

Technical Publications
by JAERI Staff

from January 1968
to December 1968

March 1969

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[Summary] Technical Publications by JAERI Staff from January 1968 to December 1968

Approximately 500 journal papers, meeting papers, reports and books are given, which have been published by personnel of JAERI from January 1968 to December 1968. The contents for each entry include the title, language in which it is written, author(s), and journal name or origin. A list of the patents, originating at JAERI, including both Japanese and other patents, is also given.

March 1969

Division of Technical Information
Japan Atomic Energy Research Institute

〔要 旨〕 日本原子力研究所研究成果発表リスト (1968年1月～1968年12月)

1968年1月から1968年12月までの間に、日本原子力研究所の所員によって発表された研究成果のうち、雑誌論文・会議の報文・レポート・単行本約500件について、その標題・国語・筆者・所在を示した。また、研究所で発生した国内・国外の特許一覧表を付した。

1969年3月

日本原子力研究所
技術情報部

Preface

Japan Atomic Energy Research Institute was established in 1956. During the years, the Institute has functioned as the center of nuclear research and development in Japan. The results of research and development thus produced have been reported and published through various media, including meetings. The present volume is intended to introduce such literature originally written in Japanese, and some in foreign languages, to scientists and engineers in various countries outside Japan. The volume is in nine major fields of research, each field listing journal papers, reports, other papers and books in this order. Patents are gathered at the end of the volume.

March 1969

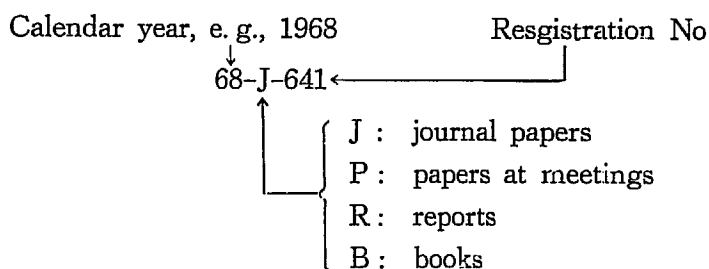
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Japan Atomic Energy Research Institute

Introduction

Given in this Technical Publications by JAERI Staff are title of papers, articles, etc., excluding reviews, commentaries and other less original ones, published from January 1968 to December 1968. An effort has been made to collect as many papers as possible. Research work done by JAERI personnel in other establishment are also listed.

Each entry contains the following :

Code number — This represent the JAERI registration number of the paper. The code numbers in this bibliography are intermitted in sequence since those less original papers to which code numbers are also given are excluded from the bibliography.



J's also include the papers appearing in the proceedings of meetings and in annual report, if these publications are numbered. P's are the papers appearing in the proceedings of non-periodical meetings. R's include reports (include declassified memos) of JAERI and those published by other research organizations. B's are books commercially available.

Title — If the title is originally in English, it is directly used. The title in other language is given as translated into English.

Language — The symbol, given after the title represents the language in which the (original) paper is written. J, E, F, and G are for Japanese, English, French, and German, respectively.

Author(s) — Authors are given in their last names and initials. If a paper is written by more than three authors, only one author with "*et al*". When a paper was prepared jointly by JAERI personnel and the personnel of outside establishment, the latter authors are asterisked (*). The paper or article published in the name of a laboratory or committee is given the organizational name as the author.

Title of the patents and utility models, the work for which has been orginated in JAERI, are listed at the end of the volume. Each entry consists of the JAERI patent registration number, the title of patent, the patentee and the patent number, under the country the patent has been granted.

Comments and suggestions from the users are welcomed.

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Reactor Engineering

Journal Articles

- 68-J-105 Pattern of nuclear fuel cycle [J]
Nozawa M., *J. Atomic Energy Soc. Japan*, **10** (No. 5), 269~272 (1968)
- 67-J-253 Application of the pseudo random binary signals to JRR-3 high power dynamics measurements [E]
Hara M., Usui H., Fujii Y., *J. Nucl. Sci. Technol. (Tokyo)*, **5** (No. 2), 79~85 (1968)
- 68-J-430 Measurement of fission gases in an in-pile loop with Ge(Li) detector [E]
Kitahara T., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, **5** (No. 11), 596~598 (1968)
- 66-J-071 Application of pure water on reactors [J]
Suguri S., Kikuchi T., *J. Wat. Waste (Tokyo)*, **8** (No. 8), 573~580 (1966)
- 66-J-039 Design and equipment of the JAERI post irradiation examination facility [E]
Iso Y., Sakakura A., *Nucl. Engng. Design*, **3** (No. 1), 105~116 (1966)
- 67-J-449 Mockup experiments for the irregular shield of the first nuclear ship of Japan [E]
Furuta Y., *et al.*, *Nucl. Engng. Design*, **7** (No. 2), 152~158 (1968)
- 66-J-347 Further comments on the optical shut down control [E]
Shinohara Y., *et al.*, *Nucl. Sci. Engng.*, **28** (No. 1), 155~156 (1967)
- 67-J-464 Sealing mechanism in reactors • 1 (Gas-cooled reactor) [J]
Okamoto Y., Murao Y., *Sci. Machine (Tokyo)*, **20** (No. 2), 303~308 (1968)
- 67-J-721 Sealing mechanism in reactors • 2 (Water-cooled reactor) [J]
Okamoto Y., Murao Y., *Sci. Machine (Tokyo)*, **20** (No. 3), 443~448 (1968)
- 68-J-041 Sealing mechanism in reactors • 3 (Liquid-metal-cooled reactor) [J]
Okamoto Y., Murao Y., *Sci. Machine (Tokyo)*, **20** (No. 4), 591~596 (1968)

Papers at Meetings

- 65-P-186 Solid-state neutron flux monitoring instruments for nuclear reactors [E]
Furukawa T., Wakayama N.,
Conf. Proc. on Nuclear Electronics (Bombay, 1965) (IAEA), p. 141~155
- 65-P-437 Some investigations into application of pseudo random binary signals to reactor-dynamics measurements [E]
Hara M., Suda N.,
; AEC Symp. Series No. 9, Neutron Noise, Waves and Pulse Propagation (Florida, 1966), p. 247~270
- 66-P-445 Construction and operating experience of JPDR [E]
Suguri S., Mochizuki K.,
Proc. of a Study Group Meeting on Problems and Prospects of
Nuclear Power Applications in Developing Countries (Manila, 1966) (IAEA)

- 67-P-074 Design of Pu self-sustaining reactor with D₂O moderator and boiling water H₂O coolant [E]
Sawai S., *et al.*, Proc. Symp. Heavy Water Power Reactors (Vienna, 1967) (IAEA), p. 285~298
- 67-P-135 Burn-up prediction in thermal reactors in Japan [E]
Mochizuki K., Tachibana A.*
Proc. of a Panel, Fuel Burn-up Predictions in Thermal Reactors (Vienna, 1967) (IAEA), p. 89~107
- 67-P-197 Shielding studies for the First Nuclear Ship of Japan [E]
Shindo M., *et al.*,
Intern. Conf. on the Physics Problems of Reactor Shielding (Harwell, 1967), AERE-R-5364
- 67-P-269 Fast reactor research and development programme in Japan [E]
Ishikawa H., *et al.*,
Proc. of a Symp. on the Fast Reactor Physics (Karlsruhe, 1967) (IAEA), p. 15~26
- 67-P-436 Failed fuel element detection and location in power reactors in Japan [E]
Mochizuki K., Ikeda T.*,
Proc. of a Panel, Detection and Location of Failed Fuel Elements (Vienna, 1967) (IAEA), p. 129~165

Reports

- 68-R-001 Design of plutonium self-sustaining reactor (Heavy water moderated boiling light water cooled) [E]
Sawai S., *et al.*, JAERI 1151, p.p. 10 (1968)
- 68-R-002 Computer control of the startup of a nuclear reactor [J]
Fujisawa T., *et al.*, JAERI 1152, p.p. 17 (1968)
- 68-R-003 JRR-2 irradiated fuel storage facility [E]
Sawai S., Ueno M., JAERI 1153, p.p. 18 (1968)
- 68-R-004 Uses of plutonium fuel in pressure tube-type heavy water moderated thermal reactor [E]
Yasukawa S., Shindo R., JAERI 1154, p.p. 7 (1968)
- 68-R-005 Three dimensional nuclear thermal hydraulic characteristic analysis of JPDR core [J]
Shimooke T., JAERI 1159, p.p. 39 (1968)
- 68-R-006 Critical experiment and analysis on the core for Japan First Nuclear Ship Reactor [E]
Mastuura S., *et al.*, JAERI 1166, p.p. 120 (1968)
- 67-R-007 Fuel handling machine for fast reactor [J]
Nozawa M., *et al.*, JAERI-memo 2598, p.p. 129 (1967)
- 67-R-008 Higher order perturbation theory and its application to burn-up analysis [J]
Saito R., JAERI-memo 2667, p.p. 35 (1967)
- 67-R-009 Current pulse amplifier and discriminator instrumentation [J]
Wakayama N., Nakata H., JAERI-memo 2697, p.p. 39 (1967)

- 67-R-010 Analysis of control rod effectiveness by Nordheim-Scalletlar method · 1 (Theoretical formulation) [E]
Amano F., *et al.*, JAERI-memo 2874, p.p. 36 (1967)
- 67-R-011 Nuclear characteristics of 1000 MWe sodium cooled fast converter · 1 [J]
Nozawa M., *et al.*, JAERI-memo 2903, p.p. 45 (1967)
- 67-R-012 Analysis on the blast resistant structure of FBR [J]
Iso Y., *et al.*, JAERI-memo 2913, p.p. 92 (1967)
- 67-R-013 Pulse height discriminator for fast pulse channel of reactor instrumentation [J]
Wakayama N., Kakuta T., JAERI-memo 2925 p.p. 10 (1967)
- 67-R-014 JPDR quarterly report · 14 [J]
Div. JPDR Operation JAERI-memo 2927, p.p. 180 (1967)
- 67-R-015 Japan fast experimental reactor conceptual design [J]
Office of Power Reactor Projects JAERI-memo 2937, p.p. 22 (1967)
- 67-R-016 Study on safety design criteria for proto-type fast breeder reactor [J]
Nagashima K.*, JAERI-memo 2938, p.p. 29 (1967)
- 68-R-017 The construction and experimental results of liquid sodium flowmeter calibration loop [J]
Furukawa K., *et al.*, JAERI-memo 2973, p.p. 51 (1968)
- 68-R-018 Report on the construction and operation of liquid sodium mother and daughter test loop system [J]
(Sept. 1965—March 1966)
Furukawa K., *et al.*, JAERI-memo 2974, p.p. 142 (1968)
- 68-R-019 A rig for experiments on simulated loss-of-coolant accidents [J]
Shiba M., JAERI-memo 2976, p.p. 24 (1968)
- 68-R-020 Heat transfer and hydrodynamics problems for analysis of fast reactor safety [J]
Namatame K., JAERI-memo 2987, p.p. 17 (1968)
- 68-R-021 Measurement of the effective thermal conductivity of UO₂ vibratory compacted fuel [J]
(Irradiation in TLG-1 gas loop)
Shirai E., *et al.*, JAERI-memo 2996, p.p. 32 (1968)
- 68-R-022 JPDR-II Project progress report · 11 (Part 1) [J]
JPDR-II Project, JAERI-memo 3041, p.p. 28 (1968)
- 68-R-023 JPDR-II Project progress report · 11 (Part 2) [J]
JPDR-II Project, JAERI-memo 3042, p.p. 227 (1968)
- 68-R-024 Design of 100 MW experimental fast breeder reactor cooling system [J]
Sako K., *et al.*, JAERI-memo 3064, p.p. 193 (1968)
- 68-R-025 JPDR quarterly report · 15 [J]
Div. JPDR Operation, JAERI-memo 3158, p.p. 231 (1968)

- 68-R-026 Status and problems in the liquid sodium technology for the fast reactor development [J]
Furukawa K., JAERI-memo 3164, p.p. 195 (1968)
- 68-R-027 Preliminary safety analysis Japan Experimental Fast Reactor [J]
Saito S., *et al.*, JAERI-memo 3224, p.p. 172 (1968)
- 68-R-028 Dynamic analysis of JPDR-II feed water control system [J]
Futamura Y., Umeda M., JAERI-memo 3250, p.p. 32 (1968)
- 68-R-029 A method for realizing high power density BWR [J]
Takeda R., *et al.*, JAERI-memo 3268, p.p. 4 (1968)
- 68-R-030 A test rig for experiments on loss of coolant accidents of light water reactors [J]
Shimamune H., *et al.*, JAERI-memo 3285, p.p. 35 (1968)
- 68-R-031 JPDR quarterly report • 16 [J]
Div. JPDR Operation., JAERI-memo 3287, p.p. 103 (1968)
- 68-R-032 Design of fuel assembly for the JFER (FOX-3) [J]
Abe Y., *et al.*, JAERI-memo 3337, p.p. 129 (1968)

Technology of Reactor Fuels and Structural Materials

Journal Articles

- 66-J-338 Study on the glassy carbone · 1 (One experience on the preparation of glassy carbone) [J]
Honda T., *Carbons (Tokyo)*, No. 45, 19~25 (1966)
- 66-J-112 On the transfer of liquids in the JAERI reprocessing test plant [J]
Naruse Y., *J. Atomic Energy Soc. Japan*, 8 (No. 7), 386~387 (1966)
- 67-J-051 High temperature oxidation of beryllium in water vapor [J]
Sasabe M., Nomura S., *J. Atomic Energy Soc. Japan*, 10 (No. 6), 319~324 (1968)
- 66-J-550 Segregation of fission products in natural UO₂ pellets irradiated at high temperature [J]
Taketani K., Ichikawa M., *J. Atomic Energy Soc. Japan*, 10 (No. 8), 426~434 (1968)
- 68-J-006 Thermal diffusivity of uranium by laser pulse method from 20° to 850°C [E]
Nasu S., *et al.*, *Japan. J. Appl. Phys.*, 7, 682 (1968)
- 67-J-430 The effect of grain-boundary migration on the xenon distribution in aluminium [E]
Kawasaki S., *J. Nucl. Mater.*, 26 (No. 3), 338~340 (1968)
- 68-J-037 Thermal diffusivity of UN from 20° to 1000°C by laser pulse method [E]
Nasu S., Kikuchi T., *J. Nucl. Sci. Technol. (Tokyo)*, 5 (No. 6), 318~319 (1968)
- 67-J-259 Analysis of fission gas escape from reactor fuel during isothermal irradiation [E]
Iwamoto K., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, 5 (No. 8), 387~396 (1968)
- 67-J-198 Detection of methyl iodide upon heating irradiated fuels [E]
Taketani K., Ikawa K., *J. Nucl. Sci. Technol. (Tokyo)*, 5 (No. 10), 491~498 (1968)
- 68-J-553 On the application of neutron wave experiment to hydrogenous systems [E]
Omichi T., Honda T., *J. Nucl. Sci. Technol. (Tokyo)*, 5 (No. 11), 600~602 (1968)
- 67-J-681 Measurement of distribution of brittle transition temperature in welded steel by means of hardness test [J]
Sato S., *et al.*, *J. Soc. Mater. Sci., Japan*, 17 (No. 178), 610~616 (1968)
- 68-J-197 Studies on glassification on Purex-type waste solution · 1 (Volatility of ruthenium) [J]
Iwamoto K., Kikuchi T., *Radioisotopes*, 17 (No. 10), 467~470 (1968)
- 68-J-193 Studies on glassification on Purex-type waste solution · 2 (Leaching of glass with water) [J]
Iwamoto K., Kikuchi T., *Radioisotopes*, 17 (No. 10), 471~475 (1968)
- 67-J-357 Neutron irradiation embrittlement of structural steels in nuclear power reactor [E]
Fujimura T., Kawasaki M., *Trans. Iron Steel Inst. Japan*, 8, 48~56 (1968)
- 67-J-334 Detection of embrittlement temperature of steels by means of hardness [J]
Sato S., Oku T., *Trans. Japan Soc. Mech. Engrs.*, 34 (No. 257), 1~10 (1968)

Papers at Meetings

- 65-P-009 Estimation of fission gas release from intentionally punctured Calder Hall type fuel element [E]
Taketani K., Ikawa K., Intern. Symp. on Fission Product Release and Transport under Accident
Conditions, Oak Ridge, 1965. CONF-650407, Vol. 1, p. 118
- 66-P-512 Electron microscopic studies of structural changes in high burnup UC-PuC [E]
Watanabe H., *et al.*,
Proc. Symp. on the Use of Plutonium as a Reactor Fuel (Brussels, 1967) (IAEA), p. 455~467

Reports

- 68-R-033 Oxidation kinetics and oxide film break-away of Zr and its alloys at high temperature [E]
Nomura S., Akutsu C., JAERI 1161, p.p. 19 (1968)
- 68-R-034 The recovery of krypton and xenon from the off-gases in reprocessing spent fuels • 1
(The solubility of various gases in carbon tetrachloride) [E]
Kitani S., *et al.*, PNCT-AR-67 (Tokyo), p. 26~27
- 68-R-035 The recovery of krypton and xenon from the off-gases in reprocessing spent fuels • 2
(Dynamic adsorption of krypton by actinated carbon) [E]
Kitani S., *et al.*, PNCT-AR-67 (Tokyo), p. 27~28
- 67-R-036 Reprocessing test facility (Plutonium laboratory for the process study) [J]
Aochi T., *et al.*, JAERI-memo 2790, p.p. 50 (1967)
- 67-R-037 Construction report of heat transfer rig for sodium flow [J]
Kuroyanagi T., *et al.*, JAERI-memo 2869, p.p. 38 (1967)
- 67-R-038 First review meeting on fuel-clad tubes for fast breeder reactors [J]
Div. of Fuel Research Develop., *et al.*, JAERI-memo 2897, p.p. 92 (1967)
- 67-R-039 Second review meeting on fuel-clad tubes for fast breeder reactors [J]
Div. of Fuel Research Develop., *et al.*, JAERI-memo 2898, p.p. 62 (1967)
- 67-R-040 Third review meeting on fuel-clad tubes for fast breeder reactor [J]
Div. of Fuel Research Develop., *et al.*, JAERI-memo 2899, p.p. 80 (1967)
- 67-R-041 Report on the IAEA panel "failed fuel element detection and location" and development status
of FFED and L of fast reactor [J]
Mochizuki K., JAERI-memo 2944, p.p. 36 (1967)
- 67-R-042 Investigations on nil-ductility transition temperature of JPDR pressure vessel steels [J]
JAERI's Reactor Safety Checking Committee JAERI-memo 2946, p.p. 69 (1967)
- 68-R-043 JFER fuel assemblies FOX-2 • 1 (Structural design and drawings) [J]
Abe Y., *et al.*, JAERI-memo 3036, p.p. 60 (1968)

- 68-R-044 Thermal expansion study of fuel pellet and cladding tube [J]
Abe K.*, JAERI-memo 3037, p.p. 23 (1968)
- 68-R-045 JFER fuel assemblies FOX-2 · 2 (Materials, purchase specifications and inspection data sheets) [J]
Abe Y., *et al.*, JAERI-memo 3039, p.p. 140 (1968)
- 68-R-046 Studies on the escape behavior of fission products from graphite-matrix reactor fuel [J]
Iwamoto K., JAERI-memo 3040, p.p. 171 (1968)
- 68-R-047 TLW-1 inpile loop progress report · 9 (γ heating inpile tube) [J]
Sato M., *et al.*, JAERI-memo 3052, p.p. 40 (1968)
- 68-R-048 2DH code: Two dimension fuel rod temperature calculation code [J]
Matsumoto Y., Takeda R., JAERI-memo 3065, p.p. 14 (1968)
- 68-R-049 JFER fuel assemblies FOX-2 · 4 (Evaluation of mechanical properties) [J]
Yuhara S., *et al.*, JAERI-memo 3070, p.p. 61 (1968)
- 68-R-050 Irradiation study by TLW-1 inpile loop · 2 (Irradiation test on the metallic cylindrical fuel) [J]
Shimamura H., *et al.*, JAERI-memo 3097, p.p. 53 (1968)
- 68-R-051 Studies on the JRR-1 with respect to the fuel sampling [J]
JRR-1 Operation Section JAERI-memo 3109, p.p. 100 (1968)
- 68-R-052 Plan for fixing facilities of metallurgical cave · 2 [J]
Ouchi M., *et al.*, JAERI-memo 3137, p.p. 45 (1968)
- 68-R-053 Radiation damage effects in boronated graphite [J]
Ito H., *et al.*, JAERI-memo 3145, p.p. 21 (1968)
- 68-R-054 Report on JPDR pressure vessel problems · 1 [J]
Uchida H*, *et al.*, JAERI-memo 3150, p.p. 23 (1968)
- 68-R-055 Fuel spacers for JPDR [J]
Morishima A., *et al.*, JAERI-memo 3157, p.p. 76 (1968)
- 68-R-056 On the crack initiation in the stainless steel cladding and its propagation to the base metal [E]
of JPDR pressure vessel
Fujimura T., Miyazono S., JAERI-memo 3175, p.p. 8 (1968)
- 68-R-057 Improvement of the metallography cave · 3 [J]
Ouchi M., *et al.*, JAERI-memo 3176, p.p. 49 (1968)
- 68-R-058 Oxidation of pure Be and Be-Ca alloys in CO₂ at high temperatures [J]
Nagasaki R., *et al.*, JAERI-memo 3178, p.p. 116 (1968)
- 68-R-059 Liquid sodium technology (Reference list) [E]
Furukawa K., *et al.*, JAERI-memo 3180, p.p. 115 (1968)
- 68-R-060 Proceeding of the seminar on nuclear fuel cladding tube for fast breeder reactor · 4 [J]
Div. Nuclear Fuel Research, *et al.*, JAERI-memo 3207, p.p. 65 (1968)

- 68-R-061 Thermal and hydraulic characteristics of an instrumented fuel assembly (IFA #3) in the JPDR core [J]
Yokota M., *et al.*, JAERI-memo 3229, p.p. 45 (1968)
- 68-R-062 Neutron irradiation effect on the low temperature hardness of several steels [E]
Oku T., Sato S*, JAERI-memo 3234, p.p. 27 (1968)
- 68-R-063 Study on UO₂ pellets containing ZrB₂ [J]
Taketani K., *et al.*, JAERI-memo 3242, p.p. 81 (1968)
- 68-R-064 Electronmicroscopic study of the precipitates in Zr-2.5% [J]
Ogawa Y., *et al.*, JAERI-memo 3313, p.p. 17 (1968)
- 68-R-065 Summary of discussion on fuel and material irradiation [J]
Taketani K., *et al.*, JAERI-memo 3322, p.p. 94 (1968)
- 68-R-066 Post operation inspection on JPDR pressure vessel [J]
Div. JPDR Operation JAERI-memo 3327, p.p. 154 (1968)
- 68-R-067 The subprogram for calculating the thermophysical properties of sodium in liquid and vapor [J]
Sanokawa K., JAERI-memo 3339, p.p. 52 (1968)
- 68-R-068 Compatibility of ceramic fuels with cladding alloys, liquid sodium and air [E]
Ikawa K., Taketani K., JAERI-memo 3342, p.p. 52 (1968)
- 68-R-069 Study on ultrasonic inspection method of reactor pressure vessel forced circulation nozzle
with the nozzle mock-up [J]
Futamura Y., *et al.*, JAERI-memo 3345, p.p. 33 (1968)

General Physics

Journal Articles

- 67-J-367 Experimental study of forces on a body in a magnetized plasma stream [E]
Kawashima N., Mori S., *AIAA Journal*, **6** (No. 1), 110~113 (1968)
- 68-J-149 New superlattice reflections of U_4O_9 [E]
Masaki N., Doi K., *Acta Crystallogr. B* **24** (No. 10), 1393~1394 (1968)
- 68-J-137 Recovery of the basal plane electrical resistivity in electron-irradiated pyrolytic graphite [E]
Iwata T., *et al.*, *Carbon*, **6**, 742~744 (1968)
- 68-J-050 Proposal of experiment using air core beta-spectrometer (Decay scheme of ^{146}Eu) [E]
Takekoshi E., Matsumoto J., *Genshikaku Kenkyu (Tokyo)*, **13** (No. 1), 89~93 (1968)
- 68-J-014 Nature and thermal evolution of amorphous hydrated zirconium oxide [E]
Doi K., *et al.*, *J. Am. Ceram. Soc.*, **51** (No. 6), 349~353 (1968)
- 67-J-161 Critical magnetic scattering of neutrons in chromium [E]
Hamaguchi Y., *et al.*, *J. Appl. Phys.*, **39** (No. 2), 1227~1228 (1968)
- 67-J-273 Effects of annealing and irradiation on the stacking-fault energy of Cu-Al solid solutions [E]
Kamada K., *J. Appl. Phys.*, **39** (No. 3), 1824~1828 (1968)
- 67-J-111 Gamma-ray leakage through a slit in lead shield · 2 [J]
Miyasaka S., *et al.*, *J. Atomic Energy Soc. Japan*, **10** (No. 9), 488~495 (1968)
- 68-J-771 Studies with the Mössbauer effect of the formation of xenon bromides in beta decay [E]
Perlow G. J*, Yoshida H., *J. Chem. Phys.*, **49** (No. 4), 1474~1478 (1968)
- 68-J-195 Proton channeling [J]
Ozawa K., *et al.*, *J. Crystallogr. Soc. Japan*, **10** (No. 2), 78~83 (1968)
- 67-J-130 Measurement of thermal diffusivity by laser pulse [E]
Kikuchi T., *et al.*, *Japan. J. Appl. Phys.*, **6** (No. 8), 1019 (1967)
- 67-J-278 Effect of crystal grain size on emission of X-ray by electron bombardment in copper crystals [E]
Izui K., Furuno S., *Japan. J. Appl. Phys.*, **7** (No. 1), 184~185 (1968)
- 68-J-537 Application of microchemical analysis to diagnostics of lithium plasma [E]
Mohri A*, Tamura S., *Japan. J. Appl. Phys.*, **7** (No. 11), 1381~1386 (1968)
- 68-J-562 Gamma-ray energy of ^{40}K [E]
Gotoh H., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, **5** (No. 8), 432~433 (1968)
- 66-J-187 Zero-phonon lines and phonon coupling in neutron irradiated MgO crystals [E]
Nakagawa M., Ozawa K., *J. Phys. Soc. Japan*, **24** (No. 1), 96~102 (1968)

- 67-J-695 Induced color centers in CaF_2 crystals irradiated with neutrons at liquid nitrogen temperature [E]
Ozawa K., *et al.*, *J. Phys. Soc. Japan*, **24** (No. 1), 115~119 (1968)
- 67-J-749 Effect of pressure on the magnetic and electrical transition point of the NiAs-type NiS [E]
Ozawa K., *et al.*, *J. Phys. Soc. Japan*, **24** (No. 2), 271~274 (1968)
- 67-J-234 Optical study of electronic structure of graphite [E]
Sato Y., *J. Phys. Soc. Japan*, **24** (No. 3), 489~492 (1968)
- 67-J-515 Temperature dependence of electrical resistivity of dislocation in aluminum [E]
Maeta H., *J. Phys. Soc. Japan*, **24** (No. 4), 757~762 (1968)
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- 66-P-231 Experimental evaluation of the validity of the description of three-dimensional power and void distributions for B.W.R.'s using the FLARE model coupled with JPHYDRO [E]
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Shinoda W., *et al.*, JAERI-memo 3023, p.p. 64 (1968)
- 68-R-119 Multi-group constants for fission product nuclides · 1 (J)
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Tsuchihashi K., JAERI-memo 3034, p.p. 15 (1968)
- 68-R-121 Stochastic formation of neutron multiple collision processes by the first-collision probability method
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- 68-R-123 Plant system parameter survey on sodium-cooled, prototype fast breeder reactor (J)
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- 67-J-266 Flow method study of γ -ray-induced polymerization of ethylene [E]
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- 66-P-034 Irradiation capsul [J]
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- 67-J-380 Retention efficiency tests of air-filter [E]
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- 67-J-747 Measurement of alpha radioactive airborne dust collected on cellulose asbestos filter paper
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- 68-J-142 Decontamination of RI protective clothing by full automatic closed system laundry cleaning machine [J]
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- 68-J-043 Performance of model 7 FE charcoal filter for the removal of airborne radioiodine · 1
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- 68-J-436 Application of the computer for the determination of ^{137}Cs and ^{40}K body burdens
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- 68-R-150 Surface chemical studies on radioactive contamination of solid surface [J]
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- 68-R-154 Activities in the Division of Health Physics and Safety • No. 10 (April 1, 1967~ March 31, 1968) [J]
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- 67-R-165 Quarterly report of the radiation control • 14 (J)
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Patents and Utility Models

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Pat-F-55	An analogue to digital conversion system Kinbara S.,	No. 1519529
Pat-F-56	Apparatus for ion temperature measurement Kawashima N.,	No. 1495781
Pat-F-57	Method for stabilizing polyoxymethylene Ito A., <i>et al.</i> ,	No. 1523694
Pat-F-58	Process for modification of polyolefin materials Gotoda M., <i>et al.</i> ,	No. 1538264
Pat-F-59	Process for producing polyethylene Machi S., <i>et al.</i> ,	No. 1544532
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Pat-Can- 5	Methods for manufacturing grafted polyester fibers Hoshino T., <i>et al.</i> ,	No. 798303
Pat-Can- 6	Method and apparatus for promoting a chemical reaction by ionizing reaction Kasamatsu T., <i>et al.</i> ,	No. 799458

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- Pat-Brit-38 Process for preparing nuclear fuel elements of dispersed-in-graphite type
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- Pat-Brit-40 System for AC operation of an ionizachamber
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- Pat-Brit-51 Ion exchange method for separating uranium isotopes
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Amano N. No. 3400268
- Pat-US-19 Electric furnace having a heating element of carbon or graphite for producing temperatures under high pressures
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- Pat-US-20 Method and apparatus for alternating current to direct current conversion utilizing a liquid metal
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Pat-J-222	RI-container with variable shielding Shoji T., <i>et al.</i> ,	No. 516540
Pat-J-223	Digital comparalior Kinbara S., <i>et al.</i> ,	No. 516516
Pat-J-212	Chlorination method of polyethylene by ionizing radiation Sakurada I., <i>et al.</i> ,	No. 319432
Pat-J-213	Magnetic multiplier and divider Kawaguch C., <i>et al.</i> ,	No. 508260
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Pat-J-215	The mutual separation of U and Pu from irradiated U dissolved in sulfuric acid with alkyl-amine Akatsu J., <i>et al.</i> ,	No. 509789
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Pat-J-224	Method of thermal neutron irradiation Nemoto D., <i>et al.</i> ,	No. 516903
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- Pat-J-228 Brazing alloy for bonding the carbonized materials
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- Pat-J-229 Reprocessing of spent uranium fuel by means of chlorination and fractional absorption
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- Pat-J-232 Magnetohydrodynamic power generator
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- Pat-J-234 Measurement apparatus of ion beam
Kobayashi C., No. 519726
- Pat-J-236 A neutron detector for reactor control
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- Pat-J-237 A method reducing temperature drift of M. O. S. transistor
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- Pat-J-238 Pumping apparatus for fog cooling nuclear reactors
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- Pat-J-242 The temperature control method of irradiation capsule in nuclear reactor
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- Pat-J-244 Brazing alloy for carbonized materials and carbonized materials to metals
Fujimura T., *et al.*, No. 527601
- Pat-J-245 Process for reprocessing used uranium fuel with fused salt containing ammonium nitrate
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- Pat-J-246 Polymerization of cyclic ethers in the presence of maleic anhydride
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- Pat-J-248 Neutron spectrometer by use of scintillators with different decaytime
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- Pat-J-249 Spent fuel container
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- Pat-J-250 A process for preparing porous carbon bodies of any desired shape with improved physical
and chemical properties
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- Pat-J-251 The sample holder of hydraulic irradiation facility
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UM-J-230	Movable grip tongue which handle radioactive material Matumoto H., <i>et al.</i> ,	No. 849019
UM-J-231	The device to revolve the jaws of tongue which handle radioactive material Matumoto H., <i>et al.</i> ,	No. 849018
UM-J-233	Rabbit tube using capsule with check valve Saruyama I., <i>et al.</i> ,	No. 847680
UM-J-235	System for reducing reactor pumping surge Someya I., <i>et al.</i> ,	No. 843768
UM-J-239	The safety mechanical valve use for vacuum suction pump Kimura K., <i>et al.</i> ,	No. 851509
UM-J-240	Portable shielding apparatus using iron sand Matumoto H., <i>et al.</i> ,	No. 851752
UM-J-241	Tongue spindle under radioactive shielding Matumoto H., <i>et al.</i> ,	No. 851751
UM-J-247	Container for radioactive material Matumoto T., <i>et al.</i> ,	No. 856383

List of journals carrying the JAERI papers and their abbreviations shown in bold-type letters

- Acta chemical Scandinavica**
Acta crystallographica
Acta metallurgica
Agricultural and Biological Chemistry (Tokyo)
AIAA Journal
Analysis and Instruments (Tokyo)
Analytical Chemistry
Analytica chimica acta
Applied Spectroscopy
- Biochemical and Biophysical Research Communications**
Biochemica et biophysica acta
Bulletin of the Chemical Society of Japan
Bulletin of the Japan Institute of Metals
Bulletin of the Japan Society of Precision Engineering
Bulletin of JSME (Japan)
Buturi (Tokyo)
- Carbon**
Carbons (Tokyo)
Chemistry of High Polymers (Tokyo)
Communications Association for Computing Machinery
- Earth and Planetary Science Letters**
Electrochemical Technology
- Food Irradiation, Japan**
- Genshikaku Kenkyu (Tokyo)**
Geochemical Journal (Japan)
Geochemical et cosmochemica acta
- Health Physics**
High Polymers, Japan
Hydrocarbon Processing
- I & EC Process Design and Development**
IEEE Transactions on Magnetics
Industrial Health
International Journal of Applied Radiation and Isotopes
IPPJ (Nagoya)
Irradiation Aliments
- Japan Analyst**
Japan Plastics
- Japanese Journal of Applied Physics**
Journal of the Agriculture Chemical Society of Japan
Journal of the American Chemical Society
Journal of the American Ceramic Society
Journal of Applied Physics
Journal of Applied Polymer Science
Journal of the Atomic Energy Society of Japan
Journal of the Ceramic Association of Japan
Journal of the Chemical Physics
Journal of the Chemical Society of Japan, Industrial Chemistry Section
Journal of the Chemical Society of Japan, Pure Chemical Section
Journal de Chimie Physique
Journal of Colloid and Interface Science
Journal of Colloid Science
Journal of Crystallography Society of Japan
Journal of the Electrochemical Society of Japan
Journal of Electromicroscopy (Tokyo)
Journal of Geophysical Research
Journal of Science of Hiroshima University
Journal of Inorganic Chemistry
Journal of Inorganic and Nuclear Chemistry
The Journal of the Institute of Electrical Communication Engineers of Japan
Journal of the Institute of Electrical Engineers of Japan
Journal of the Iron and Steel Institute of Japan
Journal of Japan Air Cleaning Association
Journal of the Japan Health Physics Society
Journal of Japan Institute of Metals
Journal of the Japan Society of Mechanical Engineers
Journal of the Japan Society of Powder Metallurgy
Journal of the Japan Welding Society
Journal of Macromolecular Chemistry
Journal of Nuclear Energy
Journal of Nuclear Materials
Journal of Nuclear Science and Technology (Tokyo)
Journal of Physical Chemistry
The Journal of Physics and Chemistry of Solids
Journal of the Physical Society of Japan
Journal of Polymer Science
Journal of Radiation Research (Japan)
Journal of the Society of Materials Science, Japan
Journal of the Spectroscopical Society of Japan
Journal of the Vacuum Society of Japan
Journal of Water and Waste (Tokyo)

Kakuyugo Kenkyu (Nagoya)

Light Metals (Tokyo)

Light Metals Welding (Tokyo)

Mass Spectroscopy (Tokyo)

Makromolekulare Chemie

Mathematica Japonicae

Molecular Physics

Nuclear Engineering and Design

Nuclear Physics

Nuclear Science and Engineering

Nuclear Structural Engineering

Nucleonics

Nukleonik

Oyo Buturi (Tokyo)

physica status solidi

Physical Review

Physical Reviews Letters

Physics Letters

Planetary and Space Science

Proceedings of the Physical Society

Progress of Theoretical Physics (Kyoto)

Radiation Research

Radiochemica Acta

Radioisotopes (Tokyo)

Radio Science

Reports on Progress in Polymer Physics in Japan

Review of Physical Chemistry of Japan

Safety Engineering (Yokohama)

Science of Light (Tokyo)

Science of Mechine (Tokyo)

Soil and Plant Food (Tokyo)

Solid State Communications

Spectrochemica acta

Talanta

Technokrat

Transactions of the Faraday Society

Transactions of the Iron and Steel Institute of Japan

Transactions of the Japan Institute of Metals

Transactions of the Japan Society of Mechanical Engineers