters generated in nuclear power plant structural materials during the irradiation process.

Her presentation was highly focused and eventually received Atomic Energy Society of Japan Student Network Excellent Prize.



日本原子力学会 6生ぶスタ 偏奏官 京都大学 昱婷殿 あなたは「日本原子力学会2023年秋の 大会」学生ポスターセッションにおい て優秀な武装を収められましたので、 ここに表彰します 2023年9月6日 一般社团法人日本原子力学会 会长 新塔 雄一

Outstanding Poster Award, The 3rd Student Research Presentation Meeting in Institute of Advanced Energy, Kyoto University

Advanced Energy Structural Materials Research Section Sakura Nishikawa (M2)

The 3rd IAE Student Research Presentation competition, which was sponsored by the Institute of Advanced Energy (Kyoto University), was held on December 8 (Fri.), 2023.

Sakura Nishikawa provided the poster presentation on "Advanced Methods for Predicting Irradiation Embrittlement using Machine Learning". Her and her coworkers' efforts are to explore the new methodology to predict irradiation embrittlement by using machine learning and material multi-scale modelling techniques. Her presentation was highly focused, and eventually won the Poster Award from Institute of Advanced Energy, Kyoto University.

優秀ボスター発表賞 西川さくら 殿 P.20 機械学習を用いた照射現化予測法の高度化 第3回京都大学エネルギー理工学 研究所学生研究発表会において 発表されました上記研究に対し 優秀な成果を認め、ここに優秀ポス ター発表賞を贈り表彰いたします 今和5年12月8日 京都大学工年ルギー理工学研究所 所長森井

2023Best Figure Prize, Materials Scienece and Technology Division, Atomic Energy Society of Japan

Advanced Energy Structural Materials Research Section Kazunori Morishita (Associate Professor)

Kazunori Morishita, along with Dr. Yoshiyuki Watanabe of National Institute for Quantum Science and Technology (QST), was awarded for the 2023 Best Figure Prize from Materials Science and Technology Division, Atomic Energy Society of Japan. This award is annually given to those who have left behind academic drawings that are recognized to have had a significant impact on the progress of research on nuclear materials. This year, Watanabe and Morishita drew a thoughtful illustration, clearly showing the quantitative difference in cavity formation in materials irradiated at various irradiation fields, which were obtained their kinetic rate theory analysis. The title of their work is "the irradiation field-dependence of void swelling behavior in ferritic steel: kinetic rate theory analysis incorporating cavity nucleation behavior". Their work was highly acclaimed by the division reviewers, and they eventually received this prize. The award ceremony was held on March 28, 2024, at the annual division meeting held at Kindai University, Osaka.



(Morishita is on the left, and Watanabe is on the right.)

Young Researcher's Award in the 5th Conference of 2.5 D Materials

Optical Nano-science Research Section Shuichi Asada (D1)

The 5th Conference of 2.5 D Materials was held on July 2nd and 3rd, 2023 at Osaka University, organized by the Grant-in-Aid for Transformative Research Areas (A) "Science of 2.5 Dimensional Materials: Paradigm Shift of Materials Science Toward Future Social Innovation". The conference provides young researchers and students in the field of related research fields to present their works.

Shuichi Asada (D1) attended and made a poster presentation on the topic of "Study of nonlinear photovoltaic effect and magnetic correlation at $MoS_2/CrPS_4$ heterointerface". In this presentation, he was awarded the Young Researcher's Award from the Grant-in-Aid for Transformative Research Areas (A) "Science of 2.5 Dimensional Materials: Paradigm Shift of Materials Science Toward Future Social Innovation".

若手摸励賞 朝田 秀一 殿 あなたは第5回領域会議ポスタ 一発表において 優秀な研究発表 をされましたので ここにその栄 茶を称え これを賞します **今和5年7月3日** 学教室单编编研究(A) 1.5次元物管科学 社会変単に向けた物質科学のバラダイムシフト 领线代表 第三日回國各國軍行委員長 狮北树 調合 花床 ----40.00

Award for encouragement of research at The 64th Fullerenes-Nanotubes-Graphene General Symposium

Optical Nano-science Research Section Wang Haonan (D3)

The 64th Fullerenes-Nanotubes-Graphene General Symposium was held by the Fullerenes, Nanotubes and Graphene Research Society on March 1-3, 2023 at Nagoya University. Wang Haonan (D3) attended and made a poster presentation on the topic of "Observation of a single moiré exciton in nano-fabricated twisted MoSe₂/WSe₂ heterobilayers".

He received the award for encouragement of research from the Fullerenes, Nanotubes and Graphene Research Society.

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	Young Scientist Poster Award	
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Oral Presentation Award (Green Chemistry Award) at The 13th ionic liquid symposium

Chemical Reaction Complex Processes Research Section Takayuki Yamamoto (Assistant Professor)

The 13th ionic liquid symposium was held on 21st–22nd November, 2023 at Niigata, Japan, which was organized by Ionic Liquid Research Association. In this annual symposium, researchers present their recent studies on ionic liquids and the presentation awards are conferred on young scientists and students.

Assistant Professor Takayuki Yamamoto attended the symposium and made an oral presentation on the topic "Charge–discharge behavior of graphite positive electrode in amide-based ionic liquid electrolytes". He received the Oral Presentation Award (Green Chemistry Award), which was given by Royal Society of Chemistry.



Student Poster Award at The 2023 Joint Symposium on Molten Salts (MS12)

Chemical Reaction Complex Processes Research Section Yoshifumi Ishio (M2)

The 2023 Joint Symposium on Molten Salts (MS12) was held on 12th–16th November, 2023, at Kyoto, Japan, which was organized by Molten Salt Committee of The Electrochemical Society of Japan. This symposium provides many researchers in the field of molten salts and its surrounding area an opportunity to present their works.

In this symposium, Mr. Yoshifumi Ishio (M2) attended the symposium and made a poster presentation on the topic "*In-situ* Raman spectroscopic analysis of the electrode/electrolyte interface in the sodium secondary battery utilizing FSA-based ionic liquids", and received the Student Poster Award.



Research Encouragement Award at The 95th Workshop of Materials Tailoring Society

Chemical Reaction Complex Processes Research Section Keita Goto (M2)

The 95th workshop of Materials Tailoring Society was held on 3rd–5th August, 2023, at Karuizawa, Japan, which was organized by Materials Tailoring Society. The purpose of this workshop is to systemize the basic study of nanostructured interface creation that induces high-performance physical properties by non-equilibrium processing such as plasma and electrolytic processes and to also apply them to energy conversion and strage.

Mr. Keita Goto (M2) attended this workshop and made a poster presentation on the topic "Novel High-Temperature Alkaline Water Electrolysis Using Molten KOH–H₂O System". He received the Research Encouragement Award.

Best Poster Award at The 3rd Nucleation and Growth Research Conference

Chemical Reaction Complex Processes Research Section Keita Goto (M2)

The 3rd Nucleation and Growth Research Conference was held on 9th–11th November, 2023, at Kyoto, Japan, which was organized by Materials Tailoring Society. The prime purpose of this conference is to discuss in-situ measurements as well as mathematical models of the relevant non-equilibrium reaction and deposition processes, in which electrons, ions, radicals, and clusters interact at the substrate surface.

Mr. Keita Goto (M2) attended this conference and made a poster presentation on the topic "Novel Highly Efficient Water Electrolysis Using NaOH–KOH Hydrate Melt". He received the Best Poster Award.





Student Poster Award at The 2023 Joint Symposium on Molten Salts (MS12)

Chemical Reaction Complex Processes Research Section Keita Goto (M2)

The 2023 Joint Symposium on Molten Salts (MS12) was held on 12th–16th November, 2023, at Kyoto, Japan, which was organized by Molten Salt Committee of The Electrochemical Society of Japan. This symposium provides many researchers in the field of molten salts and its surrounding area an opportunity to present their works.

Mr. Keita Goto (M2) attended this symposium and made a poster presentation on the topic "High-Temperature Water Electrolysis Using Molten NaOH–KOH–H₂O System". He received the Student Poster Award.



Kansai Electrochemistry Encouragement Award at The 3rd Kansai Electrochemistry Seminar

Chemical Reaction Complex Processes Research Section Haochen Wang (M2)

The 3rd Kansai Electrochemistry Seminar was held on 9th December 2023 at Kobe University, which was held by the Kansai Branch of the Electrochemical Society of Japan. This event provides young researchers and students in the field of electrochemistry and its surrounding area an opportunity to present their works.

Mr. Haochen Wang (M2) attended this meeting and made a poster presentation with the topic of "Effect of O^{2-} Ion on W Electrodeposition in Molten CsF–CsCl". In view of his performance, he was prized the Kansai Electrochemistry Encouragement Award.



Best Poster Award at The 11th Kyoto International Forum for Environment and Energy (KIFEE-11)

Chemical Reaction Complex Processes Research Section Wataru Moteki (D2)

The 11th Kyoto International Forum for Environment and Energy was held on March 3–5th, 2024 at Tendo, Japan. This event provides many researchers and students in the field of environment and energy an opportunity to present their works.

Wataru Moteki (D2) attended and made a poster presentation on the topic of "Formation of Crystalline Si Using Liquid Zn Electrode in Molten KF–KCl– K_2SiF_6 ". He received the Best Poster Award.



Student Poster Award at The 2023 Joint Symposium on Molten Salts

Chemical Reaction Complex Processes Research Section Wataru Moteki (D2)

The 2023 Joint Symposium on Molten Salts (MS12) was held on 12th–16th November, 2023, at Kyoto, Japan, which was organized by Molten Salt Committee of The Electrochemical Society of Japan. This symposium provides many researchers in the field of molten salts and its surrounding area an opportunity to present their works.

Wataru Moteki (D2) attended and made a poster presentation on the topic of "Electrodeposition of Crystalline Si film Using Liquid Zn Electrode in Molten KF–KCl– K_2 SiF₆". He received the Student Poster Award.



Student Poster Award in The 14th International Symposium of Advanced Energy Science

Chemical Reaction Complex Processes Research Section Wataru Moteki (D2)

The 14th International Symposium of Advanced Energy Science was held on August 30–September 1, 2023. This event provides young researchers and students in the field related with energy an opportunity to present their works.

In the meeting, Mr. Wataru Moteki (D2) attended and made a poster presentation on the topic of "Electrodeposition of Crystalline Si Film in Molten KF– KCl–K₂SiF₆ Using Thin Liquid Zn". He received the Student Poster Award.



The Award of Japan Society of Nucleic Acids Chemistry (Ikehara Award 2023)

Biofunctional Chemistry Research Section Takashi Morii (Professor)

Professor Takashi Morii was awarded the Ikehara Award 2023 by the Japan Society of Nucleic Acids Chemistry on November 2nd, 2023. The Ikehara Prize is awarded annually to researchers who have played a leading role in deepening and developing new research in nucleic acid chemistry through their outstanding research achievements, and who have made original and outstanding contributions to the field. He received the award for his work on "Molecular recognition and functionalization of nucleic acid and protein assemblies".

In his award lecture at the 50th International Symposium of Nucleic Acids Chemistry held in Miyazaki on November 2nd, 2023, he presented on his leading role in establishing the basic science for realizing biopolymers that can function as desired through his original ideas on molecular recognition involving the cooperative nature of nucleic acid-protein complexes and molecular design using chemical synthesis.

