

## DOCTORAL DISSERTATIONS

(1998.4.1 – 1999.3.31)

### Applied Chemistry

Name	Title	Diss. No.	Date
Kamiya, Shoko	Synthesis of saccharide-polymer hybrids and their functional analysis	K1255	1998.09.30
Wei, Rong	Multielement profiling analysis of lake Baikal core sediments for elucidation of paleo-environmental changes (in Japanese)	K1267	1999.03.25
Noda, Kenichi	Synthesis and characterization of $\text{KTiOPO}_4$ thin films for optical applications (in Japanese)	K1268	1999.03.25
Mao, Shuncong	Characterization of microstructures in vinyl polymers by pyrolysis-gas chromatography/mass spectrometry (in Japanese)	K1269	1999.03.25
Shinjoh, Hirofumi	Study of automotive exhaust catalyst multifunctionalized by addition of basic materials (in Japanese)	R1387	1998.06.30
Ohya, Kanji	Study on fatigue properties of ceramics (in Japanese)	R1392	1998.07.31
Ohzawa, Yoshimi	Studies on preparation of high-temperature materials using pressure-pulsed chemical vapour infiltration (in Japanese)	R1403	1998.12.28
Ono, Satomi	Preparation and characterization of $\text{LiNbO}_3$ -related functional ceramics derived from aqueous precursor solution (in Japanese)	R1409	1999.01.29

### Applied Chemistry II

Name	Title	Diss. No.	Date
Yokoi, Hajime	Study on the redox properties of benzyl radicals and aromatic sulfide cation radicals	K1270	1999.03.25
Ogawa, Kenji	Studies on initial hydration stage of cement paste and on properties of setting/initial hardened cement body (in Japanese)	R1391	1998.07.31

Name	Title	Diss. No.	Date
Watanabe, Yasumasa	Studies on the radical reaction of $\alpha$ -methylstyrene dimer and its utilization for polymerization and crosslinking	R1396	1998.09.30

### Chemical Engineering

Name	Title	Diss. No.	Date
Sugita, Hajime	Study on prevention method of silica scale formation from geothermal brine (in Japanese)	K1261	1998.10.30
Kyaw, Kyaw moe	Development of solid oxide fuel cell reactor for oxidative coupling of methane	K1271	1999.03.25
Nagata, Keigo	Analytical studies on the flow properties and heat transfer performance of the gas-solid contactors (in Japanese)	K1327	1999.03.25
Nakagawa, Tsuguhiko	A study on improving the efficiency of combustion heating systems in steelworks processes (in Japanese)	K1333	1999.03.25
Hirose, Yasuo	Heat transfer and combustion characteristics of a new burner with rotary heat regenerator (in Japanese)	K1334	1999.03.25

### Biotechnology

Name	Title	Diss. No.	Date
Yanase, Mitsugu	Applications of functional magnetic particles to cancer therapy and detection	K1251	1998.07.31
Kubota, Manabu	Development of practical esterification methods and design of chiral DMAP catalysts	K1272	1999.03.25
Rong, Long	Studies on the separation process and crystal growth of protein (in Japanese)	K1273	1999.03.25
Nagatani, Naoki	A study of gene transfer to animal and plant cells and visualization of gene expression (in Japanese)	K1274	1999.03.25
Hamamoto, Ryuzi	A study on regulation of growth and differentiation in cultured primary rat hepatocytes	K1275	1999.03.25

Name	Title	Diss. No.	Date
You, Jun	Development of new gene transfer for animal cells	K1276	1999.03.25
Bouhon, Isabelle Anne	Hyperthermic induction of cytokine expression and application to hyperthermia as a treatment for brain cancer	K1328	1999.03.25
Saito, Susumu	Designer Lewis acid catalysts: bulky aluminum reagents for selective organic synthesis	R1397	1998.09.30

### Materials Science & Engineering

Name	Title	Diss. No.	Date
Ofuchi, Hironori	Study on local structures around dilute elements in semiconductors and magnetic thin films by fluorescence EXAFS and on their macroscopic properties (in Japanese)	K1249	1998.06.30
Hwang, Jung-Hwan	Strength and fracture of in-situ titanium alloy matrix particulate composites (in Japanese)	K1259	1998.10.30
Lee, Changho	Interface structure and magnetoresistance effect of ferromagnetic tunnel junctions (in Japanese)	K1260	1998.10.30
Sano, Hiroyuki	Fundamental studies for the production process of high purity rare earth metals (in Japanese)	K1277	1999.03.25
Tanahashi, Mitsuru	Physicochemical studies for the development of silicon production process for solar cells (in Japanese)	K1278	1999.03.25
Hayakawa, Jun	Magnetic and transport properties of $La_{n-nX}Ca_{1+nX}Mn_nO_{3n+1}$ (in Japanese)	K1335	1999.03.25
Kamiya, Akira	Fabrication and mechanical properties of Ti-base Non-oxide ceramic matrix composites (in Japanese)	R1388	1998.06.30
Saito, Makoto	Research on design technology for commercial products made of composite materials-design optimization based on reinforcement shape and orientation (in Japanese)	R1404	1998.12.28
Takemi, Masayoshi	Metalorganic vapor phase epitaxial growth for InGaAsP/InP semiconductor laser applications (in Japanese)	R1410	1999.01.29

Name	Title	Diss. No.	Date
Ninagawa, Shingo	Application of electromagnetic force to processing of material (in Japanese)	K1250	1998.06.30
Asai, Nobuaki	Study on analysis of electrochromic mechanism in inN thin films (in Japanese)	K1279	1999.03.25
Ninomiya, Takashi	Study on high strain rate superplastic forming of particle reinforced aluminum alloy matrix composites (in Japanese)	R1280	1999.03.25
Maeda, Yasushi	Study on texture development and formability for aluminum alloy sheets by using numerical simulation (in Japanese)	K1281	1999.03.25
Hong, Lan	Study on the kinetics of reduction of molten and solid oxides by graphite and aluminum	K1329	1999.03.25
Sato, Kazuaki	Studies on strengthening of Nb, Ti treated hot rolled steel sheets and on stress corrosion cracking of hot rolled steel sheets in methanol (in Japanese)	R1398	1998.10.30
Kishimoto, Yasuo	Effect of stirring power and CO pressure of bottom blowing Gas on characteristics of decarburization reaction in combined blowing converter (in Japanese)	R1416	1999.02.26

### Applied Physics

Name	Title	Diss. No.	Date
Mizukami, Masashi	Long range attraction between surfaces in liquids studied by colloidal probe atomic force microscopy (in Japanese)	K1282	1999.03.25
Mizuno, Yoshiaki	Theory of electronic states and magnetic interactions in cuprates (in Japanese)	K1283	1999.03.25

### Nuclear Engineering

Name	Title	Diss. No.	Date
Sakai, Hiroataka	Intelligent pulse shape processing for nuclear radiation detectors with neural network algorithm (in Japanese)	K1266	1999.02.26
Kizu, Kaname	A study on permeation of two component hydrogen isotopes through metals (in Japanese)	K1284	1999.03.25

Name	Title	Diss. No.	Date
Mushiaki, Motoi	Reduction of residual water molecules in nuclear fusion devices by deposited layers of boron compounds and monitoring of the reduction process by microwave spectroscopy (in Japanese)	R1389	1998.06.30

### Electrical Engineering

Name	Title	Diss. No.	Date
Asai, Kikuo	Development of instrument for interplanetary scintillation observations and study of heliospheric tomography	K1258	1998.09.30
Ivan petrov, Ghanashev	High-density planar plasma production by surface wave excitation	K1285	1999.03.25
Shimizu, Hiroataka	Fundamental studies on quench phenomena in S/N transition type of superconducting fault current limiter ( in Japanese)	K1286	1999.03.25
Yoshizawa, Shinichi	Study on unsupervised clustering methods using neural networks (in Japanese)	K1287	1999.03.25
Katsuno, Motonari	Subband structure and magneto-transport properties in an Si atomic-layer-doped GaAs (in Japanese)	K1288	1999.03.25
Hoshino, Toshihiro	Investigation on advanced insulation diagnosis of power apparatus with electromagnetic wave caused by partial discharge (in Japanese)	K1330	1999.03.25
Ikeda, Michiaki	Research and development of magnetic sensors for intelligent control of motors (in Japanese)	K1336	1999.03.25
Aoki, Takeshi	Study on motion planning for obstacle avoidance of autonomous mobile robot using soft computing (in Japanese)	K1406	1998.12.28
Ueda, Toshiaki	Measurement and analysis of lightning surge characteristics at high voltage substations (in Japanese)	R1385	1998.06.05
Sakakibara, Takaaki	Study of on-line monitoring and fault location techniques in GIS (in Japanese)	R1407	1998.12.28

Name	Title	Diss. No.	Date
Aichi, Hisashi	Experimental studies on characteristics of contact resistance of electric contacts (in Japanese)	R1411	1999.01.29
Sunabe, Kin-ya	A study on fault arc phenomena in HVDC transmission lines (in Japanese)	R1412	1999.01.29

## Electronics

Name	Title	Diss. No.	Date
Nishimura, Naoki	Study on magneto-optical super resolution recording media (in Japanese)	K1265	1998.12.28
Suzuki, Chihiro	Laser-induced fluorescence measurements of neutral radicals in high-density fluorocarbon plasmas (in Japanese)	K1289	1999.03.25
Hayashi, Daiyu	Production and diagnostics of negative ions in high-density reactive plasmas (in Japanese)	K1290	1999.03.25
Shimizu, Masaya	MOVPE growth of nitride semiconductors (in Japanese)	K1344	1999.03.25
Diao, Zhitao	Structure, electron transport and giant magnetoresistance in magnetic multilayers	K1346	1999.03.25
Kito, Masahiro	Study on High performance distributed feedback lasers for sub-carrier multiplexed transmission (in Japanese)	K1399	1998.10.30
Nakamura, Makoto	Studies on time noise reduction in optical receiver circuits (in Japanese)	R1400	1998.10.30

## Information Electronics

Name	Title	Diss. No.	Date
watanabe, Yuji	A study on immune system for behavior arbitration mechanism of autonomous mobile robots	K1264	1998.12.28
Ishihara, Susumu	Simulation modeling and performance evaluation of local area networks (in Japanese)	K1291	1999.03.25
Ohno, Hiroshi	A study on construction of intelligent systems with input selection mechanism (in Japanese)	K1292	1999.03.25

Name	Title	Diss. No.	Date
Nozawa, Ryoichi	Studies on low temperature polycrystalline silicon film formation using electron cyclotron resonance silane/hydrogen plasma	K1293	1999.03.25
Miyata, Yujiro	A study on abductive inference using fuzzy inference (in Japanese)	K1294	1999.03.25
Okada, Hiraku	A study on the optimum access control scheme for CDMA ALOHA systems (in Japanese)	K1331	1999.03.25
Mizuno, Fumio	Study on electron beam applications in semiconductor manufacturing (in Japanese)	R1393	1998.07.31

### Information Engineering

Name	Title	Diss. No.	Date
Funahashi, Kenji	Study of interactive manipulation with virtual hands in virtual space (in Japanese)	K1248	1998.06.25
Takeuchi, Yoshinori	A study on object tracking and visual search based on active vision (in Japanese)	K1295	1999.03.25
Hachisu, Yoshinari	A CASE tool platform for object-oriented program -Japid : its design and implementation-	R1296	1999.03.25
Ono, Takao	A study on approximation algorithms for the maximum satisfiability problem (in Japanese)	R1338	1999.03.25
Teshima, Shigeharu	Computer aided software design for embedded real-time system (in Japanese)	K1339	1999.03.25
Yoshida, Atsushi	A software manipulating language and its application to software maintenance (in Japanese)	K1347	1999.03.25

### Mechanical Engineering

Name	Title	Diss. No.	Date
Ito, Masami	Study on parameter identification of a beam by using image processing (in Japanese)	R1262	1998.10.30
Yu, Huichen	Fracture mechanics study on fatigue crack propagation under combined torsional and axial cyclic loading (in Japanese)	R1297	1999.03.25

### Mechano-Informatics and Systems

Name	Title	Diss. No.	Date
Abdel-Hamid, Mohamed	Constitutive modeling of cyclic plasticity related with ratchetting	K1298	1999.03.25
Sakai, Masaharu	An experimental study of the interaction between grid-generated turbulence and a circular cylinder (in Japanese)	K1299	1999.03.25
Tanie, Hisashi	Study on optimum design of continuum structures using genetic algorithm (in Japanese)	K1300	1999.03.25
Suzuki, Takeshi	Stochastic simulation of scalar fluctuation fields in grid turbulence by the lagrangian two-particle model (in Japanese)	R1413	1999.01.29
Katoh, Kohzoh	Basic research on cold die forging utilizing deep drawn cup as a preform (in Japanese)	R1417	1999.02.26

### Electronic-Mechanical Engineering

Name	Title	Diss. No.	Date
Takigami, Tadao	Applications of self-sensing actuators using piezo-electric elements (in Japanese)	K1301	1999.03.25
Ogawa, Takashi	Realization of vibration suppression control of Two-mass system using Two-degree of freedom controller (in Japanese)	K1348	1999.03.25
Matsuoka, Kaoru	A Study on performance evaluation technology of magnetic recording device using flexible medium (in Japanese)	R1386	1998.06.05
Ito, Satoshi	A study on pattern formation in cognition and motion based on gradient system (in Japanese)	R1418	1999.02.26

### Aerospace Engineering

Name	Title	Diss. No.	Date
Mori, Sachio	Ignition mechanism induced by radical injection (in Japanese)	K1302	1999.03.25
Nagaoka, Makoto	A study on engine internal flow and fuel behavior using numerical calculation method on unstructured grid (in Japanese)	R1394	1998.07.31



### Civil Engineering

Name	Title	Diss. No.	Date
Mostafa El-Degwi Ayman Mohamed Abd El-Fattah	Integrated nonlinear dynamic interaction among waves, structure and seabed	K1252	1998.09.21
Constantinescu Teodor, Dan	A fundamental study on delayed compression and progressive failure of the assembly of crushed mudstones due to slaking	K1253	1998.09.21
Gao, Shengbin	Numerical study on seismic performance evaluation of steel structures	K1254	1998.09.21
Okazawa, Shigenobu	Study on necking and shear band behavior of solids using elasto-plastic bifurcation analysis (in Japanese)	K1303	1999.03.25
El-Behairy, Fawzy Mohamed	Non-linear analysis of RC structures using the modified lattice model and its equivalent continua under static and cyclic loads	K1340	1999.03.25

### Architecture

Name	Title	Diss. No.	Date
Qian, Qiang	A study on the architectural planning of Chinese contemporary theatre (in Japanese)	K1256	1998.09.30
Yaguchi, Naomichi	A study of the spatial composition of the Hoysala temples (in Japanese)	K1257	1998.09.30
Inoue, Kazumasa	A study on the practical application of high fluidity concrete using new type admixture (in Japanese)	K1304	1999.03.25
Nagayama, Masaru	Studies on Non-destructive monitoring of steel corrosion in concrete structures (in Japanese)	K1332	1999.03.25
Kamimura, Mitsunori	Geometrically and materially nonlinear analysis of shell and spatial structures using refined models (in Japanese)	K1341	1999.03.25
Terada, Ken-ichi	Study on determination of rheological constants of fresh concrete based on shear box test (in Japanese)	K1345	1999.03.25
Harada, Masayuki	The consciousness of urban inhabitants to residential environment (in Japanese)	K1349	1999.03.25

Name	Title	Diss. No.	Date
Hagiwara, Nobuyuki	Study on periodic solution and nonlinear dynamic behavior of structures with geometrical and material nonlinearities (in Japanese)	R1395	1998.07.31
Sasaki, Mutsuro	Study on an original approach and engineering approach for the structural design (in Japanese)	R1414	1999.01.29
Komatsu, Hisashi	Study on the place-making for the patients in the common spaces of hospital's outpatients-department (in Japanese)	R1419	1999.02.26

### Crystalline Materials Science

Name	Title	Diss. No.	Date
Biwa, Tetsushi	Studies on thermal properties of the regenerator materials and heat transport mechanism in the regenerator (in Japanese)	K1305	1999.03.25
Ma, Guilin	Studies on electrical conduction in perovskite-type oxides based on $\text{BaCeO}_3$ at high temperature (in Japanese)	K1306	1999.03.25
Ohmura, Hideki	Ultrafast coherent transients in copper halide nanocrystals (in Japanese)	K1307	1999.03.25
Kondo, Hiroki	Hopping conduction and coulomb blockade phenomena in low-dimensional systems of heavily doped semiconductors (in Japanese)	K1308	1999.03.25
Takeichi, Nobuhiko	Studies of short range structure and electronic properties of ternary amorphous alloys (in Japanese)	K1309	1999.03.25
Horii, Shigeru	Preparation and electronic properties of Pr124 and Pr247 oxides (in Japanese)	K1310	1999.03.25
Ohno, Hiroataka	Mechanism of self-assembled organic films on cleaved III-V Semiconductor and its nanostructural fabrication (in Japanese)	K1337	1999.03.25
Sakai, Naomichi	Rare earth substitution effect and microstructure study for high temperature superconductors (in Japanese)	R1384	1998.05.13
Saitoh, Kazuo	A fundamental study on recovery of lattice defects and crystal growth using high energy ion beam irradiation (in Japanese)	R1405	1998.12.28

Name	Title	Diss. No.	Date
Funahashi, Ryoji	Recrystallization mechanism and superconducting properties for Bi-based superconducting tapes (in Japanese)	R1408	1998.12.28

### Geotechnical & Environmental Engineering

Name	Title	Diss. No.	Date
Kaneda, Kazuhiro	Time dependent elasto-plastic behavior of saturated and highly structured soils (in Japanese)	K1311	1999.03.25

### Energy Engineering & Science

Name	Title	Diss. No.	Date
Kojima, Yasuaki	Atomic mass determination of $^{124-130}\text{La}$ by means of $Q_B$ measurement (in Japanese)	K1263	1998.11.30
Ezumi, Naomichi	Basic study for formation mechanism of detached plasma on linear divertor simulator (in Japanese)	K1312	1999.03.25
Takechi, Manabu	Experimental study of alfvén eigenmodes excited by energetic ions in heliotron/torsatron plasmas (in Japanese)	K1313	1999.03.25
Nunomura, Shota	Transport process and structural formation of electrostatically coupled dust particles in plasma (in Japanese)	K1314	1999.03.25
Sekikawa, Junya	Studies of heating phenomena and magnetic fluctuation level in a reversed field pinch (in Japanese)	K1342	1999.03.25

### Quantum Engineering

Name	Title	Diss. No.	Date
Kato, Takeharu	Study on microstructure of galvanized steels by transmission electron microscopy (in Japanese)	K1315	1999.03.25

Name	Title	Diss. No.	Date
Tsujimoto, Katsuhiko	Transmission electron microscope study of whiskers formed on AL films in thin-film-transistor liquid crystal displays (in Japanese)	K1316	1999.03.25
Yuya, Hideki	Diffuse X-ray scattering study of defect structure in Ni and dilute Ni alloys irradiated with high-energy ions	K1317	1999.03.25
Adi, Rahwanto	Studies on stabilization and characteristics of harmonically mode-locked Er-doped fiber ring laser with amplitude modulation technique	K1343	1999.03.25
Goto, Tatsumi	Studies on practical high repetition rate excimer lasers (in Japanese)	R1390	1998.06.30
Nagasawa, Shuichi	Study on Nb Josephson random access memories (in Japanese)	R1401	1998.10.30

### Micro System Engineering

Name	Title	Diss. No.	Date
Abe, Yasunori	Vision based navigation system considering error recovery for robot with integrated locomotion and manipulation (in Japanese)	K1318	1999.03.25
Zhang, Feng-Yuan	Simultaneous measurements of state parameters in hypersonic flows using diode-laser absorption spectroscopy	K1319	1999.03.25
Ushida, Hirohide	A study on associative memory based intelligent multi-modal interface (in Japanese)	R1402	1998.11.30
Chen, Xinkai	Variable structure system theory based identification and control for the systems with uncertainties	R1415	1999.01.29

### Molecular Design & Engineering

Name	Title	Diss. No.	Date
Umemura, Tomonari	Studies on liquid chromatography using reversed-phase columns modified with amphoteric surfactants	K1320	1999.03.25
Tsuchida, Akiko	Artificial glycoconjugate polymers: molecular design and biological functions	K1321	1999.03.25

Name	Title	Diss. No.	Date
Yamamoto, Chiyo	Chromatographic resolution on carbamate derivatives of polysaccharides and their chiral recognition mechanism	K1322	1999.03.25
Kobayashi, Nobusuke	A study on bubble and solids behavior in bubbling fluidized beds (in Japanese)	K1323	1999.03.25
Sakurai, Takashi	Dynamic properties of liquids and acoustomechanical properties of solid polymers studied by the coherent brillouin scattering method (in Japanese)	K1324	1999.03.25
Shibata, Tetsuya	Correlation between translational and reorientational motions of the anisotropic molecules in liquids (in Japanese)	K1325	1999.03.25
Noudou, Takaaki	Structural relaxation in highly viscous liquids and their mixtures (in Japanese)	K1326	1999.03.25