

## DOCTORAL DISSERTATIONS

(1996.4.1 – 1997.3.31)

### Applied Chemistry

Author	Title	Diss. No.	Date
Kojima, Masahiko	Study on processing and application to electronic devices of tin oxide thin films (in Japanese)	R1284	1996.07.10
Aikawa, Masahide	Kinetic behaviors of greenhouse gases in urban atmosphere	K1054	1997.02.07
Choi, Seong-Ho	Polymerization and reaction of aldehydes catalyzed with grignard reagent-(–)-sparteine complexes	K1055	1997.02.07
Oishi, Masataka	Hydrazone-degradation reactions for selective carbon-carbon bond formation	K1064	1997.03.25
Shichi, Tetsuya	Organized[2+2]photoaddition of unsaturated carboxylates in hydrotalcite interlayers	K1065	1997.03.25
Tsuge, Hiroyasu	Studies on Regio-, Stereo, and enantioselective synthesis of trifluoromethylated organic compounds utilizing sulfonyl functions	K1066	1997.03.25
Murase, Noriaki	The design of lewis acids for stereo-controlled carbocycle formations	K1067	1997.03.25
Yasue, Katsutaka	Studies on regio-and stereoselective reaction of allylic barium reagent	K1068	1997.03.25

### Applied Chemistry II

Author	Title	Diss. No.	Date
Usuki, Arimitsu	Study of nylon6-clay hybrid (in Japanese)	R1309	1997.01.08
Tachi, Kazuyuki	Film formation and appearance in spray painting (in Japanese)	R1314	1997.03.12
Ito, Yoshiro	Characterization of end groups in polymers by pyrolysis-gas chromatography/mass spectrometry (in Japanese)	K1063	1997.03.25

Author	Title	Diss. No.	Date
Torikai, Naoya	Studies on microphase-separated structures of block copolymers by neutron scattering (in Japanese)	K1127	1997.03.25

### Chemical Engineering

Author	Title	Diss. No.	Date
Suehara, Ken-ichiro	A Study on plant biotechnology for somatic embryo and useful bio-material production (in Japanese)	K1041	1996.09.30
Imoto, Yoshinori	Study of sewage sludge incineration using fluidized bed (in Japanese)	R1291	1996.10.04
Young-Jong, Seo	Phenol synthesis by liquid-phase oxidation of benzene	K1050	1996.11.01
Kobayashi, Noriyuki	Studies on energy conversion techniques through thermal operations (in Japanese)	R1302	1996.12.09
Yamazaki, Haruo	Flow analysis in dynamic filtration with rotating disk (in Japanese)	R1315	1997.03.12
Tanase, Takaaki	Micro-filtration hollow fiber bioreactors application to tPA production (in Japanese)	K1069	1997.03.25
Nagara, Akira	Study of culture engineering on microbial fermentation (in Japanese)	K1070	1997.03.25
Narukawa, Kimihito	Combustion characteristics of RDF (in Japanese)	K1071	1997.03.25
Yasuda, Keiji	Study on dynamics of colloidal particles in solution by ultrasonically induced birefringence method (in Japanese)	K1072	1997.03.25
Yang, Li	Development of novel extractants for uranium (VI) separation	K1073	1997.03.25
Ishigaki, Shinya	Hydrogenation of 1-methylnaphthalene using novel apparatus for three-phase kinetic measurements	K1128	1997.03.25

## Biotechnology

Author	Title	Diss. No.	Date
Wu, Rong-Rong	Molecular analysis of hepatitis C and G virus among several countries in the world by genetic engineering	R1292	1996.10.04
Sano, Hiromi	Synthetic study of hydantocidin analogues (in Japanese)	R1303	1996.12.09
Matsui, Makoto	Synthesis of $\alpha$ -Tocopherol for the next century	R1304	1996.12.09
Okamoto, Akihiro	Studies on the efficient culture of plant cell proliferation and regeneration (in Japanese)	R1310	1997.01.08
Shirasaka, Tadashi	Study of efficient synthetic methods for bioactive compounds	R1316	1997.03.12
Nagata, Takushi	Transition metal complexes with optically active aldimine ligands as efficient catalysts for novel enantioselective reactions	R1317	1997.03.12
Matsumura, Yasuchi	Synthesis of novel fluoroprostacyclins and fluoronucleosides Using selective fluorination reactions	R1318	1997.03.12

## Materials Science &amp; Engineering

Author	Title	Diss. No.	Date
Adachi, Yoshitaka	Crystallographic study of diffusional $\alpha$ Fe/Zn interface structure (in Japanese)	R1285	1996.07.10
Jin, Chun Woo	A Study on direct current and radio frequency glow discharges for analytical spectrometry	R1293	1996.10.04
Tabuchi, Masao	Study on crystal growth of strained alloy semiconductors and its initial process (in Japanese)	R1297	1996.11.05
Utsumi, Yuichi	Research on synchrotron radiation-excited semiconductor device fabrication process (in Japanese)	R1319	1997.03.12

## Materials Processing Engineering

Author	Title	Diss. No.	Date
Manuela Diaz, Cruz	Improvement of mixing and refining characteristics of metallurgical reactors with gas injection through rotary lances	K1040	1996.07.24
Taheri Nassaj, Ehsan	Fabrication of particulate reinforced aluminum matrix composite by melt stirring and infiltration in situ reaction processes	K1047	1996.09.30
Mehdi Ahmadi, Najafabadi	Study on the refining reactions between molten iron and porous materials (solid oxide and solid oxide-carbon mixture)	K1048	1996.09.30
Matsuo, Michitaka	Process engineering study on iron ore smelting reduction process in the slag bath (in Japanese)	R1298	1996.11.05
Taki, Yusuke	Fundamental study on preparation of hard carbon nitride films by reactive plasma processing (in Japanese)	K1074	1997.03.25
Futhuhara, Masanobu	Fundamental study on preparation of zinc compound thin films by dry processing and their application (in Japanese)	K1075	1997.03.25
Hozumi, Atsushi	Study on low temperature deposition of functional silicon oxide films (in Japanese)	K1076	1997.03.25
Lee, Sung-soo	Study on preparation of diamondlike carbon and diamond thin films by plasma CVD (in Japanese)	K1077	1997.03.25
Yang, Yitao	Investigation of filtration process in casting and its optimization (in Japanese)	K1078	1997.03.25

## Applied Physics

Author	Title	Diss. No.	Date
Kumazawa, Shintaro	A Study of anharmonic thermal vibration by analysis of nuclear density distribution (in Japanese)	R1281	1996.05.08
Masubuchi, Yuichi	Dynamics of DNA during gel electrophoresis (in Japanese)	K1042	1996.09.30
Shiga, Tohru	A Study of deformation and viscoelastic behavior of polymer gels in electric fields (in Japanese)	R1294	1996.10.04

Author	Title	Diss. No.	Date
Abe, Takashi	Direct measurement of surface forces between poly (L-glutamicacid ) brushes (in Japanese)	K1079	1997.03.25
Hasegawa, Ryuichi	Novel simulation technique for meso-scale dynamics in polymeric systems (in Japanese)	K1080	1997.03.25
Yasuoka, Kenji	Molecular dynamics of homogeneous nucleation in vapor phase	K1081	1997.03.25

### Nuclear Engineering

Author	Title	Diss. No.	Date
Guo, Qiuju	Measurement and dose evaluation of thoron and its progeny (in Japanese)	K1038	1996.05.08
Onozuka, Masanori	Railgun pellet injector for fusion experimental devices	R1282	1996.05.08
Hattori, Takatoshi	Dose due to inhalation of radon progeny in workplaces (in Japanese)	R1288	1996.07.25
Nagaoka, Toshi	Study on Gamma ray and cosmic ray dose rate distribution in the environment (in Japanese)	R1305	1996.12.09
Taniguchi, Akihiro	Decay study of neutron-rich nuclei in around A=150 using the mixed-gas jet type ISOL (in Japanese)	K1058	1997.03.12
Ichikawa, Shin-ichi	Selective mass separation of lanthanides and its application to searches for unknown lanthanide isotopes (in Japanese)	R1320	1997.03.12
Toyokawa, Hiroyuki	Development of a multifunctional neutron detector with position-sensitive proportional counters (in Japanese)	K1082	1997.03.25
Kobayashi, Noboru	Study on mathematical description of thermal diffusion phenomena in a multi-component mixture (in Japanese)	K1134	1997.03.25

## Electrical Engineering

Author	Title	Diss. No.	Date
Wada, Yuuichi	Development of A high voltage, high current sodium fault current limiter and its application to electric power systems (in Japanese)	R1295	1996.10.04
Mitani, Katsuhiko	Studies on dry process technology for compound semiconductor devices (in Japanese)	R1307	1996.12.09
Yamada, Keiichi	Studies on image sensing in machine vision and its applications to automotive industry (in Japanese)	R1308	1996.12.09
Minowa, Masayuki	An experimental study on corona point current and ground flashes of winter lightning in the hokuriku district (in Japanese)	K1059	1997.03.12
Kaminaga, Kenji	Study on the development of compact 500KV cross-linked polyethylene insulated power cables (in Japanese)	R1321	1997.03.12
Matsuoka, Akio	Plasma wall interaction in a reversed field pinch (in Japanese)	R1322	1997.03.12
Inanami, Ryoichi	100 nm Pattern etching of Si water by electron-beam induced CF <sub>4</sub> plasma	K1083	1997.03.25
Kato, Katsumi	Development of intelligent CAD system for optimum insulation design of electric power apparatus (in Japanese)	K1085	1997.03.25
Kawashima, Katsuhiko	Research on circumferential magnetic properties of amorphous wires and their application to sensor devices (in Japanese)	K1086	1997.03.25
Kojima, Masahiro	Study of impurity generation, transport and redeposition on the plasma-material region (in Japanese)	K1087	1997.03.25
Goto, Masashi	Low temperature formation of silicon films from an inductively coupled plasma (in Japanese)	K1088	1997.03.25
Segi, Takeshi	Preparation of polyurea thin films by vapor deposition polymerization and their second-order optical nonlinearity (in Japanese)	K1089	1997.03.25

Author	Title	Diss. No.	Date
Matsumoto, Kazunori	Robust control based on internal structure of two-degree-of-freedom controller (in Japanese)	K1091	1997.03.25
Ahn, Taehyuk	Diagnostics and silicon etching in an inductively-coupled pulsed plasma in chlorine	K1092	1997.03.25
Nakano, Ken	Visualization of micro vibration with stroboscopic phase-shift interferometry	K1093	1997.03.25
Kubota, Shigeyuki	Analysis of magnetic and density fluctuations in the STP-3(M) reversed-field pinch	K1129	1997.03.25

### Electronics

Author	Title	Diss. No.	Date
Andoh, Hiroya	Study on Current-voltage characteristics of superconducting Track (in Japanese)	R1286	1996.07.10
Iwata, Hideyuki	Development of 3 dimensional device simulator and application to MOS/SOI devices (in Japanese)	R1311	1997.01.08
Imada, Ryuji	Giant magnetoresistance in FeCoNi/Cu and CoFeB/Cu metallic multilayers (in Japanese)	K1084	1997.03.25
Niwa, Shoko	Study of the electron scattering and transport properties in GaAs quasi-one-dimensional structures (in Japanese)	K1090	1997.03.25

### Information Electronics

Author	Title	Diss. No.	Date
Hasegawa, Takashi	A Study on design of controller based on fuzzy model (in Japanese)	K1043	1996.09.30
Morikawa, Koji	A Study on scheduling with genetic algorithms (in Japanese)	K1044	1996.09.30
Kitagawa, Hideo	Studies on sensor and multiprocessor parallel signal processing of robot (in Japanese)	R1299	1996.11.05

Author	Title	Diss. No.	Date
Sugiura, Nobuaki	A Study of high-density packaging for high-speed transmission in telecom systems (in Japanese)	R1306	1996.12.09
Yahia, Hani	A Study on the speech acoustic-to-articulatory mapping using morphological constraints (in Japanese)	K1130	1997.03.25
Yoshikawa, Tomohiro	A Study on DNA coding method and knowledge discovery	K1135	1997.03.25

### Information Engineering

Author	Title	Diss. No.	Date
Matsumoto, Tetsuya	Study on the analysis of information processing function of layered neural networks and application to image processing (in Japanese)	K1039	1996.05.28
Mori, Kensaku	Three-dimensional image processing methods and their applications to computer aided diagnosis system of medical images (in Japanese)	K1045	1996.09.30
Kondo, Toshio	Studies on designing cellular type SIMD processors with practical applications (in Japanese)	R1296	1996.10.04
Zhang, Dili	Study on highly accurate camera calibration and 3D object pose estimation (in Japanese)	K1051	1996.12.06
Zhao, Yanjie	Knowledge-based parsing method of mathematical notation for improving mathematical computation environment	K1052	1996.12.06
Mizukami, Yuto	Planning of simultaneous machining sequence on automatic NC programming for turning (in Japanese)	K1053	1996.12.26
Nakayashiki, Susumu	A study on ring reconfiguration algorithm for local area network (in Japanese)	R1312	1997.01.08
Kawaguchi, Nobuo	Visual supports for analyzing, verifying and transforming programs of rewriting computation (in Japanese)	K1056	1997.02.07



Author	Title	Diss. No.	Date
Feng, Su	A Calculus for Meta-rewriting on term rewriting systems: dynamic term rewriting calculus and its application	K1057	1997.02.07
Yuen, Shoji	Testing semantics and proof techniques for extended communicating process models	R1323	1997.03.12
Fujii, Tetsuya	Computer software for construction and advanced application of virtual reality (in Japanese)	K1094	1997.03.25

### Mechanical Engineering

Author	Title	Diss. No.	Date
Nishizawa, Hiroyuki	Controller design of an electronic governor for a gasoline engine of a forklift (in Japanese)	K1049	1996.09.30
Uchida, Motomi	Measurement of contact conditions between solid surfaces by light refraction (in Japanese)	R1313	1997.02.10
Yoshikawa, Kazuo	Study on engine-driveline vibration of automobile (in Japanese)	R1325	1997.03.12
Sakaida, Yoshihisa	Study of improving strength reliability of ceramics (in Japanese)	K1095	1997.03.25
Afaghani, Jamal el deen	Tool wear and chip deformation in cutting difficult-to-cut plastic composites	K1096	1997.03.25
Bai, Qiushi	A Damage model for FRP laminates based on continuum damage mechanics	K1131	1997.03.25

### Mechano-Informatics & Systems

Author	Title	Diss. No.	Date
Imamura, Nobuaki	Mechanical design of a multi-fingered robot hand and grasp strategy (in Japanese)	R1283	1996.05.08
Kiguchi, Kazuo	The study of intelligent robot manipulators using fuzzy neural networks (in Japanese)	R1324	1997.03.12
Sekiyama, Kosuke	A Study on self-organizing robot systems (in Japanese)	K1097	1997.03.25

Author	Title	Diss. No.	Date
Miwa, Masataka	A Study of a wall point sourceplume diffusion in a turbulent pipe flow (in Japanese)	K1098	1997.03.25

### Electronic-Mechanical Engineering

Author	Title	Diss. No.	Date
Mizoh, Yoshiaki	A Study on head to flexible medium interface under the condition of elasto-and mixed-lubrication (in Japanese)	R1289	1996.07.25
Kondoh, Yukimi	Roles of elementary reactions in NO formation of methane air flames (in Japanese)	K1060	1997.03.12
Akasaka, Noriyuki	Application study of a film profile control system design (in Japanese)	K1099	1997.03.25
Ishida, Toshihiko	A Study on visualization and temperature measurement of Gas flows using laser-induced fluorescence (in Japanese)	K1100	1997.03.25
Hoshino, Kazuyoshi	A Study on direct image transmission through a multimode optical fiber (in Japanese)	K1101	1997.03.25
Lee, Seongwoo	Forced oscillations of a continuous rotor with geometric nonlinearity (in Japanese)	K1102	1997.03.25
Goto, Yoshitsugu	A Technique for experimental identification of boundary conditions and its application (in Japanese)	K1132	1997.03.25

### Aerospace Engineering

Author	Title	Diss. No.	Date
Ono, Shuji	A Study of unsteady dynamics and of high-order state estimation for space flight vehicle system (in Japanese)	R1326	1997.03.12
Kasahara, Jiro	Combustion wave around a hypersonic free flight model (in Japanese)	K1103	1997.03.25
Maeda, Ichiro	A Study on the Growth of disturbance in compressible shear layer (in Japanese)	K1104	1997.03.25

Author	Title	Diss. No.	Date
Watanabe, Kyoshi	On the characteristics of separated flows around bluff bodies (in Japanese)	R1328	1997.03.25

### Civil Engineering

Author	Title	Diss. No.	Date
Suzuki, Moriaki	A Fundamental study on the behavior of steel bridge piers under severe earthquakes (in Japanese)	K1061	1996.03.12
Devkota, Laxmi Prasad	Mixinglength theory approach to dispersion phenomena in miscible displacement	K1062	1996.03.12
Anurakamonkul, Krit	A Study on the provision and contribution of mass rapid transit in an auto-dependent metropolis: the case of Bangkok	K1105	1997.03.25
Amanat, Khan	Gradient plasticity modeling for the fracture and strain localization of early age concrete	K1106	1997.03.25
Morgan, Ahmed Saad Eldin	Nonlinear size effect analysis of concrete structures by the extended fictitious crack approach	K1107	1997.03.25
Liu, Chunlu	Lifecycle management of network-level bridges	K1108	1997.03.25
Oda, Hirotaka	Stability design method for framed structures by second-order elastic analysis (in Japanese)	K1136	1997.03.25

### Architecture

Author	Title	Diss. No.	Date
Arai, Masanao	Study on failure behavior of concrete by viscoelasto-plastic suspension element method (in Japanese)	K1109	1997.03.25
Nishizaka, Riei	A Study on source and propagation mechanisms of traffic-induced vibration based on field experiments (in Japanese)	K1110	1997.03.25

Author	Title	Diss. No.	Date
Tan, Jian	A Study on the stage planning in public multi-purpose hall –which mainly investigates the case in aichi prefecture– (in Japanese)	K1133	1997.03.25
Komiyama, Tatsuhito	Study on detection of delamination of finishing materials on external walls by thermography (in Japanese)	K1137	1997.03.25

### Crystalline Materials Science

Author	Title	Diss. No.	Date
Kitamura, Tasuku	Growth mechanism and superconducting characteristics of $\text{YBa}_2\text{Cu}_3\text{O}_{7-y}$ film prepared by liquid phase epitaxy (in Japanese)	R1300	1996.11.05
Kobayashi, Kiyoteru	A Study of silicon oxides and silicon nitrides for large-scale integrated circuit applications (in Japanese)	R1327	1997.03.12
Asano, Koichi	Studies on one-chamber fuel cells using ion-conducting ceramics (in Japanese)	K1111	1997.03.25
Arakawa, Kazuto	Study on the fluctuations of point defect clusters (in Japanese)	K1112	1997.03.25
Ikegami, Hiroshi	Studies of surface reactions on Si by scanning tunneling microscopy and scanning tunneling spectroscopy (in Japanese)	K1113	1997.03.25
Ogasawara, Yoshinori	Electron microscopic studies on radiation damage processes in neutron irradiated nickel and nickel dilute alloys	K1114	1997.03.25
Kojima, Jun	Study on solid-phase reaction in metal/semiconductor contact systems (in Japanese)	K1115	1997.03.25

### Geotechnical & Environmental Engineering

Author	Title	Diss. No.	Date
Hirao, Hisao	Study on characteristics and utilization of upheaval part of cohesive ground generated by compacted sand piles (in Japanese)	R1287	1996.07.10

Author	Title	Diss. No.	Date
Achiwa, Fumio	A Study on development of ground improvement methods for coastal power plant construction (in Japanese)	R1301	1996.11.05
Kato, Hirokazu	Life cycle assessment of influences of urban transport system on global environment (in Japanese)	K1116	1997.03.25
Shiozaki, Isao	Study on investigation method of groundwater flow around dams using chemical and isotopic compositions (in Japanese)	K1117	1997.03.25
Yamada, Eiji	Study on seismic stability assessment of earth structures and earthquake-resistant reinforcement –soil-structure interaction analyses under static and dynamic conditions– (in Japanese)	K1118	1997.03.25
Khin, Sanda	A model system for analyzing the impacts of economic growth and industrial development on waste generation and ground water pollution	K1119	1997.03.25
Yang, Zhongzhen	Financing transport infrastructure to cope with its increasing demand under a rapid economic growth in china –A methodology based on a unique beneficiary-pay system in the context of planned economy–	K1120	1997.03.25
Kim, Sang Su	An international comparison on cadastral reform towards multi-purpose land information systems (in Japanese)	K1138	1997.03.25

### Quantum Engineering

Author	Title	Diss. No.	Date
Sakai, Akira	Microscopic characterization of semiconductor interfaces and thin films formed in ultra high vacuum (in Japanese)	R1290	1996.07.25
Kurata, Masaki	Thermodynamical studies on pyrometallurgical partitioning of actinides and rare-earth elements using molten salt/liquid metal system	K1046	1996.09.30

Author	Title	Diss. No.	Date
Ikeda, Masanobu	Studies on control of radicals in plasma and synthesis of diamond film employing radical injection technique	K1121	1997.03.25
Kamada, Yasuhiro	Crystal structure and magnetic properties of 3d transition metal artificial superlattices (in Japanese)	K1122	1997.03.25
Hong, Moon Hi	Transmission electron microscopy study on the correlation of plasticity and micro-structure in the Fe-Zn intermetallic phases	K1139	1997.03.25

### Microsystem Engineering

Author	Title	Diss. No.	Date
Hayakawa, Osamu	Property characterization of fine ceramic raw powders (in Japanese)	K1123	1997.03.25
Ishigami, Hideyuki	A Study on optimum learning method and applications by fuzzy, neural and genetic algorithm (in Japanese)	K1124	1997.03.25
Kubota, Naoyuki	A Study on evolutionary optimization method	K1125	1997.03.25
Cai, Anhui	A Study on behavior decision and distributed sensing in cellular robotic system (in Japanese)	K1126	1997.03.25