

DOCTORAL DISSERTATIONS

(1997.4.1 – 1998.3.31)

Applied Chemistry

Name	Title	Diss. No.	Date
Shiohara, Kei	Asymmetric anionic polymerization of N, N-diphenylacrylamide derivatives	K1152	1998.02.27
Okawa, Tomohiro	Studies on iminophosphorane-mediated synthesis of nitrogen heterocycles	K1155	1998.03.25
Sato, Hiroaki	Characterization of functional polymers by temperature programmed analytical pyrolysis techniques (in Japanese)	K1156	1998.03.25
Nishi, Koji	Structure and catalytic properties of gallium promoted zeolites in light alkane conversion	K1157	1998.03.25
Maeda, Katsuhiko	Studies on synthesis and structure of optically active polyisocyanates	K1158	1998.03.25
Zhao, Bao-Xiang	Synthetic studies on modified isoquinoline derivatives via 3,4-dihydroisoquinoline N-oxides	K1159	1998.03.25
Hayakawa, Yoshio	Studies on synthesis and properties of functional polymers and oligomers containing perfluoroalkyl groups	R1332	1997.06.04
Sawatari, Hideyuki	Studies on multielement profiling analysis of global environmental samples by plasma mass spectrometry (in Japanese)	R1342	1997.08.01
Ohta, Kazutoku	Development of advanced ion chromatography with silica-based stationary phases (in Japanese)	R1352	1997.10.31
Inagaki, Shinji	Synthesis and structure of mesoporous crystal, FSM-16	R1376	1998.03.03
Yokota, Fumiaki	Development of analytical methods for determination of trace impurities in non-oxide advanced ceramics by ICP-AES (in Japanese)	R1377	1998.03.03

Applied Chemistry II

Name	Title	Diss. No.	Date
Kitade, Shinichi	Viscoelastic properties and structures of polymer blends (in Japanese)	K1147	1997.10.31
Akakura, Matsujiro	Selective activation of carbonyl compounds by Lewis acids for organic synthesis	K1160	1998.03.25
Kikuchi, Tetsuo	Enantioselective protonation of enolates using optically active imides	K1161	1998.03.25
Kurihara, Hideki	Development of arylboron catalysts for selective organic reactions	K1162	1998.03.25
Nakamura, Tomotaka	Photodimerizations of cinnamic acid controlled by organic molecular assemblies	K1163	1998.03.25
Nojima, Takayuki	Studies on the generation and reactivity of carbonyl oxides and related compounds	K1164	1998.03.25
Shin, Woosuck	Fabrication and characterization of light-emitting porous semiconductors (in Japanese)	K1165	1998.03.25
Hirai, Katsuyuki	Studies on neighboring group participation and steric protection in carbene chemistry	R1336	1997.07.07
Tokiai, Takeo	A study on microstructure controlled thermoelectric materials (in Japanese)	R1361	1997.12.08
Suzuki, Teiichi	Studies on photodegradation of paint materials (in Japanese)	R1365	1998.01.06
Fukaya, Haruhiko	Syntheses of nitrogen-containing perfluoro compounds and their application to a halon alternative	R1370	1998.02.03

Chemical Engineering

Name	Title	Diss. No.	Date
Ohn, Than	Crossflow microfiltration characteristics of dilute suspension including binary suspensions (in Japanese)	K1153	1998.02.27
Okada, Yasushi	Fluidizing characteristics and granulation mechanism in tapered-fluidized bed (in Japanese)	K1166	1998.03.25
Nomura, Naofumi	Control of reactivity on hydrogenation of carbon dioxide with copper catalysts	K1167	1998.03.25

Name	Title	Diss. No.	Date
Mukai, Yasuhito	Fractionation characteristics of binary protein mixtures by ultrafiltration (in Japanese)	K1168	1998.03.25
Kyaw, Kyaw	Advanced energy utilization technology by using decomposition of carbonates: study of CaO-CO ₂ type high temperature chemical heat pump	K1169	1998.03.25
Saji, Akira	Engineering study on the removal and disposal of carbon dioxide from flue gas (in Japanese)	K1231	1998.03.25
Yoshida, Hitoshi	Production of substances using the bioreactor with immobilized mammalian cells (in Japanese)	K1237	1998.03.25

Biotechnology

Name	Title	Diss. No.	Date
Nishida, Yoshio	Application of knowledge information engineering to ginjo sake making process (in Japanese)	R1337	1997.07.07
Fukuzono, Shinichi	Efficient production system of heterologous proteins in recombinant escherichia coli (in Japanese)	R1338	1997.07.07
Mukaide, Motokazu	Development of new detection method of gene mutation for hepatitis virus by genetic engineering (in Japanese)	R1339	1997.07.07
Noguchi, Yuji	Production of biologically active substances by recombinant DNA technology	R1343	1997.08.01
Miyake, Katsuhide	Efficient production of useful biosubstances by genetic engineering	R1362	1997.12.08

Materials Science & Engineering

Name	Title	Diss. No.	Date
Kitano, Tomoyasu	Mesomechanical study on fatigue strength of low carbon steels (in Japanese)	K1170	1998.03.25
Shibutani, Hideo	Analysis of alloying behavior and corrosion mechanism in zirconium alloys for structural application in atomic power plants (in Japanese)	K1171	1998.03.25
Harada, Yoshihisa	Analysis of chemical bonds and structural stability and evaluation of mechanical properties for molybdenum disilicide (in Japanese)	K1172	1998.03.25

Name	Title	Diss. No.	Date
Hohjo, Hiroshi	Study on microstructure and fracture properties in silicon nitride ceramics based on fracture mechanics approach (in Japanese)	K1173	1998.03.25
Yamada, Yasusei	The structure and magnetic properties of $[\gamma\text{-Fe/M}]$ (M=Cu,Co) artificial superlattices (in Japanese)	K1174	1998.03.25
Nukeaw, Jiti	Photoreflectance study on electronic states and electric fields in semiconductor heterostructures	K1175	1998.03.25
Muroga, Akira	Study on the formation of BER (Bright Etched Region) during rolling contact fatigue (in Japanese)	K1238	1998.03.25
Omata, Yuuji	A study on magnetic properties of soft-magnetic thin films for high density magnetic recording head cores (in Japanese)	R1353	1997.10.31

Materials Processing Engineering

Name	Title	Diss. No.	Date
Nakanishi, Koukichi	Computer aided approach to forging process design (in Japanese)	K1176	1998.03.25
Abe, Eiji	Development of compressive torsion forming –consolidation of metal powder and fabrication of metal matrix composites– (in Japanese)	K1177	1998.03.25
Makino, Hiroyasu	Study on sand compaction mechanism and development of mathematical model in sand molding process (in Japanese)	K1178	1998.03.25
Xiao, Shiqin	Plasma-enhanced syntheses and characterization of refractory nitrides	K1179	1998.03.25

Applied Physics

Name	Title	Diss. No.	Date
Oana, Hidehiro	Dynamics of DNA molecules during electrophoresis in gels and polymer solutions (in Japanese)	K1180	1998.03.25
Kinjo, Tomoyuki	Molecular mechanism of bubble formation in liquids	K1181	1998.03.25

Name	Title	Diss. No.	Date
Matsuda, Kazunari	Ultrafast spectroscopic studies of photodoping effects in 3d transition metal oxides (in Japanese)	K1182	1998.03.25
Li, Yingli	Optical nonlinearities in copper halide nanocrystals (in Japanese)	K1239	1998.03.25
Inoue, Akio	Development and study of new types of electrorheological fluids (in Japanese)	R1344	1997.08.01
Fukuzawa, Kenji	High resolution microscopy using magneto-optical and near-field optical effects (in Japanese)	R1345	1997.08.01
Takahashi, Hiroshi	X-ray diffraction and thermal studies on phase behavior of model biomembranes (in Japanese)	R1354	1997.10.31
Koda, Tomonori	Molecular theory of smectic liquid crystals with a density functional form of free energy (in Japanese)	R1371	1998.02.03
Hirayama, Tsukasa	Electron interference microscopy for visualizing electromagnetic fields in small regions (in Japanese)	R1372	1998.02.03

Nuclear Engineering

Name	Title	Diss. No.	Date
Sakashita, Tetsuya	Numerical analyses of time variations in atmospheric ^{222}Rn concentrations (in Japanese)	K1143	1997.09.30
Oda, Masahiro	Technical improvement in quantitiveness of cold neutron radiography (in Japanese)	K1148	1997.11.28
Moriizumi, Jun	Estimation of areal emission of atmospheric methane using carbon isotopic analysis and atmospheric radon data (in Japanese)	K1149	1997.12.26
Kasugai, Yoshimi	Measurement and systematics of (n,p) and (n, α) cross sections by 14 MeV neutrons (in Japanese)	K1154	1998.02.27
Asai, Masato	A study on neutron-deficient nuclei around mass-130 region by means of γ - γ angular correlation measurement (in Japanese)	K1183	1998.03.25
Suzuki, Tomohiro	Photo-luminescence characteristics and applications of imaging plate (in Japanese)	K1184	1998.03.25
Kizuka, Yuko	Study on defect microstructure evolution in copper and copper dilute alloys irradiated with neutrons (in Japanese)	K1240	1998.03.25

Name	Title	Diss. No.	Date
Takenaka, Yasuto	Pulse shape processing and applications for radiation detectors (in Japanese)	K1241	1998.03.25
Arita, Yuji	Study on heat capacity of doped UO_2	R1329	1997.04.30
Genka, Tsuguo	Precision measurement of radioactivity with a calorimeter (in Japanese)	R1366	1998.01.06
Amaya, Masaki	Thermal conductivity of high burnup light water reactor fuel (in Japanese)	R1373	1998.02.03

Electrical Engineering

Name	Title	Diss. No.	Date
Bushida, Kenichi	Magneto-impedance effect in amorphous wires and high performance micro magnetic sensor (in Japanese)	K1145	1997.09.30
Shimizu, Masahito	Study on electromagnetic environment around electric power system (in Japanese)	K1185	1998.03.25
Suzuki, Keiji	Antenna coupling study on inductively coupled plasmas and helicon wave plasmas (in Japanese)	K1186	1998.03.25
Tanaka, Yasunori	Transient behavior of an SF_6 post-arc channel on high current arc interruption	K1187	1998.03.25
Tomita, Mutuwo	Realization of sensorless control of brushless DC motors (in Japanese)	K1188	1998.03.25
Banmongkol, Channarong	Influence of molecular structure and oxidation on electrical conduction and breakdown of low-density polyethylene	K1189	1998.03.25
Takada, Shunji	Magnetic properties of electrical steel sheets under PWM wave excitation (in Japanese)	R1346	1997.08.01
Yokokura, Kunio	Research on generation mechanism of switching surge and its suppression method in vacuum circuit breakers (in Japanese)	R1348	1997.09.30
Aoyagi, Hirokuni	A study on improvement of dielectric performance and insulation design method of high electric field for SF_6 Gas insulated switchgear(GIS) (in Japanese)	R1355	1997.10.31
Kato, Kinya	Polymer-dispersed liquid crystal for display applications (in Japanese)	R1357	1997.10.31

Name	Title	Diss. No.	Date
Murabayashi, Fumio	CMOS/BiCMOS circuit techniques for high performance microprocessors (in Japanese)	R1367	1998.01.06
Goda, Yutaka	Study on rapid reclosing after arc fault in power systems (in Japanese)	R1378	1998.03.03

Electronics

Name	Title	Diss. No.	Date
Fujiwara, Yuji	Structural anisotropy and magnetic properties of rare-earth-transition-metal multilayers (in Japanese)	K1146	1997.09.30
Oikawa, Soichi	Structure and magnetic anisotropies of epitaxially grown noble metal/cobalt films (in Japanese)	K1190	1998.03.25
Kato, Takeshi	Magnetic and magneto-optical properties of Mn-Pt based alloys and superlattices (in Japanese)	K1191	1998.03.25
Yoshida, Yutaka	Studies on $\text{YBa}_2\text{Cu}_3\text{O}_{7-y}$ thin films grown by mocvd (in Japanese)	K1232	1998.03.25
Hoshino, Katsumi	Study on magneto resistance effects in spin-valve films formed by ion beam sputtering (in Japanese)	K1242	1998.03.25
Yoshimoto, Masahiko	Fundamental researches on high performance MOS static RAM (in Japanese)	R1380	1998.03.03

Information Electronics

Name	Title	Diss. No.	Date
Wada, Tadaihiro	A study on spread-spectrum communication systems utilizing orthogonal code sequences (in Japanese)	K1192	1998.03.25
Sato, Takeshi	A study on efficient multimedia wireless communications with CDMA (in Japanese)	K1233	1998.03.25
Okumura, Yohzoh	Studies on analysis and prediction of railway noise and vibration (in Japanese)	R1330	1997.04.30
Ozawa, Kazunori	A research on low bit rate speech coding based on multi-pulse excitation and vector quantization (in Japanese)	R1356	1997.10.31
Yamada, Tadahiko	Investigation of diffusions of positive ions and neutral gas in gas (in Japanese)	R1379	1998.03.03

Information Engineering

Name	Title	Diss. No.	Date
Ohsako, Naoyuki	The stable algorithms for polynomial remainder sequence and its applications (in Japanese)	K1140	1997.07.04
Minagawa, Hiroki	A vision substitution system for reading and drawing diagrams and its application to map understanding (in Japanese)	K1144	1997.09.30
Matsubara, Shigeki	Incremental interpretation of natural language and its Applications (in Japanese)	K1193	1998.03.25
Mizuno, Shinji	Study of interactive design and image generation of virtual objects in virtual space (in Japanese)	K1194	1998.03.25
Barros Filho, Allan Kardec Duailibe	Adaptive noise cancellation of cardiac signals	K1195	1998.03.25
Nishinaga, Nozomu	A study on reliable M-ary spread spectrum communication systems against carrier frequency offset (in Japanese)	K1234	1998.03.25
Iso, Naoyuki	A study on CAD algorithms for layout design (in Japanese)	K1243	1998.03.25
Kajita, Shoji	A study on noise robust acoustic analysis for automatic speech recognition	K1244	1998.03.25
Guan, Hui	Interactive design of smooth convex curves under feature point constraints	K1245	1998.03.25
Komori, Yoshio	ROW-type numerical schemes for stochastic differential equations (in Japanese)	K1246	1998.03.25
Wakabayashi, Tetsushi	Accuracy improvement of handwritten character recognition (in Japanese)	R 1333	1997.06.04
Yashima, Yoshiyuki	A Study of highly efficient coding methods for high-definition television signals (in Japanese)	R1381	1998.03.03

Mechanical Engineering

Name	Title	Diss. No.	Date
Umeda, Tsutomu	Analysis of dynamic fracture in elastic-viscoplastic materials based on damage mechanics (in Japanese)	K1196	1998.03.25
Kohzaki, Masao	Surface modification of materials by dry coating processes and estimation of their mechanical properties (in Japanese)	K1197	1998.03.25

Name	Title	Diss. No.	Date
Tanaka, Kohhei	Study on damage and fracture in carbon fiber reinforced plastics under multiaxial loading (in Japanese)	K1198	1998.03.25
Kim, Jeong-Ryul	A study on the lateral-torsional coupling vibration of a rotating shaft driven through a universal joint (in Japanese)	K1199	1998.03.25
Zhang, Luoming	Study on fatigue strength of components with defects based on resistance curve method (in Japanese)	K1200	1998.03.25
Tan, Shoichi	Studies on utilization of natural fluid energy –Wave and wind power generation– (in Japanese)	R1347	1997.08.01
Asai, Makoto	A study on the noise and vibration of passenger cars (in Japanese)	R1358	1997.10.31
Horaguchi, Iwao	Development of directionally aligned SiC whisker wheel (in Japanese)	R1368	1998.01.06
Maruyama, Naoki	Flow visualization and temperature measurement of convection heat transfer using a laser holographic interferometry (in Japanese)	R1375	1998.02.03
Ueda, Matsuei	A method to predict the thermal sensation level of an automobile passenger using a neural network and its applications (in Japanese)	R1382	1998.03.03

Mechano-Informatics and Systems

Name	Title	Diss. No.	Date
Waku, Tomohiro	Time-dependent behavior of premixed flame caused by concentration spots (in Japanese)	K1151	1998.01.30
Kobayashi, Mineo	Analysis of thermal ratcheting of cylinders subjected to axial movement of temperature fronts (in Japanese)	K1201	1998.03.25
Terao, Yoshiya	Study on measurement standard of very low air-speed (in Japanese)	R1363	1997.12.08
Inoue, Yoshihiro	Experimental study on the flow properties of manipulated wall jets (in Japanese)	R1374	1998.02.03

Electronic-Mechanical Engineering

Name	Title	Diss. No.	Date
Shimizu, Sohta	Research on wide-angle vision sensor system with fovea (in Japanese)	K1202	1998.03.25
Suzuki, Hisao	A study on the application of degenerate four wave mixing to the Gas flow measurement (in Japanese)	K1203	1998.03.25
Nakayama, Hiroshi	A study on temperature measurement of air flows using O ₂ -laser induced predissociative fluorescence (in Japanese)	K1204	1998.03.25
Nagase, Kenji	Robust vibration control of flexible structures (in Japanese)	K1205	1998.03.25
Wang, Rubin	On the analysis methods of nonlinear random vibrations	K1235	1998.03.25

Aerospace Engineering

Name	Title	Diss. No.	Date
Ali, Mohammad	Physics of supersonic mixing and combustion of a transverse jet in two-dimensional finite stream (in Japanese)	K1206	1998.03.25
Ebnezzeddin Hamidi, Hessameddin	Attitude control of falling body with unsteady aerodynamics (in Japanese)	K1207	1998.03.25
Miyasaka, Takeshi	Physics of magnetohydrodynamic flow of an MPD thruster for space propulsion (in Japanese)	K1247	1998.03.25
Ichikawa, Masami	Improvements in accuracy of numerical method for unsteady lifting surfaces in subsonic flow-mathematical foundations of box-in-strip method and its application (in Japanese)	R1349	1997.09.30
Murata, Satoshi	Studies on the homogeneous mechanical systems (in Japanese)	R1350	1997.09.30
Ito, Takeshi	Experimental study on aerodynamic problems of supersonic and hypersonic inlets (in Japanese)	R1359	1997.10.31

Civil Engineering

Name	Title	Diss. No.	Date
Kim, June Q	Fundamental study on embedment mechanism and sound generation of artificial fish reef in shallow water	K1141	1997.07.31
Gupta, Supratic	The development of the unified concrete plasticity model for three dimensional analysis of reinforced concrete members (in Japanese)	K1142	1997.07.31
Werellagama, D.R.Induka.B.	Identification of subsurface flowpaths by chemical fingerprints of water	K1150	1997.12.26
Kawasaki, Koji	Fundamental study on wave breaking and post-breaking deformation due to submerged structure (in Japanese)	K1208	1998.03.25
Han, Zhilin	Developmental history of bridge techniques in China (in Japanese)	K1209	1998.03.25
Namerikawa, Nobutaka	Design and hydraulic characteristics of semi-circular breakwaters (in Japanese)	R1334	1997.06.04
Kato, Masashi	Evaluation of the aerodynamic behavior of a square cylinder with modified K- ϵ turbulence model (in Japanese)	R1360	1997.10.31

Architecture

Name	Title	Diss. No.	Date
Yagi, Takanori	A new approach for cutting pattern analysis of membrane structures by simultaneous consideration on both equilibrium condition and initial configuration (in Japanese)	K1210	1998.03.25
Ghannad, Mohammad Ali	A study on the effect of soil-Structure interaction on the dynamic properties of structures using simplified methods	K1211	1998.03.25

Crystalline Materials Science

Name	Title	Diss. No.	Date
Ishigami, Ryoya	Study on binding energies of Cu atoms adsorbed on the Si(111) surface in the monolayer regime (in Japanese)	K1212	1998.03.25
Okada, Masahisa	Study on effects of hydrogen on the growth of the group-IV semiconductor films on silicon surfaces (in Japanese)	K1213	1998.03.25
Takagi, Atsushi	Growth mode and superconducting properties of $Nd_{1+x}Ba_{2-x}Cu_3O_y$ thick films prepared by liquid phase epitaxy (in Japanese)	K1214	1998.03.25
Tajiri, Kozo	The study on immiscible polymer blend electrorheological fluids (in Japanese)	K1215	1998.03.25
Tsuchiya, Bun	Isotope effects in retention and reemission of hydrogen implanted into graphite and beryllium studied by elastic recoil detection technique (in Japanese)	K1216	1998.03.25
Hishida, Yuji	Research related to controlling the electrical conductivity of ZnSe and related II - VI compounds and developing a ZnSe based short wavelength laser using a nitrogen gas doping method (in Japanese)	R1331	1997.04.30
Tani, Yukari	Fabrication of single crystalline Si-SiO ₂ stacked structures by low-energy oxygen implantation and its applications (in Japanese)	R1340	1997.07.07
Itoh, Yoshitaka	Fundamental studies of pulsed field magnetization of Y-Ba-Cu-O superconducting bulk magnet and its application to a motor (in Japanese)	R1351	1997.09.30
Takahashi, Katsuhiro	Study on electrode materials of lead-acid batteries for easy maintenance (in Japanese)	R1369	1998.01.06

Geotechnical & Environmental Engineering

Name	Title	Diss. No.	Date
Sugiyama, Yoichi	A study on spatial characteristics of residual circulation in Ise bay (in Japanese)	K1217	1998.03.25
Kim, Kwang Mun	Analysing the contribution of vehicle tax to improvement of road infrastructure and integrated surface transport systems (in Japanese)	K1218	1998.03.25

Name	Title	Diss. No.	Date
Takegawa, Shuji	A Study on life safety evaluation method from fire based on fire scenarios (in Japanese)	R1341	1997.07.07
Moro, Hayato	A study on the effect of sample disturbance on the anisotropy of strength and consolidation properties and its application to slope stability and settlement analysis (in Japanese)	R1364	1997.12.08

Energy Engineering & Science

Name	Title	Diss. No.	Date
Kanamori, Michito	Study on chemical heat storage and chemical heat transformation (in Japanese)	K1219	1998.03.25
Takami, Hitoshi	Study on environmentally friendly noble combustors in gas-liquid multiphase system (in Japanese)	K1220	1998.03.25

Quantum Engineering

Name	Title	Diss. No.	Date
Inayoshi, Muneto	Studies on fabrication of fluorocarbon film by dry process	K1221	1998.03.25
Sugiyama, Hideyuki	Studies on heightening critical current densities and controlling properties in Nb-based Josephson junctions (in Japanese)	K1222	1998.03.25
Den, Shoji	Studies on the development and application of permanent magnet electron cyclotron resonance plasma sources	K1223	1998.03.25
Nagai, Shinji	Studies on oscillation mechanism of discharge-pumped ArF excimer laser with laser diagnostic techniques	K1224	1998.03.25
Yamamoto, Yasuo	Studies on neutral and ionic radicals in electron cyclotron resonance silane plasma	K1225	1998.03.25
Ahn, Hyung-Soo	Optical nonlinearity in a GaAs/AlGaAs asymmetric triple quantum well structure	K1226	1998.03.25
Miyata, Koji	Studies on fluorocarbon plasma chemistry in an electron cyclotron resonance etching system	K1236	1998.03.25
Shiota, Tetsuyoshi	Improving reliability of Nb Josephson circuits (in Japanese)	R1335	1997.06.04

Quantum Engineering

Name	Title	Diss. No.	Date
Arakawa, Takemasa	Motion generation for robots based on structured intelligence (in Japanese)	K1227	1998.03.25
Ito, Shigenori	Navigation system based on ceiling landmark recognition for autonomous mobile robot (in Japanese)	K1228	1998.03.25
Nokata, Makoto	Study on safety robotics for medicine and welfare (in Japanese)	K1229	1998.03.25
Morishima, Keisuke	Micromanipulation system for handling of biological molecule and high throughput screening of microbes	K1230	1998.03.25
Shikida, Mitsuhiro	Study on electrostatic S-shaped film actuator (in Japanese)	R1383	1998.03.03