JAERI 5011
Vol. 3

JAERI 5011
Vol. 3

Technical Publications by JAERI Staff

from January 1967
to December 1967

March 1968

Japan Atomic Energy Reseach Institute

JAERI 5011
Vol. 3

Technical Publications by JAERI Staff from January 1967 to December 1967

[Summary] Technical Publications by JAERI Staff from January 1967 to December 1967

Approximately 300 journal papers, meeting papers, reports and books are given, which have been published by personnel of JAERI from January 1967 to December 1967. 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 1968

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（1967年1月～1967年12月）

1967年1月から1967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300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．

1968年3月

日本原子力研究所
技術情報部

JAPAN ATOMIC ENERGY RESEARCH INSTITUTE

Preface

About ten years have passed since the establishment of Japan Atomic Energy Research Institute 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 or published through various media, including meetings. It is intended in the present volume to compile a listing of all these reports. The volume is first divided in the nine major fields of research, and journal papers, reports, other papers and books given in order under the respective field; patents are gathered at the end of the volume. Reviews and articles of general character deemed useful for scientists and technologists in foreign countries are given; reports presented orally are not contained.

March 1968

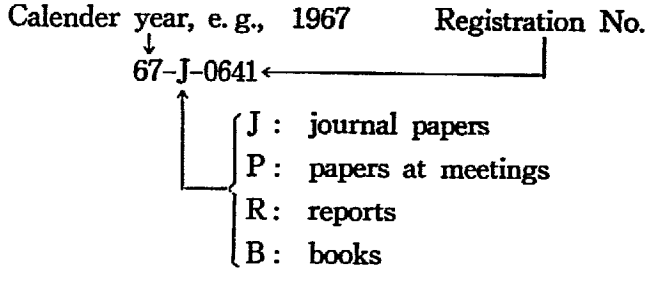
Division of Technical Information
Japan Atomic Energy Research Institute

Introduction

Titles of papers, articles, etc., published from January 1967 to December 1967, are given; an effort was made to collect as many papers etc. as possible.

Each entry contains the following:

Code number—This represents the number of their registration in JAERI. Therefore, the reviews and articles, not contained, constitute the missing numbers.



J's also include those, appearing in the proceedings for meetings and in annual reports, if these publications are given volumes or numbers. P's are the papers, appearing in the proceedings for irregular meetings. R's include reports of JAERI and those from other research organizations. B's are books commercially available.

Title—If the title is originally in English, this is directly used. The title, given in other language, is 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, respectively, for Japanese, English, French, and German.

Author(s)—Authors are given in their last name and initial name. In the case of co-authors, up to three names are give. When the paper was prepared jonintly with others in outside establishments, the (latter) authors are attached with*. The paper or article, published in the name of a laboratory or committee, is given this name as the author. Research works done by JAERI personnel in other establishments:—these papers are also listed.

Titles of the patents and utility models, which originated in JAERI, are also listed at the end of the volume. Each entry has the JAERI registration number, the title of patent, the patentee, the patent number, and the country of the patent, e.g., Japanese patient.

Comments and suggestions from the users are welcomed.

Contents

Reactor Engineering

Journal Articles

67-J-281 Some problems on the design and operation of light water cooling reactor pressure vessel [J]
Fujimura T., *High Pressure (Tokyo)*, **5** (No. 6), 1156~1162 (1967)

66-J-304 Sodium-cooled 1,000MWe fast breeder reactor design study (1st cycle) [J]
Nozawa M., *J. Atomic Energy Soc. Japan*, **9** (No. 1), 16~24 (1967)

66-J-561 Developments in thermal and hydraulic design of reactors·2 [J]
Okamoto Y., Hori M., *et al.*, *J. Atomic Energy Soc Japan*, **9** (No. 4), 212~222 (1967)

67-J-237 Containment of fast breeder reactor [J]
Iso Y., *J. Atomic Energy Soc. Japan*, **9** (No. 9), 536~538 (1967)

67-J-331 Fuel assembly flow test loops for the JPDR-II project [J]
Yamazaki Y., *J. Atomic Energy Soc. Japan*, **9** (No. 11), 676~677 (1967)

67-J-212 An analysis of continuous bi-directional reactor refueling [E]
Yasukawa S., *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 7), 367~371 (1967)

67-J-184 New method of temperature control in capsule irradiation (Vacuum control method) [E]
Hayashi T., Ouchi S., Ishii T., *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 7), 381~383 (1967)

66-J-237 Dynamic anlysis at fast reactor [E]
Saito S., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 11), 545~554 (1967)

66-J-375 Design and operation of post-irradiation examination facilities·1 (Analysis of JHL-1 four years operation experience) [E]
Murakami M., *Nucl. Engng. Design*, **5**, 433~442 (1967)

66-J-244 Heat transfer between metallic surfaces in contact·1 (The conditions of both metals in contact are same) [J]
Sanokawa K., *Trans. Japan Soc. Mech. Engrs.*, **33** (No. 251), 1097~1107 (1967)

66-J-245 Heat transfer between metallic surfaces in contact·2 (The effects of the thickness of metals, and the conditions of both metals in contact are different) [J]
Sanokawa K., *Trans. Japan Soc. Mech. Engrs.*, **33** (No. 251), 1108~1119 (1967)

66-J-246 Heat transfer between metallic surfaces in contact·3 (The effects of the oxidation of contact surfaces) [J]
Sanokawa K., *Trans. Japan Soc. Mech. Engrs.*, **33** (No. 251), 1120~1130 (1967)

66-J-247 Heat transfer between metallic surfaces in contact·4 (The effects of both the shape of surface roughness and waviness, and the approximate methed of calculating thermal contact resistance) [J]
Sanokawa K., *Trans. Japan Soc. Mech. Engrs.*, **33** (No. 251), 1131~1137 (1967)

67-J-142 Fixation of photoelastic fringe patterns by gamma rays•1 (About the phenomenon that photoelastic fringe patterns are fixed) [J]
Miyazono S., Sakamoto F., *Trans. Japan Soc. Mech. Engrs.*, **33** (No. 252), 1169~1174 (1967)

67-J-028 Design code for reactor shielding [J]
Miyasaka S., Miyakoshi J., *Nucl. Engng. (Japan)*, **13** (No. 10), 67~70 (1967)
(No. 11), 67~70 (1967)
(No. 12), 65~69 (1967)

Reports

66-R-032 Liquid sodium technology development•1 (Test loops, purification methods and supplementary techniques) [E]
Furukawa K., *et al.*, JAERI 1129, p.p. 27 (1967)

66-R-033 Experimental and theoretical studies of the expansion joints (Bellows) in the piping systems of nuclear reactors [J]
Miyazono S., *et al.*, JAERI 1130, p.p. 31 (1967)

67-R-002 JPDR thermal and hydraulic characteristics measured by an instrumented fuel assembly (IFA) and their analyses by a computer code "JP-Hydro" [E]
Uga T., JAERI 1136, p.p. 17 (1967)

67-R-004 Construction of JRR-4 [J]
JRR-4 Operation Section, JAERI 1141, p.p. 35 (1967)

67-R-015 A preliminary study of reactor thermal characteristics (Heavy water moderated carbon dioxide cooled reactor) [E]
Sawai S., Tadokoro Y., Seya T., JAERI 1145, p.p. 16 (1967)

67-R-018 Detection of failed fuel at JPDR [E]
Makino* K., JAERI 1147, p.p. 23 (1967)

67-R-020 Outline of critical experiment and characteristic test of JRR-4 [J]
JRR-4 Operation Section, JAERI 1139, p.p. 26 (1967)

Technology of Reactor Fuels and Structual Materials

Journal Articles

66-J-166 Fuel irradiation research and development in Japan [J]
Taketani K., *J. Atomic Energy Soc. Japan*, **9** (No. 2), 72～82 (1967)

66-J-428 Preparation of thorium oxide microspheres·4 (Experiments with mixtures of ethyl- and isobuthyl-alcohol) [J]
Yamazaki Y., Yoshida K., *et al.*, *J. Atomic Energy Soc. Japan*, **9** (No. 6), 326～331 (1967)

67-J-081 Present status of the art in nuclear reactor structural design and related technology·1 [J]
Fujimura T., Miyazono S., *et al.*, *J. Atomic Energy Soc. Japan*, **9** (No. 7), 411～418 (1967)

66-J-266 Irradiation of natural UO_2 pellets [J]
Taketani K., Ichikawa M., *J. Atomic Energy Soc. Japan*, **9** (No. 8), 447～454 (1967)

67-J-293 Siting and safety considerations related to nuclear power installation·3 (Behavior of fission products) [J]
Taketani K., *J. Atomic Energy Soc. Japan*, **9** (No. 9), 549～552 (1967)

67-J-196 Present status of nuclear fuel engineering [J]
Taketani K., *et al.*, *J. Atomic Energy Soc. Japan*, **9** (No. 9), 553～560 (1967)

67-J-167 Progress in nuclear materials technology [J]
Sato S., *et al.*, *J. Atomic Energy Soc. Japan*, **9** (No. 10), 611～621 (1967)

66-J-073 Diffusion of xenon in copper [E]
Kawasaki S., *J. Nucl. Mater.*, **22**, 192～196 (1967)

66-J-037 On the microstructure of the UO_2 pellets irradiated at high temperature [E]
Taketani K., Ichikawa M., *J. Nucl. Sci. Technol.* (*Tokyo*), **4** (No. 1), 1～10 (1967)

66-J-204 Grain boundary migration and growth of gas bubbles in neutron irradiated Al-Li alloys [E]
Shiraishi K., *J. Nucl. Sci. Technol.* (*Tokyo*), **4** (No. 3), 136～142 (1967)

66-J-168 Studies of ceramic fuels with the use of fission gas release loop·1 (Fission gas release from UO_2-graphite mixture during irradiation) [E]
Kamemoto Y., Shiba K., *et al.*, *J. Nucl. Sci. Technol.* (*Tokyo*), **4** (No. 4), 164～170 (1967)

66-J-163 Analysis of the escape behavior of xenon captured in graphite by nuclear recoil·1 (Tempering) [E]
Iwamoto K., Oishi J*., *J. Nucl. Sci. Technol.* (*Tokyo*), **4** (No. 5), 223～230 (1967)

66-J-174 Studies of ceramic fuels with the use of fission gas release loop·2 (Measurement of gamma-ray spectrum of fission gases) [E]
Kamemoto Y., Shiba K., *et al.*, *J. Nucl. Sci. Technol.* (*Tokyo*), **4** (No. 5), 231～238 (1967)

66-J-398 The diffusion of xenon in silver [E]
Kawasaki S., *J. Nucl. Sci. Technol.* (*Tokyo*), **4** (No. 5), 239～243 (1967)

66-J-399 Measurement of diffusion of gold in copper by elastic scattering of deuteron [E]
Kawasaki S., Sakai E., *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 6), 273~277 (1967)

66-J-175 Studies of ceramic fuels with the use of fission gas release loop·3 (Neutron flux monitoring at specimen chamber of FGRL by counting nitrogen-16 generated by ^{16}O (n, p) ^{16}N reaction in primary cooling water) [E]
Kamemoto Y., Shiba K., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 6), 278~282 (1967)

66-J-513 Analysis of the escape behavior of zenon captured in graphite by nuclear recoil·2 (Isothermal annealing) [E]
Iwamoto K., Oishi J*., *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 8), 431~442 (1967)

67-J-060 Release of xenon from sintered UO_2 at low temperatures [E]
Taketani K., Ikawa K., *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 12), 589~594 (1967)

66-J-442 Studies on the mechanical properties of hot rolled beryllium at elevated temperatures [J]
Sato S., Oku T., *et al.*, *J. Soc. Mater. Sci., Japan*, **16** (No. 162), 194~202 (1967)

66-J-441 Studies on the mechanical properties of hot extruded beryllium at elevated temperatures [J]
Sato S., Oku T., *et al.*, *J. Soc. Mater. Sci., Japan*, **16** (No. 162), 203~209 (1967)

67-J-365 Studies on embrittlement of molybdenum and tungsten by hardness measurements [J]
Oku T., Sato S., *et al.*, *J. Soc. Mater. Sci., Japan*, **16** (No. 170), 876~882 (1967)

67-J-075 Research trend on the materials for fast breeder reactors·1 [J]
Sato S., Oku T., *Nucl. Engng. (Japan)*, **13** (No. 7), 51~57 (1967)

67-J-128 Research trend on the materials for fast breeder reactors·2 [J]
Sato S., Oku T., *Nucl. Engng. (Japan)*, **13** (No, 8), 49~54 (1967)

67-J-168 Research trend on the materials for fast breeder reactors·3 [J]
Sato S., Oku T., *Nucl. Engng. (Japan)*, **13** (No. 9), 67~73 (1967)

66-J-223 Liquid sodium technology and its hazard protection for the atomic energy development [J]
Furukawa K., Iguchi Y., *Safety Engng. (Yokohama)*, **6** (No. 1), 1~11 (1967)

66-J-385 Studies on carbon thermocouples [J]
Sato S., Oku T., Yuhara S., *Trans. Japan Soc. Mech. Engng.*, **33** (No. 247), 390~397 (1967)

Reports

66-R-036 Bibliography on irradiated fuel shipping and its shipping casks [E]
Sawai S., *et al.*, JAERI 4039, p.p. 29 (1967)

67-R-014 Proceedings of the seminar on physical properties of fast reactor fuels [J]
Division of Fuel Research and Development and Division of Power Reactor Development, JAERI 1144, p.p. 52 (1967)

General Physics

Journal Articles

66-J-553 Sputtering of metals [J]
Izui K., *Butsuri (Tokyo)*, **22** (No. 4), 223~225 (1967)

67-J-181 A review of the physics of MHD electrical power generation [J]
Yano S., *Butsuri (Tokyo)*, **22** (No. 9), 568~577 (1967)

67-J-165 Color centers of calcium fluoride [J]
Kamikawa T.*, Ozawa K., *Butsuri (Tokyo)*, **22** (No. 9), 588~589 (1967)

67-J-109 Measurement of proton beam intensity distribution by ^{27}Al (p, αpn) ^{22}Na reaction [J]
Suzuki T., Gotoh H., Baba S., *et al.*, *Genshikaku Kenkyu (Tokyo)*, **12** (No. 1), 71~88 (1967)

65-J-379 Dielectric breakdown in LiF crystals bombarded by electrons [E]
Kubo K., *J. Appl. Phys.*, **37** (No. 13), 4722~4728 (1966)

66-J-218 Plasticity in ferroelectric $NaNO_2$ single crystals [E]
Geshi K., Takagi Y.*, *Japan. J. Appl. Phys.*, **5** (No. 11), 1118 (1966)

66-J-583 Phase transitions in gamma-ray irradiated KNO_3 [E]
Geshi K., *Japan. J. Appl. Phys.*, **6** (No. 6), 781 (1967)

66-J-173 Determination of boron content in borosilicate glasses by neutron transmission [J]
Ideno K., *J. Atomic Energy Soc. Japan*, **9** (No. 6), 317~321 (1967)

66-J-472 Gamma-ray leakage through a slit in lead shield·1 [J]
Miyasaka S., Kanemori Y*., Fukushima Y*., *et al.*,
J. Atomic Energy Soc. Japan, **9** (No. 10), 597~603 (1967)

66-J-264 Negative electrolytic breakdown in proton-bombarded LiF crystal [E]
Kubo K., *J. Phys. Soc. Japan*, **21** (No. 12), 2259~2601 (1966)

66-J-197 Theory of nuclear spin relaxation in copper acetate [E]
Obata Y., *J. Phys. Soc. Japan*, **22** (No. 1), 256~263 (1967)

66-J-500 Experimental test of rigid band models for Cr by means of Cr-V-Mn ternary dilute alloys [E]
Komura S., Hamaguchi Y., *J. Phys. Soc. Japan*, **23** (No. 2), 171~179 (1967)

67-J-077 Decay of $^{178g,m}Lu$ [E]
Tamura T., *J. Phys. Soc. Japan*, **23** (No. 4), 691~700 (1967)

67-J-265 Absorption spectra neutron irradiated graphite [E]
Sato Y., Iwata T., *J. Phys. Soc. Japan*, **23** (No. 10), 1425 (1967)

67-J-243 A high speed shutter against neutral gas flow for plasma experiments [J]
Kunieda S., *Kakuyugo Kenkyu (Nagoya)*, **19** (No. 6), 455~467 (1967)

66-J-333 Atomic displacement in pyrolytic graphite by electron bombardment [E]
Iwata T., *Phys. Letters*, **23** (No. 11), 631~632 (1966)

66-J-501 Neutron diffraction studies on chromium-based Cr-V-Mn ternary dilute alloys [E]
Komura S., Hamaguchi Y., *et al.*, *Phys. Letters*, **24A** (No. 6), 299~300 (1967)

67-J-134 Low temperature, recovery in cold worked F.C.C. metals [E]
Okuda S., Takamura S., *Phys. Letters*, **25A** (No. 1/2), 239~240 (1967)

66-J-455 A turbulence theory of the longitudinal waves in electron plasmas [E]
Sasakura Y., *Progr. Theoret. Phys. (Kyoto)*, **36** (No. 2), 413~414 (1966)

66-J-551 A statistical theory of plasma turbulence [E]
Sasakura Y., *Progr. Theoret. Phys. (Kyoto)*, **38** (No. 3), 576~583 (1967)

66-J-577 X-ray study on a phase transition of U_4O_9 [E]
Naito K., Hamaguchi Y., *Solid State Comm.*, **5**, 349~352 (1967)

Papers at Meetings

65-P-374 Some laboratory simulations on phenomena in the ionosphere and the interplanetary space [E]
Kawashima N., Proc. 6 th Intern. Symp. Space Technol. and Sci. (Tokyo, 1965), p. 719~728

65-P-385 Laboratory experimeuts on the interaction of solar plasma stream with geomagnetic field [E]
Kawashima N., Mori S., Proc. 7 th Intern. Conf. Phenomena Ionized Gases (Beograd, 1966)

Peports

66-R-034 Fabrication of thick germanium detectors [E]
Ishii M., *et al.*, JAERI 1131, p.p. 9 (1967)

67-R-003 Itinerant antiferromagnetism in chromium alloys [E]
Komura S., JAERI 1137, p.p. 36 (1967)

67-R-008 The neutron time of flight spectrometer at JAERI linac [E]
Asami A., Fuketa T., Kawarasaki Y., *et al.*, JAERI 1138, p.p. 17 (1967)

67-R-685 An empirical formula for the nuclear of ^{252}Cf spontaneous-fission neutrons as a function of the fission mass pair and the total kinetic energy [E]
Takekoshi E., Thompson S. G., UCRL-17299, 194 (1967)

66-R-414 Laboratory experiment of plasma intruding into magnetic cavity [E]
Kawashima N.,
Report of Hakone Meeting on Space Plasma Physics and Collisionless Shocks, p.p. 69~80, (August 17—19, 1966)

Chemistry

Journal Articles

65-J-415 Infrared-absorption studies on some organic phosphate [E]
Ohwada K., *Appl. Spectroscopy*, **21** (No. 5), 332~335 (1967)

66-J-101 The isotope effect of hydrogen on the oxidation of benzen to phenol [E]
Hotta H., *Bull. Chem. Soc. Japan*, **40** (No. 3), 687~688 (1967)

66-J-362 The autoxidation of toluene catalyzed by metal ions in aqueous solutions • 1 [E]
Hotta H., *Bull. Chem. Soc. Japan*, **40** (No. 6), 1361~1367 (1967)

66-J-379 The photochemistry of aqueous hexacyanoferrate (II) solutions • 1
(Photo-aquation reaction at 3660 Å) [E]
Ohno S., *Bull. Chem. Soc. Japan*, **40** (No. 8), 1765~1769 (1967)

66-J-380 The photochemistry of aqueous hexacyanoferrate (II) solutions • 2
(Photo-oxidation reaction at 2537 Å) [E]
Ohno S., *Bull. Chem. Soc. Japan*, **40** (No. 8), 1770~1775 (1967)

66-J-473 Radiation chemistry of dicarboxilic acids in the solid state • 1
(Radiolysis of malonic acid in the solid state) [E]
Hosaka A., Genka T., *Bull. Chem. Soc. Japan*, **40** (No. 8), 1799~1803 (1967)

66-J-474 Radiation chemistry of dicarboxylic acids in the solid state • 2
(C-13 isotope effects in the radiation-induced dicarboxylation of malonic and several aliphatic decarboxylic acids) [E]
Hosaka A., *Bull. Chem. Soc. Japan*, **40** (No. 8), 1803~1806 (1967)

66-J-381 The photochemistry of aqueous hexacyanoferrate (II) solutions • 3
(The effect of acetone on the photooxidation reaction at 2537 Å) [E]
Ohno S., *Bull. Chem. Soc. Japan*, **40** (No. 8), 1776~1779 (1967)

66-J-382 The photochemistry of aqueous hexacyanoferrate (II) solutions • 4
(A study of the mechanism of the photoelectron detachment) [E]
Ohno S., *Bull. Chem. Soc. Japan*, **40** (No. 8), 1779~1783 (1967)

66-J-537 The reactions of the photochemically produced electron in aqueous hexacyanoferrate (II) solutions [E]
Ohno S., *Bull. Chem. Soc. Japan*, **40** (No. 9), 2035~2038 (1967)

66-J-538 The radiation of OH radical arising from nitrous oxide in an aqueous hexacyanoferrate (II) solution illuminated at 2537 Å [E]
Ohno S., *Bull. Chem. Soc. Japan*, **40** (No. 9), 2039~2042 (1967)

67-J-227 Isotope effect in dissociative resonance-electron-capture (DREC) by methylacetylene [E]
Sugiura T., Seguchi T., Arakawa K., *Bull. Chem. Soc. Japan*, **40** (No. 12), 2992 (1967)

67-J-120 Neutron activation analysis of potassium in ultrabasic rocks [E]
Nagasawa H.*, Wakita H., *Geochem. J.*, **1**, 149~154 (1967)

66-J-107 Simple method for direct photometric determination of traces of fluoride with alizarin complexone [J]
Hashitani H., Yoshida H., *et al.*, *Japan Analyst*, **16** (No. 1), 44~46 (1967)

66-J-365 Am improved spectrophotometric method for the determination of tin in zircaloy [J]
Hashitani H., Katsuyama K., *et al.* *Japan Analyst*, **16** (No. 5), 478~482 (1967)

66-J-444 Determination of traces of aluminum and manganese in zirconium and its alloys [J]
Hashitani H., Katsuyama K., *et al.*, *Japan Analyst*, **16** (No. 6), 596~601 (1967)

66-J-567 Extraction photometry using oxine (Analysis of nuclear reactor materials) [J]
Motojima K., *Japan Analyst*, **6** (No. 6), 616~624 (1967)

66-J-564 Controlled-potential coulometric titrator [J]
Emura S., Okazaki S., *Japan Analyst*, **16** (No. 7), 718~720 (1967)

67-J-030 Fluorescent X-ray analysis of high purity dysprosium oxide [J]
Nakajima T., Kawaguchi H., *et al.*, *Japan Analyst*, **16** (No. 8), 832~834 (1967)

67-J-097 Remotely operating polarographic determination of uranium in process waste solutions [J]
Emura S., Sugikawa S., *Japan Analyst*, **16** (No. 12), 1345~1350 (1967)

66-J-036 Preparation of thorium carbides [E]
Imai H., Hosaka S., *et al.*, *J. Am. Ceram. Soc.*, **50** (No. 6), 308~311 (1967)

67-J-669 Neutron irradiated conditions of radioisotopes in JRR-3 [J]
Nakamura H., *J. Atomic Energy Soc. Japan*, **9** (No. 9), 524~529 (1967)

67-J-045 Thermal conductivity of nuclear fuel ceramics at high temperatures [J]
Naito K., *J. Ceram. Assoc., Japan*, **75** (No. 6), 163~174 (1967)

66-J-040 Extraction of nitric acid and uranyl nitrate with tri-*n*-octyl amine [J]
Tsujino T., Ohwada K., *et al.*, *J. Chem. Soc. Japan, Ind. Chem. Sec.*, **70** (No. 5), 622~628 (1967)

66-J-113 Preparation of the monodisperse aerosol of sodium chloride [E]
Kitani S., *J. Colloid Interface. Sci.*, **23** (No. 2), 200~202 (1967)

66-J-239 Retention efficiency test of air-filter [E]
Kitani S., Honma K.*, *J. Colloid Interface. Sci.*, **24** (No. 2), 270~271 (1967)

67-J-359 Effects of phase homogeneity on the chemical consequences of nuclear reactions [E]
Stevoic J.*, Tanaka K., *et al.*, *J. Inorg. Nucl. Chem.*, **3**, 415~418 (1967)

67-J-017 Fluorescent X-ray determination of tin, iron, nickel and chromium in zircaloy-2 and its application to the homogeneity characterization of JAERI zircaloy-2 standard sample [J]
Nakajima T., Takashima K., *et al.*, *J. Japan Inst. Metals*, **31** (No. 8), 993~998 (1967)

66-J-122 Isotope separation by multiple contact • 1 (Analytical procedure for reverse frontal process) [E]
Shimokawa J., Kobayashi T., *J. Nucl. Sci. Technol. (Tokyo)*, 4 (No. 2), 63~75 (1967)

66-J-330 Kinetic studies of fluorination of uranium carbides by fluorine • 2
(The fluorination of uranium dicarbide) [E]
Iwasaki M., Sakurai T., Ishikawa N., *J. Nucl. Sci. Technol. (Tokyo)*, 4 (No. 5), 249~253 (1967)

67-J-054 Decomposition of cyclohexyl amines through irradiation [E]
Tsujino T., Ishihara Takehiko., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, 4 (No. 6), 317~318 (1967)

66-J-389 Effect of temperature on the extraction of nitric acid, uranium and fission products
with tri-*n*-octyl amine [E]
Tsujino T., Ishihara Takehiko., *J. Nucl. Sci. Technol. (Tokyo)*, 4 (No. 7), 353~360 (1967)

66-J-453 Removal of fission products and their complexing agents from degraded solvent
by ion exchange method [E]
Ohwada K., *J. Nucl. Sci. Technol. (Tokyo)*, 4 (No. 7), 361~366 (1967)

66-J-454 Group type analysis of carboxylic acid formed by degradation
of *i*-dodecane and kerosene with nitric acid [E]
Ohwada K., *J. Nucl. Sci. Technol. (Tokyo)*, 4 (No. 8), 427~430 (1967)

67-J-023 Determination of hydrogen fluoride and uranium (VI) incrude uranium hexafluoride
by hydrolysis and potentiometric titration [E]
Tsujimura S., Izawa K., Shinohara H., *J. Nucl. Sci. Technol. (Tokyo)*, 4 (No. 9), 482~487 (1967)

67-J-242 Removal of fission products and their complexing agents by potassium dichromate method [E]
Ohwada K., *J. Nucl. Sci. Technol. (Tokyo)*, 4 (No. 11), 560~564 (1967)

66-J-146 Study of negative ion formations by electron impact • 1
(Negative ions produced from acrylonitrile) [E]
Sugiura T., Arakawa K., *et al.*, *Mass Spectroscopy (Tokyo)*, 14 (No. 4), 187~200 (1967)

65-J-375 Studies on the behavior of carrier-free radioisotopes • 2 (The colloid formation of radioactive
and nonradioactive europium in solutions of extremely low concentrations) [E]
Ishikawa F., Sato T., *Radiochim. Acta*, 6, 128~133 (1966)

66-J-188 Rapid separation of radionuclides by spontaneous electrodeposition on metallic mercury • 1
(Metallic mercury-mercury ion system) [E]
Ohkashita H., *Radiochim. Acta*, 7, 81~85 (1967)

66-J-189 Rapid separation of radionuclides by spontaneous electrodeposition on metallic mercury • 2 [E]
Ohkashita H., *Radiochim. Acta*, 7, 85~89 (1967)

66-J-035 The spontaneous fission of uranium-238 [E]
Ishimori T., Ueno K., *et al.*, *Radiochim. Acta*, 7, 95~103 (1967)

66-J-377 Determination of radioactive cobalt in reactor coolant water by solvent extraction [E]
Motojima K., Bando S., *et al.*, *Talanta*, 14, 1179~1183 (1967)

Paper at Meeting

66-P-397 The structure of fused salts [J]
Furukawa K., Proc. Electrochem. Seminor (Kyoto, 1967)

Reports

66-R-035 Studies on the solvent extraction of actinide elements by organophosphorus compounds [E]
Watanabe K., JAERI 1132, p. p. 87 (1967)

67-R-005 Production of sulfur-35 and preparation of its inorganic cabelled compound (A review of method) [J]
Shikata E., JAERI 4041, p. p. 7 (1967)

67-R-007 Water chemistry of JPDR [E]
Ishiwatari N., JAERI 1135, p. p. 21 (1967)

67-R-016 Use of extraction-photometric technique in activation analysis (Determination of gallium and indium in aluminum and zinc) [E]
Motojima, K., Hashitani H., Bando S., *et al.* JAERI 1148, p. p. 11 (1967)

Book

65-B-538 Extraction photometry using oxine and 2-methyloxine (Analysis of essential nuclear reactor materials) [E]
Motojima K.,
"Prog. in Nuclear Energy Series IX, Analy Stical Chemistry" **8**, Part 1, 49~87, Pergamon Press (1967)

Reactor Physics

Journal Articles

67-J-117 Some problems for the production of reactor constants [J]
Japanese Cross Section Committee *J. Atomic Energy Soc. Japan*, **9** (No. 7), 386~395 (1967)

66-J-219 Measurement of neutron slowing down time in graphite [E]
Kaneko Y., Kurokawa R., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 4), 177~184 (1967)

66-J-341 A pulsed neutron source for thermal reactor physics [E]
Kaneko Y., Kurokawa R., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 7), 328~338 (1967)

66-J-342 Determination of neutron multiplication · 1 (Concept) [E]
Kaneko Y., Sumita K.*, *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 8), 400~407 (1967)

66-J-340 Measurement of prompt neutron decay constant in delayed critical state of heavily reflected reactor [E]
Kaneko Y., Akino F., Kurokawa R., *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 9), 462~467 (1967)

66-J-343 Determination of neutron multiplication · 2 (Experiment and analysis) [E]
Kaneko Y., Sumita K., *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 10), 491~502 (1967)

67-J-046 Two-time doublet Boltzman equation in reactor kinetics and its application [E]
Taji Y., *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 10), 518~527 (1967)

67-J-115 The effect of the resonance scattering of sodium on the resonance absorption of ^{238}U [E]
Tone T., Ishiguro Y., *et al.* *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 12), 601~606 (1967)

66-J-057 Noise-equivalent source in nuclear reactors [E]
Saito K., *Nucl. Sci. Engng.*, **28**, 384~396 (1967)

66-J-061 On the noise-equivalent source in a zero-power reactor [E]
Saito K., *Nucl. Sci. Engng.*, **28**, 450~463 (1967)

66-J-200 Theory of branching processes of neutrons in a multiplying medium [E]
Saito K., Taji Y., *Nucl. Sci. Engng.*, **30**, 54~64 (1967)

66-J-078 On the itinerant oscillator model of liquids [E]
Nakahara Y., Takahashi H., *Proc Phys. Soc.*, **89**, 747 (1966)

Reports

66-R-028 Group constants for a fast reactor and sodium void effects [E]
Katsuragi S., *et al.*, JAERI 1109, p. p. 27 (1966)

66-R-029 Direct substitution of plutonium in commercial boiling water reactor [J]
Yasukawa S., *et al.*, JAERI 1123, p. p. 32 (1967)

66-R-030 The KAK program for the numerical solution of few-group neutron diffusion equations in two dimensions [E]
Akanuma M., *et al.*, JAERI 1127, p. p. 19 (1967)

66-R-031 CROWN—An IBM-7090 code for calculation of cruciform control rod worth for monoenergetic neutrons [E]
Fukai Y., JAERI 1128, p. p. 15 (1967)

67-R-001 RICM—An IBM-7090 code of resonance integral calculation for multi-region lattice [E]
Nuclear Code Committee of Japan, JAERI 1134, p. p. 28 (1967)

67-R-017 FREDAM-BI. A FORTRAN-IV program for computation of the frequency distributions of beryllium and ice by root sampling method [E]
Nakahara Y., Kato* O., JAERI 1146, p. p. 24 (1967)

Radiation Applications

Journal Articles

67-J-006 Effect of gamma irradiation on strawberries as a means of extending its shelf-life and lethal dose of Botrytis cinerea [E]
Shibabe S., Ito H. *et al.*, *Agricul. Biol. Chem. (Tokyo)*, **31** (No. 8), 930~934 (1967)

67-J-061 Portable X-ray analyzer using radioisotope sealed sources [J]
Enomoto S., Tominaga H., *Anal. and Instrum. (Tokyo)*, **5** (No. 6), 35~43 (1967)

67-J-062 Neutron absorption analysis using radioisotope neutron sources [J]
Enomoto S., Wada N., *Anal. and Instrum. (Tokyo)*, **5** (No. 8), 42~49 (1967)

66-J-082 The addition reactions of ethanol to ethylene induced by gamma-ray irradiation in the gaseous phase • 1 (Results and the reaction mechanisms) [E]
Hotta H., Kurihara H., *et al.*, *Bull. Chem. Soc. Japan*, **40** (No. 4), 714~718 (1967)

66-J-083 The addition reactions of ethanol to ethylene induced by gamma-ray irradiation in the gaseous phase • 2 (A kinetic analysis of the results) [E]
Hotta H., Kurihara H., *Bull. Chem. Soc. Japan*, **40** (No. 4), 719~723 (1967)

66-J-499 The influence of agitation on the gas-phase ethylene polymerization induced by γ-rays [E]
Kawakami W., Hagiwara M., *et al.*, *Bull. Chem. Soc. Japan*, **40** (No. 11), 2668~2675 (1967)

66-J-582 γ-ray induced polymerization of ethylene [J]
Kawakami W., Machi S., *Chem. Engng. (Tokyo)*, **12** (No. 6), 1~9 (1967)

67-J-107 γ-irradiation effect on microflora of rice • 9 (Studies on the microorganisms of cereal grain) [J]
Iizuka H., Ito H., *J. Agr. Chem. Soc. Japan*, **41** (No. 11), 578~584 (1967)

66-J-431 Radiation polymerization of ethylene and properties of polyethylene produced in pilot plant experiments [J]
Sawayanagi S., Takehisa M., Machi S., *Japan Plastics*, **18** (No. 4), 8~14 (1967)

66-J-472 Gamma-ray leakage through a slit in lead shield • 1 [J]
Miyasaka S., Kanemori Y.*, *et al.*, *J. Atomic Energy Soc. Japan*, **9** (No. 10), 597~603 (1967)

66-J-150 Effect of solvent on γ-radiation induced polymerization of ethylene [J]
Machi S., Fujioka S., *et al.*, *J. Chem. Soc. Japan, Ind. Chem. Sec.*, **70** (No. 3), 388~390 (1967)

67-J-267 Effects of emulsifiers and oxygen on the emulsion grafting of styrene on the pre-irradiated rayon [J]
Gotoda M., Kageyama E., *et al.*, *J. Chem. Soc. Japan, Ind. Chem. Sec.*, **70** (No. 9), 1578~1582 (1967)

67-J-267 Suspension grafting of styrene on the pre-irradiated rayon [J]
Gotoda M., Kubota H., *et al.*, *J. Chem. Soc. Japan, Ind. Chem. Sec.*, **70** (No. 9), 1606~1607 (1967)

66-J-124 Gamma-rays and neutrons streaming about a cylindrical duct by the ray analysis method [E]
Tsuruo A., Shindo M., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 1), 11~20 (1967)

66-J-574 Measurement of cadmium ratio in a U-H_2O subcritical assembly with scintillation detector [E]
Tojo T., Nakajima M., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 6), 314~315 (1967)

66-J-420 Albedo component of gamma-ray streaming through straight cylindrical ducts [E]
Miyagi J., Miyasaka S., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 8), 423~426 (1967)

66-J-575 A scintillation detector for the measurement of thermal neutrons in subcritical assembly [E]
Tojo T., Nakajima T., Kondo M., *J. Nucl. Sci. Techol. (Tokyo)*, **4** (No. 10), 512~517 (1967)

66-J-148 Mechanism of initiation in the γ-radiation-induced polymerization of ethylene [E]
Mitsui H., *J. Porymer Sci.*, Part A-1, **5**, 1073~1082 (1967)

67-J-064 Polyethylenes formed by the γ-radiation-induced polymerization in various alcohols [E]
Mitsui H., Suganuma F., *et al.*, *J. Polymer Sci.*, Part B, **5**, 997~1000 (1967)

66-J-571 Preparation of thermal neutron scintillator based on a mixture of ZnS (Ag), ^{6}LiF and polyethylene [E]
Tojo T., Nakajima T., *Nucl. Instr. Meth.*, **53** (No. 1), 163~166 (1967)

66-J-224 Gamma-ray streaming through a straight cylindrical duct [E]
Shindo M., Tsuruo A., *et al.*, *Nucl. Sci. Engng.*, **27**, 450~463 (1967)

66-J-027 Dose buildup factors of plane parallel barries for Cs-137 plane monodirectional source [E]
Tsuruo A., Tamura K., *Nucl. Sci. Engng.*, **28**, 144~154 (1967)

66-J-238 Experimental studies on gamma-ray dose rates from a ^{60}Co cylindrical source [E]
Furuta Y., Kanemori Y.*, *Nucl. Sci. Engng.*, **30**, 261~267 (1967)

66-J-358 Radiation dosimetry by polyethylene terephthalate [J]
Oshima Y., Tanaka R., *Oyo Buturi (Tokyo)*, **36** (No. 7), 515~520 (1967)

67-J-088 Dose rate distribution in the autoclave of the apparatus of radiation-induced polymerization of ethylene [J]
Oshima Y., Tachibana H., *Oyo Buturi (Tokyo)*, **36** (No. 10), 782~788 (1967)

66-J-384 Polymerization of ethylene by radiation [J]
Sawayanagi S., Takehisa M., Machi S., *Petrol. Petrochem. (Japan)*, **11** (No. 3), 31~36 (1967)

67-J-155 ^{60}Co-γ radiolysis of aqueous ferro- and ferricyanide solutions [J]
Ohno S., Tsuchihashi G.*, *Radioisotopes (Tokyo)*, **16** (No. 9), 434~438 (1967)

Health Physics

Journal Articles

66-J-440 On the oceanic condition off Tokai village [J]
Fukuda M., *Bull. Coastal Oceonography (Japan)*, **5** (No. 2), 20~26 (1966)

65-J-231 Relationship between ingestion, excretion and accumulation of fallout cesium-137 [E]
Fujita M., Yabe A., *et al.*, *Health Phys.*, **12**, 1649~1653 (1966)

65-J-532 Environmental radiological monitoring system at nuclear installations [E]
Ishihara Toyohide, *Health Phys.*, **13**, 549~558 (1967)

66-J-158 A new rem-counter for neutrons [E]
Tatsuta H., Ryufuku H., *et al.*, *Health Phys.*, **13**, 559~565 (1967)

66-J-059 A study of elementary particle interactions for high-energy dosimetry [E]
Kato K., *Health Phys.*, **13**, 831~843 (1967)

66-J-134 An evaluating method for ground surface contamination during rain [J]
Kakuta M., *J. Atomic Energy Soc. Japan*, **9** (No. 4), 186~191 (1967)

66-J-373 Energy absorption spectrum-radiation dose conversion operator · 1 (Principle) [J]
Miyanaga I., Moriuchi S., *J. Atomic Energy Soc. Japan*, **9** (No. 8), 440~446 (1967)

66-J-374 Energy absorption spectrum-radiation dose conversion operator · 2 (Automation of operation) [J]
Moriuchi S., Miyanaga I., *J. Atomic Energy Soc. Japan*, **9** (No. 9), 518~523 (1967)

67-J-076 Reflection of neutrons by human body [J]
Tatsuta H., Ryufuku H., *et al.*, *J. Atomic Energy Soc. Japan*, **9** (No. 12), 700~704 (1967)

67-J-286 Performance of gas monitor employed at full reprocessing test plant of JAERI [J]
Sato N., Minami K., *et al.*, *J. Japan Health Phys. Soc.*, **2** (No. 2), 76~80 (1967)

67-J-261 Some considerations on the methods of fire-prevention and fire-fighting for plutonium and uranium fires on the basis of literature survey [J]
Kadokawa M., Inoue Y., *J. Japan Health Phys. Soc.*, **2** (No. 2), 81~94 (1967)

67-J-112 Autoradiographic analysis of plutonium contamination on pig skin · 1 [J]
Tashiro S., *J. Japan Health Phys. Soc.*, **2** (No. 3), 128~133 (1967)

67-J-162 Decontamination of Pu-239 from pt plates [J]
Iwaya S., Wadachi Y., *J. Japan Health Phys. Soc.*, **2** (No. 3), 134~137 (1967)

66-J-511 Skin surface contamination by uranium [E]
Wadachi Y., Tashiro S., *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 4), 208~209 (1967)

67-J-073 Airborne plutonium monitor with alpha spectrometer [J]
Minami K., Watanabe K., *et al.*, *Radioisotopes (Tokyo)*, **16** (No. 8), 383~390 (1967)

66-J-584 Monitoring and evaluation of inhaled airborne radioactive materials [J]
Fukuda S., Sakagishi S., *J. Japan Air Cleaning Assoc.*, **4** (No. 5), 40~51 (1967)

Reports

66-R-037 Biological dosimetry at the time of a radiation exposure [J]
Ohira I., *et al.*. JAERI 4040, p. p. 12 (1967)

66-R-038 Activities in the Division of the Health Physics and Safety (Apr. 1965—Mar. 1966) [J]
Div. of Health Physics and Safety JAERI 5015, p. p. 247 (1967)

66-R-039 Manual for radiation safety handling [J]
Div. of Health Physics and Safety JAERI 6017, p. p. 47 (1967)

67-R-009 Orthonormal expansion code ACOF for analysis of neutron spectra and dose equivalent rates [J]
Ryufuku H., JAERI 1140, p. p. 11 (1967)

67-R-010 Activities in the division of health physics and safety [J]
Division of Health Physics and Safety, JAERI 5016, p. p. 167 (1967)

67-R-019 Radiation monitoring and control of the JPDR [J]
Radiation Control Section, JAERI 1149, p. p. 44 (1967)

67-R-021 Health administration at Japan Atomic Energy Research Institute
(Mainly by blood examination) [J]
Ohira I.*, Hori G., Kobayashi H., JAERI 1150, p. p. 7 (1967)

Engineering in General

Journal Articles

67-J-053 Fixation of photoelastic fringe patterns by gamma rays [E]
Miyazono S., *J. Appl. Phys.*, **38** (No. 5), 2319~2323 (1967)

66-J-565 Remotely operated pipetter [J]
Emura S., Nakahara Y., *et al.*, *J. Atomic Energy Soc. Japan*, **9** (No. 12), 705~709 (1967)

66-J-390 A cooled FET preamplifier for semiconductor detectors [E]
Kumahara T., Goto H., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 3), 152~154 (1967)

66-J-288 Construction of flowmeter for fluorine [E]
Tsujimura S., Fujisawa G., *et al.*, *J. Nucl. Sci. Technol. (Tokyo)*, **4** (No. 5), 244~248 (1967)

66-J-131 An amplifier for microphotometer using a MOS-FET [J]
Takahashi M., Furukawa T., *J. Spectroscop. Soc. Japan*, **15** (No. 5), 178~183 (1967)

Reports

66-R-027 A Sensitive capillary plastometer for slurries [J]
Yamazaki Y., *et al.*, JAERI 1117, p. p. 30 (1967)

67-R-013 Annemometric characteristics of semiconductor flow-meter [J]
Okamoto Y., Hanawa J.*, JAERI 1142, p. p. 13 (1967)

Other Fields

Journal Articles

67-J-121 Uranium and thorium contents in ultrabasic rocks [E]
Wakita H., *Earth Planetary Sci., Letters*, **2** (No. 4), 377~381 (1967)

67-J-156 The role of chemistry and industrial chemistry in nuclear industry [J]
Naito K., *Chem. Education*, **15** (No. 3), 305~315 (1967)

67-J-044 Recent development of nuclear energy in FRANCE [J]
Kobayashi M., Enomoto S., *Bull. Soc. Franco-Japonaise Tech. Ind.*, **13** (No. 1), 2~97 (1967)

Paper at meeting

67-P-084 Containment design and study for the fast critical assembly of JAERI [E]
Uchida T., Iso Y., Symp. Containment and Siting of Nuclear Power Plants, SM 89/27 (Vienna 1967)

Patents and Utility Models

Foreign Patents

French Patents

Pat-F-45 Reprocessing of spent uranium fuel by means of chlorination and fractional absorption by barium chloride
Ishihara Takehiko, *et al.*, No. 1472438

Pat-F-46 Ion exchange method for separating uranium isotopes
Shimokawa J., *et al.*, No. 1480129

Pat-F-47 Method for the manufacture of polymeric trioxane
Okamura S., *et al.*, No. 1300390

Pat-F-48 Methods for manufacturing grafted polyester fibers
Hoshino T., *et al.*, No. 1362843

Pat-F-49 Polymerization method for cyclic ethers in the presence of maleic anhydride
Okamura S., *et al.*, No. 1413607

Pat-F-50 Method for producing radioactive tellurium
Umezawa K., *et al.*, No. 1496047

Pat-F-51 Graft polymerization of vinyl compound onto cellulose
Gotoda M., *et al.*, No. 1499619

Pat-F-52 Nuclear reactor
Nozawa M., *et al.*, No. 1509339

Pat-F-53 Steam generator or heater for an atomic power generating plant
Nozawa M., *et al.*, No. 1508471

U. S. Patents

Pat-US-9 Magnet assembly capable of controlling distribution of magnetic field
Momota T., *et al.*, No. 3296569

Pat-US-10 Apparatus for suppressing the appearance of transient responses or spikes
Furukawa T., *et al.*, No. 3307044

Pat-US-11 Process for reprocessing burned uranium fuel using molten bath containing ammonium nitrate
Kamemoto Y., *et al.*, No. 3322679

Pat-US-12 Method for manufacture of polymeric trioxane
Okamura S., *et al.*, No. 3242063

Pat-US-13 Magnetic amplifier for servo use
Kawaguchi T., *et al.*, No. 3332026

Pat-US-14 Method for direct recovery of plutonium from irradiated nuclear fuel
Ishihara Takehiko, *et al.*, No. 3328133

Pat-US-15 Symmetrical magnetic amplifier
Kawaguchi T., *et al.*, No. 3345577

Pat-US-16 Process for preparing nuclear fuel elements of dispersed-in-graphite type
Ishihara Takehiko., *et al.*, No. 3342910

British Patents

Pat-Brit-21 A process for preparing porous carbon bodies of any desired shape with improved physical and chemical properties
Ishihara Takehiko, *et al.*, No. 1036259

Pat-Brit-22 Method of inhibiting deterioration of organic moderator coolants
Ishihara Takehiko, *et al.*, No. 1044141

Pat-Brit-23 Improvements in or relating to binary-decimal converters
Kinbara S., *et al.*, No. 1045747

Pat-Brit-24 System for suppressing the appearance of transient response or spikes in transistorized choppers
Furukawa T., *et al.*, No. 1043562

Pat-Brit-25 Brazing carbonaceous materials
Fujimura T., *et al.*, No. 1043819

Pat-Brit-26 Pulse integrating circuit
Kinbara S., No. 1048469

Pat-Brit-27 Fuel element for high temperature and high power density nuclear
Sugimoto E., *et al.*, No. 1049751

Pat-Brit-28 Process of preparing chlorinated hydrocarbons
Danno A., *et al.*, No. 1055410

Pat-Brit-29 A process for preparing high molecular weight polymer of formaldehyde
Okamura S., *et al.*, No. 913150

Pat-Brit-30 Process for polymerizing formaldehyde by the action of ionizing
Okamura S., *et al.*, No. 928605

Pat-Brit-31 Method for the purification and recovery of solvents used in reprocessing nuclear fuel
Sakata S., *et al.*, No. 1051978

Pat-Brit-32 Methods of separating or classifying materials refining molten metal, and manufacturing ingots or other castings and apparatus for boiling electrically conducting liquids
Hori M., *et al.*, No. 1059083

Pat-Brit-33 Improved methods for manufacturing grafted polyesters
Hoshino T., *et al.*, No. 1054269

Pat-Brit-34 Improvements in magnetic amplifiers
Kawaguchi T., *et al.*, No. 1055735

Pat-Brit-35 Apparatus for measuring counting rates
Amano N., *et al.*, No. 1053989

Pat-Brit-36 Method for direct separation and recovery of plutonium from irradiated nuclear fuel
Ishihara Takehiko, *et al.*, No. 1060965

Pat-Brit-37 Improvements in or relating to radiation spectrometers
Mizuho M., No. 1070403

German Patents

Pat-G-7 A process for preparing high molecular weight polymer of formaldehyde
Okamura S., *et al.*, No. 1160615

Pat-G-8 Pulse integrating circuit
Kinbara S., No. 1228300

Pat-G-9 Comparing and selecting circuit for digital numbers
Kinbara S., No. 1239505

Pat-G-10 Improvements in or relating to radiation spectrometers
Mizuho M., No. 1242764

Pat-G-11 Brazing carbonaceous materials
Fujimura T., *et al.*, No. 1245685

Belgic Patents

Pat-Belg-1 Reprocessing of spent uranium fuel by means of chlorination and fractional absorption by barium chloride
Ishihara Takehiko, *et al.*, No. 677881

Pat-Belg-2 Process for polymerizing formaldehyde by the action of ionizing
Okamura S., *et al.*, No. 594045

Pat-Belg-3 A process for preparing high molecular weight polymer of formaldehyde
Okamura S., *et al.*, No. 600656

Pat-Belg-4 Method for the manufacture of polymeric trioxane
Okamura S., *et al.*, No. 605982

Pat-Belg-5 Methods for manufacturing grafted polyester fibers
Hoshino T., *et al.*, No. 634284

Italian Patent

Pat-Ita-1 Polymerization method for cyclic ethers in the presence of maleic anhydride
Okamura S., *et al.*, No. 744160

Canadian Patents

Pat-C-1 Improvements in and relating to the oxidation of benzene to phenol
Danno A., *et al.*, No. 682888

Pat-C-2 Process for polymerizing formaldehyde by the action of ionizing
Okamura S., *et al.*, No. 663987

Pat-C-3 A process for preparing high molecular weight polymer of formaldehyde
Okamura S. *et al.*, No. 676255

Japanese Patents

Pat-J-110 Heat-transfer fins for the piping in a heat exchanger
Takase M., *et al.*, No. 488644

Pat-J-111 Process for preparing ^{132}Cs of radiochemically high purity
Shibata N., *et al.*, No. 487574

Pat-J-112 Method for producing radioactive iodine by temperature-gradient chromatography
Yajima S., *et al.*, No. 489725

Pat-J-113 Temperature compensation method for logarithmic amprifiers • 2
Furukawa T., *et al.*, No. 489667

Pat-J-114 Temperature compensation method for logarithmic amplifiers • 1
Furukawa T., *et al.*, Nc. 489666

Pat-J-116 Self regulating controlled sealing mechanism
Okamoto Y., *et al.*, No. 491278

Pat-J-117 Frexible sealing mechanism
Okamoto Y., *et al.*, No. 491004

Pat-J-118 Synthesis of inorganic ion-exchange material
Ishihara Takehiko, *et al.*, No. 489335

Pat-J-119 Synthesis of ion-exchange material containing metal ferrocyanate
Ishihara Takehiko, *et al.*, No. 489334

Pat-J-120 Synthesis of pulverized ion-absorptive material containing organic solvent
Ishihara Takehiko, *et al.*, No. 489333

Pat-J-121 Method for manufacture of new material from silicagel
Onishi S., *et al.*, No. 271852

Pat-J-122 Method for grafting to polyvinyl alcohol fibers and films
Sakurada I., *et al.*, No. 289912

Pat-J-123 Method for grafting to polyvinyl alcohol by use of ionizing radiation
Sakurada I,, *et al.*, No. 289913

Pat-J-124 Method for cross-linking polyvinyl alcohol by use of ionizing radiation at elevated temperatures
Sakurada I., *et al.*, No. 290684

Pat-J-125 Method for cross-linking of polyvinyl chloride in the presence of ammonia gas
Shinohara K., *et al.*, No. 290698

Pat-J-126 Method for protecting cellulose from radiation-induced degradation
Sakurada I., *et al.*, No. 290723

Pat-J-127 Methou for grafting to cellulose by use of ionizing radiation
Sakurada I., *et al.*, No. 292073

Pat-J-128 Improved method for preparing graft copolymer
Sakurada I., *et al.*, No. 292978

Pat-J-129 Anionic polymerization method by ionizing radiation
Okamura S., *et al.*, No. 292981

Pat-J-130 Method for cross-linking of polyvinyl chloride by use of ionizing radiation and solvent
Shinohara K., *et al.*, No. 293251

Pat-J-131 Process for grafting to polyvinyl alcohol by use of ionizing radiation
Sakurada I., *et al.*, No. 295361

Pat-J-132 Method for curing of unsaturated polyester solution in vinyl acetate by use of ionizing radiation
Shinohara K., *et at.*, No. 295392

Pat-J-133 Method for bonding polyester resin materials by use of ionizing radiation
Shinohara K., *et al.*, No. 298477

Pat-J-134 Method for accerelating graft polymerization by chlorination of polymer
Okamura S., *et al.*, No. 298479

Pat-J-135 Ionizing radiation induced copolymerization of alkylene oxides and vinyl monomers
Okamura S., *et al.*, No. 298805

Pat-J-136 Method for cross-linking of polyvinyl chloride
Shinohara K., *et al.*, No. 298882

Pat-J-137 Graft polymerization method of cellulosic products by ionizing radiation
Okamura S., *et al.*, No. 302933

Pat-J-138 Method for grafting to cellulose
Sakurada I., *et al.*, No. 303279

Pat-J-139 Method for polymerization of methacrylonitrile
Sofue H., *et al.*, No. 305150

Pat-J-140 Manufacturing method of high molecular weight polymer from formaldehyde
Okamura S., *et al.*, No. 305406

Pat-J-141 Method for synthesizing cyclohexanone and cyclohexanol
Shinohara K., *et al.*, No. 307599

Pat-J-142 Graft-polymerization method of cellulosic products by ionizing radiation
Okamura S., *et al.*, No. 308070

Pat-J-143 Synthetic method of ketones from liquid aldehyde and monoolefins by an ionizing radiation reaction
Hirota K., *et al.*, No. 308071

Pat-J-144 Polymerization of formaldehyde by ionizing radiation
Okamura S., *et al.*, No. 308072

Pat-J-145 Process for chlorination of polypropylene fibers by use of ionizing radiation
Sakurada I., *et al.*, No. 303799

Pat-J-146 Manufacturing method of chlorinated polymer by ionizing radiation
Okamura S., *et al.*, No. 318429

Pat-J-147 Procedure for anionic polymerization by ionizing radiation
Okamura S., *et al.*, No. 402655

Pat-J-148 Manufacturing method of synthetic polymer having semiconductivity
Okamura S., *et al.*, No. 403911

Pat-J-149 Process for grafting of alkyl acrylate to polyvinyl alcohol by use of ionizing radiation
Sakurada I., *et al.*, No. 406216

Pat-J-150 Process for grafting to polyvinyl alcohol by use of pre-irradiation method
Sakurada I., *et al.*, No. 406218

Pat-J-151 Process for synthesizing graft copolymer
Shinohara K., *et al.*, No. 406219

Pat-J-152 Polymerizing method for acetaldehyde and propionaldehyde by ionizing radiation
Okamura S., *et al.*, No. 406220

Pat-J-153	Polymerizing method of diketene by ionizing radiation Okamura S., *et al.*,	No. 406221
Pat-J-154	Polymerizing method of β-propiolactone by ionizing radiation Okamura S., *et al.*,	No. 406222
Pat-J-155	Method for polymerization of isocyanate Sofue H., *et al.*,	No. 406650
Pat-J-156	Method for preparing a copolymer from acrylonitrile and isocyanate Sofue H., *et al.*,	No. 406651
Pat-J-157	Manufacturing method of copolymer of β-propiolactone by ionizing radiation Okamura S., *et al.*,	No. 406652
Pat-J-158	Process grafting to cellulose by use of pre-irradiation method Sakurada I., *et al.*,	No. 408542
Pat-J-159	Manufacturing method of nitrile polymer by ionizing radiation Okamura S., *et al.*,	No. 408543
Pat-J-160	Method for preparing copolymer from cellulose and vinyl monomers Shinohara K., *et al.*,	No. 409316
Pat-J-161	Method for preparing graft copolymers Hoshino T., *et al.*,	No. 409318
Pat-J-162	Method for polymerization of dimethylformamide Sofue H., *et al.*,	No. 410554
Pat-J-163	Method for polymerization of chloral Sofue H., *et al.*,	No. 410556
Pat-J-164	Manufacturing method for glyoxal polymer by ionizing radiation Okamura S., *et al.*,	No. 413210
Pat-J-165	Improving method of polyoxymethylene by ionizing radiation Okamura S., *et al.*,	No. 413211
Pat-J-166	Manufacturing method of polymer from cyanuric chloride by ionizing radiation Okamura S., *et al.*,	No. 413212
Pat-J-167	Method for the manufacture of graft copolymers Hoshino H., *et al.*,	No. 413367
Pat-J-168	Process for grafting to polyvinyl alcohol by use of pre-irradiation method Sakurada I., *et al.*,	No. 413368
Pat-J-169	Method for synthesizing polypropagylalcohol by use of ionizing radiation Sofue H., *et al.*,	No. 413375

Pat-J-170 Manufacturing method of poly-propagylbromide by ionizing radiation
Okamura S., *et al.*, No. 413376

Pat-J-171 Method for the manufacture of semiconductive polyacrylonitrile by use of ionizing radiation
Sofue H., *et al.*, No. 415924

Pat-J-172 Ring opening polymerization of ring ethers catalyzed by fluoro-containing compounds with inoizing radiation
Okamura S., *et al.*, No. 415929

Pat-J-173 Manufacturing Method of halogenated acetone polymer by ionizing radiation
Okamura S., *et al.*, No. 417276

Pat-J-174 Method for synthesizing phenyl cyclohexane hydroperoxide from phenyl cyclohexane by oxydation
Hoshino T., *et al.*, No. 420259

Pat-J-175 Method for polymerization of formaldoxime
Sofue H., *el al.*, No. 420265

Pat-J-176 Manufacturing method of modified formaldehyde polymer having high molecular weight
Okamura S., *et al.*, No. 420891

Pat-J-177 Method for synthesizing cyclohexanone and cyclohexanol
Shinohara K., *et al.*, No. 423085

Pat-J-178 Manufacturing method of acetone polymer by ionizing radiation
Okamura S., *et al.*, No. 417277

Pat-J-179 Polymerizing method of conjugated hetero-five-membered ring compounds by ionizing radiation
Okamura S., *et al.*, No. 426836

Pat-J-180 Method for preparing a polymer of acrolein dialkyl acetal
Hoshino T., *et al.*, No. 429229

Pat-J-181 Manufacturing method of β-propiolactone polymer by ultra-violet radiation
Okamura S., *et al.*, No. 431057

Pat-J-182 Method for grafting of butadiene to polyvinyl alcohol by use of ionizing radiation
Sakurada I., *et al.*, No. 431054

Pat-J-183 A method of synthesis of tertiary alcohols
Hirota K., *et al.*, No. 431412

Pat-J-184 Method for improvement of polyvinyl chloride resin
Hoshino T., *et al.*, No. 434081

Pat-J-185 Method for synthesizing nitrocyclohexanone
Hoshino T., *et al.*, No. 434083

Pat-J-186 Manufacturing method of ring lactone polymer
Okamura S., *et al.*, No. 435998

Pat-J-187 Manufacturing method of copolymer
Okamura S., *et al.*, No. 435999

Pat-J-188 New method for co-grafting of butadiene and acrylonitrile to cellulose by use of ionizing radiation
Sakurada I., *et al.*, No. 449763

Pat-J-189 Method for co-grafting of butadiene and styrene to cellulose by use of ionizing radiation
Sakurada I., *et al.*, No. 458151

Pat-J-190 Process for grafting to polyvinyl alcohol by use of pre-irradiation method
Sakurada I., *et al.*, No. 459480

Pat-J-191 New method for co-grafting of styrene and acrylonitrile to cellulose by use of ionizing radiation
Sakurada I., *et al.*, No. 459481

Pat-J-192 Manufacturing method of ketene polymer by ionizing radiation
Okamura S., *et al.*, No. 459482

Pat-J-193 Method for the manufacture of polysulfone resin
Shinohara K., *et al.*, No. 459483

Pat-J-194 Manufacturing method of dioxo-aspiroheptane polymer by ionizing radiation
Okamura S., *et al.*, No. 465045

Pat-J-195 Manufacturing method of dimethylketene copolymer by ionizing radiation
Okamura S., *et al.*, No. 472059

Pat-J-196 Manufacturing method of dimethylketene polymer by ionizing radiation
Okamura S., *et al.*, No. 472060

Pat-J-197 Method for the manufacture of graft copolymers
Hoshino T., *et al.*, No. 472062

Pat-J-198 Synchronous rectifier for magnetic-modulation type DC amplifiers
Kawaguchi T., *et al.*, No. 491330

Pat-J-199 Synthesis of nuclear fuel-dispersed graphite type material
Ishihara Takehiko, *et al.*, No. 491356

Pat-J-200 Manufacturing method of copolymer from ketenes and aldehydes by ionizing radiation
Okamura S., *et al.*, No. 491629

Pat-J-201 Circuit arrangement for flattening air energy response of a scintillation counter in bias moduration of a pulse height discriminator
Moriuchi S., No. 492376

Pat-J-202 Electric furnace having a heating element of carbon or graphite for producing high temperature under high pressures
Sato S., No. 496611

Pat-J-203 A new method of radon activity measurement with liquid scintillator
Noguchi M., *et al.*, No. 494581

Pat-J-204 Method for the purification and recovery of solvents used in reprocessing nuclear fuel
Sakata S., *et al.*, No. 495013

Pat-J-205 Process for separating U, Pu and fission product from neutron irradiated uranium by use of the gradient multistage extraction method
Ishimori T., *et al.*, No. 494997

Pat-J-206 Period meter for linear-output nuclear reactors
Kuwabara J., No. 499539

Pat-J-207 New apparatus for neutron diffraction at low flux research reactor
Ohno Y., *et al.*, No. 501168

Pat-J-208 Exchange method of filters by fitting radioactive materials on them
Murakami M., No. 504187

Pat-J-209 Ampere-turns stabilized circuit (for magnets)
Kanbara M., *et al.*, No. 503393

Pat-J-210 Fixing method of photoelastic fringe patterns by gamma ray irradiation
Miyazono S., No. 506357

Pat-J-211 Carbon thermocouples
Sato S., No. 507480

Japanese Utility Model

UM-J-115 Neutron temperature detector
Fuketa T., *et al.*, No. 825135

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

Acta crystallographica
Acta haematologica japonica
Acta metallurgica
Agricultural and Biological Chemistry (Tokyo)
Analysis and Instruments (Tokyo)
Analytical Chemistry
Analytica chimica acta
Applied Physics Letter
Applied Spectroscopy
Architectural World (Tokyo)
Atompraxis

Biochimica et biophysica acta
Bulletin of Automatic Control Division (Tokyo)
Bulletin of the Chemical Society of Japan
Bulletin on Coastal Oceanography (Japan)
Bulletin de la Société Franco-Japonaise des Techniques Industrielles
Bulletin of the Institute of Space and Aeronautical Science, University of Tokyo
Bulletin of the Japan Institute of Metals
Bulletin of JSME (Japan)
Buturi (Tokyo)

Carbon
Carbons (Tokyo)
Chemical Education (Japan)
Chemical Engineering, Japan
Chemical Engineering (Tokyo)
Chemical Factory (Tokyo)
Chemical Industry (Tokyo)
Chemistry (Kyoto)
Chemistry and Chemical Industry, Japan
Chemistry of High Polymers (Tokyo)
Coal Tar (Tokyo)
Communications Association for Computing Machinary
Comptes Rendus

Denki Kagaku (Tokyo)
Discussions of the Faraday Society
Dokyumenteisyon Kenkyu (Tokyo)

Earth and Planetary Science Letters
Electric Power (Kyoto)
Electrochemical Technology
Electronician (Tokyo)
Engan Kaiyo Kenkyu Note (Japan)

Food Irradiation, Japan

Genshikaku Kenkyu (Tokyo)
Geochemical Journal
Geochemical et cosmochimica acta

Health Physics
High Polymers, Japan
High Pressure (Tokyo)
The Hitachi Hyoron (Tokyo)
Hitachi Review (Tokyo)
Hoden Kenkyu (Tokyo)

Industrial Water (Tokyo)
Imformation & Documentation (Tokyo)
Information Process, Japan
International Journal of Applied Radiation and Isotopes
IPPJ (Nagoya)
Isotopes and Radiation (Tokyo)

Japan Analyst
Japan Plastics
Japanese Journal of Applied Physics
Japanese Journal of Clinical Pathology
The Japanese Journal of Genetics
Japanese Journal of Medical Science and Biology
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 Balneological Society of Japan
Journal of the Ceramic Association of Japan
Journal of 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 Electronmicroscopy (Tokyo)
Journal of Geophysical Research
Journal of Inorganic Chemistry
Journal of Inorganic and Nuclear Chemistry
JICST (Tokyo)

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 Boiler Association
Journal of Japanese Chemistry
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 the Oceanographycal Society of Japan
Journal de Physique
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 Science of Soil and Manure, Japan
Journal of the Society of Materials Science, Japan
The Journal of the Society of Organic Synthetic Chemistry, Japan
Journal of the Spectroscopical Society of Japan
Journal of Waseda Electrotechnical Society (Tokyo)
Journal of Water and Waste (Tokyo)

Kakuyugo Kenkyu (Nagoya)
Koatsu Gas (Tokyo)

Light Metals (Tokyo)
Light Metal Welding (Tokyo)

Mass Spectroscopy (Tokyo)
Makromolekulare Chemie
Memories of the Institute of High Speed Mechanics, Tohoku University
Metals (Tokyo)
Metal Physics (Tokyo)
Mitsubishi Denki Laboratory Reports (Japan)
Molecular Physics

Nature
Nuclear Engineerng (Japan)
Nuclear Engineering and Design
Nuclear Physics
Nuclear Science and Engineering
Nuclear Structural Engineering
Nucleonics
Nukleonik

Oyo Buturi (Tokyo)

Petroleum and Petrochemicals (Japan)
Petroleum Refiner
Philosophical Magazine
Physics in Medicine and Biology
Physical Status Solidi
Physical Review
Physical Reviews Letters
Physics of Fluids
Physics Letters
Planetary and Space Science
Proceedings of the Physical Society
Progress of Theoretical Physics (Kyoto)

Radiation Research
Radiochimica Acta
Radioisotopes (Tokyo)
Repports of Inosphere and Space Research in Japan
Report on Progress in Physics
Review of Physical Chemistry of Japan
Review of Polarography (Tokyo)
Review of Scientific Instruments

Safety Engineering (Yokohama)
Science of Light (Tokyo)
Science of Machine (Tokyo)
Soil Science and Plant Nutrition (Tokyo)
Soil and Plant Food (Tokyo)
Solid State Communications
Spectrochimica acta

Talanta
Telecommunications (Japan)
Transactions of the Faraday Society
Transactions of the Japan Institute of Metals
Transactions of the Japan Society of Mechanical Engineers

Water Purification and Liquid Wastes Treatment (Osaka)

Yoyuen, Japan

Zairyo Kagaku, Japan