

Vol. 52, Supplement

(Only Data in English)

**Bulletin of the Graduate School of Engineering
Hiroshima University**

February, 2004

CONTENTS

Published Papers	S 1
Published Books	S 48
Registered Patents	S 49

Contents

P rincipled P er

Mechanical System Engineering	1
Artificial Complex Systems Engineering	12
Information Engineering	17
Chemistry and Chemical Engineering	22
Social and Environmental Systems Engineering	35
Research Center for Nanodevices and Systems	43

P rincipled Boo

e vanced P en

Published Papers

A. Mechanical System Engineering

Paper No.	Title	Author(s)	Journal Name	Volume	Page No.	Year	Page
A1	Development of Laser Braze Technique of Fe-base Superalloy Using Ag-Pd Filler Metal	K.Shinozaki A.Kanata M.Yoshida M.Shirai	Proceeding of IIW, Doc, X	(2003)	pp. 1740		
A2	Obsevation of type IV cracking in weld joints of high chromium ferritic heat resistant steels	K.Shinozaki Dejun Li H.Kuroki H.Harada K.Ohishi T.Sato	Science and Technology of Welding and Joining	, 4 (2003)	pp. 289-295		
A3	Analysis of factores affecting type IV cracking in welded joints of high chromium ferritic heat resistant steels	Dejun Li K.Shinozaki H.Kuroki H.Harada K.Ohishi	Science and Technology of Welding and Joining	, 4 (2003)	pp. 296-302		
A4	Stress-strain analysis of creep deterioration in heat affected weld zone in high Cr ferritic heat resistant ateeel	Dejun Li K.Shinozaki H.Kuroki	Materials Science and Technology	, 9 (2003)	pp. 1253-1260		
A5	Oxidation behavior of the SiC fiber reinforced SiO ₂ -mullite composites	M.Yoshida K.Nagahisa Y.Shimojo G.Sasaki	International conference on Composite Materials (ICCM-14), (2003)		pp. 169-170		
A6	Prediction of liquation Crack Initiation at HAZ of Laser Weldment Based on Strain Analysis at Elevated Temperature	Kitamura Mitsuru Hassan Maher Shinozaki Kenji Yamamoto Motomichi Takata Atsushi Shirai Makoto	Proceedings of the Seventeenth Asian-Pacific Technical Exchange and Advisory Meeting on Marine Structures, (2003)		pp. 287-296		
A7	Fabrication and mechanical properties of carbon fiber reinforced magnesium alloy composite by squeeze casting	T.Matsunaga M.Yoshida G.Sasaki T.Hatayama K.Shinozaki	Proceedings of the 8th Japan International SAMPE Symposium, (2003)		pp. 773-776		
A8	Influence of Inclusion Size and Its Distribution on the Mechanical Property and Their Reliabilities of Aluminum Alloy Squeeze Castings	KIMURA Ryosuke YOSHIDA Makoto SASAKI Gen SHINOZAKI Kenji FUJII Toshio FUYAMA Nobuyuki FUKUNAGA Hideharu	Proceedings of The 8th Asian Foundry Congress, (2003)		pp. 266-275		
A9	Design and manufacture of an impact-electric current dischargejoining machine	K. Matsugi M. Konishi O. Yanagisawa M. Komatsu	Materials Science and Engineering, A	, 1-2 (2003)	pp. 195-201		
A10	A case study for production of perfectly sintered complex compactsin rapid consolidation by spark sintering	K. Matsugi H. Kuramoto O. Yanagisawa M. Kiritani	Materials Science and Engineering, A	, 1-2 (2003)	pp. 234-242		
A11	Temperature distribution at steady state under constant current discharge in spark sintering process of Ti and Al ₂ O ₃ powders	K. Matsugi H. Kuramoto T. Hatayama O. Yanagisawa	J. Materials Processing Technology	, 2 (2003)	pp. 225-232		
A12	Application of electric discharge process in joining aluminum and stainless steel sheets	K. Matsugi Y. Wang T. Hatayama O. Yanagisawa K. Syakagohri	J. Materials Processing Technology	, 1 (2003)	pp. 75-82		

P per e	A or N e	o rn o No Ye r P e
A Visualized modeling of compo casting processing for magnesium alloy composites	G. Sasaki K. Matsugi O. Yanagisawa N. Fuyama T. Fujii	Proc. of 14th Int. Conf. on Composite Materials (ICCM-14), (2003)
A Preparation of cast steels with high-toughness and -strength	K.Matsugi G. Sasaki O. Yanagisawa	Proc. 1st Korea-Japan Conf. for Young Foundry Engineers, (2003) pp. 145-148
A Influence of fiber surface structure on interfacial reaction of carbon fiber reinforced aluminum matrix com		

P per e	A or N e	o rn o No Ye r P e
A Improvement of Densification in Solid State Sintering by Efficient Packing of Fine Powders with Narrow Size Distribution using High Centrifugal Force	Hiroyuki Y. Suzuki Kenji Shinozaki Hidenori Kuroki	P/M Science & Technology Briefs, , 3 (2003) pp. 22-28
A 6 Colloidal Compaction of Fine Metallic Powders under High-speed Centrifugal Force -Compaction and Sintering of High Speed Steel-	Hiroyuki Y. Suzuki Masato Fukuda Hidenori Kuroki	J. Jpn. Soc. Powder Powder Metallurgy, , 11 (2003) pp. 856-864
A ▼ Diffusion Bonding of Iron and Iron-Copper Powder Compacts	Hidenori Kuroki	Advances in Powder Metallurgy & Particulate Materials -2003, Proceedings of the 2003 International Conference on Powder Metallurgy & Particulate Materials, June 8-12, Las Vegas, NV, USA, (2003) pp. 5/203-5/213
A Cryo-transfer TEM study of vacancy cluster formation in thin films of aluminum and copper elongated at low temperature	I. Mukouda Y. Shimomura M. Kiritani	Materials Science & Engineering A, (2003) pp. 37-43
A Computer Simulation Study of the Atomistic Mechanism of Deformation and Fracture Initiation in Thin FCC Metal Films	Y. Shimomura M. Kiritani I. Mukouda	Materials Science & Engineering A, (2003) pp. 238-244
A Formation of Vacancy Clusters in Deformed Thin Film of Al-Mg and Al-Cu Dilute Alloys	H. Ohkubo Y. Shimomura I. Mukouda K. Sugio M. Kiritani	Materials Science & Engineering A, (2003) pp. 30-36
A POSITRON LIFETIME STUDIES OF DEFECTS IN LOW-TEMPERATURE NEUTRON-IRRADIATED Si	Hiroshi Fukushima	Proceedings of the 3rd International Workshop on Positron Studies of Semiconductor Defects, (2003) pp. 155-161
A Molecular Dynamics Studies of Crystallization and Grain Boundary Formation in Silicon	Kenjiro Sugio Hiroshi Fukushima	Solid State Phenomena, (2003) pp. 381-386
A Reaction engineering model for supercritical water oxidation of phenol catalyzed by activated carbon	Teppei Nunoura Geunhee Lee Yukihiko Matsumura Kazuo Yamamoto	Ind. Eng. Chem. Res., 15 (2003) pp. 3522-3531
A ↗ Effect of carbonaceous materials on the oxidation of phenol in supercritical water; A preliminary study	Teppei Nunoura Geunhee Lee Yukihiko Matsumura Kazuo Yamamoto	Ind. Eng. Chem. Res., 16 (2003) pp. 3718-3720
A Biomass gasification in supercritical water with partial oxidation	Yukihiko Matsumura Masaki Harada Dayin Li Hiroshi Komiyama Yoshikuni Yoshida Hisashi Ishitani	J. Jpn. Inst. Energy, , 12 (2003) pp. 919-925
A 6 Comprehensive comparison of efficiency and CO ₂ emissions between biomass energy conversion technologies—position of supercritical water gasification in biomass technologies	Yoshikuni Yoshida Kiyoshi Dowaki Yukihiko Matsumura Ryuji Matsuhashi Dayin Li Hisashi Ishitani Hiroshi Komiyama	Biomass and Bioenergy, , 3 (2003) pp. 257-272
A ▼ Effect of heating rate of biomass feedstocks on supercritical water gasification characteristics	Kyoko Nagata Masaki Harada Yukihiko Matsumura Yoshihiro Kikuchi Ronghou Liu	Proc. 8th Japan-China Symp. on Coal and C1 Chemistry, (2003) pp. 133-134
A Feasibility study on glycerol gasification process in supercritical water fluidized bed reactor	Yukihiko Matsumura Tomoaki Minowa	Proc. 8th Japan-China Symp. on Coal and C1 Chemistry, (2003) pp. 219-220

Paper / ed Paper	Author or Name	Journal or No. Year Paper
A Report on the 40th Heat Transfer Symposium of Japan	Yoshihiro Kikuchi	Thermal Science and Engineering, 4 (2003) pp. 1
A Analytical estimation of performance parameters of an ideal pulse detonation engine	T. Endo T. Fujiwara	Transactions of the Japan Society for Aeronautical and Space Sciences, 150 (2003) pp. 249-254
A Wall-Thickness Dependence of Cooling-Induced Deformation of Polystyrene Spherical Shells	T. Endo N. Kobayashi K. Goto M. Yasuda Y. Fujima	Fusion Science and Technology, 3 (2003) pp. 270-274
A Pressure History at the Thrust Wall of a Simplified Pulse Detonation Engine	T. Endo J. Kasahara Y. Tanahashi T. Numata A. Matsuo S. Sato T. Fujiwara	Proceedings of the 19th International Colloquium on the Dynamics of Explosions and Reactive Systems, (2003)
A Experimental Studies on L/D Ratio and Heat Transfer in Pulse Detonation Engines	J. Kasahara Y. Tanahashi T. Numata A. Matsuo T. Endo	Proceedings of the 19th International Colloquium on the Dynamics of Explosions and Reactive Systems, (2003)
A Performance Analysis of the Multiple Tube Pulse Detonation Rocket Engine	S. Sato A. Matsuo J. Kasahara T. Endo	Proceedings of the 19th International Colloquium on the Dynamics of Explosions and Reactive Systems, (2003)
A The effects of the dilution gas for the properties of acceleration and combustion on the thermal choking ram accelerator	T. Yatsufusa S. Taki	Proceedings of the 19th International Colloquium on the Dynamics of Explosions and Reactive Systems, (2003)
A 6 Initiation of gasoline-air mixture with PDE initiator	T. Yatsufusa S. Taki	Proceedings of the 19th International Colloquium on the Dynamics of Explosions and Reactive Systems, (2003)
A Temperatures of Positively and Negatively Stretched Flames	Kazuhiro Yamamoto Satoru Ishizuka	JSME International Journal, Series B, 46, 1 (2003) pp. 198-205
A Vortex Ring Combustion in an Atmosphere of the Same Mixture as the Combustible	Satoru Ishizuka Mio Ikeda Kazuhiro Kameda	Proceedings of the Combustion Institute, (2003) pp. 1705-1712
A Characterization of Droplets and Vapor Concentration Distributions in Split-Injection Diesel Sprays by Processing UV and Visible Images	Yuyin Zhang Tomoaki Ito Keiya Nishida	JSME International Journal, Series B, 46, 1 (2003) pp. 100-108
A Vapor/Liquid Behaviors in Split-Injection D.I. Diesel Sprays in a 2-D Model Combustion Chamber	Yuyin Zhang Keiya Nishida	SAE Paper, , 2003-01-1837 (2003) pp. 1-12
A Spray Characteristics of Group-hole Nozzle for D.I. Diesel Engine	Yuyin Zhang Keiya Nishida Shinsuke Nomura Tomoaki Ito	SAE Paper, , 2003-01-3115 (2003) pp. 1-9
A Characterization of Mixture Formation Processes in D.I. Gasoline Sprays by the Laser Absorption Scattering (LAS) Technique -Effects of Injection Conditions-	Tie Li Masahisa Yamakawa Daisuke Takaki Keiya Nishida Yuyin Zhang Hiroyuki Hiroyasu	SAE Paper, , 2003-01-1811 (2003) pp. 1-10
A Insight on Early Spray Formation Process of a High-Pressure Swirl Injector for DISI Engines	Jeekuen Lee Keiya Nishida	SAE Paper, , 2003-01-1809 (2003) pp. 1-14

Paper No.	Author	Journal or Conference Name	Volume or Issue No.	Year	Page
A4 Simultaneous Flow Field Measurement of D.I. Gasoline Spray and Entrained Ambient Air by LIF-PIV Technique	Jeekuen Lee Keiya Nishida	SAE Paper, (2003)	, 2003-01-1115		pp. 1-15
A Measurement of Ambient Air Motion of D.I. Gasoline Spray by LIF-PIV	Masahisa Yamakawa Seiji Isshiki Takuo Yoshizaki Keiya Nishida	JSME International Journal, Series B,	6, 1 (2003)		pp. 25-30
A6 Breakup Process of an Initial Spray Injected by a D.I. Gasoline Injector - Simultaneous Measurement of Droplet Size and Velocity by Laser Sheet Image Processing and Particle Tracking Technique-	Jeekuen Lee Keiya Nishida	SAE Paper, (2003)	, 2003-01-3107		pp. 1-23
A Characterization of Mixture Formation Processes in DI Gasoline Engine Sprays with Split Injection Strategy via Laser Absorption and Scattering (LAS) Technique	Tie Li Yuyin Zhang Keiya Nishida Hiroyuki Hiroyasu	SAE Paper, (2003)	, 2003-01-3161		
A Atomization Characteristics of Multi-Hole Swirl Injectors for Direct Injection Engines -Observation of Spray Behavior and Calculation of Injector Internal Flow-	Keiya Nishida Haiyan Miao Mitsuhiro Kawamoto	CD-ROM Proceedings of Ninth International Conference on Liquid Atomization and Spray Systems, ICCLASS 2003, 14-1 (2003)			pp. 1-8
A Spray and Mixture Formation Processes by High-Pressure Swirl Injector for DISI Engines -Analyses Based on Laser Absorption Scattering (LAS) Measurements-	Tie Li Masahisa Yamakawa Keiya Nishida Daisuke Takaki Yuyin Zhang Hiroyuki Hiroyasu	CD-ROM Proceedings of Ninth International Conference on Liquid Atomization and Spray Systems, ICCLASS 2003, 14-22 (2003)			pp. 1-8
A6 Analyses of Pre-Swirl Spray Formation and Its Breakup Processes of D.I. Gasoline Spray	Jeekuen Lee Keiya Nishida	CD-ROM Proceedings of Ninth International Conference on Liquid Atomization and Spray Systems, ICCLASS 2003, 14-20 (2003)			pp. 1-8
A6 An Investigation of the Breakup Mechanisms for Swirl Sprays from High-Pressure Swirl Injectors	Christos Chryssakis Dennis Assanis Jeekuen Lee Keiya Nishida	CD-ROM Proceedings of Ninth International Conference on Liquid Atomization and Spray Systems, ICCLASS 2003, 14-1 (2003)			pp. 1-8
A6 Effects of Injection Splitting on Mixture Properties of Fuel Spray Injected by High Pressure Swirl Injector for DISI Engines	Tie Li Keiya Nishida Yuyin Zhang Hiroyuki Hiroyasu	Proceedings of the 8th Annual Conference on Liquid Atomization and Spray Systems - Asia, ILASS-Asia, (2003)			pp. 57-64
A6 Effects of Annealing on Photoluminescence of ZnO Thin Film Prepared by Vapor Phase Growth	Ji Chen Toshiaki Fujita	Jpn. J. Appl. Phys., 42, 2A (2003)			pp. 602-606
A6 Photoluminescence from ZnO Thin Films Prepared by Vapor Phase Growth	Toshiaki Fujita Ji Chen Daigo Kawaguchi	Jpn. J. Appl. Phys., 42, 7B (2003)			pp. L834-L836
A6 High-density metastable helium atoms produced by Penning-type discharges	P X. Feng D. Andruszyk B W. James K. Takiyama S. Namba T. Oda	Plasma Sources Sci. Technol., 12, 2 (2003)			pp. 142-147

P per e	A or N e	o rn o No Ye r P e
A66 High resolution measurements of the Ha line shape in LHD plasma	H. Kawazome K. Kondo K. Ida K. Takiyama M. Goto S. Morita N. Tamura N. Ohyabu S. Sudo The LHD experimental Group	J. Nucl. Mater., 6 (2003) pp. 716-719
A67 High-Sensitive LIF Measurements of Electric Field Perpendicular to Magnetic Field in Plasmas	K. Takiyama S. Namba S. Furukawa T. Oda T. Ohgo B. W. James D. Andruszyk	Proc. 11th Int. Sympo. Laser-Aided Plasma Diagnostics, (2003)
A68 Potential Profiles in the Central Core of the Cathode in the Star Mode Operation in Inertial-Electrostatic Fusion Neutron Source	K. Yoshikawa K. Masuda H. Toku A. Nagafuchi T. Mizutani H. Hashimoto A. Nagasaki Y. Yamamoto K. Takiyama M. Ohnishi H. Matsuura K. Funakoshi Y. Nakao	IAEA Fusion Energy 2002(19th Conference Proceedings, Lyon, France), (2003) pp. EX/P1-20
A69 Structure of amorphized C60 films studied by Raman spectroscopy and X-ray photoelectron spectroscopy	Ryosuke Ookawa Katsumi Takahiro Kiyoshi Kawatsura Fumitaka Nishiyama Shunya Yamamoto Hirosi Naramoto	Nucl. Instr. and Meth. in Phys. Res., B 6 (2003) pp. 175-178
A70 Surface morphology of glassy carbon irradiated with nitrogen ions	Katsumi Takahiro Ryosuke Ookawa Fumitaka Nishiyama Shinji Nagata Shunya Yamamoto Kazumasa Narumi Hirosi Naramoto Masaya Iwaki	Nucl. Instr. and Meth. in Phys. Res., B 6 (2003) pp. 206-210
A71 Improvement in surface roughness of nitrogen-implanted glassy carbon by hydrogen doping	Katsumi Takahiro Ryosuke Ookawa Kiyoshi Kawatsura Shinji Nagata Fumitaka Nishiyama Shunya Yamamoto Kazumasa Narumi Hirosi Naramoto Masaya Iwaki	Diamond and Related Materials, (2003) pp. 1362-1367
A72 Structural Characterization of GaAs _{1-x} Bi _x Alloy by Rutherford Backscattering Spectroscopy Combined with the Channeling Technique	Katsumi Takahiro Kiyoshi Kawatsura Kunishige Oe Fumitaka Nishiyama	Journal of ELECTRONIC MATERIALS, , 1 (2003) pp. 34-37

P per ▾ e	A or N e	o rn o No Ye r P e
A▼ Identification of the new isotope ^{241}Bk	M. Asai K. Tsukada S. Ichikawa M. Sakama H. Haba Y. Nagame I. Nishinaka K. Akiyama A. Toyoshima T. Kaneko Y. Oura Y. Kojima M. Shibata	European Physical Journal A, 6 (2003) pp. 17-19
A▼ Conversion electron measurement in the β^- -decay of ^{151}Pr	Y. Kojima M. Shibata A. Taniguchi T. Hanafusa E. Yoshida K. Shizuma Y. Kawase S. Yamada	European Physical Journal A, 6 (2003) pp. 331-336
A▼ Microdosimetry of neutron field for Boron Neutron Capture Therapy at Kyoto University Reactor	S. Endo Y. Onizuka M. Ishikawa M. Takada Y. Sakurai T. Kobayashi M. Hoshi K. Shizuma	Jpn. J. Med. Phys., (2003) pp. 170-173
A▼ Energy-dependent RBE of neutrons to induce micronuclei in root-tip cells of Allium cepa onion irradiated as dry dormant seeds and seedlings	W. Zhang K. Fujikawa S. Endo M. Ishikawa M. Ohtaki H. Ikeda M. Hoshi	J. Radiat. Res., 44 (2003) pp. 171-177
A▼ Development of Thermal Neutron Monitor in real-time for Boron Neutron Capture Therapy	M. Ishikawa H. Unesaki T. Kobayashi Y. Sakurai K. Tanaka S. Endo M. Hoshi	Jpn. j. Med. Phys., (2003) pp. 174-176
A▼ Measurement of residual ^{152}Eu activity induced by atomic bomb neutrons in Nagasaki and the contribution of environmental neutrons to this activity	K. Shizuma S. Endo M. Hoshi J. Takada M. Ishikawa K. Iwatani H. Hasai T. Oka S. Fujita T. Watanabe T. Yamashita T. Imanaka	J. Radiat. Res., 44 (2003) pp. 133-139
A▼ Finite-Element Nonlinear Dynamics of Flexible Structures in Three Dimensions	Shingo Okamoto Yuki Omura	Computer Modeling in Engineering & Sciences, 2 (2003) pp. 287-299
A▼ Fracture Mechanism of Cemented Carbide Tips Held in Bits for Excavation: 1st Report, Effect of Tip Shapes on Mechanism and Modes of Fracture	Shingo Okamoto Akio Okamoto	International Conference on Computational & Experimental Engineering & Sciences, (2003)
A▼ Fracture Mechanism of Cemented Carbide Tips Held in Bits for Excavation: 2nd Report, Mechanical Properties of WC-Co Cemented Carbide	Shingo Okamoto Akio Okamoto Shuzo Fujii	International Conference on Computational & Experimental Engineering & Sciences, (2003)

P per e	A or N e	o rn o No Ye r P e
A 5 Micro damage evolution analysis of target impacted by projectile	Toshio Tsuta Yajun Yin Takeshi Iwamoto	JSME International Journal Ser. A, 46, 2 (2003) pp. 109-118
A 6 Computational simulation of patterning process of martensite in TRIP steel by crystal plasticity FEM with cellular automata approach	Takeshi Iwamoto Shinji Kubo	Dislocations, plasticity and metal forming, Proc. Plasticity 2003, (2003) pp. 220-222
A 7 Experimental Study of the Sound Field in Water Generated from a Vibrating Plate with Flexural Traveling Waves	Noritoshi Nakagawa Jun Satonobu Takao Ito	Proc. The 32nd International Congress and Exposition on Noise Control Engineering, (2003)
A 8 Diagnosis of ball bearing based on chaos analysis	Yasuhide Sekiguchi Noritoshi Nakagawa	Proc. of Asia-Pacific Vibration Conference 2003, (2003) pp. 629-634
A 9 Traveling wave ultrasonic motor using the bolt-clamped Langevin transducers	Jun Satonobu Masahiro Fukami Noritoshi Nakagawa	Proc. of Asia-Pacific Vibration Conference 2003, (2003) pp. 623-628
A 10 Traveling wave ultrasonic motor by using a flexural composite transducer	Jun Satonobu Masahiro Fukami Noritoshi Nakagawa	Japanese Journal of Applied Physics, 41, 5B (2003) pp. 3007-3011
A 11 A single-element tuning fork piezoelectric linear actuator	James R. Friend Jun Satonobu Kentaro Nakamura Sadayuki Ueha Daniel S. Stutts	IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control, 50, 2 (2003) pp. 179-186
A 12 Tooth Root Stress and Tooth Contact Stress of the Modified Cycloid Helical Gear	Florin Gabriel Tutulan Kazuteru Nagamura Kiyotaka Ikejo	Proceedings of DETC'03 ASME 2003 Design Engineering Technical Conferences and Computers and Information in Engineering Conference, 9th International Power Transmission and Gearing Conference (Chicago, Illinois USA), ASME Paper No. DETC2003/PTG-48012 (2003)
A 13 Power Loss of Spur Gear Drive Lubricated with Traction Oil	Kiyotaka Ikejo Kazuteru Nagamura	Proceedings of DETC'03 ASME 2003 Design Engineering Technical Conferences and Computers and Information in Engineering Conference, 9th International Power Transmission and Gearing Conference (Chicago, Illinois USA), ASME Paper No. DETC2003/PTG-48130 (2003)
A 14 Visualization Study of Oscillatory Entrance Flow in Curved Pipes	Masaru Sumida	CD-ROM Proceedings of 7th Asian Symposium on Visualization, (2003)
A 15 Curvature Effects in the Curved Duct for the Compressible Viscous Flow with Heat Transfer	Kougen Ozaki Hiroshi Maekawa	Proceedings of ASME Fluid Engineering Conference, ED M , 45634 (2003)
A 16 An overview of the machinability of aeroengine alloys	E.O. Ezugwu J. Bonney Y. Yamane	Journal of Materials Processing Technology, 134 (2003)
A 17 Development of a Simulator for Scrapping Operation and a Simulation of Fitting of Three surfaces	Tadanori Sugino Yasuo Yamane Kei Sumimoto Norihiko Narutaki	Proceedings of International Conference on Leading Edge Manufacturing in 21st Century, (2003) pp. 833-836
A 18 Inspection of Bow and Deformation of Printed Circuit Board Using Patterned Panel Light Source	Tadanori Sugino Yasuo Yamane Tatsuro Ishizaki Norihiko Narutaki	Proceedings of the International Conference on Agile Manufacturing, Advance in Agile Manufacturing , (2003) pp. 393-398
A 19 3D Dead Reckoning Based on Decentralized Filter for Modular Vehicle	Masafumi Hashimoto Yuichi Ishida Masato Fujita Fuminori Oba	Proceeding of 6th Japan-France Congress on Mechatronics, (2003) pp. 453-485

Paper	Author	Journal or Conference Name	Year	Page
A A Multi-Model Based Fault Detection and Diagnosis of Internal Sensor for Mobile Robot	Masafumi Hashimoto Hiroyuki Kawashima Fuminori Oba	Proceeding of the 2003 IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS 2003), (2003) pp. 3787-3792		
A Experiments of Bi-directional AGV Routing and Traffic Control in a Dynamic Job Shop Scheduling Environment	Toru Eguchi Fuminori Oba Satoru Toyoda Hironori Matsuoka	Proceedings of 6th Japan-France Congress on Mechatronics and 4th Asia-Europe Congress on Mechatronics, (2003) pp. 107-112		
A A Robust Neural Network For Dynamic Job Shop Scheduling	Toru Eguchi Fuminori Oba Satoru Toyooka	Electronic Proceedings of the 17th International Conference on Production Research, (2003)		
A Unfalsified control approach to parameter space design of PID controllers	Masami Saeki	Proc. of the 42nd IEEE Conference on Decision and Control, (2003) pp. 786-791		
A Synthesis of Output Feedback Gain-Scheduling Controllers Based on the Descriptor LPV System Representation	Izumi Masubuchi Tomoaki Akiyama Masami Saeki	Proc. of the 42nd IEEE Conference on Decision and Control, (2003) pp. 6115-6120		
A Design of a Static Anti-windup Compensator that Optimizes L2 Performance: An LMI Based Approach	Nobutaka Wada Masami Saeki	Proc. of the 2003 IEEE International Conference on Robotics and Automation, (2003) pp. 2628-2633		
A Reactive Disassembly Planning using Internet	Takeshi Murayama Kentaro Kagawa Fuminori Oba	Proceedings of SICE Annual Conference 2003, (2003) pp. 2772-2777		
A Simulation-based Evaluation of Forward and Reverse Supply Chain	Takeshi Murayama Shinya Hatakenaka Fuminori Oba	Proceedings of EcoDesign 2003: The 3rd International Symposium on Environmentally Conscious Design and Inverse Manufacturing, (2003) pp. 521-526		
A Anomalous surface deformation of sapphire clarified by 3D-FEM simulation of the nanoindentation	R. Nowak T. Manninen CL. Li K. Heiskanen SP. Hannula V. Lindroos T. Soga F. Yoshida	JSME International Journal Series A -Solid Mechanics and Material Engineering, 46, 3 (2003) pp. 265-271		
A 6 Springback of sheet metal laminates in draw-bending	Ryutaro Hino Yoshihiro Goto Fusahito Yoshida	Journal of Materials Processing Technology, 1-3 (2003) pp. 341-347		
A Effects of temperature on yield locus for 5083 aluminum alloy sheet	Tetsuo Naka Yasuhide Nakayama Takeshi Uemori Ryutaro Hino Fusahito Yoshida	Journal of Materials Processing Technology, 14 (2003) pp. 494-499		
A Analysis of plastic bending of adhesive-bonded sheet metals taking account of viscoplasticity of adhesive	Michihiro Takiguchi Fusahito Yoshida	Journal of Materials Processing Technology, 14 (2003) pp. 441-446		
A Wound stress of permeable papers with air-entrainment	K. Tanimoto K. Kohno S. Takahashi M. Sasaki F. Yoshida	Archive of Applied Mechanics, 73, 3-4 (2003) pp. 160-170		
A Effect of strain rate on Luders band propagating velocity and Luders strain for annealed mild steel under uniaxial tension	HB. Sun F. Yoshida M. Ohmori X. Ma	Materials Letters, 57, 29 (2003) pp. 4535-4539		
A Improvement of mechanical properties of chromium-nickel sintered compacts by multiple rolling	Y. Harada M. Ohmori F. Yoshida R. Nowak	Materials Letters, 57, 5-6 (2003) pp. 1142-1150		

P per e	A or N e	o rn o No Ye r P e
A Rate-dependent indentation hardness of a power-law creep solder alloy	X. Ma F. Yoshida	Applied Physics Letters, , 2 (2003) pp. 188-190
A Deformation characteristics and delamination strength of adhesively bonded aluminium alloy sheet under plastic bending	M. Takiguchi F. Yoshida	JSME International Journal Series A -Solid Mechanics and Material Engineering, 6, 1 (2003) pp. 68-75
A On the loading curve in microindentation of viscoplastic solder alloy	Xin Ma Fusahito Yoshida Kazuhiro Shinbata	Materials Science and Engineering A, 344, 1-2 (2003) pp. 296-299
A A Model of Large-Strain Cyclic Plasticity and its Application to Springback Simulation	F. Yoshida T. Uemori	Key Engineering Materials, 366 (2003) pp. 47-58
A 6 Rate-Dependent Shear Deformation of Ductile Acrylic Adhesive and its Constitutive Modeling	M. Takiguchi S. Izumi F. Yoshida	Key Engineering Materials, 366 (2003) pp. 175-180
A Investigation of cyclic elasto-plastic behaviour of copper sheet	T. Uemori F. Yoshida	Key Engineering Materials, 366 (2003) pp. 287-292
A Fracture of Type 5083 Aluminum Sheet under Warm Stretch Bending	T. Naka R. Hino F. Yoshida	Key Engineering Materials, 366 (2003) pp. 113-118
A Evaluation of press formability in magnesium alloy	M. Kohzu F. Yoshida K. Higashi	Magnesium Alloys 2003, Pts 1 and 2, Materials Science Forum, 444 (2003) pp. 321-326
A Numerical simulation of shear stress distribution in as soldered Al-Al ₂ O ₃ assembly	X. Ma F. Yoshida	Science and Technology of Welding and Joining, , 2 (2003) pp. 154-156
A Determination of elastoplastic properties of individual phase in solidified Al brazed joint	YY. Qian F. Gao DP. Sekulic X. Ma F. Yoshida	Transactions of Nonferrous Metals Society of CHINA, , Sp. Iss. 1 (2003) pp. 5-8
A Finite element simulation on the propagation of Luders band and effect of stress concentration	HB. Sun F. Yoshida X. Ma T. Kamei M. Ohmori	Materials Letters, 52, 21 (2003) pp. 3206-3210
A Development of Cu-Sn intermetallic compound at Pb-free solder/Cu joint interface	Xin Ma Fengjiang Wang Yiyu Qian Fusahito Yoshida	Materials Letters, 52, 22-23 (2003) pp. 3361-3365
A Inverse approach to identification of material parameters of cyclic elasto-plasticity for component layers of a bimetallic sheet	F. Yoshida M. Urabe R. Hino V.V. Toropov	International Journal of Plasticity, 19, 12 (2003) pp. 2149-2170
A Identification of material properties for lead-free solder using micro-indentation experiments, FE simulation and optimization	H. Hamasaki F. Yoshida K. Shinbata V.V. Toropov	Short Papers of The Fifth World Congress of Structural and Multidisciplinary Optimization (WCSMO5), (2003) pp. 101-102
A 6 Optimum blank design for sheet metal forming process using high- and low-fidelity models	R. Hino F. Yoshida V.V. Toropov	Short Papers of The Fifth World Congress of Structural and Multidisciplinary Optimization (WCSMO5), (2003) pp. 435-436
A A Model of Large-Strain Cyclic Plasticity for Sheet Metals of Orthotropic Anisotropy and Its Applications to Springback Analysis	F. Yoshida T. Uemori	Proceedings of Plasticity '03: The Tenth International Symposium on Plasticity and Its Current Applications, (2003) pp. 58-60

Paper	AUTHOR	Journal Name	Year	Page
A Evaluation of Interfacial Fracture Toughness of Thermal Barrier Coating under Heat Cycles	Lin GAO Keiji NAKASA Masahiko KATO Hidetaka NISHIDA	Key Engineering Materials, [▲] [▼] (2003) pp. 267-272		
A Relation between Delamination of Thin Films and Backward Deviation of Load-displacement Curves under Repeating Nanoindentation	T.Dharma Raju K.Nakasa M. Kato	Acta Materialia, [▲] [▼] (2003) pp. 457-467		
A Analysis and Simulation of Cracking Patterns in Coating under Biaxial Tensile or Thermal Stress Using Analysis/FEM Strain-accommodation Method	S.Gao K.Nakasa M.Kato	Engineering Fracture Mechanics, [▲] [▼] (2003) pp. 1573-1591		
A Backward Deviation and Depth Recovery of Load-displacement Curves of Amorphous SiC Film under Repeating Nanoindentation	T.Dharma Raju M. Kato K.Nakasa	Acta Materialia, [▲] [▼] (2003) pp. 3585-3595		
A Evaporation and Condensation Behaviors of Micro-Water Droplets on SUS304 Steel Using AFM	Rongguang Wang Mitsuo Kido	Materials Letters, [▲] [▼] 16-17 (2003) pp. 2360-2365		
A High Temperature Fatigue Deformation Measurement of Ceramics Thermally Sprayed SUS304 Steel Using an ESPI System	Rongguang Wang Tarou Tokuda Mitsuo Kido	Materials Science Research International, [▲] , 1 (2003) pp. 69-74		
A Estimated and Evaluated Residual Stress by Vickers Indentation in Several Structural Ceramics	Tarou Tokuda Mitsuo Kido Rongguang Wang Takahiro Dote	Materials Science Research International, [▲] , 1 (2003) pp. 75-80		
A An XPS and Atomic Force Microscopy Study of the Micro-Wetting Behavior of Water on Pure Chromium	Rongguang Wang Mitsuo Kido Naoki Morihiko	Materials Transactions, [▲] , 3 (2003) pp. 389-395		
A High Temperature Fatigue Deformation Behaviors of Thermally Sprayed Steel Measured with ESPI Method	Rongguang Wang Mitsuo Kido	Materials Research Bulletin, [▲] , 8 (2003) pp. 1401-1411		
A Fatigue behavior of thermally sprayed materials at high temperature	Rongguang Wang Naoki Morihiko Yoshiko Shinhara Mitsuo Kido	Proc. ATEM 2003 (International Conference on Advanced Technology in Experimental Mechanics 2003), (2003)		
A Wetting behavior of micro-water on pure chromium	Rongguang Wang Kouji Mukai Mitsuo Kido	Proceedings of the International Conference on Advanced Technology in Experimental Mechanics 2003, (2003)		
A Estimated and Evaluated Residual Stress by Vickers Indentation in Several Structural Ceramics	Tokuda Tarou Rongguang Wang Mitsuo Kido	Proceedings of the International Conference on Advanced Technology in Experimental Mechanics 2003, (2003)		
A XPS Analysis and Atomic Force Microscopy Observation of Micro-liquids adsorbed on Pure Iron and Copper Surfaces	Rongguang Wang Mitsuo Kido Fumihiro Suzumura	Proceedings of 3rd International Symposium on Designing, Processing and Properties of Advanced Engineering Materials, (2003)		
A Effect of Cyclic Surface Pressure on Delamination Strength of WC-Co Coating Sprayed by High-Pressure High-Velocity Oxygen-Fuel	C.Li M.Kato D.Zhang K.Nakasa	Proceedings of the 9th International Conference on the Mechanical Behavior of Materials, (2003)		
A Delamination Behavior of Thin Films under Repeating Nanoindentation	T.Dharma Raju M.Kato K.Nakasa	Proceedings of the 9th International Conference on the Mechanical Behavior of Materials, (2003)		
A Deformation Behavior of Ceramics under Repeating Nanoindentation	T.Dharma Raju M.Kato K.Nakasa	Proceedings of the International Conference on Advanced Technology in Experimental Mechanics 2003, (2003)		
A Analysis and Simulation of Cracking Patterns in Ceramics Coating under Thermal Stress	Sande Gao Keiji NAKASA	Key Engineering Materials, [▲] [▼] (2003) pp. 345-350		

P per e	A or N e	o rn o No Ye r P e
A Relationship between Friction and Wear Properties and Delamination Behavior of Amorphous SiC Film Coated by Helicon Sputtering	M.Kato K.Nakasa X.Yan J.Zheng	Proceedings of the 22nd Heat Treating Society Conference and the 2nd International Surface Engineering Congress, (2003) pp. 584-591

B. Artificial Complex Systems Engineering

P per e	A or N e	o rn o No Ye r P e
B Genetic algorithms with double strings for 0-1 programming problems	Masatoshi Sakawa Kosuke Kato	European Journal of Operational Research, 144, 3 (2003) pp. 581-597
B An interactive fuzzy satisficing method for multiobjective stochastic linear programming problems through an expectation model	Masatoshi Sakawa Kosuke Kato Ichiro Nishizaki	European Journal of Operational Research, 144, 3 (2003) pp. 665-672
B Genetic algorithms with decomposition procedures for multidimensional 0-1 knapsack problems with block angular structures	Kosuke Kato Masatoshi Sakawa	IEEE

P per e	A or N e	o rn o No Ye r P e
B Characterizations of the distributions of power inverse Gaussian and others based on the entropy maximization principle	Toshihiko Kawamura Kosei Iwase	J. Japan Statist. Soc., , 1 (2003) pp. 95-104
B* Stackelberg solutions to multiobjective two-level linear programming problems with random variable coefficients	Ichiro Nishizaki Masatoshi Sakawa Hideki Katagiri	Central European Journal of Operations Research, , 3 (2003) pp. 281-296
B Computational method based on genetic algorithms for obtaining equilibrium solutions to a finite n-person noncooperative game	Ichiro Nishizaki Masatoshi Sakawa Hideki Katagiri	Proceedings of the 10th IFSA World Congress, (2003) pp. 539-542
B 6 Stackelberg solutions to two-level linear programming problems with random variable coefficients	Ichiro Nishizaki Masatoshi Sakawa Kosuke Kato Hideki Katagiri	Multi-Objective Programming and Goal-Programming, (2003) pp. 209-214
B An inventory problem with a perishable commodity and a nonperishable one	Hideki Katagiri Hiroaki Ishii Masatoshi Sakawa	Asia Pasific Management Review, , 4 (2003) pp. 477-485
B An Interactive satisficing method through the variance minimization model for fuzzy random linear programming problems	Hideki Katagiri Masatoshi Sakawa Syuuji Ohsaki	Multi-Objective Programming and Goal-Programming, (2003) pp. 171-176
B A study on fuzzy random linear programming problems based on possibility and necessity measures	Hideki Katagiri Masatoshi Sakawa	Fuzzy Sets and Systems - IFSA2003, (2003) pp. 725-732
B An interactive fuzzy satisficing method for fuzzy random multiobjective linear programming problems through the fractile optimization model using possibility and necessity measures	Hideki Katagiri Masatoshi Sakawa Kosuke Kato Syuuji Ohsaki	Proceedings of the Ninth Asia Pacific Management Conference, (2003) pp. 795-802
B Interactive decision making through the expectation optimization model using possibility and necessity measures for a fuzzy random multiobjective 0-1 linear programming problem	Hideki Katagiri Masatoshi Sakawa Ichiro Nishizaki Kosuke Kato	Proceedings of the Ninth Asia Pacific Management Conference, (2003) pp. 103-112
B Equivalence of a cumulant maximization criterion for blind deconvolution and a cumulant matching criterion for blind identification	Shuichi Ohno Yujiro Inouye	IEICE Trans. Fundamentals, E*, A, 3 (2003) pp. 605-610
B Optimal training for block transmissions over doubly-selective wireless fading channels	Xiaoli Ma Georgios B. Giannakis Shuichi Ohno	IEEE Transactions on Signal Processing, , 5 (2003) pp. 1351-1366
B* Blind Identification for Fixed Fragment-Size Packet Transmissions with Distributed Redundancy over Multipath Fading Channels	Shuichi Ohno Georigios B. Giannakis	Proc. of the 4th Intl. Symp. on Independent Component Analysis and Blind Source Separation, (2003) pp. 733-738
B Fixed fragment-size packet transmissions with distributed redundancy over multipath fading channels	Shuichi Ohno Georgios B. Giannakis	Proc. of Intl. Conf. on Acoustics, Speech and Signal Processing, * (2003) pp. 177-180
B 6 Roundoff noise minimization of state-space digital filters using separate and joint error feedback/coordinate transformation optimization	Takao Hinamoto Hiroaki Ohnishi Wu-Sheng Lu	IEEE Trans. on Circuits and Systems I: Fundamental Theory and Applications, , 1 (2003) pp. 23-33
B Jointly optimized error feedback and realization for roundoff noise minimization in two-dimensional state-space digital filters	Takao Hinamoto Keisuke Higashi Wu-Sheng Lu	Proc. 2003 IEEE Int. Conf. on Acoustics, Speech, and Signal Processing, (2003) pp. 321-324
B Optimal design of frequency-response-masking filters using semidefinite programming	Wu-Sheng Lu Takao Hinamoto	IEEE Trans. on Circuits and Systems I : Fundamental Theory and Applications, , 4 (2003) pp. 557-568

P per e

A or N e

o rn o No Ye r P e

B Optimal design of FIR frequency-response-masking filters using second-order cone programming

Wu-Sheng Lu
Takao Hinamoto

Proc. IEEE Int. Symp. on Circuits
and Systems, (2003)
pp. 878-890

B Joint optimization of error feedback and coordinate transformation for roundoff noise minimization in state-space

Paper	A or N	Journal or No.	Year	Page
B⁴ Design of adaptive state-space digital filters using stable filter structures	Takao Hinamoto Yoshiyuki Kawai Mitsuji Muneyasu Akimitsu Doi		Proc. 46th IEEE Midwest Symp. on Circuits and Systems, (2003)	
B⁴6 Improved MSE analysis of a gradient algorithm for an adaptive IIR notch filter	Aloys Mvuma Shotaro Nishimura Takao Hinamoto		Proc. 46th IEEE Midwest Symp. on Circuits and Systems, (2003)	
B⁴7 Robustness optimisation of the minimum makespan schedules in a job shop	Yuuki Kawata Katsumi Morikawa Katsuhiko Takahashi Nobuto Nakamura		International Journal of Manufacturing Technology and Management, , 1/2 (2003)	pp. 1-9
B⁴8 A Method of Voltage Stability Evaluation for Branch and Generator Outage Contingencies	Naoto Yorino Hua-Qiang Li Sigemi Harada Atushi Ohta Hiroshi Sasaki		IEEE Trans. on Power Systems, , 4 (2003)	
B⁴9 A New Approach for Preventive/Corrective Control Strategy to Avoid Voltage Collapse Based on FACTS Devices Investment	Elsaid Elsayed El-Araby Naoto Yorino Hiroshi Sasaki		Trans. IEE of Japan, , B, 5 (2003)	pp. 569-576
B⁴10 A Two Level Hybrid GA/SLP for FACTS Allocation Problem Considering Voltage Security	Elsaid Elsayed El-Araby Naoto Yorino Hiroshi Sasaki		International Journal of Electrical Power and Energy Systems, , 4 (2003)	pp. 327-335
B⁴11 A New Formulation for Var Planning for Security Enhancement against Voltage Collapse	Naoto Yorino Elsaid Elsayed El-Araby Hiroshi Sasaki Shigemi Harada		IEEE Trans. on Power Systems, , 1 (2003)	pp. 3-10
B⁴12 A Fast Method of Voltage Stability Evaluation for Multiple Contingencies	Huaqiang Li Naoto Yorino Hiroshi Sasaki		Proc. of International Conference on Electrical Engineering (ICEE), ICEE-019 (2003)	
B⁴13 A Multi-agent Approach to Distribution System Restoration	T. Nagata Y. Tao H. Sasaki H. Fujita		IEEE Power Engineering Society 2003, General Meeting, (2003)	
B⁴14 A solution of optimal power flow with multicontingency transient stability constraints	Yue Yuan J. Kubokawa H. Sasaki		IEEE Transactions on Power Systems, , 3 (2003)	pp. 1904-1102
B⁴15 Excitability Changes of Motor Evoked Potentials Dependent on Muscle Properties and Contraction Modes	Susumu Yahagi Zen Ni Makoto Takahashi Yusaku Takeda Toshio Tsuji Tatsuya Kasai		Motor Control, o , No.4 (2003)	pp. 323-345
B⁴16 A Human-Assisting Manipulator Tele-operated by EMG Signals and Arm Motions	Osamu Fukuda Toshio Tsuji Makoto Kaneko Akira Otsuka		IEEE Transactions on Robotics and Automation, o , No.2 (2003)	pp. 210-222
B⁴17 EMG-Based Motion Discrimination Using a Novel Recurrent Neural Network	Nan Bu Osamu Fukuda Toshio Tsuji		Journal of Intelligent Information Systems, o , No.2 (2003)	pp. 113-126
B⁴18 Further Insights into Post-exercise Effects on H-Reflexes and Motor Evoked Potentials of the Flexor Carpi Radialis Muscles	Takashi Kato Yusaku Takeda Toshio Tsuji Tatsuya Kasai		Motor Control, o , No.1 (2003)	pp. 82-99
B⁴19 A Recurrent Log-linearized Gaussian Mixture Network	Toshio Tsuji Nan Bu Makoto Kaneko Osamu Fukuda		IEEE Transactions on Neural Networks, o , No.2 (2003)	pp. 304-316
B⁴20 An EMG-controlled omnidirectional pointing device using a HMM-based neural network	Osamu Fukuda Jun Arita Toshio Tsuji		Proceedings of the IEEE International Joint Conference on Neural Networks, (2003)	pp. 3195-3200

P per e	A or N e	o rn o No Ye r P e
B6 MMI-based training for a probabilistic neural network	Nan Bu Toshio Tsuji Osamu Fukuda	Proceedings of the IEEE International, Joint Conference on Neural Networks, (2003) pp. 2661-2666
B6 A Virtual Training Sports System for Measuring Human Hand Impedance	Yusaku Takeda Yoshiyuki Tanaka Toshio Tsuji	Proceedings of the 2003 IEEE/ASME International, A M , 914-919 (2003) pp. 914-919
B6 Task Readiness Impedance in Human Arm Movements for Virtual Ball-Catching Task	Yoshiyuki Tanaka Toshio Tsuji Makoto Kaneko	Proceedings of the 29th Annual Conference of the IEEE Industrial Electronics, (2003) pp. 478-483
B6 Estimating Arterial Wall Impedance using a Plethysmogram	Akira Sakane Toshio Tsuji Yoshiyuki Tanaka Noboru Saeki Masashi Kawamoto	Proceedings of the 29th Annual Conference of the IEEE Industrial Electronics Society, (2003) pp. 580-585
B6 Human Impedance Perception through Sensory-Motor Integration	Toshio TSUJI Yoshiyuki TANAKA Tatuya ABE Hideki MIYAGUCHI	Journal of Robotics and Mechatronics, 1, No.2 (2003) pp. 192-199
B6 The 100G Capturing Robot -Too Fast to See-	Makoto Kaneko Reika Takenaka Mitsuru Higashimori Akio Namiki Masatoshi Ishikawa	IEEE Trans. on Mechatronics, 1, 1 (2003) pp. 37-44
B6 Moment feature-based 3-D tracking	Yoshihiro Nakabo Idaku Ishii Masatoshi Ishikawa	Advanced Robotics, 10, 10 (2003) pp. 1041-1056
B6 The 100G Capturing Robot -Too Fast To See-	Makoto Kaneko Mitsuru Higashimori Reika Takenaka Akio Namiki Masatoshi Ishikawa	Proceeding of the Eighth International Symposium on Artificial Life and Robotics, 1 (2003) pp. 291-296
B6 Touching Stomach by Air	Makoto Kaneko Tomohiro Kawahara Satoshi Matsunaga Toshio Tsuji Shinji Tanaka	IEEE Proceeding of International Conference on Robotics and Automation, (2003) pp. 644-669
B6 Dynamic Preshaping for a Robot Driven by a Single Wire	Mitsuru Higashimori Makoto Kaneko Masatoshi Ishikawa	IEEE Proceeding of International Conference on Robotics and Automation, (2003) pp. 1115-1120
B6 The 100G Capturing Robot -Too Fast To See-	Makoto Kaneko Mitsuru Higashimori Akio Namiki Masatoshi Ishikawa	Proceeding of 11th International Symposium on Robotics Research, 1 (2003)
B6 Tactile Sensor with Automatic Gain Control	Makoto Kaneko Ryuta Horie	Proceeding of IEEE/RSJ International Conference on Intelligent Robots and Systems, (2003) pp. 25-30
B6 Design of Joint Spring for Dynamic Preshaping	Mitsuru Higashimori Makoto Kaneko	Proceeding of IEEE/RSJ International Conference on Intelligent Robots and Systems, (2003) pp. 2101-2106
B6 Development of a High-speed Multi-fingered Hand System and Its Application to Catching	Akio Namiki Yoshiro Imai Masatoshi Ishikawa Makoto Kaneko	Proceeding of IEEE/RSJ International Conference on Intelligent Robots and Systems, (2003) pp. 2666-2671
B6 Whole Body Manipulation	Kensuke Harada Makoto Kaneko	IEEE Internationl Conference on Robotics, Intelligent Systems, and Signal Processing, (2003)

C. Information Engineering

Paper	Author	Journal or No.	Year	Page
C1 Trajectory Recognition using State Transition Learning	Tadashi Ae Keiichi Sakai Kenji Otaka Nguyen Duy Thien Chuong Yuuki Obara	Image Processing; Algorithm and Systems II (SPIE), #4 (2003)	pp. 297-305	
C2 A Music Score Generation using Augmented Interactive Evolutionary Computation	Motoki Kamitani Tadashi Ae	Advances in Decision Technology and Intelligent Information Systems(IIAS), #4 (2003)	pp. 46-50	
C3 Evolving Chaotic Neural Network for Creative Sequence Generation	Shunji Kawabata Keiichi Sakai Tadashi Ae	Abstract Book of 6th International Conference on Computing Anticipatory Systems (CASY'S'03), (2003)	pp. 7	
C4 A self-stabilizing algorithm for the distributed minimal k-redundant dominating set problem in tree networks	Sayaka Kamei Hirotugu Kakugawa	Proceedings of the Fourth International Conference on Parallel and Distributed Computing, Applications and Technologies (PD-CAT'03), (2003)	pp. 720-724	
C5 A Quorum-Based Distributed Algorithm for Group Mutual Exclusion	Mie Toyomura Sayaka Kamei Hirotugu Kakugawa	Proceedings of the Fourth International Conference on Parallel and Distributed Computing, Applications and Technologies (PD-CAT'03), (2003)	pp. 742-746	
C6 Sparse Hypercube – A Minimal k-Line Broadcast Graph –	Satoshi Fujita A. Farley	Discrete Applied Mathematics, #3 (2003)	pp. 431-446	
C7 A Greedy Multicast Algorithm in k-ary n-cubes and its Worst Case Analysis	Satoshi Fujita	IEICE Trans. Inf. & Syst., E 6 D, 2 (2003)	pp. 238-245	
C8 On-Line Grid Packing with a Single Active Grid	Satoshi Fujita	Information Processing Letters, #28 (2003)	pp. 199-204	
C9 Distributed Location of Shared Resources and Its Application to the Load Sharing Problem in Heterogeneous Distributed Systems	Satoshi Fujita Shigeaki Tagashira	Proceedings of the 5th International Symposium High Performance Computing (ISHPC 2003), LNCS 2858, (2003)	pp. 393-401	
C10 On Heuristics for Solving Winner Determination Problem in Combinatorial Auctions	Masaya Mito Satoshi Fujita	Proceedings of the 2003 IEEE/WIC International Conference on Intelligent Agent Technology (IAT2003), (2003)	pp. 25-31	
C11 A Vehicle Scheduler for On-Demand Bus Systems Based on a Heuristic Cost Estimation	Satoshi Fujita Akihiko Nakatani	Proceedings of the IEEE 2003 International Conference on Intelligent Transportation Systems (ITS 2003), (2003)	pp. 1194-1199	
C12 A Fast Branch-and-Bound Scheme for the Multiprocessor Scheduling Problem with Communication Time	Satoshi Fujita Masayuki Masukawa Shigeaki Tagashira	Proceedings of the 2003 International Conference on Parallel Processing Workshops (ICPP 2003), (2003)	pp. 104-111	

P per e	A or N e	o rn o No Ye r P e
C Recursive Refinement of Lower Bounds in the Multiprocessor Scheduling Problem	Satoshi Fujita Masayuki Masukawa Shigeaki Tagashira	Proceedings of the 9th International Euro-Par Conference, Parallel Processing (Euro-Par 2003), LNCS 2790, (2003) pp. 201-205
C Optimal Neighbourhood Broadcast in Binary n-Cube	Satoshi Fujita	Proceedings of the Japan-Korea Workshop on Algorithm and Computation (WAAC03), (2003) pp. 148-154
C A Protocol-Aware Method for Dynamic Power-Saving in Wireless Communication Devices	Hideaki Maruyama Shigeaki Tagashira Satoshi Fujita	Proceedings of the IASTED International Conference on Wireless and Optical Communications (WOC 2003), (2003) pp. 543-548
C 6 Proposal of Wireless Peer-to-Peer System using the Wireless Multi-Hop Network to access Wireless Hot Spot	Hideki Shimada Shigeaki Tagashira Teruaki Kitasaka Tsuneo Nakanishi Akira Fukuda	Proceedings of the 2003 International Conference on Parallel and Distributed Processing Techniques and Applications (PDPTA2003), (2003) pp. 877-881
C A 2-Approximation Algorithm 2-ABIS for 2-Vertex-Connectivity Augmentation of Specified Vertices in a Graph	Makoto Tamura Satoshi Taoka Toshimasa Watanabe	IEICE Trans. Fundamentals, E 6 A, 4 (2003) pp. 822-828
C An algorithm GMST for extracting minimal siphon-traps and its application to efficient computation of Petri net invariants	Akihiro Taguchi Satoshi Taoka Toshimasa Watanabe	Proc. 2003 IEEE International Symposium on Circuit and Systems (ISCAS 2003), (2003) pp. III-172-III-175
C A 2-Approximation Algorithm FSA+1 to $(\lambda + 1)$ -Edge-Connect a Specified Set of Vertices in a λ -Edge-Connected Graph	Satoshi Taoka Toshiya Mashima Toshimasa Watanabe	Proc. 2003 IEEE International Symposium on Circuit and Systems (ISCAS 2003), (2003) pp. III-236-III-239
C A Heuristic Algorithm FSDC based on Avoidance of Deadlock Components in Finding Legal Firing Sequences of Petri nets	Satoshi Taoka Shinji Furusato Toshimasa Watanabe	Lecture Notes in Computer Science 2679, Springer-Verlag, Berlin, (2003) pp. 417-439
C On Riesz mean for the coefficients of twisted Rankin-selberg L-functions.	Yumiko Ichihara	Journal of Mathematical Society of Japan, , no.1 (2003) pp. 81-100
C Some cautionary notes on factor loadings estimated by principal component analysis	Manabu Sato Masaaki Ito	Proceedings of the International Meeting of the Psychometric Society IMPS2001, (2003) pp. 117-122
C The evaluation of the sum over arithmetic progressions for the coefficients of the Rankin-Selberg series	Yumiko Ichihara	Japanese Journal of Mathematics, , no.2 (2003) pp. 297-314
C Fast 3D Edge Element Analysis by the Geometric Multigrid Method using Accelerated Symmetric Gauss-Seidel Smoother	Vasil Spasov So Noguchi Hideo Yamashita	IEEE Transaction on Magnetics, , 3 (2003) pp. 1685-1688
C Development of a Tracking and Steering System in a Network Environment	So Noguchi Fumihiro Kanagawa Hideo Yamashita	IEEE Transaction on Magnetics, , 3 (2003) pp. 1646-1649
C 6 An Optimization Method for Design of SMES Coils Using YBCO Wshpnde	So Noguchi Hideo Yamashita Atsushi Ishiyama	IEEE Trans. Applied Superconductivity, 16(2), 2006, pp. 1646-1649

Paper	A or N e	Journal or No Year Pe
C 1 An Automatic Hexahedral Mesh Generation Method for Hexahedral Elements towards Rotating Machine	Toshihiro Maeda So Noguchi Hideo Yamashita	Proceedings of the 3rd Japanese-Mediterranean Workshop on Applied Electromagnetic Engineering for Magnetic and Superconducting Materials & 3rd Workshop on Superconducting Flywheels, (2003) pp. 49-50
C 2 An Optimization Method for Design of PM Motor by using Voltage Driven Finite Element Method and Genetic Algorithm	Shinya Matsutomo So Noguchi Hideo Yamashita Sigeya Tanimoto	Proceedings of 11th International Symposium on Applied Electromagnetics & Mechanics, (2003) pp. 302-303
C 3 A New Interactive Visualization System with Force Feedback for Electromagnetics Education	Yutaka Matsubayashi So Noguchi Hideo Yamashita	Proceedings of 11th International Symposium on Applied Electromagnetics & Mechanics, (2003) pp. 326-327
C 4 Object Oriented Programming for Finite Element Analysis	Youichi Takazane So Noguchi Hideo Yamashita	Proceedings of 11th International Symposium on Applied Electromagnetics & Mechanics, (2003) pp. 396-397
C 5 Automatic Hexahedral Mesh Generation for Rotating Machine	Toshihiro Maeda So Noguchi Hideo Yamashita	Record of the 14th COMPUMAG Conference on the Computation of Magnetic Fields, (2003) pp. 32-33
C 6 A New Interactive Visualization System with Force Feedback Device in 3D Electromagnetics	Yutaka Matsubayashi So Noguchi Hideo Yamashita	Record of the 14th COMPUMAG Conference on the Computation of Magnetic Fields, (2003) pp. 84-85
C 7 An Optimization Design Method for Enhancing Efficiency of PM Motor by Using Voltage Driven Finite Element Method with Adjusting Supply Voltage	Shinya Matsutomo So Noguchi Hideo Yamashita	Record of the 14th COMPUMAG Conference on the Computation of Magnetic Fields, (2003) pp. 118-119
C 8 Geometric Correction of Scanned Topographic Maps Using Capable Input Information	Takaharu Miyoshi W. Li Kazufumi Kaneda Hideo Yamashita Eihachiro Nakamae	Proceedings of 2003 International Conference on Geometric Modeling and Graphics, (2003) pp. 3-13
C 9 Detecting Auditory Information in Concentration Based on Eye Movement	Atsuo Yoshitaka Hiroyuki Seki	Proc. IEEE International Conference on Multimedia and Expo., (2003) pp. 537-540
C 10 Self-reproduction and shape formation in two and three dimensional cellular automata with conservative constraints	Katsunobu Imai Yosuke Kasai Yuya Sonoyama Chuzo Iwamoto Kenichi Morita	Proc. Eighth Int. Symposium on Artificial Life and Robotics, Beppu, (2003) pp. 377-380
C 11 Simulation of one-dimensional cellular automata by uniquely parallel parsable grammars	Jia Lee Katsunobu Imai Kenichi Morita	Theoretical Computer Science, (2003) pp. 185-200
C 12 A Survey on the Complexity Classes in Hyperbolic Cellular Automata	Chuzo Iwamoto Maurice Margenstern	Proceedings of the 6th World Multi-Conference on Systemics, Cybernetics and Informatics, Orlando, Florida, (2003)
C 13 Simulations Between Multi-dimensional Deterministic and Alternating Cellular Automata	Chuzo Iwamoto Katsuyuki Tateishi Kenichi Morita Katsunobu Imai	Fundamenta Informaticae, , 3-4 (2003) pp. 261-271
C 14 Embedding Universal Delay-Insensitive Circuits in Asynchronous Cellular Spaces	Jia Lee Susumu Adachi Ferdinand Peper Kenichi Morita	Fundamenta Informaticae, , 3-4 (2003) pp. 295-320
C 15 Expanding periodic orbits with small exponents	Yong Moo Chung	Journal of Difference Equation and Applications, , 3/4 (2003) pp. 337-341

P per e	A or N e	o rn o No Ye r P e
C Topological entropy and periodic orbits of saddle type for surface diffeomorphisms	Yong Moo Chung Michihiro Hirayama	Hiroshima Mathematical Journal, , 2 (2003) pp. 189-195
C Determination of the optimal software release time based on proportional hazards software reliability growth models	Y. Nishio T. Dohi	Journal of Quality in Maintenance Engineering, , 1 (2003) pp. 48-65
C Dependability analysis of a transaction-based multi server system with rejuvenation	H. Okamura S. Miyahara T. Dohi	IEICE Transactions on Fundamentals of Electronics, Communications and Computer Sciences (A), E 6 A, 8 (2003) pp. 2081-2090
C Estimating the mixture of proportional hazards model with incomplete data	J. W. Kim W. Y. Yun T. Dohi	Journal of Quality in Maintenance Engineering, , 3 (2003) pp. 265-278
C Discrete availability models to rejuvenate a telecommunication billing application	T. Dohi K. Iwamoto H. Okamura N. Kaio	IEICE Transactions on Communications (B), E 6 B, 10 (2003) pp. 2931-2939
C Discrete-time stochastic EMQ models with machine breakdown and repair	B. C. Giri T. Dohi	Proceedings of 9th International Conference on Reliability and Quality in Design, (2003) pp. 310-314
C Estimating discrete-time periodic software rejuvenation schedules under cost effectiveness criterion	K. Iwamoto T. Dohi N. Kaio	Proceedings of 9th International Conference on Reliability and Quality in Design, (2003) pp. 300-304
C Optimal lot sizing for an unreliable production system in discrete time setting	B. C. Giri T. Dohi	Proceedings of The 8th Annual International Conference on Industrial Engineering: Theory, Applications and Practice, (2003) pp. 968-973
C Maximizing interval reliability in operational software system with rejuvenation	H. Suzuki T. Dohi N. Kaio K. S. Trivedi	Proceedings of 14th International Symposium on Software Reliability Engineering, (2003) pp. 246-256
C An iterative scheme for maximum likelihood estimation in software reliability modeling	H. Okamura T. Watanabe T. Dohi	Proceedings of 14th International Symposium on Software Reliability Engineering, (2003) pp. 479-490
C Optimal lot sizing for an unreliable manufacturing system under cost-effectiveness criterion	B. C. Giri T. Dohi	Proceedings of the 9th Asia Pacific Management Conference - Managing in the E-Era -, (2003) pp. 667-678
C Analysis of periodic software rejuvenation policies based on net present value approach	T. Danjou T. Dohi N. Kaio S. Osaki	Proceedings of 2nd International Conference on Quality, Reliability and Information Technology, (2003)
C Some remarks on Littlewood software reliability model	H. Okamura T. Dohi S. Osaki	Proceedings of 2nd International Conference on Quality, Reliability and Information Technology, (2003)
C 6 A stochastic model on warranty period extension service contract	K. Rinsaka H. Sandoh	Electronic Proceedings of 17th International Conference on Production Research, (2003)
C A stochastic model on an additional warranty service contract providing corrective replacements	K. Rinsaka H. Sandoh	Proceedings of International Workshop on Reliability and Its Applications, (2003) pp. 306-311
C A new graphical method to estimate the optimal repair-time limit with incomplete repair and discounting	T. Dohi N. Kaio S. Osaki	Computers & Mathematics with Applications, 6, 7 (2003) pp. 999-1007

Paper	A or N e	Journal or No Year Pe
C A structural approximation method to generate the optimal auto-sleep schedule for a computer system	H. Okamura T. Dohi S. Osaki	Computers & Mathematics with Applications, 46, 7 (2003) pp. 1103-1110
C6 The optimal repair-time limit replacement policy with imperfect repair: Lorenz transform approach	T. Dohi A. Ashioka N. Kaio S. Osaki	Mathematical and Computer Modelling, , 11/13 (2003) pp. 1169-1176
C6 Software reliability assessment models based on cumulative Bernoulli trial processes	T. Dohi K. Yasui S. Osaki	Mathematical and Computer Modelling, , 11/13 (2003) pp. 1177-1184
C6 The phase type approximation for the optimal auto-sleep scheduling	H. Okamura T. Dohi S. Osaki	Mathematical and Computer Modelling, , 11/13 (2003) pp. 1391-1398
C6 Vertex correspondence for compatible convex decompositions between polygons	Anuja Dharmaratne Koichi Harada	Proc. CGIM2003, (2003) pp. 111-116
C6 An automatic system for counting and capturing the pictures of moving vehicles in real-time	Manoj Perera Koichi Harada	Proc. IV2003, (2003) pp. 85-89
C6 Towards 2D image morphing	Anuja Dharmaratne Koichi Harada	Proc. VIIP2003, (2003) pp. 31-36
C6 Sequential reconstruction with factorization method	Xu Xiaolong Koichi Harada	Proc. VIIP2003, (2003) pp. 72-77
C6 Sequential reconstruction with factorization method	Xu Xiaolong Koichi Harada	Proc. IMVIP2003, (2003) pp. 65-71
C6 Vertex correspondence between polygons in different applications	Anuja Dharmaratne Koichi Harada	Machine Graphics and Vision, , 3 (2003) pp. 311-333
C6 Automatic surface reconstruction with alpha-shape method	Xu Xiaolong Koichi Harada	Visual Computer, , 7-8 (2003) pp. 431-443
C6 A Markov random field-based approach to decision level fusion for remote sensing image classification	Ryuei Nishii	IEEE Transactions on Geoscience and Remote Sensing, 41, 10 (2003) pp. 2316-2319
C6 Morphological texture analysis using optimization of structuring elements	Akira Asano Miho Miyagawa Mitsuhiko Fujio	Geometry, Morphology, and Computational Imaging, Springer LNCS, 2616 (2003) pp. 141-152
C6 Primitive and Point Configuration Texture Model and Primitive Estimation using Mathematical Morphology	Akira Asano Takeshi Ohkubo Mitsuji Muneyasu Takao Hinamoto	Proc. 13th Scandinavian Conference on Image Analysis, Springer LNCS, 2749 (2003) pp. 178-185
C6 Modification of spatial distribution in Primitive and Point Configuration texture model	Yasushi Kobayashi Akira Asano	Proc. 13th Scandinavian Conference on Image Analysis, Springer LNCS, 2749 (2003) pp. 877-884
C6 A Novel Evaluation Method of Visual Impression of Black Fabrics	Chie Muraki Asano Akira Asano Machiko Murakami Takako Fujimoto	Journal of the Asian Design International Conference, (2003)
C6 Discriminal Exploration of Image Features for Describing Visual Impressions of Black Fabrics	Satoshi Hirakawa Chie Muraki Asano Naoko Hamahashi Akira Asano	Design and Application of Hybrid Intelligent Systems, Frontiers in Artificial Intelligence and Applications, 4 (2003) pp. 509-518
C6 REMarks on universal functions of $O(C^*)$	Makoto Abe Teisuke Jin Tadashi Shima	Hiroshima Mathematical Journal, , 1 (2003)
C6 Extracting Spatial Knowledge from the Web	Yasuhiko Morimoto Masaki Aono Michael Houle Kevin McCurley	Proceedings of the International Symposium on Applications and the Internet, (2003) pp. 326-333

P per e	A or N e	o rn o No Ye r P e
C▼ Characterization of Balanced Fractional 2 ^m Factorial designs of Resolution R*(1 3) and GA-optimal Designs	Masahide Kuwada Yoshifumi Hyodo Dong Han	J. Japan Statist. Soc., , 2 (2003) pp. 181-201

D. Chemistry and Chemical Engineering

P per e	A or N e	o rn o No Ye r P e
D Nanoparticle Synthesis by Ionizing the Source Gas in Chemical Vapor Deposition	M. Adachi S. Tsukui K. Okuyama	Jpn. J. Appl. Phys. Part-2/Lett., 41A-B (2003) pp. L77-L79
D Airborne organic contamination behavior on silicon wafer surface	H. Habuka S. Ishiwari H. Kato M. Shimada K. Okuyama	J. Electrochem. Soc., , 2 (2003) pp. G148-G154
D Unipolar charging of nanosized aerosol particles using soft X-ray photoionization	B. Han M. Shimada M. Choi K. Okuyama	Aerosol Sci. Technol., 37, 4 (2003) pp. 330-341
D In-Situ Synthesis of Polymer Nanocomposite Electrolytes Emitting a High Luminescence with a Tunable Wavelength	M. Abdullah I. W. Lenggoro K. Okuyama F. G. Shi	J. Phys. Chem. B, 107, 9 (2003) pp. 1957-1961
D Optical band gap and ultralow dielectric constant materials prepared by a simple dip coating process	F. Iskandar M. Abdullah H. Yoden K. Okuyama	J. Appl. Phys., 90, 11 (2003) pp. 9237-9242
D6 Time-dependent airborne organic contamination on silicon wafer surface stored in a plastic box	H. Habuka Y. Shimazaki S. Okamura F. Sugimoto T. Takeuchi M. Aihara M. Shimada K. Okuyama	Jpn. J. Appl. Phys., 42, 4A (2003) pp. 1575-1580
D▼ Nanoparticle formation mechanism in CVD reactor with ionization of source vapor	M. Adachi S. Tsukui K. Okuyama	J. Nanoparticle Res., 5, 1 (2003) pp. 31-38
D Formation of single crystallite ZnO nanoparticle by salt-assisted spray pyrolysis	C. Panatarani I. W. Lenggoro K. Okuyama	J. Nanoparticle Res., 5, 1 (2003) pp. 47-54
D Large-scale production of CdSe nanocrystal by a continuous flow reactor	M. Kawa H. Morii A. Ioku S. Saita K. Okuyama	J. Nanoparticle Res., 5, 1 (2003) pp. 81-86
D Synthesis of Non-agglomerated Nanoparticles by An Electrospray Assisted Chemical Vapor Deposition (ES-CVD) Method	K. Nakaso B. Han K. H. Ahn M. Choi K. Okuyama	J. Aerosol Sci., 34, 7 (2003) pp. 869-881
D Characterization of particle contamination in process steps during plasma-enhanced chemical vapor deposition operation	H. Setyawan M. Shimada Y. Imajo Y. Hayashi K. Okuyama	J. Aerosol Sci., 34, 7 (2003) pp. 923-936
D Preparation of Nanoparticle via Spray Route	K. Okuyama I. W. Lenggoro	Chem. Eng. Sci., 58, 3-6 (2003) pp. 537-547

Paper	Author	Journal	Volume	Year	Page
D 5 Measurement of Cluster Ions and Determination of Residues in Water Samples with an Electrospray/Differential Mobility Analyzer	B. Han I. W. Lenggoro M. S. Choi K. Okuyama	Anal. Sci.	, 6 (2003)		pp. 843-851
D 4 Effect of reaction temperature on CVD-made TiO ₂ primary particle diameter	K. Nakaso K. Okuyama M. Shimada S. E. Pratsinis	Chem. Eng. Sci.	, 15 (2003)		pp. 3327-3335
D 3 Preparation of microencapsulated powders by an aerosol spray method and their optical properties	F. Iskandar H. K. Chang K. Okuyama	Adv. Powder Technol.	, 3 (2003)		pp. 349-367
D 6 Charged Nanoparticle Formation from Humidified Gases with and without Dilute Benzene under Electron Beam Irradiation	T. Hakoda H. H. Kim K. Okuyama T. Kojima	J. Aerosol Sci.	, 8 (2003)		pp. 977-991
D 5 Size Tunable Synthesis of Highly Crystalline BaTiO ₃ nanoparticles using Salt-Assisted Spray Pyrolysis	Y. Itoh I. W. Lenggoro K. Okuyama L. Madler S. E. Pratsinis	J. Nanoparticle Res.	, 3-4 (2003)		pp. 191-198
D 2 Experimental Evaluation of the Optical Properties of Porous Silica/Carbon Composite Particles	H. K. Chang K. Okuyama W.				

P per e	A or N e	o rn o No Ye r P e
D Effect of NaOH on aragonite precipitation in batch and continuous crystallization in	Haruo Konno Yasunori Nanri Mitsutaka Kitamura	Powder Technology, (2003) pp. 15-21
D A generalized correlation for Henry's Law constants of nonpolar solutes in four polymers	Shigeki Takishima Gede Wibawa Yoshiyuki Sato Hirokatsu Masuoka	Fluid Phase Equilibria, (2003) pp. 241-256
D Modification of Simha-Somcynsky Equation of State for the Vapor-Liquid Equilibrium Calculation of Gas-Polymer Mixtures	Shigeki Takishima Ming Wang Yoshiyuki Sato Hirokatsu Masuoka	International Symposium on Molecular Thermodynamics and Molecular Simulation (MTMS'03), (2003)
D Solubility of Monomers in Polyethylene Copolymer Melts	Yoshiyuki Sato Kenzo Inohara Shigeki Takishima Hirokatsu Masuoka	20th European Symposium on Applied Thermodynamics (ESAT2003), (2003) pp. 267-271
D Crystallization of Polylactide Induced by Supercritical Carbon Dioxide	Yoshiyuki Sato Kumiko Takeuchi Shigeki Takishima Hirokatsu Masuoka	Polymer-Supercritical Fluid Systems and Foams, (2003) pp. 83-86
D Viscosity Measurement and Prediction for Polystyrene + Carbon Dioxide Mixture	Yoshiyuki Sato Akira Ideguchi Kenji Sakata Shigeki Takishima Hirokatsu Masuoka	Polymer-Supercritical Fluid Systems and Foams, (2003) pp. 135-138
D Solubility of Carbon dioxide in Polymer	Yoshiyuki Sato Shigeki Takishima Hirokatsu Masuoka	Polymer-Supercritical Fluid Systems and Foams, (2003) pp. 139-140
D A Fundamental Study for Microcellular Poly(ethylene terephthalate) Production Using Supercritical Fluids	Yoshiyuki Sato Tetsuya Chikatsune Kazunari Hayashi Shigeki Takishima Hirokatsu Masuoka Hirokazu Yamamoto Masanobu Takasugi	Polymer-Supercritical Fluid Systems and Foams, (2003) pp. 145-146
D Solubility of Condensable Gases in Polymers	Ming Wang Yoshiyuki Sato Shigeki Takishima Hirokatsu Masuoka	Polymer-Supercritical Fluid Systems and Foams, (2003) pp. 141-144
D Separation of V from Fe-rich Leachant of Heavy Oil Fly Ash - Application of An Ion Exchange Moving Bed	Hideaki Tokuyama Susumu Nii Fumio Kawaizumi Katsuroku Takahashi	J. Chem. Eng. Japan, 6, 4 (2003) pp. 486-492
D Process Development for Recovery of Vanadium and Nickel from Heavy Oil Fly Ash by Leaching and Ion Exchange	Hideaki Tokuyama Susumu Nii Fumio Kawaizumi Katsuroku Takahashi	Sep. Sci. Technol., 6 (2003) pp. 1329-1344
D Role of Pressure Drop in Counter-current Multistage Fluidized Bed of Solid-liquid System - Effect of Non-uniform Liquid Flow	Hideaki Tokuyama Masayuki Natsume Susumu Nii Fumio Kawaizumi Katsuroku Takahashi	J. Chem. Eng. Japan, 6, 1 (2003) pp. 98-104
D Synthesis of Thermo-Sensitive Poly(N-alkylacrylamide) Gel by Amidation of Poly(acrylic acid) Gel	Takashi Iizawa Yoshinobu Matsuura Kazuya Hashida Yukio Onohara	Polymer J., 10 (2003) pp. 815-818
D Separation of Heavy Metal Ions by Using Molecular Imprinted Thermosensitive Gels	Ryoichi Kanazawa Shuji Sakohara	5th Korea-Japan Symposium on Materials, (2003) pp. 51
D The Application of Thermosensitive Porous Gel for Dewatering of Organic Slurry	Takehiko Gotoh Hiroshi Okamoto Shuji Sakohara	5th Korea-Japan Symposium on Materials, (2003) pp. 14

P per e	A or N e	o rn o No Ye r P e
D⁴ Pervaporation and vapor permeation characteristics of a porous SiO ₂ -ZrO ₂ membrane for separation of organic solvents/water mixtures	Masashi Asaeda Yasufumi Tasaka	Membranes - Preparation, Properties and Applications, Materials Research Society Symposium Proceedings, (2003) pp. 251-256
D⁴6 Gas permeation characteristics and stability of composite silica-metal oxide membranes	Masashi Asaeda Masakoto Kanezashi Tomohisa Yoshioka Toshinori Tsuru	Membranes - Preparation, Properties and Applications, Materials Research Society Symposium Proceedings, (2003) pp. 213-218
D⁴7 Structurally composite membranes of titanium oxide and titanium phosphorus oxide for proton conduction at intermediate temperatures	Toshinori Tsuru Yasuhiro Yagi Yosuke Kinoshita Tomohisa Yoshioka Masashi Asaeda	Membranes - Preparation, Properties and Applications, Materials Research Society Symposium Proceedings, (2003) pp. 103-108
D⁴8 Organic/inorganic nanohybrid membranes for nanofiltration of nonaqueous solutions	Toshinori Tsuru Hiroyasu Kondo Tomohisa Yoshioka Masashi Asaeda	Membranes - Preparation, Properties and Applications, Materials Research Society Symposium Proceedings, (2003) pp. 97-102
D⁴9 Photocatalytic membrane reactor using porous titanium oxide membranes	Toshinori Tsuru Terutaka Toyosada Tomohisa Yoshioka Masashi Asaeda	Journal of Chemical Engineering of Japan, 36, 9 (2003) pp. 1063-1069
D⁴10 A photocatalytic membrane reactor for gas-phase reactions using porous titanium oxide membranes	Toshinori Tsuru Takehiro Kan-no Tomohisa Yoshioka Masashi Asaeda	Catalysis Today, 81 (2003) pp. 41-48
D⁴11 Characterization of sol-gel derived membranes and zeolite membranes by nanoporometry	Toshinori Tsuru Yuko Takata Hiroyasu Kondo Fumi Hirano Tomohisa Yoshioka Masashi Asaeda	Separation and Purification Technology, 51 (2003) pp. 23-27
D⁴12 Permeation mechanism of water through microporous SiO ₂ -ZrO ₂ membranes for separation of aqueous solutions of organic solvents by pervaporation	Jianhua Yang Masashi Asaeda	Separation and Purification Technology, 51 (2003) pp. 29-36
D⁴13 Inorganic porous membranes for nanofiltration of nonaqueous solutions	Toshinori Tsuru Masashi Miyawaki Hiroyasu Kondo Tomohisa Yoshioka Masashi Asaeda	Separation and Purification Technology, 51 (2003) pp. 105-109
D⁴14 Condensable vapor permeation through miroporous silica membranes studied with molecular dynamics simulation	Tomohisa Yoshioka Toshinori Tsuru Masashi Asaeda	Separation and Purification Technology, 51 (2003) pp. 231-237
D⁴15 Titanium phosphorus oxide membranes for proton conduction at intermediate temperatures	Toshinori Tsuru Yasuhiro Yagi Yosuke Kinoshita Masashi Asaeda	Solid State Ionics, 161 (2003) pp. 343-350
D⁴16 Effect of Apex Cone Height on Particle Classification Performance of a Cyclone Separator	Hideto Yoshida Kwan-Sik Yang Kunihiro Fukui Satoshi Akiyama Satoru Taniguchi	Advanced Powder Technology, 14, 3 (2003) pp. 263-278
D⁴17 Particle Size Measurement of Standard Reference Particle Candidates with Improved Size Measurement Devices, Advanced Powder Technology	Hideto Yoshida Hiroaki Masuda Kunihiro Fukui Yuusuke Tokunaga K. Takarada T. Sakurai H. Matsumoto	Advanced Powder Technology, 14, 1 (2003) pp. 17-31
D⁴18 Elaborate Control of Cut Size with Revised Dry Cyclone	Hideto Yoshida Satoru Taniguchi Kunihiro Fukui	The 2nd Asian Particle technology Symposium 2003, (2003) pp. 305-311

P per e	A or N e	o rn o No Ye r P e
D Effect of Blade Angle on Pulverizing Characteristics by an Impact Mill	S. Akiyama T. Fujii H. Yoshida	The 2nd Asian Particle technology Symposium 2003, (2003) pp. 429-434
D6 Phillipsite Synthesis from Fly Ash and Rice Husk Ash Prepared by Hydrothermal Treatment	Kunihiro Fukui Mayumi Takiguchi Tatsunori Noriyasu Hideto Yoshida	The 2nd Asian Particle technology Symposium 2003, (2003) pp. 263-268
D6 Tribological behavior of aluminum alloys in a vibratory finishing process	M.R. Baghbanan A. Yabuki R.S. Timsit J.K. Spelt	Wear, (2003) pp. 1369-1379
D6 Measurements of Plastic Strain around Indentations Caused by the Impact of Round and Angular Particles, and the Origin of Erosion	Yoshinori Isomoto Oka Kazuo Nagahashi	Wear, (2003) pp. 1267-1275
D6 Organic Field-Effect Transistor Using Oligoselenophene as an Active Layer	Y. Kunigi K. Takimiya K. Yamane K. Yamashita Y. Aso T. Otsubo	Chem. Mater., (2003) pp. 6-7
D6 TTF-Porphyrin Dyads as Novel Photoinduced Electron Transfer Systems	S. Sadaike K. Takimiya Y. Aso T. Otsubo	Tetrahedron Lett., (2003) pp. 161-165
D6 Incommensurate Anion Potential Effect on the Electronic States of the Organic Superconductor (MDT-TSF)(AuI ₂) _{0.436}	T. Kawamoto T. Mori C. Terakuma T. Terashima S. Uji K. Takimiya T. Otsubo	Phys. Rev. B, 67, pp. 020508(R)1-4 (2003), 6 (2003) pp. 020508R1-4
D66 Synthesis and Properties of Conductive Radical Cation Salts of MDT-TSF (Methylenedithiotetraseslenafulvalene)	K. Takimiya Y. Kataoka M. Kodani Y. Aso T. Otsubo	Synth. Met., (2003) pp. 185-187
D6 Organic Superconductors Based on a New Electron Donor, Methylenedithiodiselenathiafulvalene (MDT-ST)	K. Takimiya A. Takamori Y. Aso T. Otsubo T. Kawamoto T. Mori	Chem. Mater., (2003) pp. 1225-1227
D6 Oligothiophene/fullerene Dyads as Active Photovoltaic Materials	N. Negishi K. Yamada K. Takimiya Y. Aso T. Otsubo Y. Harima	Chem. Lett., (2003) pp. 404-405
D6 Synthesis and Spectroscopic Properties of a Series of b-Blocked Long Oligothiophenes up to the 96-mer: revaluation of Effective Conjugation Length	T. Izumi S. Kobashi K. Takimiya Y. Aso T. Otsubo	J. Am. Chem. Soc., (2003) pp. 5286-5287
D6 A General Method for the Synthesis of Alkylenedithio- and bis(alkylenedithio)tetraselenafulvalenes	K. Takimiya Y. Kataoka N. Niihara Y. Aso T. Otsubo	J. Org. Chem., 6 (2003) pp. 5217-5224
D6 New Organic Superconductors with an Incommensurate Anion Lattice Consisting of Polyhalide Chains (MDT-TSF) _{Xy} (MDT-TSF = Methylenedithiotetraseslenafulvalene; X = Halogen; y = 1.27-1.29)	K. Takimiya M. Kodani Y. Kataoka Y. Aso T. Otsubo T. Kawamoto T. Mori	Chem. Mater., (2003) pp. 3250-3255

P per e	A or N e	o rn o No Ye r P e
D▼ ESR Studies on Polarons in Long Oligothiophenes	K. Kanemoto T. Kato Y. Aso T. Otsubo	Phys. Rev. B, 6 (2003) pp. 092302-1-4
D▼ Synthesis and Structures of Neutral Crystals and Charge-Transfer Salts of Selenium Containing TMET-TTP Derivatives	M. Ashizawa H. Nii T. Mori Y. Misaki K. Tanaka T. Otsubo	Bull. Chem. Soc. Jpn., 6 (2003) pp. 2091-2097
D▼ Photoexcitation and Electron transfer Properties of Rod- and Coil-Type Oligo(thienylene-ethynylene)s	M. Fujitsuka T. Makinoshima O. Ito Y. Obara Y. Aso T. Otsubo	J. Phys. Chem. B, 6 (2003) pp. 739-746
D▼ Electronic Properties of (DMTSA)BF ₄ at Ambient Pressure	M. Nagasawa K. Kawabata T. Sambongi P. Monceau T. Otsubo	Synth. Met., 6 (2003) pp. 639-640
D▼ 6 Synthesis and Properties of Selenium-Containing TTM-TTP Conductors	M. Ashizawa H. Nii T. Kawamoto T. Mori Y. Misaki K. Tanaka K. Takimiya T. Otsubo	Synth. Met., 6 (2003) pp. 627-628
D▼ Spectroscopic and Theoretical Study of Push-pull Chromophores Containing Thiophene-based Quinonoid Structures as Electron Spacers	B. Miilian E. Orti V. Hernandez J. T. L. Navarrete T. Otsubo	J. Phys. Chem. B, 6 (2003) pp. 12175-12183
D▼ Synthetic Studies of Extraordinarily Long Oligothiophenes	T. Otsubo Y. Aso K. Takimiya H. Nakanishi N. Sumi	Synth. Met., 6 (2003) pp. 325-328
D▼ Electronic state anisotropy and the Fermi Surface topology of the incommensurate organic superconducting crystal (MDT-TSF)(AuL2)0.436	T.Kawamoto T.Mori C.Terakura T.Terashima S.Uji H.Tajima K.Takimiya Y.Aso T.Otsubo	Eur.Phys.J.B, 6 (2003) pp. 161-167
D▼ Synthesis and Properties of Silicon-Bridged Bithiophenes and Application to EL Devices	A. Kunai J. Ohshita T. Iida K. Kanehara A. Adachi K. Okita	Syn. Met., 6 (2003) pp. 1007-1008
D▼ Synthesis of organosilanylene-pentathienylene alternating polymers and their application to the hole-transporting materials in double-layer electroluminescent devices	J. Ohshita K. Yoshimoto M. Hashimoto D. Hamamoto A. Kunai Y. Harima Y. Kunugi K. Yamashita M. Kakimoto M. Ishikawa	J. Organomet. Chem., 66 (2003) pp. 29-32

P per e	A or N e	o rn o No Ye r P e
D PdCl ₂ and NiCl ₂ -catalyzed hydrogen-halogen exchange for the convenient preparation of bromo- and iodosilanes and germanes	A. Iwata Y. Toyoshima T. Hayashida T. Ochi A. Kunai J. Ohshita	J. Organomet. Chem., 66 (2003) pp. 90-95
D Thermal Isomerization of an Acyl(ethenyl)disilane via 2-Siladiene Intermediates	J. Ohshita H. Takayama M. Tamai T. Iida A. Kunai	Organometallics, (2003) pp. 2338-2341
D Thermal Isomerization of 1,2-Diadamantoyltetrakis(trimethylsilyl)disilane via a 2,3-Disilabutadiene Intermediate	J. Ohshita H. Takayama M. Ishikawa A. Kunai	J. Organomet. Chem., 6 (2003) pp. 72-76
D Substitution Effects on the Thermal Extrusion of Silylenes from 1,1-Diarylsilacycloprenes	J. Ohshita N. Honda K. Nada T. Iida T. Miura Y. Matsuo A. Kunai A. Naka M. Ishikawa	Organometallics, (2003) pp. 2436-2441
D Hole-Transporting Properties of Organosilanylene-Diethynylpyrene and Diethynylanthracene Alternating Polymers. Applications to Patterning of Light-Emitting Images	J. Ohshita K. Yoshimoto Y. Tada Y. Harima A. Kunai Y. Kunugi K. Yamashita	J. Organomet. Chem., 6 (2003) pp. 33-38
D Synthesis of organosilanylene-thiethylene alternating oligomers bearing ether side chains	J. Ohshita M. Hashimoto K.-H. Lee H. Yoshida A. Kunai	J. Organomet. Chem., 6 (2003) pp. 267-271
D Selective synthesis of halosilanes from hydrosilanes and utilization for organic synthesis	A. Kunai J. Ohshita	J. Organomet. Chem., 6 (2003) pp. 3-15
D Spin-Spin Interaction between Phenyl Nitroxides through s-p System	T. Iida T. Uemura H. Fukuoka N. Ohta K. Komaguchi Y. Itagaki M. Shiotani S. Yamanaka A. Kunai J. Ohshita	Silicon Chemistry, in pre (2003)
D Synthesis of Silicon-Bridged Benzcrown Ethers as the Novel Ion-Sensing Chromophores Based on Sigma-Pai System	J. Ohshita T. Inoue T. Iida T. Uemura A. Kunai	Silicon Chemistry, in pre (2003)
D Base-free Oxidative Homocoupling of Arylboronic Esters	H. Yoshida Y. Yamaryo J. Ohshita A. Kunai	Tetrahedron Lett., 44 (2003) pp. 1541-1544
D Activator-free Oxidative Homocoupling of Organosilanes Catalysed by a Palladium-DPPP Complex	H. Yoshida Y. Yamaryo J. Ohshita A. Kunai	Chem. Commun., (2003) pp. 1510-1511
D Palladium-Catalyzed Bissilylation of Arynes with Cyclic Disilanes: Synthesis of Benzo-Annulated Disilacarbocycles	H. Yoshida J. Ikadai M. Shudo J. Ohshita A. Kunai	J. Am. Chem. Soc., (2003) pp. 6638-6639

P per , e	A or N e	o rn o No Ye r P e
D 4 Preparation of Pt Dispersed Porous Carbon Particles from Polyimide Particles	Hisashi Tamai Sayaka Nakatsuchi Hajime Yasuda	J. Mater. Sci., 9 (2003) pp. 1859-1868
D New Pt and Pt/Ru Supported Carbon Particles for Polymer Electrolyte Fuel Cell	Hisashi Tamai Sayaka Nakatsuchi Yoshiya Kera Hajime Yasuda	J. Mater. Sci. Lett., 2 (2003) pp. 145-148
D 6 Simple Preparation and Catalytic Activity of Pd Particles Dispersed Mesoporous Carbons from Poly(VDC/MA) Containing Pd and Y Compounds	Hisashi Tamai Junichi Ogawa Hajime Yasuda	J. Colloid Interface Sci., 6, 2 (2003) pp. 312-316
D Preparation of Highly Mesoporous and High Surface Area Activated Carbons from Vinylidene Chloride Copolymer Containing Yttrium Acetylacetone	Hisashi Tamai Masayuki Kouzu Hajime Yasuda	Carbon, 8 (2003) pp. 1678-1681
D Highly Mesoporous Carbon Electrodes for Electric Double-Layer Capacitor	Hisashi Tamai Masayuki Kouzu Masayuki Morita Hajime Yasuda	Electrochim. Solid State Lett., 6, 10 (2003) pp. A214-A217
D Syntheses of Bis- and Tetra(trimethylsilyl) Substituted Lanthocene Methyl Complexes and Their Catalyses for Polymerizations of Methyl Methacrylate, <i>e</i> -Caprolactone and L-Lactide	Yoshinori Sato Noriko Ikitake Yuushou Nakayama Shingo Okuno Hajime Yasuda	J. Organomet. Chem., 66, 1-2 (2003) pp. 42-52
D Synthesis, Structure, and Olefin Polymerization Catalysis of a Novel Vanadium(III) 1,1-Bi-2-naphtholate Complex	Yoshinori Sato Yuushou Nakayama Hajime Yasuda	J. Appl. Polym. Sci., 6 (2003) pp. 1659-1662
D Ring-Opening Metathesis Polymerization of Norbornene with Catecholato Complexes of Tungsten(VI) as Effective Catalyst Precursors	Yuushou Nakayama Kouhei Katsuda Hajime Yasuda	Polym. J., 11 (2003) pp. 896-900
D Stereospecific Ring-Opening Metathesis Polymerization of Cycloolefins Using Novel Molybdenum and Tungsten Complexes Having Biphenolate Ligands. Development of Crystalline Hydrogenated Poly(endocyclicpentadiene) and Poly(norbornene)	Shigetaka Hayano Hiroshi Kurakata Yasuo Tsunogae Yuushou Nakayama Yoshinori Sato Hajime Yasuda	Macromolecules, 6, 20 (2003) pp. 7422-7431
D Facile Syntheses of Bis[1-(arylimino)ethyl]pyridine-MoCl ₃ /MMAO Catalytic Systems and Their Dual Catalytic Functions for ROMP of Norbornene and Linear Polymerization of Ethylene	Kohji Hiya Yuushou Nakayama Hajime Yasuda	Macromolecules, 6, 21 (2003) pp. 7916-7922
D 4 Stereospecific Polymerizations of Conjugated Dienes by Single Site Iron Complexes Having Chelating N,N,N-Donor Ligands	Yuushou Nakayama Yuji Baba Hajime Yasuda Keiko Kawakita Norikazu Ueyama	Macromolecules, 6, 21 (2003) pp. 7953-7958
D Biodegradations of Block Copolymers Composed of L- or D,L-Lactide and Six-membered Cyclic Carbonates Prepared with Organolanthanide Initiators	Chikara Tsutsumi Katsuhiro Yamamoto Akiko Ichimaru Mitsufumi Nodono Katsuhiro Nakagawa Hajime Yasuda	J. polym. sci., A, Polym. chem., 22 (2003) pp. 3572-3588
D 6 Isospecific Polymerizations of Alkyl Methacrylates with a Bis(alkyl)Yb Complex and Formation of Stereocomplexes with Syndiotactic Poly(alkyl methacrylate)s	Guizhong Qi Yuu Nitto Akira Saiki Taketoshi Tomohiro Yuushou Nakayama Hajime Yasuda	Tetrahedron, 52 (2003) pp. 10409-10418
D The Effect of pH on Sorption of 2,4-D on Three Soils	Ilka Nishiguchi Yorimitsu Kodama Toshiko Komatsu Sotaro Ito	Environ. Eng. Res., 1 (2003) pp. 697-703

P per e	A or N e	o rn o No Ye r P e
D High-sensitive capillary zone electrophoresis analysis by electrokinetic injection with transient isotachophoretic preconcentration: Electrokinetic supercharging	Takeshi Hirokawa Hikaru Okamoto Bohuslav Gas	Electrophoresis, 4 (2003) pp. 53-504
D High-sensitive capillary gel electrophoretic analysis of DNA fragments on an electrophoresis microchip using electrokinetic injection with transient isotachophoresis preconcentration	Zhongqi Xu Takeshi Hirokawa Tsutomu Nishine Akihiro Arai	J.Chromatogr, 4 (2003) pp. 53-61
D Application of electrokinetic supercharging capillary zone electrophoresis to rare-earth ore samples	Hikaru Okamoto Takeshi Hirokawa	J.Chromatogr, 4 (2003) pp. 335-341
D Specific analyte-electrolyte additive interaction in transient isotachophoresis-capillary electrophoresis	Takeshi Hirokawa Teppei Ichihara Andrei R. Timerbaev	J.Chromatogr., 4 (2003) pp. 205-209
D Trace ion analysis of seawater by capillary electrophoresis: determination of iodide using transient isotachophoretic preconcentration	Takeshi Hirokawa Teppei Ichihara Kazuaki Ito Andrei R. Timerbaev	Electrophoresis, 4 (2003) pp. 2328-2334
D Mechanistic Study on Analyte Focusing by Dynamic pH Junctionin Capillary Electrophoresis Using Computer Simulation,	Jong-Bok Kim Philip Britz-Mckibbin Takeshi Hirokawa Shigeru Terabe	Anal. Chem., 16 (2003) pp. 3986-3993
D Determination of trace iodide in seawater by capillary electrophoresis following transient isotachophoretic preconcentration. Comparison with ion chromatography	Kazuaki Ito Teppei Ichihara Huang Zhuo K Kumamoto Andrei R. Timerbaev Takeshi Hirokawa	Anal. Chim. Acta, 4 (2003) pp. 67-74
D Electrokinetic supercharging preconcentration and microchip gel electrophoretic separation of SDS-protein complexes	Zhongqi Xu Tomomi Ando Tsutomu Nishine Akihiro Arai Takeshi Hirokawa	Electrophoresis, 4 (2003) pp. 3821-3827
D Trace ion analysis of sea-water by capillary electrophoresis: determination of strontium and lithium pre-concentrated by transient isotachophoresis	Hikaru Okamoto Yasuaki Okamoto Takeshi Hirokawa Andrei R. Timerbaev	Analyst, 4 (2003) pp. 1439-1442
D Characterization of individual aerosol particles using an x-ray microprobe	S. Hayakawa S. Tohno A. Hamamoto M. Suzuki T. Hirokawa	J. Phys. IV France, 4 (2003) pp. 309-312
D Evolution of the Ka x-ray satellites for Fe, Ni and Zn: From threshold to saturation	K. Kawatsura T. Morikawa K. Takahiro M. Oura H. Yamaoka K. Maeda S. Hayakawa S. Ito M. Terasawa T. Mukoyama	J. Phys. B: At. Mol. Opt. Phys, 6 (2003) pp. 4065-4072
D Synthesis of organosilanylene-pentathienylene alternating polymers and their application to the hole-transporting materials in double-layer electroluminescent devices	J. Ohshita K. Yoshimoto M. Hashimoto D. Hamamoto A. Kunai Y. Harima Y. Kunugi	J. Organomet. Chem., 66 (2003) pp. 29-32

P per / e	A or N e	o rn o No Ye r P e
D Optical and electrochemical study of a series of monosilanylene-oligothienylene copolymers in solution	X. Jiang Y. Harima K. Yamashita A. Naka K.K. Lee M. Ishikawa	J. Mater. Chem., (2003) pp. 785-794
D A transport study of poly(3-hexylthiophene) films with different regioregularities	X. Jiang Y. Harima K. Yamashita Y. Tada J. Ohshita A. Kunai	Synth. Metals, (2003) pp. 351-352
D Spontaneous buildup of giant surface potential by the deposition of AlQ ₃	E. Ito Y. Washizu H. Hayashi H. Ishii N. Matsue K. Tsuboi Y. Harima	Synth. Metals, ▼ (2003) pp. 911-912
D Oligothiophene/fullerene dyads as active photovoltaic materials	N. Negishi K. Yamada K. Takimiya Y. Aso T. Otsubo Y. Harima	Chem. Lett., (2003) pp. 404-405
D Influence of p-conjugation length on mobilities of charge carriers in conducting polymers	Y. Harima X. Jiang Y. Kunugi K. Yamashita A. Naka K.K. Lee M. Ishikawa	J. Mater. Chem., (2003) pp. 1298-1305
D Hole-transporting properties of organosilanylene-diethynylpyrene and diethynylanthracene alternating polymers. Applications to patterning of light-emitting images	J. Ohshita K. Yoshimoto Y. Tada Y. Harima A. Kunai Y. Kunugi K. Yamashita	J. Organomet. Chem., 6▼ (2003) pp. 33-38
D Long-lived mutagenic radicals induced in mammalian cells by ionizing radiation are mainly localized to proteins	J. Kumagai K. Masui Y. Itagaki M. Shiotani S. Kodama M. Watanabe T. Miyazaki	Radiation Research, 6 (2003) pp. 95-102
D Structure and dynamics of radicals in zeolite matrices: CW and pulsed ESR studies	Wei Liu anders Lund Masaru Shiotani Jacek Michalik	App. Mag. Res., ▲ (2003) pp. 285-302
D Nitric oxide adsorbed on zeolites: EPR studies	H. Yahirō A. Lund M. Shiotani	Spectrochimica Acta. A, , n pre (2003) pp. #1-#12
D Spin-spin interaction between phenoxyl radicals through σ - π system	T. Iida J. Ohshita N. Ohta K. Komaguchi Y. Itagaki M. Shiotani A. Kunai	J. Organomet. Chem., 6 (2003) pp. 192-199
D Electrosynthesis and Properties of Poly[N-(3,6,9-trioxadecyl)aniline]	Akira Kitani Hiroshi Munemura Sotaro Ito	Synth. Met., / 6 (2003) pp. 413-414

P per e	A or N e	o rn o No Ye r P e
D Morphology of Poly(N-methylaniline) Electrodeposited from Different Acid Solutions	J. Yano F. Takamura K. Masaoka S. Yamasaki A. Kitani	Syht. Met., / 6 (2003) pp. 417-418
D Suppression of Decomposition of Propylene Carbonate at Graphite Electrodes by the Addition of Nonionic Surfactants	Akira Kitani Tsukasa Fukuta Yorimitsu Kodama Nobuaki Ohta Sotaro Ito	Electrochemistry, , 12 (2003) pp. 1076-1077
D High-Pressure Synthesis and Superconductivity of LaGe5 Containing a Tunnel Germanium Network	Hiroshi Fukuoka Shoji Yamanaka	Physical Review B, 6, 9 (2003) pp. 0945011-0945015
D Superconductivity of Metal Deficient Silicon Clathrate Compounds, Ba8-xSi46 (0 < x < 1.4)	Hiroshi Fukuoka Junichi Kiyoto Shoji Yamanaka	Inorganic Chemistry, 4 (2003) pp. 2933-2937
D High-pressure Raman study of Ba doped silicon clathrate	Tetsuji Kume Hiroshi Fukuoka Toshihiro Koda Shigeo Sasaki Hiroyasu Shimizu Shoji Yamanaka	Physical Review Letters, (2003) pp. 1555031-1555034
D 6 Crystal structure and ionic conductivity of ruthenium diphosphate ARu2(P2O7)2, A = Li, Na, and Ag, with a tunnel structure	Hiroshi Fukuoka Hideyuki Matsunaga Shoji Yamanaka	Materials Research Bulletin, (2003) pp. 991-1001
D Superconductivity and Crystal Structure of the Solid Solutions of Ba8-δSi46-xGex (0 + x + 23) with Type I Clathrate Structure	Hiroshi Fukuoka Junichi Kiyoto Shoji Yamanaka	Journal of Solid State Chemistry, (2003) pp. 237-244
D High-Pressure Synthesis and Structures of Novel Chromium Sulfides, Ba3CrS5 and Ba3Cr2S6 with One-Dimensional Chain Structures	Hiroshi Fukuoka Yuji Miyaki Shoji Yamanaka	Journal of Solid State Chemistry, 6 (2003) pp. 206-212
D High-pressure Raman study of the iodine-doped silicon clathrate I8Si44I2	Hiroyasu Shimizu Tetsuji Kume Toyoki Kuroda Shigeo Sasaki Hiroshi Fukuoka Shoji Yamanaka	Physical Review B, 6 (2003) pp. 2121021-2121024
D Preparation and superconductivity of Chlorine-Deintercalated Crystals β-MNC11-x (M = Zr, Hf)	L. Zhu S. Yamanaka	Chemistry of Materials, (2003) pp. 1897-1902
D Electron-doping and superconductivity in layer-structured nitride chlorides, β-MNC1 (M = Zr, Hf)	S. Yamanaka L. Zhu X. Chen H. Tou	Physica B, (2003) pp. 6-9
D Tunneling spectroscopy of MgB2 and Lix(THF)yHfNCl	T. Ekino T. Takasaki T. Muranaka H. Fujii J. Akimitsu S. Yamanaka	Physica B, (2003) pp. 23-25
D NMR studies of the electron-doped hafnium nitride superconductor	H. Tou Y. Maniwa S. Yamanaka M. Sera	Physica B, (2003) pp. 1323-1324
D Tunneling spectroscopy of the electron-doped layered superconductor Li0.48(THF)0.3HfNCl	T. Ekino T. Takasaki H. Fujii S. Yamanaka	Physica C, (2003) pp. 573-574
D Superconducting characteristics in electron-doped layered hafnium nitride: 15N isotope effect studies	H. Tou Y. Maniwa S. Yamanaka	Physical Review B, 6 (2003) pp. 100509/1-100509/4

P per e	A or N e	o rn o No Ye r P e
D 6 High-pressure synthesis and structural characterization of three new polyphosphides, α -SrP3, BaP8, and LaP5	X. Chen L. Zhu S. Yamanaka	Journal of Solid State Chemistry, 176 (2003) pp. 449-455
D Mechanism of superconductivity in the polyhedral-network semiconductor Ba8Si46	K. Tanigaki T. Shimizu K. M. Itoh J. Teraoka Y. Morimoto S. Yamanaka	Nature Materials, (2003) pp. 653-655
D Bond switching from two- to three-dimensional polymers of C60 at high pressure	D. H. Chi Y. Iwasa T. Takano T. Watanuki Y. Ohishi S. Yamanaka	Physical Review B, 67 (2003) pp. 153402/1-153402/4
D Superconductivity in Doped sp3 Semiconductors: The Case of the Clathrates	D. Connetable V. Timoshevskii B. Masenelli J. Beille J. Marcus B. Barbara A. M. Saitta G.-M. Rigananese P. Melinon S. Yamanaka X. Blase	Physical Review Letters, 90 (2003) pp. 247001/1-247001/14
D Preparation and transport properties of Nb _{1-x} CrxN epitaxial thin films on silicon wafers	Kei Inumaru Koyo Sakamoto Hiroshi Okamoto Shoji Yamanaka	Physica B, 329 (2003) pp. 123-124
D Organic-Inorganic Cooperative Molecular Recognition in Alkyl-grafted MCM-41	Kei Inumaru Yuta Inoue Shintaro Kakii Tomoyasu Nakano Shoji Yamanaka	Chemistry Letters, (2003) pp. 1110-1111
D The Substitutional Chemistry of MgB2	Robert J. Cava Henny W. Zandbergen Kei Inumaru	Physica C, 367 (2003) pp. 8-15
D Catalyst for hydrocarbon reforming hydrogen preparation	Katsuomi Takehira	Kemikaru Enjiniyaringu, 12 (2003) pp. 908-914
D Synthesis of lanthanide(II)-imine complexes and their use in carbon-carbon and carbon-nitrogen unsaturated bond transformation	Ken Takaki Kimihiro Komeyama Katsuomi Takehira	Tetrahedron, 59, 52 (2003) pp. 10381-10395
D Leaching features of Fe-MCM-41 during epoxidation of alkene with hydrogen peroxide	Ye Wang Qinghong Zhang Tetsuya Shishido Katsuomi Takehira	Studies in Surface Science and Catalysis, 146 (2003) pp. 263-266
D 6 Steam reforming of CH ₄ over supported Ni catalysts prepared from a Mg-Al hydrotalcite-like anionic clay	Katsuomi Takehira Tetsuya Shishido Peng Wang Tokuhisa Kosaka Ken Takaki	Physical Chemistry Chemical Physics, 5, 17 (2003) pp. 3801-3810
D Cr-MCM-41 for selective dehydrogenation of lower alkanes with carbon dioxide	Ye Wang Yoshihiko Ohishi Tetsuya Shishido Qinghong Zhang Katsuomi Takehira	Studies in Surface Science and Catalysis, 146 (2003) pp. 725-728
D Fe-MCM-41 catalyzed epoxidation of alkenes with hydrogen peroxide	Qinghong Zhang Ye Wang Satoko Itsuki Tetsuya Shishido Katsuomi Takehira	Studies in Surface Science and Catalysis, 146 (2003) pp. 625-628

P per e	A or N e	o rn o No Ye r P e
D 6 Intermolecular Hydrophosphination of Alkynes and Related Carbon-Carbon Multiple Bonds Catalyzed by Organoytterbiums	Ken Takaki Go Koshoji Kimihiro Komeyama Mitsuhiko Takeda Tetsuya Shishido Akira Kitani Katsuomi Takehira	Journal of Organic Chemistry, 6 , 17 (2003) pp. 6554-6565
D 6 Crystalline $\text{CrV}_{1-x}\text{P}_x\text{O}_4$ catalysts for the vapor-phase oxidation of 3-picoline	Zhaoxia Song Toshiyuki Matsushita Tetsuya Shishido Katsuomi Takehira	Journal of Catalysis, , 1 (2003) pp. 32-41
D 6 Oxidation of alkanes with dioxygen induced by visible light and Cu(II) and Fe(III) chlorides	Ken Takaki Jun Yamamoto Yuka Matsushita Hirokazu Morii Tetsuya Shishido Katsuomi Takehira	Bulletin of the Chemical Society of Japan, 6 , 2 (2003) pp. 393-398
D 6 Vapor-phase oxidation of 3-picoline to nicotinic acid over $\text{Cr}_{1-x}\text{Al}_x\text{VO}_4$ catalysts	Tetsuya Shishido Zhaoxia Song Eriko Kadokawa Ye Wang Katsuomi Takehira	Applied Catalysis, A: General, , 1-2 (2003) pp. 287-296
D 6 Dry reforming of methane over catalysts derived from nickel-containing Mg-Al layered double hydroxides	Andrey I. Tsyganok Tatsuo Tsunoda Satoshi Hamakawa Kunio Suzuki Katsuomi Takehira Takashi Hayakawa	Journal of Catalysis, , 2 (2003) pp. 191-203
D 6 Carbon fibers prepared by pyrolysis of methane over Ni/MCM-41 catalyst	Jifei Jia Ye Wang Eishi Tanabe Tetsuya Shishido Katsuomi Takehira	Microporous and Mesoporous Materials, 3 (2003) pp. 283-289
D 6 Highly efficient esterification of carboxylic acids with alcohols by montmorillonite-enwrapped titanium as a heterogeneous acid catalyst	Tomonori Kawabata Tomoo Mizugaki Kohki Ebitani Kiyotomi Kaneda	Tetrahedron Letters, 51 (2003) pp. 9205-9208
D 6 A Novel Montmorillonite-Enwrapped Scandium as a Heterogeneous Catalyst for Michael Reaction	Tomonori Kawabata Tomoo Mizugaki Kohki Ebitani Kiyotomi Kaneda	Journal of the American Chemical Society, 35 (2003) pp. 10486-10487
D 6 Highly efficient deprotection of acetals by titanium cation-exchanged montmorillonite as a strong solid acid catalyst	Tomonori Kawabata Masaki Kato Tomoo Mizugaki Kohki Ebitani Kiyotomi Kaneda	Chemistry Letters, , 7 (2003) pp. 648-649
D 6 Characterizations and catalytic properties of Cr-MCM-41 prepared by direct hydrothermal synthesis and template-ion exchange	Ye Wang Yoshihiko Ohishi Tetsuya Shishido Qinghong Zhang Wei Yang Qian Guo Huilin Wan Katsuomi Takehira	Journal of Catalysis, , 2 (2003) pp. 347-357
D 6 DOC removal by multi-stage ozonation-biological treatment	Wataru Nishijima Fahmi Tsukasa Mukaidani Mitsumasa Okada	Water Research, (2003) pp. 150-154
D 6 Effects of spilled oil on microbial communities in a tidal flat	Yoko Katayama Tetsu Oura Mihoko Iizuka Izumi Orita Kyung-Jin Cho In Young Chung Mitsumasa Okada	Marine Poll. Bulliten, 1-6 (2003) pp. 85-90

P per e	A or N e	o rn o No Ye r P e
D▼ Improvement of DOC removal by multi-stage AOP-biological treatment	Fahmi Wataru Nishijima Mitsumasa Okada	Chemosphere, (2003) pp. 1043-1048
D▼ Effect of non-aqueous phase liquid on biodegradation of PAHs in spilled oil on tidal flat	Kose, T T. Mukai K. Takimoto M. Okada	Water Research, ▼(2003) pp. 1729-1736
D▼ Ozone decomposition of hazardous chemical substance in organic solvents	Nakano, Y K. Okawa W	

P per e	A or N e	o rn o No Ye r P e
E Numerical Model for Hydration of Portland Cement	Ippei Maruyama	Proceedings of International Conference on Civil and Environmental Engineering, (2003) pp. 53-62
E Experiment on Creep of Bond Between Corroded Steel Bar and Concrete	Nour-Allah Hussein Louis Darmawan Ippei Maruyama Ryoichi Sato	Proceedings of the Ninth East Asia-Pacific Conference on Structural Engineering and Construction, (2003)

E p o

Paper	Author	Journal or Conference Name
E Monitoring-based maintenance (MBM) for bridge maintenance and safety	Snaryo Smitro Takuji Okamoto Masaru Kono Katashi Fujii	Proceedings of The Ninth East Asia-Pacific Conference on Structural Engineering and Construction, (2003) pp. MMR14-MMR19
E Thick-directional variation of material properties and residual stresses in rolled thick plate	Shinsuke Ishikawa Katashi Fujii Koji Yamada Hideharu Nakamura	Proceedings of The Ninth East Asia-Pacific Conference on Structural Engineering and Construction, (2003) pp. SSM57-SSM63
E A beam element for finite element analysis of corrugated steel web bridge	Naoto Yoshida Katashi Fujii Hideharu Nakamura	Proceedings of The Ninth East Asia-Pacific Conference on Structural Engineering and Construction, (2003) pp. CPM44-CPM50
E On Test Method for Slip Strength of Perforated Rib Shear Connector	Hatsumi Iwasaki Katashi Fujii Nobutoshi Fujimura Tadashi Toyota	Proceedings of 5th Japanese-German Joint Symposium on Steel and Composite Bridge, (2003) pp. 465-472
E Measurement of Surface Irregularities and Shear Loading Test of Corroded Plate Girder	Tatsumasa Kaita Takashi Hara Katashi Fujii Hideharu Nakamura Minoru Uenoya Kohzo Tagaya	Proceedings of the First International Conference on Structural Health Monitoring and Intelligent Infrastructure, (2003) pp. 659-671
E An Estimation Method for Ultimate Shear Strength of perforated Rib Shear Connector	Katashi Fujii Hatsumi Iwasaki Tadashi Toyota	Proceedings of International Conference on Civil and Environmental Engineering, (2003) pp. 33-42
E Surface Irregularities of Corroded Plate Girder and Its Ultimate Shear Behavior	Takashi Hara Katashi Fujii Tatsumasa Kaita Hideharu Nakamura Minoru Uenoya Kohzo Tagaya	Proceedings of International Conference on Civil and Environmental Engineering, (2003) pp. 239-244
E A Beam Element for Corrugated Web Bridge in Finite Element Analysis	Naoto Yoshida Katashi Fujii Yosuke Urakawa	Proceedings of International Conference on Civil and Environmental Engineering, (2003) pp. 245-250
E The change in suction and water content in natural Masado slopes due to rainfall	Thi Ha Takeo Moriwaki Yasushi Sasaki Seiji Kano Dissanayake A. Kamal-nath	Proceedings of the International Symposium on Groundwater Problems related to Geo-environment, (2003) pp. 181-187
E Method for determining the coefficient of permeability of clays	Takeo Moriwaki Ken Umehara	Geotechnical Testing Journal, 6, 1 (2003) pp. 47-56
E Local failure of long embankments during earthquakes	Seiji Kano	Proceedings of International Conference on Civil and Environmental Engineering 2003, (2003) pp. 81-90
E The applicability of the elasto-viscous model in predicting three-dimensional consolidation of clay ground improved by the vertical drain method	Wonjin Baek Takeo Moriwaki	Proceedings of International Conference on Civil and Environmental Engineering 2003, (2003) pp. 253-258
E Three-dimensional consolidation of clay ground improved by vertical drain	Wonjin Baek Takeo Moriwaki Yoshitaka Kikuchi	Proceedings of the 3rd International Conference on Deformation Characteristics of Geomaterials, (2003) pp. 863-872
E Case studies of Lightweight Treated Soil Method in Seaport and Airport Construction Project	Takashi Tsuchida M. S. Kang	Proceedings of 12th Asian Regional Conference on Soil Mechanics and Geotechnical Engineering, (2003)

P per e

E 6 Influence of Sand Fraction on the Impermeability of Seepage Control Clayey Layer

A or N e

Yoichi Watanabe
Takashi Tsuchida
M. S. Kang
K. Sato
Koichi Yamada
K. Ueno

o rn o No Ye r P e

2nd International Symposium on Contaminated Sediments, Characterization, Evaluation, Mitigation/Restoration, Monitoring and Performance, (2003)

E 7 Effect of Drying Process on the Evaluation of Microstructure of Clays Using Scanning Electron Microscope (SEM) and Mercury Intrusion Porosimetry (MIP)

M. S. Kang
Takashi Tsuchida

The Proceedings of the 13th (2003) International Offshore and Polar Engineering Conference, (2003)
pp. al-

Paper	Author	Journal or Conference
E A study on sludge accumulation mechanism on flat sheet membrane surface in submerged membrane bioreactor	Noriatsu Ozaki	Proceedings of International Conference on Civil and Environmental Engineering, (2003) pp. 177-186
E Emission and dispersion of PAHs from heavy traffic road	Noriatsu Ozaki Kyoko Nitta Tomoko Sugihara Takehiko Fukushima Toshiko Komatsu	Air Pollution XI, (2003) pp. 623-632
E Plan Shape Features in Compound Meandering Channels and Relative Depth	Shoji Okada Shoji Fukuoka	Journal of Hydroscience and Hydraulic Engineering, , 1 (2003) pp. 41-52
E The Effect of Planform and Cross-sectional Shape on Accuracy of Discharge Measurement Using Floats	Akihide Watanabe Shoji Fukuoka Wataru Takatsugu Hiroki Sakamoto	Journal of Hydroscience and Hydraulic Engineering, , 1 (2003) pp. 53-62
E Mixing Structure and Flow Evolution Resulting from Variation in the Density of Riparian Vegetation along the Banks of Main Channel in a Compound Channel	Akihide Watanabe Shoji Fukuoka	XXX IAHR Congress Proceedings, C, 1 (2003) pp. 9-16
E Behaviors of Large Turbid Current and Countermeasures for Long Term Turbidity Problem in the Stratified Reservoir	Tetsuo Hotta Shoji Fukuoka F.Y. Chen Yoshihiro Yamashita Hikaru Shoji Yasushi Tsuruta	XXX IAHR Congress Proceedings, C, 1 (2003) pp. 389-396
E Evaluation of the Efficacy of Water Channel Planning for the Nagaoka City Area of Shinano River	Susumu Tsuchiya Shoji Fukuoka	XXX IAHR Congress Proceedings, C, II (2003) pp. 647-653
E The Role of Groins in Channel Formation in the Tone River: An Assessment of Flood-Control and Environmental Functions	Katsuji Sirai Shoji Fukuoka	International Symposium on Disaster Mitigation & Basin-Wide Water Management, (2003) pp. 280-288
E Evaluation of M-Y closure model in tidal estuary with turbulence data from high-resolution current profiler	Kiyosi Kawanisi	Proceedings of 6th International Conference on Computer Modelling and Experimental Measurements of Seas and Coastal Regions, 6 (2003) pp. 101-110
E Investigations on bottom turbid water in a semi-enclosed coastal sea	Kiyosi Kawanisi	Proceedings of International Conference on Civil and Environmental Engineering, (2003) pp. 127-136
E Inter-annual Fluctuation of Water Quality in Seto Inland Sea - Relationship with Sea Levels at the Entrances of the Inland Sea -	Tadashi Hibino Katsuyoshi Shimizu	Coastal Engineering Journal, , 2 (2003) pp. 43-51
E Predicting the effects of city logistics schemes	Eiichi Taniguchi Tadashi Yamada	Transport Reviews, , 4 (2003) pp. 489-515
E Reliable vehicle routing and scheduling with time windows towards City Logistics	Eiichi Taniguchi Tadashi Yamada	The Network Reliability of Transport, Edited by Bell and Iida, Pergamon, (2003) pp. 301-322
E Optimising the handling capacity in a container terminal for investigating efficient handling systems	Tadashi Yamada Gentaro Yoshizawa Bona Fazila Russ Kazuhiro Mori	Journal of the Eastern Asia Society for Transportation Studies, (2003) pp. 597-608
E A Study on the Impact and Effectiveness of the Truck Ban Scheme in Metro Manila	Jun Castro Hiroyuki Kuse Tetsuro Hyodo	Journal of the Eastern Asia Society for Transportation Studies, (2003) pp. 2177-2192

Paper / e	A or N e	o rn o No Ye r P e
E6 Organizational Structures and Government Policies on Logistics and ICT	Jun Castro Hirohito Kuse Viroat Srisurapanon	Logistics Developments Supported by ICT and ITS in the Asia Pacific Region, Institute of Highway Economics/OECD, (2003) pp. 29-50
E6 Logistics and ICT Policies in the Asia-Pacific Region	Jun Castro Hirohito Kuse	Proceedings of Infrastructure Planning, Japan Society of Civil Engineers, (2003)
E6 Multimodal Freight Assignment Model Considering Terminal Performance	Bona Fazila Russ Tadashi Yamada Jun Castro	Proceedings of Infrastructure Planning, Japan Society of Civil Engineers, (2003)
E6 Travel Demand Management Measures	Jun Castro	Capability Building for the Implementation of TIA in the Philippines, (2003)
E6 Characteristics of Coastal Circulation in the Semi-Enclosed Seto Inland Sea Using Regional Atmosphere-Ocean Model	Hidemi Mutsuda	Proc. of 8th International Conference on Estuarine and Coastal Modeling, (2003)
E6 Analysis of propulsive performance of fish-like motion	Shigeru Nishio Yasuaki Doi Ken Nakamura Zuogang Chen	2nd International Symposium on Aqua Bio-Mechanisms, (2003)
E6 A New Type Very Large Floating Structure Using Submerged Horizontal Plate	Mikio Takaki Masahiko Fujikubo Masamitsu Kanda Hiroyuki Nakagawa	Proceedings of International Symposium on Ocean Utilization Technology, (2003) pp. 149-164
E6 Estimation of the Radiation Forces on Submerged-Plate Oscillating near a Free Surface by Composite Grid Method	Sang-Min Lee Mikio Takaki Mitsuo Iwano	Transactions of West-Japan Society of Naval Architects, 105 (2003) pp. 113-122
E6 Hydrodynamic Forces on Submerged-Plate Heaving near a Free Surface	Mikio Takaki Sang-Min Lee	Proceedings of The 13th International Offshore and Polar Engineering Conference, (2003) pp. 457-463
E6 Interaction Effect of Hydrodynamic Forces on a VLFS with Submerged-Plate	Sang-Min Lee Mikio Takaki	Transactions of West-Japan Society of Naval Architects, 106 (2003) pp. 77-87
E6 The Northeastward current southeast of Okinawa Island observed during November 2000 to August 2001	Xiao-Hua Zhu In-Seong Han Jae-Hun Park Hirosi Ichikawa Kiyoshi Murakami Arata Kaneko Alexander Ostrovskii	Geophys. Res. Letters, , 2 (2003) pp. 1071-1074
E6 ISUM Approach for Collapse Analysis of Double-bottom Structures in Ships	Masahiko Fujikubo Daisuke Yanagihara Yuu Setoyama Daniel V. Olaru	International Journal of Offshore and Polar Engineering, , 3 (2003) pp. 224-231
E6 Collapse Test on 1/10-Scale Hull Girder Model of Chip Carrier in Sagging	Tetsuya Yao Masahiko Fujikubo Daisuke Yanagihara Isshin Fujii	Proceedings of the 13th International offshore and Polar Engineering Conference, (2003) pp. 376-383
E6 Collapse Analysis of a Pontoon-Type VLFS in Waves	Masahiko Fujikubo Daisuke Yanagihara Ikuo Matsuda	Proceeding of International Symposium on Ocean Space Utilization Technology, Tokyo, (2003) pp. 207-214
E6 Strucutral Safety Assessment of a Pontoon-Type VLFS Considering Damage to the Breakwater	Masahiko Fujikubo Taoyun Xiao Kazuhiro Yamamura	J. of Maine Science and Technology, 3 (2003) pp. 119-127
E6 Strucutral Safety Assessment of a Pontoon-Type VLFS Considering Damage to the Breakwater	Masahiko Fujikubo Taoyun Xiao Kazuhiro Yamamura	NK Technical Bulletin, (2003) pp. 1-9

P per e	A or N e	o rn o No Ye r P e
E Elasto-Plastic Solid Analysis by Eulerian vd (75rrian)Tj 17.9815 0 Tdd (E83)Tj 25.6627.4344 0 Te 12t.9394 0 Td.4344 0 MeTj .7882 0 8d (d vd (7Shige		

P per e	A or N e	o rn o No Ye r P e
E 4 Crack Initiationn Strength of Structural Steel Members under Cyclic Large Deformation	Hiroshi Yajima Motomichi Yamamoto Kazuhiko Matsuoka Yuji Kisaka	Proceedings of the Seventeenth Asian-Pacific Technical Exchange and Advisory Meeting on Marine Structures (TEAM 2003 TAINAN), (2003) pp. 297-306
E 5 Crack Initiation Strength of Aluminum Alloy having Experienced Large Compressive Strain due to Buckling Deormation	Hiroshi Yajima Motomichi Yamamoto Kazuhiro Hirota Kazuhiko Matsuoka Satoshi Iizuka Yoshinari Ishida	Proceedings of the Seventeenth Asian-Pacific Technical Exchange and Advisory Meeting on Marine Structures (TEAM 2003 TAINAN), (2003) pp. 307-316
E 6 Stress Intensity Factor		

P per e	A or N e	o rn o No Ye r P e
E Development of the Calculation Method for the Loads of Cold and Hot Water Consumption in the Apartment Houses	Saburo Murakawa Hiroshi Takata	Proceedings of CIB-W62 International Symposium on Water Supply and Drainage for Buildings, D (2003) pp. 281-295
E Simulation of Ship Collision Caused by Hydrodynamic Interaction Between Ships	Hironori Yasukawa	Proceedings of the International Conference on Marine Simulation and Ship Maneuverability (MAR-SIM'03), (2003)
E A Simulation Method for Maneuvering Motions of Two Ships in Close Proximity	Hironori Yasukawa	9th Symposium on Nonlinear and Free-Surface Flows, (2003) pp. 83-86

F. Research Center for Nanodevices and Systems

P per e	A or N e	o rn o No Ye r P e
Characteristics of Integrated Antenna on Si for On-Chip Wireless Interconnect	A.B.M. H. Rashid S. Watanabe T. Kikkawa	Japanese Journal of Applied Physics, o , No. 4B (2003) pp. 2204-2209
Direct Patterning of Low-k Dielectric Films using X-Ray Lithography	S. Kuroki, T. Kikkawa H. Kochiya S. Shishiguchi	Jpn. J. Appl. Phys., o , No.4B (2003) pp. 1907-1910
Effects of surfactants on the properties of ordered periodic porous silica films	K. Yamada Y. Oku N. Hata S. Takada T. Kikkawa	Japanese Journal of Applied Physics, o , No. 4B (2003) pp. 1840-1842
Crosstalk Isolation of Monopole Integrated Antenna on Si for ULSI Wireless Interconnect	A.B.M. H. Rashid S. Watanabe T. Kikkawa	Proceedings of 2003 IEEE International Interconnect Technology Conference, (2003) pp. 156-158
Integrated Characterization of Porous Low-k Films for Identifying Killer Pores and Micropores	N. Hata K. Yamada C. Negoro S. Takada, X. Xiao T. Kikkawa	Proceedings of 2003 IEEE International Interconnect Technology Conference, (2003) pp. 51-53
Theoretical analysis of ultra low-k porous films with periodic pore arrangement and high elastic modulus	Hiidenori Miyoshi Hisanori Matsuo Yoshiaki Oku Hiroyumi Tanaka Kazuhiro Yamada Noboru Mikami Takamaro Kikkawa	Proceedings of 2003 IEEE International Interconnect Technology Conference, (2003) pp. 57-59
Robust self-assembled monolayer as diffusion barrier for copper metallization	N. Mikami N. Hata T. Kikkawa H. Machida	Applied Physics Letters, , 25 (2003) pp. 5181-5183
Mechanical Properties of periodic porous silica low-k films determined by the twin-transducer surface acoustic wave technique	Xia Xiao N. Hata K. Yamada T. Kikkawa	Review of Scientific Instrumentation, , 10 (2003) pp. 4539
Characterization of Porous Low-k Dielectrics by Gas Adsorption Techniques	C. Negoro N. Hata K. Yamada H. S. Zhou T. Kikkawa	Proc. ULSIXVIII, Materials Research Society, (2003) pp. 273-278

P per e	A or N e	o rn o No Ye r P e
Evaluation of Copper Ion Drift in Low-Dielectric Constant Interlayer Films by Transient Capacitance Spectroscopy	T. Yoshino N. Hata T. Kikkawa	Proc. Materials Research Society, o , 766 (2003) pp. 217-222
Influence of Metal Electrodes on Leakage Current in MSQ Films with or without Pores	N. Sasaki T. Oda T. Kikkawa	Proc. ULSIXVIII, Materials Research Society, (2003) pp. 265-268
Advanced characterization of ultra-low-k periodic porous silica films-pore size distribution, pore-diameter anisotropy, and size and macroscopic isotropy of domain structure	N. Hata C. Negoro S. Takada K. Yamada Y. Oku T. Kikkawa	Proc. Materials Research Society, o , 766 (2003) pp. 191-195
KrF Excimer Laser Annealing For Ultra Shallow Junction Formation: Approach For Ir-radiation Energy Density Reduction	K. Shibahara K. Kurobe Y. Ishikawa K. Kagawa Y. Niwatsukino A. Matsuno	Extend. Abst. 11th Int. Conf. on Adv. Thermal Processing of Semiconductors, (2003) pp. 13-16
Comparative Studies of Perfluorocarbon Alternative Gas Plasmas for Contact Hole Etch	S. Nakamura M. Itano H. Aoyama K. Shibahara S. Yokoyama M. Hirose	Jpn. J. Appl. Phys., o , No. 9A (2003) pp. 5759-5764
Defect density reduction and sheet resistance improvement by multi-pulse KrF-excimer-laser annealing	K. Kurobe Y. Ishikawa K. Kagawa Y. Niwatsukino A. Matsuno K. Shibahara	Extend. Abst. Fabrication, Characterization, and Modeling of Ultra-Shallow Doping Profiles in Semiconductors, (2003) pp. 98-103
6 60-nm Gate Length SOI CMOS Technology Optimized for System-on-a-SOI-Chip Solution	K. Imai S. Maruyama T. Suzuki T. Kudo S. Miyake M. Ikeda T. Abe S. Masuda A. Tanabe J.-W. Lee K. Shibahara S. Yokoyama H. Ooka	Proc. of the 203rd Meeting of Electrochemical Society, Silicon-on-insulator Technology and Devices XI, (2003) pp. 149-158
Phosphorus-Assisted Low-Energy Arsenic Implantation Technology for N-Channel Metal-Oxide-Semiconductor Field-Effect Transistor Source/Drain Formation Process	K. Imai S. Shishiguchi K. Shibahara S. Yokoyama	Jpn. J. Appl. Phys., o , No. 5A (2003) pp. 2654-2659
Influence of Nitrogen Profile on Metal Workfunction in Mo/SiO ₂ /Si MOS Structure	M. Hino T. Amada N. Maeda K. Shibahara	Ext. Abst. of Int. Conf. on Solid State Devices and Materials, (2003) pp. 494-495
Ultra-shallow Boron Profile Fitting Compensating for Surface Contamination by Utilizing Genetic Algorithms	M. Murakawa K. Shibahara Y. Oda T. Higuchi K. Nishi	Ext. Abst. of Int. Conf. on Solid State Devices and Materials, (2003) pp. 504-505
KrF Excimer Laser Annealing For Ultra Shallow Junction Formation: Approach For Irradiation Energy Density Reduction	K. Shibahara K. Kurobe Y. Ishikawa K. Kagawa Y. Niwatsukino A. Matsuno	Extend. Abst. 11th Int. Conf. on Adv. Thermal Processing of Semiconductors, (2003)
Evaluation of Surface Contamination by Noncontact Capacitance Method under UV Irradiation	M. Kohno T. Kitajima S. Hirae S. Yokoyama	Jpn. J. Appl. Phys., o , No. 9A (2003) pp. 5837-5843

Paper	AUTHOR	Journal	Year	Page
Excellent Contact-Hole Etching with NH ₃ Added C ₅ F ₈ Pulse-Modulated Plasma	M. Ooka S. Yokoyama	Ext. Abst. of Int. Conf. on Solid State Devices and Materials, (2003)	pp. 454-455	
Compact Branched Optical Waveguides Using High-Index-Contrast Stacked Structure	Y. Hara S. Yokoyama K. Umeda	Optical Review, o, No. 5 (2003)	pp. 357-360	
Organic Contamination Dependence of Process Induced Interface Trap Generation in Ultrathin Oxide Metal Oxide Semiconductor Transistors	Q. D. M. Khosru S. Yokoyama A. Nakajima K. Shibahara T. Kikkawa H. Sunami T. Yoshino	Jpn. J. Appl. Phys., o, Pt 2, No. 12A (2003)	pp. L1429-L1432	
Investigation of Surface Contamination on Silicon Oxide after HF Etching by Noncontact Capacitance Method	M. Kohno T. Kitajima S. Hirae S. Yokoyama	Jpn. J. Appl. Phys., o, Pt 1, No. 12 (2003)	pp. 7601-7602	
Carrier Mobility in p-MOSFET with Atomic-Layer-Deposited Si-Nitride/SiO ₂ Stack Gate Dielectrics	A. Nakajima Q. D. M. Khosru T. Kasai S. Yokoyama	IEEE Electron Device Lett., o, (2003)	pp. 472-474	
High Quality Atomic-Layer-Deposited Ultrathin Silicon-Nitride Gate Dielectrics with Low Density of Interface and Bulk Traps	A. Nakajima Q.D.M. Khosru T. Yoshimoto T. Kasai S. Yokoyama	Appl. Phys. Lett., o (2003)	pp. 335-337	
Periodic Coulomb oscillation in highly doped Si single-electron transistor	T. Kitade K. Ohkura A. Nakajima	Ext. Abst. of Int. Conf. on Solid State Devices and Materials, (2003)	pp. 584-585	
Atomic-Layer-Deposited Ultrathin Si-Nitride Gate Dielectrics -A Better Choice for Sub-tunneling Gate Dielectrics-	A. Nakajima H. Ishii T. Kitade S. Yokoyama	Tech. Dig. of IEEE International Electron Devices Meeting, (2003)	pp. 657-670	
A Proposal of Corrugated-Channel Transistor (CCT) with Vertically-Formed Channels for Area-Conscious Applications	T. Furukawa H. Yamashita H. Sunami	Jpn. J. Appl., o, Pt , No. 4B (2003)	pp. 2067-2072	
Field-Shield Trench Isolation with Self-Aligned Field Oxide	A. Takase T. Kidera H. Sunami	Jpn. J. Appl. Phys., o, Pt , No. 4B (2003)	pp. 2100-2105	
High-Aspect Ratio gate Formation of Beam-Channel MOS Transistor with Impurity-Enhanced oxidation of Silicon Gate	A. Katakami K. Kobayashi H. Sunami	Extended Abstracts of International Symp. on Solid State Devices and Materials, Abs, No. D-5-2 (2003)	pp. 282-283	
HiSIM : Accurate Charge Modeling Important for RF Era	M. Miura-Mattausch D. Navarro H. Ueno S. Jinbou H. J. Mattausch K. Morikawa S. Itoh A. Kobayashi H. Masuda	Proc. Int. Conf. on Modeling and Simulation of Microsystems, (2003)	pp. 258-261	
Temperature-Independence- Point Properties for 0.1μm-Scale Pocket-Implant Technologies and the Impact on Circuit Design,	K. Hisamitsu H. Ueno M. Tanaka D. Kitamaru M. Miura-Mattausch H. J. Mattausch S. Kumashiro T. Yamaguchi K. Yamashita N. Nakayama	Proc. of Asia and South Pacific Design Automation Conf, (2003)	pp. 179-183	

P per e	A or N e	o rn o No Ye r P e
Circuit-Simulation Model of Cgd Changes in Small-Size MOSFETs Due to High Channel-Field Gradients	D. Navarro H. Kawano K. Hisamitsu T. Yamaoka M. Tanaka H. Ueno M. Miura-Mattausch H. J. Mattausch S. Kumashiro T. Yamaguchi, K. Yamashita N. Nakayama	IEICE Trans. Electron, o E 6 C, No. 3 (2003) pp. 474-480
6 Extraction of Inter- and Intra-Chip Device-Parameter Variations with a Differential-Amplifier-Stage Test Circuit	T. Mizoguchi H. J. Mattausch H. Ueno D. Kitamaru K. Hisamitsu M. Miura-Mattausch S. Itoh K. Morikawa	Proc. Workshop on Synthesis and System Integration of Mixed Information Technologies, (2003) pp. 76-82
▼ 100nm-MOSFET Model for Circuit Simulation: Challenges and Solutions	M. Miura-Mattausch H. Ueno H. J. Mattausch K. Morikawa S. Itoh A. Kobayashi H. Masuda	IEICE Trans. Electron, o E 6 C, No. 6 (2003) pp. 1009-1021
High Access Bandwidth Multi-Port Cache Design with Compact Hierarchical 1-Port-Bank Structure	Z. Zhu K. Johguchi H. J. Mattausch T. Koide T. Hirakawa T. Hironaka	11th Workshop on Synthesis And System Integration of Mixed Information Technologies , (2003) pp. 394-400
High-Speed and Low-Power Multi-Port-Cache	Z. Zhu K. Johguchi H. J. Mattausch T. Koide T. Hirakawa T. Hironaka	Proceedings of COOL Chips VI, (2003) pp. 76-76
▲ A Cost-Efficient Dynamic Ternary CAM in 130nm CMOS Technology with Planar Complementary Capacitors and TSR Architecture	H. Noda K. Inoue H. J. Mattausch T. Koide K. Arimoto	Symposium on VLSI Circuits Digest of Technical Papers, (2003) pp. 83-84
▲ A Novel Hierarchical Multi-Port Cache	Z. Zhu K. Johguchi H. J. Mattausch T. Koide T. Hirakawa T. Hironaka	Proceedings of the 29th European Solid-State Circuits Conference , (2003) pp. 405-408
▲ Bank-Type Multiport Register File for Highly-Parallel Processors	T. Sueyoshi H. Uchida Y. Mitani K. Hiramatsu H. J. Mattausch T. Koide T. Hironaka	Extended Abstracts of the International Conference on Solid State Devices and Materials, (2003) pp. 400-401
▲ Origin of Enhanced Thermal Noise for 100nm MOSFETs	S. Hosokawa Y. Shiraga H. Ueno M. Miura-Mattausch H. J. Mattausch T. Ohguro S. Kumashiro M. Taguchi H. Masuda S. Miyamoto	Ext. Abst. the International Conference on Solid State Devices and Materials, (2003) pp. 20-21

P per e	A or N e	o rn o No Ye r P e
44 A Nearest-Hamming-Distance Search Memory with Fully Parallel Mixed Digital-Analog Match Circuitry	T. Koide H. J. Mattausch Y. Yano T. Gyohten Y. Soda	Proc. the Asia and South Pacific Design Automation Conference , (2003) pp. 591-592
45 An Associative Memory for Real-Time Applications Requiring Fully-Parallel Manhattan-Distance Search	T. Koide Y. Yano H. J. Mattausch	Proc. 11th Workshop on Synthesis And System Integration of Mixed Information Technologies, (2003) pp. 200-205
46 Optimized Bank-Based Multi-Port Memories through a Hierarchical Multi-Bank Structure	S. Fukae N. Omori T. Koide H. J. Mattausch T. Inoue T. Hironaka	Proc. 11th Workshop on Synthesis And System Integration of Mixed Information Technologies, (2003) pp. 323-330
47 CMOS Test Chip for a High-Speed Digital Image-Segmentation Architecture with Pixel-Parallel Processing	Y. Harada T. Morimoto T. Koide H. J. Mattausch	Proceedings of the 2003 International Technical Conference on Circuits/Systems, Computers and Communications, (2003) pp. 284-287
48 Low-Power Real-Time Region-Growing Image-Segmentation in 0.35 μ m CMOS due to Subdivided-Image and Boundary-Active-Only Architectures	T. Morimoto Y. Harada T. Koide H. J. Mattausch	Extended Abstracts of the 2003 International Conference on Solid State Devices and Materials, (2003) pp. 146-147
49 Combined Data/Instruction Cache with Bank-Based Multi-Port Architecture	K. Johguchi Z. Zhu T. Hirakawa T. Koide T. Hironaka H. J. Mattausch	Extended Abstracts of the International Conference on Solid State Devices and Materials, (2003) pp. 150-151
50 A Hierarchical 512-Kbit SRAM with 8 Read/Write Ports in 130 nm CMOS	S. Fukae N. Omori T. Koide H. J. Mattausch T. Hironaka	Extended Abstracts of the International Conference on Solid State Devices and Materials, (2003) pp. 152-153

Published Books

Book Title	Editor(s)	Publisher	Year
Autonomous Systems and Intelligent Agents in Power System Control and Operation (Chapter 6)	Takeshi Nagata Hiroshi Sasaki	Springer Verlag	2003
Autonomous Systems and Intelligent Agents in Power System Control and Operation (Chapter 12)	Chen-Ching Liu Hao Li Yoshifumi Zoka	Springer Verlag	2003
Grammars and Automata for String Processing	Kenichi Morita	Taylor and Francis	2003
Software rejuvenation - modeling and applications, Springer Reliability Engineering Handbook	T. Dohi K. Goseva-Popstojanova K. Vaidyanathan K. S. Trivedi S. Osaki	Springer-Verlag	2003
Preventive maintenance models: replacement, repair, ordering and inspection, Springer Handbook of Reliability Engineering	T. Dohi N. Kaio S. Osaki	Springer-Verlag	2003
Handbook of Luminescence, Display Materials, and Devices	I. W. Lenggoro K. Okuyama	American Scientific Publishers	2003
Optimization of Aerosol Drug Delivery	T. R. Sosnowski L. Gradon F. Iskandar K. Okuyama	Kluwer Academic Publishers	2003
Special Issue: Focus on Research in Nanoparticle in Japan	K. Okuyama Y. Yamaguchi I. W. Lenggoro	Journal of Nanoparticle Research, Kluwer Academic Publishers	2003
10.1 Porous Ceramics for Filtration, Handbook of Advanced Ceramics: Volume 2: Processing and their Applications	Toshinori Tsuru	Academic Press	2003
Membranes-Preparation, properties and Applications	Vasilis N. Burganos Richard D. Noble Masashi Asaeda Andre Ayral Johann D. LeRoux	Materials Research Society	2003
Perspectives in Organometallic Chemistry	Hajime Yasuda	Royal Society of Chemistry	2003
EPR of free radicals in solids: Trends in method and applications	A. Lund M. Shiotani	Kluwer Academic Publisher	2003
Quantum effects in isotopically labeled radicals in EPR of free radicals in solids:	M. Shiotani K. Komaguchi	Kluwer Academic Publisher	2003
Waves and Tidal Flat Ecosystems	E. Baba H. Kawarada W. Nishijima M. Okada H. Suito	Springer, Berlin,	2003
The Economics of Disappearing Distance: In Honour of T.R. Lakshmanan, Gentleman and Scholar	Ake.E.Andersson Borje Johansson William Anderson Makoto Okumura Kiyoshi Kobayashi	Ashgate	2003

Registered Patents

P	en	N	e	e	,	ered	N	er	n	en	or	N	e	e	er	D	e	e	ered
Catalyst for steam reforming of methanol to produce hydrogen-rich gases (JP 2003265961 A2 20030924)	Katsuomi Takehira Tetsuya Shishido	2003.1.1																	
Catalyst for hydrocarbon decomposition and its production (JP 2003225566 A2 20030812)	Katsuomi Takehira Tetsuya Shishido Daisuke Shoji Masahide Honda Yoshinari Kobayashi	2003.1.1																	
Nickel-magnesium-alumina catalysts for hydrogen manufacture from hydrocarbons (EP 1285692 A1 20030226)	Katsuomi Takehira Tetsuya Shishido Hiroyuki Morioka Naoya Kobayashi Tsutomu Katamoto Tomoyuki Imai Kozo Iida Toshinobu Yasutake	2003.1.1																	
Pattern matching and pattern recognition system, associative memory apparatus, and pattern matching pattern recognition processing method (USA Patent Application No.10/453,636)	H.-J. Mattausch T. Koide	2003.5.27																	
Pattern matching and pattern recognition system, associative memory apparatus, and pattern matching pattern recognition processing method (EPC Patent Application No.03012722.9)	H.-J. Mattausch T. Koide	2003.5.27																	
Pattern matching and pattern recognition system, associative memory apparatus, and pattern matching pattern recognition processing method (KOR Patent Application No.2003-36263)	H.-J. Mattausch T. Koide	2003.5.27																	
Pattern matching and pattern recognition system, associative memory apparatus, and pattern matching pattern recognition processing method (TWN Patent Application No.92115261)	H.-J. Mattausch T. Koide	2003.5.27																	
Self-adjusting winner lineup amplifier (USA Patent Application No.10/445,033)	H.-J. Mattausch T. Koide	2003.6.4																	
Self-adjusting winner lineup amplifier (EPC Patent Application No.03011724.6)	H.-J. Mattausch T. Koide	2003.6.4																	
Self-adjusting winner lineup amplifier (KOR Patent Application No.2003-34611)	H.-J. Mattausch T. Koide	2003.6.5																	
Self-adjusting winner lineup amplifier (TWN Patent Application No.92114262)	H.-J. Mattausch T. Koide	2003.6.5																	
Multi-port integrated cache (USA Patent Application TBD)	T. Hironaka H.-J. Mattausch T. Koide T. Hirakawa K. Johguchi	2003.10.6																	
Image segmentation method, image segmentation apparatus, (USA Patent Application No.10/445,247)	T. Koide H.-J. Mattausch T. Morimoto Y. Harada	2003.5.26																	
Image segmentation method, image segmentation apparatus, (EPC Patent Application No.03011840.0)	T. Koide H.-J. Mattausch T. Morimoto Y. Harada	2003.5.26																	
Image segmentation method, image segmentation apparatus, (KOR Patent Application No.2003-33324)	T. Koide H.-J. Mattausch T. Morimoto Y. Harada	2003.5.26																	
Image segmentation method, image segmentation apparatus, (TWN Patent Application No.92114142)	T. Koide H.-J. Mattausch T. Morimoto Y. Harada	2003.5.26																	