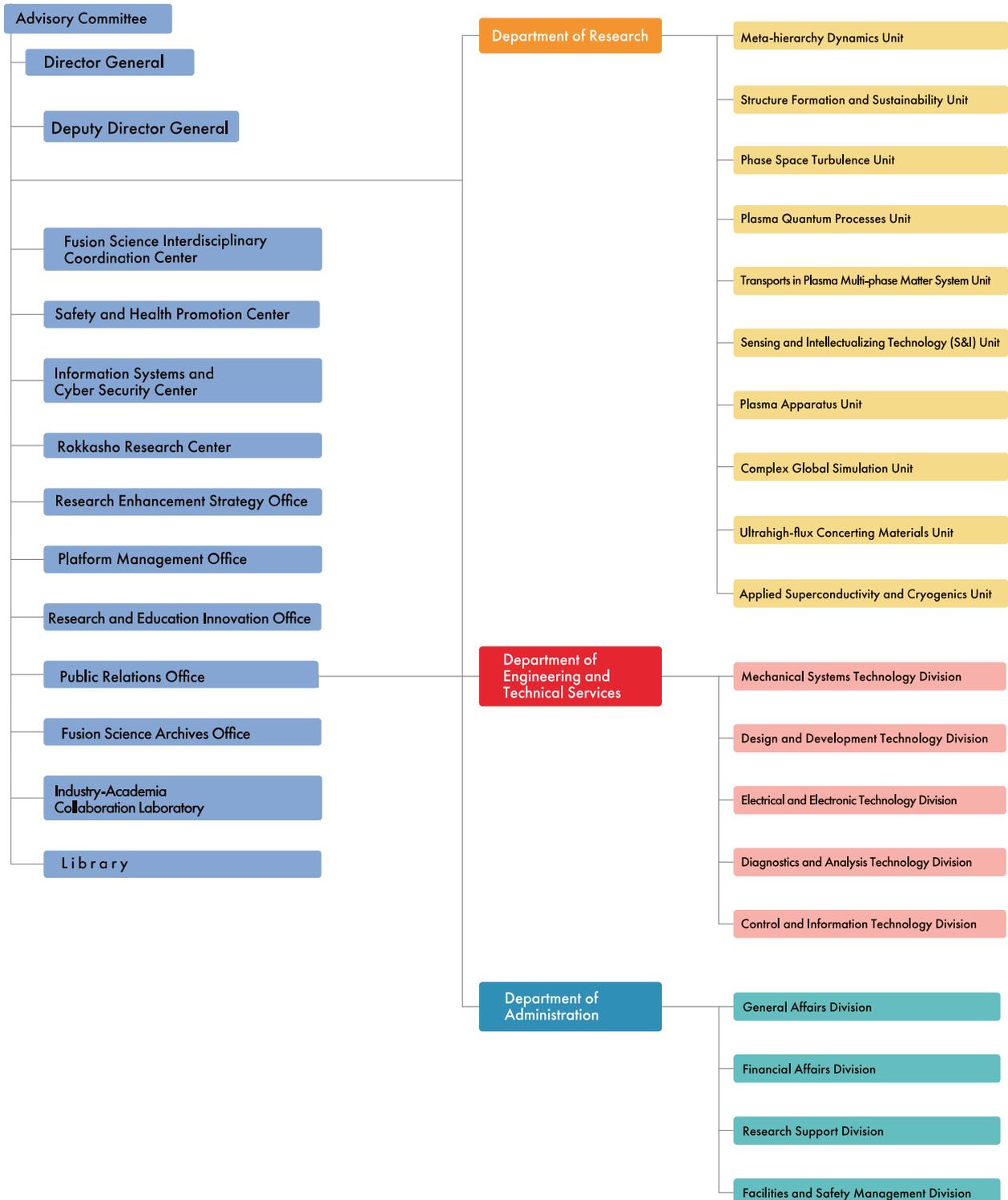


APPENDIX

APPENDIX 1. Organization of the Institute

April 2024



APPENDIX 2. Members of Committees

Advisory Committee

ISHIDA, Shinichi	Vice Director National Institute for Quantum Science and Technology
UEDA, Yoshio	Professor Faculty of Science and Engineering, Otemon Gakuin University
OZAWA, Tohru	Professor Faculty of Science and Engineering School of Advanced Science and Engineering, Waseda University
KANEKO, Toshiro	Professor Graduate School of Engineering, Tohoku University
FUJISAWA, Akihide	Professor Research Institute for Applied Mechanics, Kyushu University
FUJITA, Takaaki	Professor Graduate School of Engineering, Nagoya University
MATSUOKA, Ayako	Professor Graduate School of Science, Kyoto University
MORII, Takashi	Professor Faculty of Health Science, Department of Health and Nutrition, Kyoto Koka Women's University
YAMADA, Hiroshi	Professor Graduate School of Frontier Sciences, The University of Tokyo
YONEDA, Hitoki	Professor Institute for Laser Science, The University of Electro-Communications
WATANABE, Tomohiko	Professor Graduate School of Science, Nagoya University

※ This list was compiled as of March 31, 2025

APPENDIX 3. Professor Emeritus

Professors Emeritus

ICHIKAWA, Yoshihiko (1993)
MIZUNO, Yukio (1994)
FUJITA, Junji (1996)
KURODA, Tsutomu (1997)
AMANO, Tsuneo (1998)
MOMOTA, Hiromu (1998)
IIYOSHI, Atsuo (1999)
HATORI, Tadatsugu (1999)
SATO, Tetsuya (2001)
FUJIWARA, Masami (2002)
KAMIMURA, Tetsuo (2003)
HAMADA, Yasuji (2007)
KATO, Takako (2007)
NODA, Nobuaki (2008)
WATARI, Tetsuo (2008)
MOTOJIMA, Osamu (2009)
SATO, Kohnosuke (2010)
MATSUOKA, Keisuke (2010)
TOI, Kazuo (2012)
NARIHARA, Kazumichi (2012)
KUMAZAWA, Ryuhei (2012)
UDA, Tatsuhiko (2012)
SATO, Motoyasu (2012)
YAMAZAKI, Kozo (2013)
KAWAHATA, Kazuo (2013)
OKAMURA, Shoichi (2014)
KOMORI, Akio (2015)
SUDO, Shigeru (2015)
SKORIC, Milos (2015)
MUTO, Takashi (2016)
NAGAYAMA, Yoshio (2017)
NAKAMURA, Yukio (2017)
SAGARA, Akio (2017)
ITOH, Kimitaka (2017)
HORIUCHI, Ritoku (2017)
MORITA, Shigeru (2019)
NISHIMURA, Arata (2019)
TAKEIRI, Yasuhiko (2021)
KUBO, Shin (2021)
MITO, Toshiyuki (2021)
NISHIMURA, Kiyohiko (2021)
KANEKO, Osamu (2022)
MURIGA, Takeo (2022)
ISHIGURO, Seiji (2022)
NAKAJIMA, Noriyoshi (2022)
SHIMOZUMA, Takeshi (2022)
IDA, Katsumi (2023)
SAKAGAMI, Hitoshi (2023)

※ This list was compiled as of March 31, 2025

APPENDIX 4. List of Staff

Director General

YOSHIDA, Zensho

Deputy Director General

TODO, Yasushi

Department of Research

Prof. SAKAMOTO, Ryuichi (Director)

Meta-hierarchy Dynamics Unit

Prof. GOTO, Motoshi (Chief)
Prof. SAKAMOTO, Ryuichi
Prof. NAGAOKA, Kenichi
Prof. NUNAMI, Masanori
Assoc. Prof. IGAMI, Hiroe
Assoc. Prof. ITO, Atsushi
Assoc. Prof. SATO, Naoki
Assoc. Prof. SEKI, Tetsuo

Assoc. Prof. TODA, Shinichiro
Assoc. Prof. MAEYAMA, Shinya
Assist. Prof. ISHIKAWA, Ryohtaro
Assist. Prof. TAKAYAMA, Arimichi
Assist. Prof. HASEGAWA, Hiroki
COE Researcher LIN, Keren
COE Researcher YANG, Shudi
Guest Prof. KATO, Yuto (Tohoku Univ.)

Structure Formation and Sustainability Unit

Assoc. Prof. YAMAGUCHI, Hiroyuki (Chief)
Prof. ISOBE, Mitsutaka
Prof. ICHIGUCHI, Katsuji
Prof. OSAKABE, Masaki
Assoc. Prof. OGAWA, Kunihiro
Assoc. Prof. SATAKE, Shinsuke
Assoc. Prof. TAKAHASHI, Hiromi

Assist. Prof. ITO, Atsushi
Assist. Prof. KAWAMOTO, Yasuko
Assist. Prof. SHIMIZU, Akihiro
Assist. Prof. NISHIMURA, Shin
Assist. Prof. NUGA, Hideo
Project Prof. IDO, Takeshi
Guest Researcher YOSHIMURA, Yasuo (QST)

Phase Space Turbulence Unit

Assoc. Prof. TOKUZAWA, Tokihiko (Chief)
Project Prof. IDA, Katsumi
Assoc. Prof. KENMOCHI, Naoki
Assoc. Prof. KOBAYASHI, Tatsuya
Assoc. Prof. NISHIURA, Masaki
Assoc. Prof. YAMADA, Ichihiko
Assist. Prof. YANAI, Ryohma

Assist. Prof. YOSHINUMA, Mikiro
Project Prof. FUJISAWA, Akihiro
Project Researcher UEDA, Kenji
Project Researcher NASU, Tatsuhiko
COE Researcher NISHIMURA, Daiki
Guest Prof. EBIHARA, Yusuke (Kyoto Univ.)
Guest Assoc. Prof. SASAKI, Makoto (Japan Univ.)

Plasma Quantum Processes Unit

Prof. KATO, Daiji (Chief)
Prof. HOSHI, Takeo
Prof. MURAKAMI, Izumi
Assoc. Prof. KIMURA, Naoki
Assist. Prof. SAKAI, Kentaro
Assist. Prof. SAKAUE, Hiroyuki
Assist. Prof. SUZUKI, Chihiko

Assist. Prof. FUNABA, Hisamichi
Assist. Prof. MUTO, Sadatsugu
Assist. Prof. MORITAKA, Toseo
Assist. Prof. YAMAGISHI, Osamu
Guest Prof. FUJIOKA, Shinsuke
Research Support KATO, Masatoshi

Transports in Plasma Multi-phase Matter System Unit

Prof. MASUZAKI, Suguru (Chief)
Prof. NAKAMURA, Hiroaki
Prof. MORISAKI, Tomohiro
Assoc. Prof. USAMI, Shunsuke
Assoc. Prof. KANNO, Ryutaro
Assoc. Prof. KOBAYASHI, Masahiro
Assoc. Prof. SHOJI, Mamoru
Assoc. Prof. TOKITANI, Masayuki
Assoc. Prof. MOTOJIMA, Gen
Assoc. Prof. YOSHIMURA, Shinji

Assist. Prof. GOTO, Yuki
Assist. Prof. HAMAJI, Yukinori
Assist. Prof. YAJIMA, Miyuki
Project Prof. TOYODA, Hirotaka
COE Researcher WANG, Chenxu
Guest Prof. KAWAGUCHI, Hideki (Murooran Inst. Tech.)
Guest Assoc. Prof. TERASAKA, Kenichiro (Sojo Univ.)
Guest Researcher KOVTUN, Yurii (KIPT)
Professional Staff YOSHIDA, Shigeru

S&I: Sensing and Intellectualizing Technology Unit

Assoc. Prof. UEHARA, Hiyori (Chief)
Prof. SAKAKIBARA, Satoru
Prof. TANAKA, Kenji
Prof. BYRON, Peterson
Prof. YASUHARA Ryo
Prof. YOKOYAMA, Masayuki
Prof. WATANABE, Kiyomasa
Assoc. Prof. OHTANI, Hiroaki
Assoc. Prof. TANAKA, Masahiro
Assoc. Prof. NAKANISHI, Hideya
Assoc. Prof. SAZE, Takuya
Assist. Prof. EMOTO, Masahiko
Assist. Prof. OHTA, Masato

Assist. Prof. KAWAGUCHI, Haruki
Assist. Prof. TAKEMURA Yuki
Assist. Prof. MUKAI, Kiyofumi
Project Assoc. Prof. MIYAKAWA, Reina
Project Assoc. Prof. ZANGPO, Jigme
Project Researcher ZHAO, Mingzhong
Project Researcher YU, Linpeng
COE Researcher FABIEN, Sanchez
Research Fellowship SAKAI, Hikona
Guest Prof. TAIRA, Takunori
Guest Prof. TOKITA, Shigeki
Guest Assoc. Prof. YANO, Keisuke (ISM)

Plasma Apparatus Unit

Assoc. Prof. NAKANO, Haruhisa (Chief)
Project Prof. OKADA, Shinji
Project Assoc. Prof. SAITO, Haruhiko

Project Assoc. Prof. SHIBATA, Takanori
Guest Assoc. Prof. TAKAHASHI, Kazunori

Complex Global Simulation Unit

Prof. TOIDA, Mieko (Chief)
Prof. SUGAMA, Hideo
Prof. TODO, Yasushi
Prof. MIURA, Hideaki
Assoc. Prof. HORI, Kumiko
Assoc. Prof. SATO, Masahiko
Assoc. Prof. MIZUGUCHI, Naoki
Assoc. Prof. YAMAMOTO, Takashi

Assist. Prof. ISHIZAKI, Ryuichi
Assist. Prof. SEKI, Ryosuke
Assist. Prof. WANG, Hao
Assist. Prof. WANG, Jialei
COE Researcher LI, Hangzen
COE Researcher WEI, Shizhao
Guest Prof. GOTO, Susumu

Ultrahigh-flux Concerting Materials Unit

Prof. NAGASAKA, Takuya (Chief)
Assoc. Prof. KOBAYASHI, Makoto
Assoc. Prof. MUKAI, Keisuke
Assoc. Prof. TAKAYAMA, Sadatsugu
Assoc. Prof. TANAKA, Teruya

Assist. Prof. SHEN, Jingjie
Assist. Prof. NOTO, Hiroyuki
Guest Prof. KASADA, Ryuta
Guest Assoc. Prof. OONO, Naoko

Applied Superconductivity and Cryogenics Unit

Prof. HIRANO, Naoki (Chief)

Prof. IMAGAWA, Shinsaku

Prof. TAKAHATA, Kazuya

Prof. YANAGI, Nagato

Assoc. Prof. CHIKARAISHI, Hirotaka

Assoc. Prof. HAMAGUCHI, Shinji

Assoc. Prof. HISHINUMA, Yoshimitsu

Assoc. Prof. OBANA, Tetsuhiro

Assist. Prof. ONODERA, Yuta

Assist. Prof. NARUSHIMA, Yoshiro

Assist. Prof. TAKADA, Suguru

Guest Prof. KIKUCHI, Akihiro

Professional Staff YOSHIDA, Shigeru*

Fusion Science Interdisciplinary Coordination Center

Prof. MURAKAMI, Izumi (Director)*

Prof. MORISAKI, Tomohiro*

Prof. YASUHARA, Ryo*

Project Prof. IDA, Katsumi*

Project Assoc. Prof. NAKAMURA, Naoko

Project Assist. Prof. KUSABA, Minoru

Safety and Health Promotion Center

Prof. OSAKABE, Masaki (Director)*

Specially Appointed Senior Specialist SAZE, Takuya*

Information Systems and Cyber Security Center

Assoc. Prof. YAMAMOTO, Takashi (Director)*

Rokkasho Research Center

Prof. YOKOYAMA, Masayuki (Director)*

Research Enhancement Strategy Office

Prof. YOSHIDA, Zensho (Chief)*

Project Professor MITO, Toshiyuki

Project Professor MUROGA, Takeo

Specially Appointed Senior Specialist CARR, Stephen

Platform Management Office

Prof. SAKAMOTO, Ryuichi (Chief)*

Prof. IMAGAWA, Shinsaku*

Prof. TODO, Yasushi*

Research and Education Innovation Office

Prof. NAGAOKA, Kenichi (Chief)*

Public Relations Office

Prof. TAKAHATA, Kazuya (Chief)*

Fusion Science Archives Office

Prof. MURAKAMI, Izumi (Chief)*

Industry-Academa Collaboration Laboratory

Prof. YASUHARA Ryo (Chief)*

Prof. YANAGI, Nagato*

Assist. Prof. NARUSHIMA, Yoshiro*

Library

Prof. MURAKAMI, Izumi (Chief)*

* concurrent post

※ This list was compiled as of March 31, 2025

Department of Engineering and Technical Services

	HAYASHI, Hiromi	Director
Mechanical Systems Technology Division	YOKOTA, Mitsuhiro	Manager
Design and Development Technology Division	SUZUKI, Naoyuki	Manager
Electrical and Electronic Technology Division	KONDO, Tomoki	Manager
Diagnostics and Analysis Technology Division	HAYASHI, Hiroshi	Manager
Control and Information Technology Division	MORIUCHI, Sadatomo	Manager

※ This list was compiled as of March 31, 2025

Department of Administration

	IINO, Michiko	General Manager
General Affairs Division	URUSHIHARA, Rina	Manager
	MATSUBARA, Tomohisa	Deputy Manager
	UESUGI, Kohtaro	Leader/General Affairs Section
	MATSUZAKA, Takehiro	Leader/Planning and Evaluation Section
	INAGAKI, Tomoko	Leader/Employee Section
	SASAKI, Mitsuru	Leader/Personnel and Payroll Section
	HOSOE, Tsunenari	Leader/Communications and Public Affairs Section
Financial Affairs Division	HIROI, Noriaki	Manager
	ARAI, Masanori	Deputy Manager
	HIBINO, Atsushi	Leader/Audit Section
	SUZUKI, Takayuki	Leader/Financial Planning Section
	KONDO, Takahiko	Leader/Accounts Section
	OHTAKE, Hirokazu	Leader/Procurement Section
Research Support Division	SHOJI, Madoka	Manager
	FUKAYA, Yohsuke	Deputy Manager
	SOGA, Shihoko	Leader/Research Support Section
	FUKUOKA, Miwa	Leader/International Collaboration Section
	KAWAI, Sanae	Leader/Graduate Student Affairs Section
	FUKAYA, Yohsuke	Leader/Academic Information Section
	FUKAYA, Yohsuke	Director/Visitor Center
	HAYASHI, Tomomi	Leader/Visitor Center
Facilities and Safety Management Division	YASUE, Akihito	Manager
	FURUI, Norihiro	Deputy Manager
	IWASHIMA, Itsuki	Leader/Facilities Planning Section
	NAITO, Kazuhiro	Leader/Facilities Management Section

※ This list was compiled as of March 31, 2025

APPENDIX 5. List of Publications I (NIFS Reports)

NIFS-1130

Development of the operation scenarios based on the vertical plasma position control in QUEST
Osamu MITARAI, Kazuo NAKAMURA, Makoto HASEGAWA, Takumi ONCHI, Kengou KURODA,
Hiroaki TSUTSUI, Aki HIGASHIJIMA, Hiroshi IDEI, Kazuaki HANADA, and Suguru MASUZAKI
Jan. 14, 2025 (In Japanese)

NIFS-PROC-130

Proceedings of the meetings on Archives in Fields of Natural Sciences in FY2023
Edited by Y. Takaiwa (KEK) and I. Murakami (NIFS)
Mar. 04, 2025 (In Japanese)

NIFS-PROC-129

NIFS-SWJTU JOINT PROJECT FOR CFQS -PHYSICS AND ENGINEERING DESIGN- VER. 6.1 2024. SEP.
CFQS Team
National Institute for Fusion Science, National Institutes of Natural Sciences
Institute of Fusion Science, School of Physical Science and Technology, Southwest Jiaotong University
Hefei Keye Electro Physical Equipment Manufacturing Co. Ltd.
Feb. 21, 2025

NIFS-PROC-128

Frontier of pulsed power technology and pulsed-power-produced plasmas/quantum-beams technology
Edited by Douyan Wang and Sadatsugu Muto
Dec. 20, 2024

NIFS-PROC-127

Conceptual Design of a Heavy Ion Inertial Fusion Reactor Based on Circular Induction Accelerators
Edited by Jun Hasegawa and Tetsuo Ozaki
May 29, 2024

※ This list was compiled as of March 31, 2025

APPENDIX 6. List of Publications II (Journals, etc.)

1. Akiyama Y., Ohta A., Manabe Y., Sato F., Iwamoto A., Imagawa S., Utoh H., Nishijima S.
Study on irradiation effect of insulating materials for fusion superconducting magnets: temperature dependence of mechanical strength
IOP Conference Series: Materials Science and Engineering 1302 12003 -2024
2. Banerjee S., Tanaka M., Kato D., Gaigalas G.
Diversity of Early Kilonova with the Realistic Opacities of Highly Ionized Heavy Elements
The Astrophysical Journal 968 2 64 -2024
3. Cui Z., Zhang X., Xu Y., Shimizu A., Ogawa K., Takahashi H., Isobe M., Lei G., Liu S., Li H., Hu J., Zhu Y., Li X., Zheng H., Liu X., Liu H., Wang X., Liu H., Tang C.
The evolutionary process of W-V mixed dumbbell in tungsten crystals: A study about W-V alloy as a plasma-facing material in fusion devices
Fusion Engineering and Design 208 114655 -2024
4. Emoto M., Nakanishi H., Ohsuna M., Imazu S., Yoshida M., Nonomura M., Sakamoto R.
Plasma and Fusion Cloud Data Analysis Environment
Fusion Engineering and Design 211 114789 -2025
5. Fu T., Wang X., Su X., Xu Y., Okamura S., Shimizu A., Isobe M., Cheng J., Liu H., Huang J., Zhang X., Liu H., Tang C.
Suppression of equilibrium magnetic islands by density profile effect in quasi-axisymmetric stellarator plasmas
Plasma Physics and Controlled Fusion 66 6 65026 -2024
6. Fujita Y., Nakamura H., Kawaguchi H., Goto Y., Kubo S.
Generating optical vortex beams using cylindrical waveguides
Japanese Journal of Applied Physics 63 10 10SP07 -2024
7. Goto M., Nojiri K., Simons J., Kawate T., Oishi T., Yatsuka E., Yanagihara Y., Isobe M., Nunoya Y.
Influence of Stark Broadening on Ion Temperature Measurement for ITER Divertor Diagnosis
Plasma and Fusion Research 20 Special Issue 1 2401012 -2025
8. Goto Y., Tsujimura T., Kubo S.
Azimuthal mode decomposition of millimeter-wave integer and non-integer optical vortices generated by a spiral mirror
AIP Advances 15 2 25225 -2025
9. Goya K., Noda S., Ishida G., Tachibana K., Uehara H., Tokita S.
Mid-infrared refractometer based on side-polished indium fluoride fiber for monitoring relative humidity
Applied Physics Express 18 3 32003 -2025
10. Habara H., Ueyama Y., Nakamura Y., Sakagami H.
Stable creation of a single plasma channel and collimated fast electrons using large-scale PIC simulations with new dynamic load-balancing technique
High Energy Density Physics 53 101147 -2024
11. Hamaji Y., Hayashi Y., Masuzaki S.
Development of a heated liquid Sn flowing system and preliminary results of wettability improvement by inter-metallic layer
Fusion Engineering and Design 210 114727 -2025

12. Hayashi W., Heidbrink W., Muscatello C., Lin D., Osakabe M., Ogawa K., Kawamoto Y., Yamaguchi H., Seki R., Nuga H., Isobe M., Fujiwara Y., Kamio S.
Charge-exchange measurements of high-energy fast ions in LHD using negative-ion neutral beam injection
Journal of Instrumentation 19 P12006 -2024
13. Hayashi Y., Masuzaki S., Kobayashi M., Kawamura G., Mukai K., Tanaka H., Murase T.
Heat flux mitigation characteristics in the radiative divertors with multi-peaks of heat flux in the large helical device
Plasma Physics and Controlled Fusion 67 2 25010 -2025
14. Hu J., Zhang X., Xu Y., Lei G., Liu S., Tsumori K., Nakano H., Osakabe M., Isobe M., Okamura S., Shimizu A., Ogawa K., Takahashi H., Li H., Cui Z., Zhu Y., Li X., Zheng H., Liu X., Geng S., Chen X., Liu H., Wang X., Liu H., Cheng J., Tang C.
Theoretical investigation of structural, electronic, mechanical, surface work function and thermodynamic properties of La_{1-x}M_xB₆ (M = Ba, Sr, Ca) compounds: Potential plasma grid materials in N-NBI system
Nuclear Materials and Energy 41 101813 -2024
15. Ida K.
Overview of Large Helical Device experiments of basic plasma physics for solving crucial issues in reaching burning plasma conditions
Nuclear Fusion 64 11 112009 -2024
16. Imagawa S.
Effect of Magnetic Field Distribution on Recovery Currents of NbTi Superconducting Conductors
低温工学 (Journal of the Cryogenic Society of Japan) 59 3 114-122 -2024
17. Inomoto M., Suzuki T., Jin H., Maeda Y., Togo Y., Cho S., Tanabe H., Ono Y., Kawamori E., Usami S., Yanai R.
The role of an in-plane electric field during the merging formation of spherical tokamak plasmas
Nuclear Fusion 64 8 86060 -2024
18. Ishikawa R., Katsukawa Y.
Origin of Line Broadening in Fading Granules: Influence of Small-scale Turbulence
The Astrophysical Journal 975 1 98 -2024
19. Ishizawa A., Kishimoto Y., Imadera K., Nakamura Y., Maeyama S.
Plasma beta dependence of turbulent transport suggesting an advantage of weak magnetic shear from local and global gyrokinetic simulations
Nuclear Fusion 64 6 66008 -2024
20. Ito A., Toda Y., Takayama A.
Quantum Electron Dynamics in Helium Ion Injection onto Tungsten Surfaces Based on Time-Dependent Density Functional Theory
Nuclear Materials and Energy 42 101836 -2025
21. Kajita S., Hiraiwa K., Tanaka H., Iwai R., Aramaki M., Yasuhara R., Ohno N.
TALIF measurements of atomic deuterium in toroidal divertor simulator NAGDIS-T
Nuclear Materials and Energy 42 101898 -2025
22. Kang B., Sugama H., Watanabe T., Nunami M.
Comprehensive gyrokinetic study of eigenstate transitions in fast ion-driven electrostatic drift instabilities
Physics Letters A 535 130278 -2025
23. Kataoka K., Mukai K., Yagi J., Nakajima M., Jae-hwan K., Nozawa T.
Corrosive behavior of structural F82H RAFM steel by LTZO ceramic breeder pebbles
Nuclear Materials and Energy 42 101875 -2025

24. Kato D., Tanaka M., Gaigalas G., Kitoviene L., Rynkun P.
Systematic opacity calculations for kilonovae – II. Improved atomic data for singly ionized lanthanides
Monthly Notices of the Royal Astronomical Society 535 3 2670-2686 -2024
25. Kato T., Sugama H., Watanabe T., Nunami M.
Energy exchange between electrons and ions in ion temperature gradient turbulence
Physics of Plasmas 31 6 62510 -2024
26. Kawate T., Goto M., Oishi T., Kawamoto Y., Yamada I., Funaba H., Takahashi H.
Detection of electron temperature anisotropy by an x-ray crystal spectrometer in the Large Helical device
Physica Scripta 100 3 35612 -2025
27. Kenmochi N., Ida K., Tokuzawa T., Mizuno Y., Yasuhara R., Funaba H., Uehara H., Den hartog D., Yoshinuma M., Takemura Y., Igami H., Yanai R.
Fast nondiffusive response of heat and turbulence pulse propagation
Scientific Reports 14 13006 -2024
28. Kimura N., Miya Y., Ito D., Vishwakarma P., Kato D., Baba M., Kuma S., Azuma T., Nakamura N.
Laboratory Transition-rate Measurement of the Coronal Intercombination Line of Ar xv by Time-resolved Laser Spectroscopy
The Astrophysical Journal 972 1 12 -2024
29. Kinoshita T., Tanaka K., Ishizawa A., Sakai H., Nunami M., Ohtani Y., Yamada H., Sato M., Nakata M., Tokuzawa T., Yasuhara R., Takemura Y., Yamada I., Funaba H., Ida K., Yoshinuma M., Tsujimura T., Seki R., Ichiguchi K., Michael C.
Turbulence Transition in Magnetically Confined Hydrogen and Deuterium Plasmas
Physical Review Letters 132 23 235101 -2024
30. Kobayashi M., Takahashi J., Ota H., Matsuo K., Ibrahim M., Minato T., Fujimori G., Katoh M., Kobayashi K., Kebukawa Y., Nakamura H.
Emergence of optical activity and surface morphology changes in racemic amino acid films under circularly polarized Lyman- α light irradiation
Chirality 36 11 e70004 -2024
31. Kobayashi M., Yoshihashi S., Ogawa K., Isobe M., Aso T., Hara M., Sangaroon S., Kusaka S., Tamaki S., Murata I., Toyama S., Miwa M., Matsuyama S., Osakabe M.
Application of a Single-Crystal CVD Diamond Detector for Fast Neutron Measurement in High Dose and Mixed Radiation Fields
IEEE Transactions on Instrumentation and Measurement 73 6010808 -2024
32. Kobayashi M., Yoshihashi S., Ogawa K., Isobe M., Aso T., Hara M., Sangaroon S., Tamaki S., Murata I., Miwa M., Toyama S., Matsuyama S., Osakabe M.
Simultaneous measurements for fast neutron flux and tritium production rate using pulse shape discrimination and single crystal CVD diamond detector
Nuclear Fusion 64 6 66026 -2024
33. Kobayashi M., Yoshimura S., Iwayama H., Kondo N., Takahashi J., Ota H., Katoh M., Kobayashi K., Nakamura H.
First Attempt at Photoionized Plasma Production with VUV Radiation in Synchrotron Light Source UVSOR-III
Plasma and Fusion Research 19 Regular Issue 1301028 -2024
34. Kobayashi T., Kobayashi M., Narushima Y., Suzuki Y., Tanaka K., Motojima G., Watanabe K., Mukai K., Hayashi Y.
New type of self-sustained divertor oscillation driven by magnetic island dynamics in Large Helical Device
Nuclear Fusion 64 7 76059 -2024

35. Kobayashi T., Yoshinuma M., Hu W., Ida K.
Detection of bifurcation in phase-space perturbative structures across transient wave–particle interaction in laboratory plasmas
Proceedings of the National Academy of Sciences 121 46 e2408112121 -2024
36. Kotani T., Toida M., Moritaka T., Taguchi S.
Generation of the Harmonic Structure of Upper Hybrid and Electron Cyclotron Waves Driven by Energetic Electrons
Plasma and Fusion Research 19 Regular Issue 1201033 -2024
37. Kotani T., Toida M., Moritaka T., Taguchi S.
Parametric Study of the Harmonic Structure of Lower Hybrid Waves Driven by Energetic Ions
Journal of Geophysical Research: Space Physics 129 9 e2024JA032824 -2024
38. Lazerson S., Geiger J., Kulla D., Leviness A., Bozhenkov S., Killer C., Ogawa K., Isobe M., Mcneely P., Rust N., Hartmann D., W7-x team T.
Fast ion confinement in the presence of core magnetic islands in Wendelstein 7-X
Plasma Physics and Controlled Fusion 66 7 75017 -2024
39. Le T., Suzuki Y., Ohtani H., Hasegawa H., Moritaka T.
Poloidally asymmetric potential formation on plasma boundary in axisymmetric magnetic field
Frontiers in Physics 12 1398172 -2024
40. Leviness A., Lazerson S., Jansen van vuuren A., Rueda-Rueda J., Ayllon-guerola J., Bozhenkov S., Corl D., Ellis R., Galdon-Quiroga J., Garcia-dominguez J., Garcia-Munoz M., Hidalgo-salaverri J., Ogawa K., Pablant N., Segado-fernandez J., W7-x team T.
Simulation of a scintillator-based fast ion loss detector for steady-state operation in Wendelstein 7-X
Review of Scientific Instruments 95 7 73529 -2024
41. Leviness A., Lazerson S., Jansen van vuuren A., Rueda-Rueda J., Beurskens M., Bozhenkov S., Brunner K., Ford O., Fuchert G., Garcia-Munoz M., Isobe M., Killer C., Knauer J., Ogawa K., Pablant N., Pasch E., Poloskei P., Romba T., W7-x team T.
Validation of a synthetic fast ion loss detector model for Wendelstein 7-X
Nuclear Fusion 64 9 96034 -2024
42. Li H., Fujiwara S., Nakamura H., Mizuguchi T., Saito S., Sakai W.
Reactive molecular dynamics simulations of the intra- and intermolecular reactions of hydrogen-abstracted polyethylene chains
Molecular Simulation 51 2 122-127 -2025
43. Li H., Zhang X., Xu Y., Lei G., Liu S., Tsumori K., Nakano H., Osakabe M., Isobe M., Okamura S., Shimizu A., Ogawa K., Takahashi H., Cui Z., Hu J., Zhu Y., Li X., Zheng H., Liu X., Geng S., Chen X., Liu H., Wang X., Liu H., Tang C.
Effect of oxygen or copper impurities on the work function of cesiated surfaces under co-existence with hydrogen: A study about negative hydrogen ion sources for neutral beam injection systems
Nuclear Materials and Energy 41 101792 -2024
44. Liao L., Ogawa K., Sangaroon S., Paenthong W., Kusaka S., Tamaki S., Murata I., Isobe M.
The initial measurement of a compact D–T neutron spectrometer based on a single-crystal chemical vapor deposition diamond stack for fusion plasma diagnostic
Review of Scientific Instruments 95 7 73533 -2024
45. Maekaku K., Sugama H., Watanabe T.
Time evolutions of information entropies in a one-dimensional Vlasov–Poisson system
Physics of Plasmas 31 10 102101-1-25 -2024
46. Maeyama S., Honda M., Narita E., Toda S.
Multi-Fidelity Information Fusion for Turbulent Transport Modeling in Magnetic Fusion Plasma
Scientific Reports 14 28242 -2024

47. Maeyama S., Howard N., Citrin J., Watanabe T., Tokuzawa T.
Overview of multiscale turbulence studies covering ion-to-electron scales in magnetically confined fusion plasma
Nuclear Fusion 64 11 112007 -2024
48. Maeyama S., Watanabe T., Nakata M., Nunami M., Asahi Y., Ishizawa A.
Rotating flux-tube model for local gyrokinetic simulations with background flow and magnetic shears
Journal of Computational Physics 522 113595 -2025
49. Masuzaki S., Shoji M., Nespoli F., Lunsford R., Motojima G., Yajima M., Tokitani M., Oishi T., Kawate T., Goto M., Kasahara H., Yoshimura Y., Gilson E., Pablant N., Morisaki T.
Glow Discharge Boronization and Real-Time Boronization Using an Impurity Powder Dropper in LHD
Nuclear Materials and Energy 42 101843 -2025
50. Minagawa H., Yoshimura S., Terasaka K., Aramaki M.
Data-volume reduction of optical vortex laser absorption spectroscopy by coarse-graining using a quadrant photodiode
Japanese Journal of Applied Physics 63 5 56002 -2024
51. Miura H.
Formation of fine structures in incompressible Hall magnetohydrodynamic turbulence simulations
Plasma 7 4 793-815 -2024
52. Nagasaka T., Shen J., Ando M., Kato T., Nozawa T., Tanigawa H.
Tensile and creep properties of small specimens of reduced-activation ferritic steel F82H, and the correlation to standard specimen data
Nuclear Science and Technology Open Research 2 56 -2024
53. Nakamura H., Ishiguro K., Nakata A., Usami S., Saito S., Fujiwara S.
Reactive molecular dynamics simulation on DNA double-strand breaks induced by hydrogen elimination
Japanese Journal of Applied Physics 63 12 12SP09 -2024
54. Nasu T., Tokuzawa T., Nakata M., Ida K., Inagaki S., Nishiura M., Yoshimura Y., Yanai R., Tanaka K., Yoshinuma M., Kobayashi T., Ejiri A., Watanabe K., Yamada I., LHD Experiment Group .
Electron-scale turbulence characteristics with varying electron temperature gradient in LHD
Nuclear Fusion 64 9 96008 -2024
55. Nishimoto S., Nagaoka K., Nakata M., Yoshimura S., Tanaka K., Yokoyama M., Nunami M., Tokuzawa T., Suzuki C., Seki R., Yoshinuma M., Motojima G., Ida K., Suzuki Y.
Experimental study of the effect of geodesic curvature on turbulent transport in magnetically confined plasma
Plasma Physics and Controlled Fusion 66 4 45010 -2024
56. Nishimura R., Oishi T., Murakami I., Kato D., Sakaue H., Gupta S., Ohashi H., Goto M., Kawamoto Y., Kawate T., Takahashi H., Tobita K.
Collisional-Radiative modeling of unresolved transition array spectra near 200 Å from W19+-W25+ emissions for diagnostics of ITER edge plasma
Nuclear Materials and Energy 41 101740 -2024
57. Nishimura R., Oishi T., Murakami I., Kato D., Sakaue H., Gupta S., Ohashi H., Goto M., Kawamoto Y., Kawate T., Takahashi H., Tobita K.
Observation and identification of W19+-W23+ spectra in the EUV wavelength region in the vicinity of 200Å
Plasma and Fusion Research 19 Regular Issue 1402022 -2024
58. Nishiura M., Shimizu A., Ido T., Satake S., Yoshinuma M., Yanai R., Nunami M., Yamaguchi H., Nuga H., Seki R., Fujita K., Salewski M.
Core density profile control by energetic ion anisotropy in LHD
Physics of Plasmas 31 6 62505 -2024

59. Noto H., Wakai E.
Overview of strengthening and working technique on Fusion materials
Research & Development in Material Science 21 1 2493-2496 -2024
60. Nuga H., Seki R., Ogawa K., Yamaguchi H., Kamio S., Fujiwara Y., Kawamoto Y., Yoshinuma M., Kobayashi T., Takemura Y., Isobe M., Osakabe M., Yokoyama M.
Degradation of fast-ion confinement depending on the neutral beam power in MHD quiescent LHD plasmas
Nuclear Fusion 64 6 66001 -2024
61. Obana T.
Investigating the Effect of Coil Length, Alignment Errors and Cooling Down on a Superconducting Magnet With Active Shielding for Rotating Gantry
IEEE Transactions on Applied Superconductivity 34 5 4401105 -2024
62. Ogawa K., Isobe M., Sangaroon S., Liao L., Zhong G., Seki R., Nuga H., Osakabe M.
Observation of energetic ion anisotropy using neutron diagnostics in the Large Helical Device
Nuclear Fusion 64 7 76010 -2024
63. Ogawa K., Jo J., Kim J., Liao L., Sangaroon S., Takada E., Isobe M.
A scintillating-fiber detector for making high-time-resolution secondary D-T neutron measurements in KSTAR
Review of Scientific Instruments 95 7 73539 -2024
64. Ogawa K., Magee R., Tajima T., Gota H., Mccarroll P., Allfrey I., Nuga H., Isobe M., Osakabe M.
Demonstration of aneutronic p-11B reaction in a magnetic confinement device
Nuclear Fusion 64 9 96028 -2024
65. Ogawa K., Zhong G., Liao L., Chen W., Zhou R., Li K., Takada E., Sangaroon S., Hu L., Isobe M.
Time-resolved deuterium–deuterium fusion born 1 MeV triton confinement study in EAST deuterium plasma
Plasma Physics and Controlled Fusion 67 2 25001 -2025
66. Ohno N., Takano F., Yamanaka A., Ohtani H., Kageyama A.
Digital-LHD: LHD Visualizer for Head-Mounted Display Systems
Plasma and Fusion Research 19 Regular Issue 1401029 -2024
67. Ohya M., Imagawa S., Shirai Y., Kobayashi H.
Energization test apparatus of HTS coils cooled by liquid hydrogen and manufacture of split-type REBCO external field coil
Journal of Physics: Conference Series 2776 12010 -2024
68. Oishi T., Morita S., Kato D., Murakami I., Sakaue H., Goto M., Kawamoto Y., Kawate T., Nishimura R., Takahashi H., Tobita K.
Observation of tungsten emission spectra up to W46+ ions in the Large Helical Device and contribution to the study of high-Z impurity transport in fusion plasmas
Nuclear Fusion 64 10 106011 -2024
69. Pégourié B., Geulin E., Goto M., Matsuyama A., Motojima G., Sakamoto R.
Structure of pellet cloud emission and relation with the local ablation rate
Nuclear Fusion 64 5 56026 -2024
70. Paenthong W., Ogawa K., Sangaroon S., Du X., Liu D., Liao L., Wisitorsasak A., Onjun T., Isobe M.
Design and initial results of the imaging neutral particle analyzer in large helical device
Review of Scientific Instruments 95 8 83547 -2024
71. Petrosky T., Goto Y., Garmon S.
Classicalization of Quantum Mechanics: Classical Radiation Damping Without the Runaway Solution
Physics 6 4 1191-1203 -2024

72. Rattanawongnara E., Osakabe M., Nakano H., Tsumori K., Nagaoka K., Takeiri Y.
Evaluation of H-/D- Density Using Langmuir Probe Measurement in a Cs Seeded Negative Ion Source
Journal of Physics: Conference Series 2743 1 12084 -2024
73. Rongpuit K., Wisitsorasak A., Sangaroon S., Ogawa K., Pattanaboonmee N., Chewpraditkul C.,
Tangwancharoen S., Suksaengpanomrung S., Tamman A., Chatthong B., Poolyarat N., Isobe M.
Initial results of hard X-ray spectroscopy by LaBr₃(Ce) detector for runaway electron study in Thailand Tokamak-1
Radiation Physics and Chemistry 227 112346 -2025
74. Saito S., Nakamura H., Sawada K., Hoshino K., Kojima Y., Doi T., Kobayashi M., Hasuo M., Homma Y.,
Yamamoto S.
Emission of high rovibrational hydrogen molecules under detached plasma conditions by recycling on the tungsten wall
Nuclear Fusion 64 12 126067 -2024
75. Saito S., Sato S., Nakamura H., Takahashi C., Sawada K., Hoshino K., Kobayashi M., Hasuo M.
Deep learning model for predicting the spatial distribution of binding energy from atomic configurations
Japanese Journal of Applied Physics 63 9 09SP03 -2024
76. Saito S., Takahashi T., Mizuguchi N.
First Confinement Time Evaluation for Particles Axially Injected into a Non-Adiabatic Trap
Plasma and Fusion Research 20 Regular Issue 1203023 -2025
77. Sakai K., Huang T., Khasanah N., Bolouki N., Chu H., Moritaka T., Sakawa Y., Sano T., Tomita K., Matsukiyo
S., Morita T., Takabe H., Yamazaki R., Yasuhara R., Habara H., Kuramitsu Y.
Competition of magnetic reconnections in self-generated and external magnetic fields
High Energy Density Physics 52 101132 -2024
78. Sakaki T., Watanabe T., Maeyama S.
Convective growth of auroral arcs through the feedback instability in a dipole geometry
Journal of Geophysical Research: Space Physics 129 12 e2023JA032407 -2024
79. Sangaroon S., Ogawa K., Isobe M.
Neutron emission spectrometer in magnetic confinement fusion
AAPPS Bulletin 34 34 -2024
80. Sangaroon S., Ogawa K., Isobe M., Liao L., Zhong G., Wisitsorasak A., Takada E., Kobayashi M., Poolyarat
N., Murakami S., Seki R., Nuga H., Osakabe M.
Neutron Spectroscopy in Perpendicular Neutral Beam Injection Deuterium Plasmas Using Newly Developed Compact
Neutron Emission Spectrometers
IEEE Transactions on Instrumentation and Measurement 73 1006911 -2024
81. Sato N.
Quantum-Fluid Correspondence in Relativistic Fluids with Spin: From Madelung Form to Gravitational Coupling
Classical and Quantum Gravity 42 2 25017 -2025
82. Sato N., Morrison P.
A collision operator for describing dissipation in noncanonical phase space
Fundamental Plasma Physics 10 100054 -2024
83. Sato N., Yamada M.
A Reduced Ideal MHD System for Nonlinear Magnetic Field Turbulence in Plasmas with Approximate Flux Surfaces
Journal of Mathematical Physics 65 9 93101 -2024
84. Seki R., Todo Y., Suzuki Y., Spong D., Ogawa K., Isobe M., Osakabe M.
Orbit-following simulations of fast-ion transport and losses due to the Alfvén eigenmode burst in the Large Helical Device
Physics of Plasmas 31 10 102503 -2024

85. Shen J.
Influences of minor Ti addition on microstructure and tensile properties of high-purity V-10Cr alloys
Materials Science and Engineering: A 915 147263 -2024
86. Shoji M., Kawamura G., Smirnov R., Romazanov J., Kirschner A., Tanaka Y., Masuzaki S., Kawate T., Nespoli F., Lunsford R., Gilson E., Brezinsek S., Pablant N.
Full-torus impurity transport simulation in boron powder injection experiments in the Large Helical Device
Nuclear Materials and Energy 41 101803 -2024
87. Shoji M., Kawamura G., Smirnov R., Tanaka Y., Masuzaki S., Nespoli F., Gilson E., Lunsford R.
Self-consistent transport simulation of boron dust particle injection in the peripheral plasma in Large Helical Device
Contributions to Plasma Physics 64 7月8日 e202300105 -2024
88. Su X., Wang X., Xu Y., Okamura S., Shimizu A., Isobe M., Cheng J., Liu H., Huang J., Zhang X., Liu H., Luo Y., Shen J., Hu J., Tang C.
Controlling three-dimensional magnetic island appearance with external current drive in the Chinese first quasi-axisymmetric stellarator
Nuclear Fusion 64 7 76023 -2024
89. Sugama H.
Local momentum balance in electromagnetic gyrokinetic systems
Physics of Plasmas 31 4 42303 -2024
90. Sugiyama T., Masuzaki S., Shoji M., Hayashi Y., Motojima G., Ogawa K., Kawamura G., Kanno R., Ohtani H.
Asymmetry in particle load on divertor tiles in different magnetic field configurations of LHD
Nuclear Materials and Energy 41 101830 -2024
91. Takahata K.
Transition Boiling Heat Transfer on a Horizontal Surface Using Liquid Nitrogen: Observation of Steady-state Boiling Curves in the Transition Boiling Regime and Hysteresis Appearing in the Curves
低温工学 (Journal of the Cryogenic Society of Japan) 60 1 13-20 -2025
92. Tanaka M., Kato H., Suzuki N., Chimura H., Yonezu H., Masuzaki S.
Determination of tritium inventory in carbon divertor tiles used in deuterium plasma experiment by induction heating method
Nuclear Materials and Energy 42 101876 -2025
93. Tanaka M., Kurita S., Akata N.
Impacts of the large fusion test facility on tritium in environmental water and natural radiation levels
Radiation Protection Dosimetry 200 16-18 1802-1806 -2024
94. Tanoue H., Nakagawa S., Nagahara K., Murase T., Shimizu A., Ogawa K., Takahashi H., Shoji M., Okamura S., Isobe M., Osakabe M., Yin D., Liu H., Xu Y.
Engineering design and manufacturing of the modular coil system for the quasi-axisymmetric stellarator CFQS-T
Fusion Engineering and Design 212 114853 -2025
95. Toida M., Kotani T.
Simulation study of energetic-ion mass dependence on nonlinear development of lower hybrid wave instabilities
Physics of Plasmas 31 12 122304 -2024
96. Tokitani M., Miyamoto M., Masuzaki S., Hatano Y., Lee S., Oya Y., Kurotaki H., Asakura N., Nakamura H., Hayashi T., Rubel M., Widdowson A., Likonen J.
Co-deposited layers on gap surfaces of bulk tungsten divertor tiles in JET ITER-like wall: Directional effects and nanostructures
Nuclear Materials and Energy 39 101678 -2024

97. Tokuzawa T., Yoshida M., Imazawa R., Nakagawa S., Inagaki S., Kin F., Chiba S., Suzuki N., Nasu T., Fujisawa A., Ida K.
Preparatory study of feasibility for a vertical viewing electron cyclotron emission diagnostic for the JT-60SA tokamak
Review of Scientific Instruments 95 8 83531 -2024
98. Tsunoda K., Fujita T., Okamoto A., Morizawa S., Kato S., Oshiro T., Nakagawa S., Murase T., Isobe M., Shimizu A.
Three-Dimensional Analysis of Eddy Current in TOKASTAR-2
Plasma and Fusion Research 20 Regular Issue 1402016 -2025
99. Ueda K., Nishiura M.
Nonlinear Gaussian process tomography with imposed non-negativity constraints on physical quantities for plasma diagnostics
Machine Learning: Science and Technology 6 1 15061 -2025
100. Urano T., Takahashi T., Mizuguchi N., Asai T., Okada S.
Hybrid simulation study on ion heating by low-frequency wave excited in a field-reversed configuration
Nuclear Fusion 65 3 36026 -2025
101. Vanthieghem A., Tsiolis V., Spitkovsky A., Todo Y., Sekiguchi K., Fiuza F.
Electron Heating in High Mach Number Collisionless Shocks
Physical Review Letters 132 26 265201 -2024
102. Wang C., Kawaguchi H., Nakamura H., Kubo S.
The study of propagation characteristics of the millimeter-wave vortex in magnetized plasma by using the FDTD method
Japanese Journal of Applied Physics 63 9 09SP08 -2024
103. Wang H., Lauber P., Todo Y., Suzuki Y., Li H., Idouakass M., Wang J., Adulsiriswad P., ASDEX Upgrade T.
Nonlinear excitation of energetic particle driven geodesic acoustic mode by resonance overlap with Alfvén instability in ASDEX Upgrade
Scientific Reports 15 1130 -2025
104. Wang H., Lauber P., Todo Y., Suzuki Y., Li H., Wang J., Wei S.
Nonlinear excitation of energetic particle driven geodesic acoustic mode by Alfvén instability in ASDEX-Upgrade Tokamak
Nuclear Fusion 64 7 76015 -2024
105. Wenzel U., Motojima G., Mackel F., Arkhipov A., Jagielski B., Haak V., Meister H., Marquardt M., Fox-widdows E.
Performance of ITER pressure gauges during deuterium operation in the Large Helical Device
Plasma Physics and Controlled Fusion 66 12 125017 -2024
106. Xu M., Zhong G., Zhang Y., Huang L., Hu L., Zhang R., Yang L., Zhang Y., Chen W., Li Y., Sangaroon S., Ogawa K., Isobe M., Liao L., Fan T.
Investigation of Cs²⁷LiYCl₆:Ce scintillator energy response for D-D fusion neutron spectrometer
Fusion Engineering and Design 204 114490 -2024
107. Yamagishi O.
Neoclassical transport computations in non-isothermal tokamak plasmas
Physics of Plasmas 31 10 102502 -2024
108. Yamanaka K., Nakanishi H., Tokunaga S., Urushidani S.
A data transfer method for physics data of experimental fusion reactors using virtual disks
Fusion Engineering and Design 211 114743 -2025

109. Yamauchi Y., Tanoue Y., Keta K., Nagasaka T., Shen J., Tomioka S., Matsumoto Y.
Deuterium and helium desorption/retention properties of low-activation vanadium alloys possible for reuse in a short time in fusion reactors
Nuclear Materials and Energy 39 101655 -2024
110. Yang H., Yasuhara R., Noto H., Nagata D., Tokitani M., Kawaguchi H., Suzuki C., Miyagawa R., Uehara H.
Effect of Nanosecond Laser Irradiation on Tungsten Grain Structure
Nuclear Materials and Energy 40 101688 -2024
111. Yoshida Z.
Kinetic Theory with Casimir Invariants–Toward Understanding of Self-Organization by Topological Constraints
Entropy 27 1 5 -2025
112. Yoshinuma M., Ida K., Ebihara Y.
Development of Hyperspectral Camera for Auroral Imaging (HySCAI)
Earth, Planets and Space 76 96 -2024
113. Yoshinuma M., Ida K., Kobayashi T.
Fast Charge Exchange Spectroscopy for Measurements of Ion-Velocity-Space Distribution Function
Plasma and Fusion Research 19 Regular Issue 1402037 -2024
114. Zhang X., Shimizu A., Nakagawa S., Xu Y., Murase T., Tanoue H., Nagahara K., Shoji M., Cui Z., Hayashi H., Ogawa K., Takahashi H., Isobe M., Okamura S., Liu H., Wang X., Liu H., Hu J., Cheng J., Tang C.
Investigation of modular coil misalignment on magnetic flux surface in the CFQS quasi-axisymmetric stellarator
Fusion Engineering and Design 211 114820 -2025
115. Zhang Y., Zhong G., Huang L., Xu M., Hu L., Huang J., Xu K., Zhang R., Yang L., Mai C., Zhang Y., Chen W., Ogawa K., Isobe M., Fan T., Zhou M.
Study on the contribution matrix for EAST radial neutron camera system
Fusion Engineering and Design 206 114602 -2024