

業績レポート

都市環境・環境地理学講座

都市環境動態論分野

- Benchmark Solutions for Natural Convection in a cubic cavity using the Higher-order time-space method. [J. Heat Mass Trans., 47, (2004), 853-864] S. Wakashima, T.S. Saitoh
- ソーラーオーガニックランキンサイクルシステムに関する研究. [太陽エネルギー, 30 (1), (2004), 55-60] 斎藤武雄, 安藤啓文, 山田昇, 若嶋振一郎
- 3次元複合放物面集光(CPC)型ソーラーコレクタに関する研究(第1報: 3次元CPC型ソーラーコレクタの性能試験および最適設計) [太陽エネルギー, 30 (2), (2004), 39-44] 斎藤武雄, 山田昇, 高橋純, 中島隆之
- Experimental and Numerical Investigation of Thermal Plume in Urban Surface Layer. [Experimental Thermal and Fluid Science, 24, (2004), 585-595] T.S. Saitoh, N. Yamada
- フライホイルエネルギー貯蔵と電気自動車への応用に関する研究. [日本機械学会論文集, 70 (697B), (2004), 244-251] 斎藤武雄, 小笠原弘丞, 山田昇
- An Evaluation of Future Energy Conversion Systems Including Fuel Cell. [Proc. of Urban Transport X: Urban Transport and the Environment in the 21st century, (2004), 607-616] T.S. Saitoh, A. Yoshimura, N. Yamada
- Recent Developments in Solar Energy Conversion - Electricity and Heat Generation-. [Proc. of ISES Asia-Pacific, (2004)] T.S. Saitoh
- Advanced Solar Pulse Turbine System for Electricity Generation. [Proceedings of World Renewable Energy Congress VIII (CD-ROM), (2004)] T.S. Saitoh, H. Ando, N. Yamada, S. Wakashima

自然環境地理学分野

- 郡山市史 続編3通史(執筆担当部分) 郡山市の農林水産業. [郡山市, (2004) 9月] 郡山市史編纂委員会編

人間環境地理学分野

- 環境地理学の教育とアフリカ. [日本アフリカ学会 アフリカ研究, (特別), (2004), 72-73] 上田元
- 政治・社会. [人文地理学会人文地理, 56 (3), (2004), 251-254] 上田元
- 「外邦図」のデジタル画像化とアーカイブ構築に向けて—東北大學における試行作業から. [東北地理学会季刊地理学, 56 (3), (2004), 163-168] 宮澤仁, 村山良之, 上田元

流域環境研究分野

- 河岸侵食のにおける地中水流動の影響. [水工学論文集, 48, (2004), 1093-1098] 常松直志, 風間聰, 沢本正樹, 仙頭紀明
- メコン河中流域における土砂動態について. [水工学論文集, 48, (2004), 1123-1128] 鈴木健司, 風間聰, 沢本正樹
- NDVIを用いた時空間蒸発散量推定法の開発と単層モデル法による検証. [水工学論文集, 48, (2004), 145-150] 渡辺

浩明, 風間聰, 沢本正樹

- GISを用いたホタル生息環境の評価. [水工学論文集, 48, (2004), 1543-1548] 松本哲, 風間聰, 沢本正樹
- 洪水規模の違いによる1次産業便益の地域差. [水工学論文集, 48, (2004), 469-474] 垣内健吾, 風間聰, 沢本正樹
- 河川環境確保のための土地利用と許容人口の関係. [水工学論文集, 48, (2004), 475-483] 土田恭平, 風間聰, 沢本正樹
- Method to delineate blocks in BTOPMC model for large scale watersheds. [水工学論文集, 48, (2004), 61-66] Nawarathna, NMNS. B., S. Kazama, M. Sawamoto, and K. Takara

国際環境・地域環境学講座

国際経済環境研究分野

- 森林資源管理と数理モデル Vol.3 —FORMATH TSUKUBA 2003— [森林計画学会出版局, (2004) 3月] 鹿又秀聰, 吉本敦
- 林木直径成長データを用いた成長傾向に対する変化点探索法の構築(執筆担当部分) pp.69-80. [森林計画学会出版局, (2004) 3月] 二宮嘉行, 吉本敦
- 林分成長分析のための一般化非線形混合効果モデル(執筆担当部分) pp.19-45. [森林改革学会出版局, (2004) 3月] 柳原宏和, 吉本敦, 能本美穂
- 最適確率制御モデルを用いた貿易自由化の森林資源管理への影響分析(執筆担当部分) pp.103-12. [森林計画学会出版局, (2004) 3月] 吉本敦
- 九州の民間2市売り市場における木材価格の時系列分析. [森林計画学会誌, 38 (2), (2004), 61-74] 行武潔, 吉本敦, 樋口幸浩
- Effects of estimation length on parameter estimates of geometric Brownian motion for price dynamics. [Journal of Forest Research, 9, (2004), 239-248] Yoshimoto, A., Kato, T.

東アジア思想論分野

- 諸子百家再発見. [岩波書店, (2004) 8月] 浅野裕一, 湯浅邦弘
- 諸子百家. [講談社, (2004) 11月] 浅野裕一
- 戦国楚簡研究. [萬卷樓, (2004) 12月] 浅野裕一
- 上博楚簡「恒先」の道家特色. [多元視野中の中国歴史—第二届中国史学国際会議—, (2004), 1-21] 浅野裕一
- 上博楚簡『魯邦大旱』における刑徳論. [中国研究集刊, (36), (2004), 41-54] 浅野裕一
- 上博楚簡『容成氏』における禪讓と放伐. [中国研究集刊, (36), (2004), 55-74] 浅野裕一
- 上博楚簡『魯邦大旱』における「名」. [国語教育論叢, (14), (2004)] 浅野裕一

朝鮮民族文化研究分野

- 渤海遺地邑落消長を追う. [東北アジア研究叢書, 16,

(2004)]

- 李朝社会精神風土形成の一つの典型と思弁哲学。[『第2回世界朝鮮学国際会議プロシーディング』, (2004)]

中東・中央アジア地域研究分野

- 水資源をめぐる地域政治環境の変化—レバノン南部の国境問題を中心に—。[MECAS シリーズ, (No.26), (2004) , 1-52] 木村喜博

太陽地球システム・エネルギー学講座

地球物質・エネルギー学分野

- マグネタイトとケイ酸カルシウムの同時水熱合成により電波吸収体の作成。[資源と素材, 120 (2) , (2004) , 126-130] 黒木俊宏, 松本明子, 土屋範芳, 中塚勝人
- SEM-CL imaging of hydrothermal quartz - lessons and applications. [Water-Rock Interaction, 11, (2004) , 615-619] G. Bignall, N. Hirano, B. Batkhishig, N. Tsuchiya
- Detection of a mass transport front in rocks by thermoluminescence technique. [Water-Rock Interaction, 11, (2004), 647-651] M. Yamamoto, N. Tsuchiya
- Fluid-rock interaction process in the Te Kopua geothermal field (New Zealand) revealed by SEM-CL. [GEOTHERMICS, 33, (2004), 615-635] G. Bignall, K. Kotaro, N. Tsuchiya
- Application of synthetic fluid inclusions to simultaneous temperature-pressure logging in high-temperature(sub- to supercritical)geothermal systems. [GEOTHERMICS, 33, (2004), 775-793] Kotaro Sekine, Greg Bignall, Noriyoshi Tsuchiya
- ゴムを圧力媒体とした封圧発生装置の開発および透水試験。[資源と素材, (2004)] 平野伸夫, 渡邊則昭, 土屋範芳

太陽地球計測学分野

- Energy In My Yard : 自然エネルギー利用拡大の戦略。[日本地熱学会誌, 26 (1) , (2004) , 1-10] 新妻弘明
- Microseismic monitoring of a stimulation of HDR reservoir at Cooper Basin, Australia, by the Japanese team. [Trans. Geothermal Resources Council, 28, (2004), 191-195] H. Asanuma, Y. Kumano, T. Izumi, N. Soma, H. Kaieda, Y. Aoyagi, K. Tezuka, D. Wyborn and H. Niitsuma
- Reflection imaging of the deep HDR reservoir ar Soultz by triaxial drill-bit VSP. [Trans. Geothermal Resources Council, 28, (2004), 197-200] H. Asanuma, Y. Ogasawara, N. Soma, H. Niitsuma and R. Baria
- Data acquisition and analysis of microseismicity from simulation at Soultz in 2003 by Tohoku University and AIST, Japan. [Trans. Geothermal Resources Council, (2004), 187-190] H. Asanuma, Y. Ogasawara, N. Soma, H. Niitsuma, R. Baria and S. Michelet
- Precise auto wave picking technique for on site microseis-

mic monitoring in Hot Dry Rock development. [Trans. Geothermal Resources Council, (2004), 239-244] N. Soma, T. Takehara, H. Asanuma, H. Niitsuma, and R. Baria

- Hydraulically induced slip due to fluid injection and pore fluid flow assoiated with the slip. [Trans. Geothermal Resources Council, (2004), 299-302] K. Nemoto, H. Moriya and H. Niitsuma
- Strategy of sustainable energy system with biomass resources. [Proc. World Renewable Energy Congress VIII, (2004), 39] K. Kubo, Y. Ito, T. Nakata and H. Niitsuma
- Passive seismic monitoring of a stimulation of HDR reservoir at Cooper Basin, Australia. [SEG Expanded Abstracts, (2004), 556-559] H. Asanuma, Y. Kumano, T. Izumi, N. Soma, H. Kaieda, K. Tezuka, D. Wyborn and H. Niitsuma
- Automatic tuing of an optical ultrasonic microsensor based on the Fabry-Perot interferometer. [Proc. Optical MEMS 2004, (2004), 72-73] H. Asanuma, H. Ohishi and H. Niitsuma
- Development of a prototype of a fiber-optical PTF tool. [(2004), O] H. Asanuma, S. Takashima and H. Niitsuma
- A prototype of a fiber-optical downhole measurement system of pressure, temperature and flow. [SEG Expanded Abstracts, (2004), 278-281] S. Takashima, H. Asanuma and H. Niitsuma
- Measurement of hydraulically activated subsurface fracture system in geothermal reservoir by using acoustic emission multiplet-clustering analysis. [Progress in Acoustic Emission XII, (2004), 233-238] H. Moriya, H. Niitsuma and R. Baria
- Evaluation of parameter dependencies of AE accompanying sliding along a rough simulated fracture. [Progress in Acoustic Emission XII, (2004), 239-246] K. Nemoto, H. Moriya and H. Niitsuma
- Interpretation of reservoir creation process at Cooper Basion, Australia by acoustic emission. [Progress in Acoustic Emission XII, (2004), 263-270] Y. Kumano, H. Moriya, H. Niitsuma, H. Asanuma, N. Soma, H. Kaieda, K. Tezuka, D. Wyborn and H. Niitsuma
- Development of an optical micro AE sensor within an automatic tuning system. [Progress in Acoustic Emission XII, (2004), 49-54] H. Asanuma, H. Ohishi and H. Niitsuma
- Application of the tri-axial drill-bit VSP method to drilling for geological survey in civil engineering. [Exploration Geophysics, 35 (1), (2004), 70-79] N. Soma, M. Utagawa, M. Seto, H. Asanuma
- Identification of subsurface structure using the seismic while drilling technique. [Int. J. Rock. Mech. and Min. Sci., 41, (2004), 165-173] N. Soma, U. Utagawa, M. Seto, A. Cho and H. Asanuma
- 小型軽量坑井内3成分弹性波検出器による坑井掘削音の観測と地下構造の推定法。[土木学会誌, 757 (III-66) , (2004) , 177-187] 相馬宣和, 歌川学, 瀬戸政宏, 長秋雄,

浅沼 宏

- Microseismic monitoring of the world's largest potential HDR reservoir. [Proc. 28th Workshop on Geothermal Reservoir Engineering, Stanford University, CD-ROM, (2004)] R. Baria, S Michelet, J. Baumgartner, B. Dyer, A. Gerard, J. Nicholls, T. Hettkamp, D. Teza, N. Soma, H. Asanuma
- The tetrahedral geophone configuration: geometry and properties. [SEG Expanded Abstracts, (2004), 9-12] R. Jones, H. Asanuma
- Optimal four geophone configuration, vector fidelity and long-term monitoring. [EAEG 2004 Annual Conference Abstracts, (2004), CDROM] R. Jones and H. Asanuma
- AE analysis in developing the Hot Fractured Rock geothermal power in Australia. [EOS Transactions of AGU, (2004), S41B-0964] Y. Aoyagi, H. Kaieda, H. Asanuma, D. Wyborn
- Microseismicity and permeability enhancement of hydrogeologic structures during massive fluid injections into granite at 3km depth at the Soultz HDR site. [Geophysical Journal of International, 160, (2005), 388-412] K. F. Evans, H. Moriya, H. Niitsuma, R. H. Jones, W. S. Phillips, A. Genter, J. Sausse, R. Jung and R. Baria
- On site mapping of microseismicity at Australian HDR Project by the Japanese team. [Proc. 28th Workshop on Geothermal Reservoir Engineering, Stanford University, CD-ROM, (2004)]
- Application of three dimensional time-frequency coherency method to the reflection imaging in a tunnel. [Proceeding of The 7th SEGJ International Symposium, (2004), 383-388] K. Ohnuma, H. Asanuma, H. Niitsuma
- A water flowmeter using dual fiber Bragg grating sensors and cross-correlation technique. [Sensors and Actuators, 116, (2004), 66-74] N. Soma, H. Asanuma, H. Kaieda, K. Tezuka, D. Wyborn and H. Niitsuma
- Validation of the ozone profile derived from ground-based infrared spectra with SFIT2 by comparing with ozonesonde measurements. [Proceedings of the XX Quadrennial Ozone Symposium, (2004), 585-586] Murata, I., H. Nakane, H. Nakajima, and H. Fukunishi
- Development of a Balloon-borne Optical Ozone Sensor with GPS receiver. [Proceedings of the XX Quadrennial Ozone Symposium, (2004), 587-588] Murata, I., K. Sato, T. Yamagami, S. Okano, M. Tsutsumi, K. Noguchi, and H. Fukunishi

地殻システム情報学分野

- A waterjets system utilizing cuttings as abrasives for cutting hard rocks with moderate pressure. [噴流工学, 21 (2), (2004), 22-31] Koji Matsuki, Akihisa Kizaki, Kiyohtiko Okumura, Ryuta Togasawa, Chisato Segawa
- Determination of three dimensional in situ stress from core discing based on analysis of principal tensile stress. [Int. J.

Rock Mech. Min. Sci., 41 (7), (2004), 1167-1190] K. Matsuki, N. Kaga, T. Yokoyama, N. Tsuda

- 高圧水中下における小型バッヂ式アブレシブジェットによる鋼管のパーフォレーション. [ウォータージェット技術年次報告会講演論文集, (2004), 21-28] 木崎彰久, 高橋智誓, 坂口清敏, 松木浩二, 小山研也, 田村一浩
- Size effect on permeability of a fracture estimated by a large-scale synthetic fractal fracture. [Proc. of the ISRM International Symposium : The 3rd ARMS, 1, (2004), 451-456] K. Matsuki, Y. Chida, K. Sakaguchi
- Downward compact conical-ended borehole technique for rock stress measurement at great depth and its application. [Proc. of the International Symposium: The 3rd ARMS, 2, (2004), 1129-1134] K. Sakaguchi, H. Yoshida, M. Minami, Y. Suzuki, M. Hara, K. Matsuki
- Estimation of regional stress for heterogeneous rock mass by FEM. [Proc. of the International Symposium: The 3rd ARMS, 2, (2004), 1135-1140] K. Matsuki, T. Kato, N. Kimura, S. Nakama, T. Sato
- 鋼管パーフォレーション用アブレシブジェットの小型化. [2004 年度資源・素材学会春季大会講演集, (2004), 170-171] 木崎彰久, 高橋智誓, 坂口清敏, 松木浩二, 小山研也, 田村一浩
- 水中ウォータージェットの切削性能にノズル内壁面形状が及ぼす影響. [日本流体力学会年会 2004 講演論文集, (2004), 378-379] 木崎彰久, 斗ヶ澤龍太, 奥村清彦, 松木浩二
- 水中アブレシブウォータージェットの壊食性能に関する実験的研究. [2004 年資源・素材学会秋季大会若手ポスター発表講演要旨, (2004), 72] 木崎彰久, 高橋智誓, 坂口清敏, 松木浩二, 小山研也, 田村一浩
- コンパクトオーバーコアリング法に基づく応力解放法の提案と高精度化. [月刊地球, (2004) 1月] 坂口清敏

地球開発環境学分野

- 建設機械知能化の現状と展望. [建設の機械化, (647), (2004), 10-16] 高橋 弘
- 繊維質固化処理土の地震対策用地盤材料としての可能性. [月刊下水道, 27 (5), (2004), 69-72] 高橋 弘
- 故紙を混ぜて建設汚泥をリサイクル—纖維質固化処理土の強度特性と施工事例—. [建設の機械化, (651), (2004), 28-33] 高橋 弘, 森 雅人
- Study on the mechanism of over-head-type load-haul-dump with a vessel. [Journal of Terramechanics, 41 (2-3), (2004), 175-185] H.Takahashi, Y.Morikawa, K.Tateyama and R.Fukagawa
- 高温度油井掘削時のビットの被温度履歴推定とビットパフォーマンス. [石油技術協会誌, 69 (4), (2004), 395-403] 須藤祐子, 山崎俊輔, 斎藤清次, 畠山信夫, 高橋 弘
- パワーショベルによる斜面掘削作業時における抵抗力解析. [応用力学論文集, 7 (2), (2004), 787-796] 高橋 弘, 斎藤 泰

- Automation and Intelligence in Crushed Rock and Limestone Quarries in Japan. [Proceedings of the 7th Asia-Pacific Conference of the International Society for Terrain-Vehicle Systems, 1, (2004), 1-7] Hiroshi TAKAHASHI
- Geomechatronics-Interaction between Ground and Construction Machinery and its application to Construction Robotics. [Proceedings of the 7th Asia-Pacific Conference of the International Society for Terrain-Vehicle Systems, 1, (2004), 362-372] K.Tateyama, S.Ashida, R.Fukagawa and H.Takahashi
- The State-of-the-Art of Snow Removers and Snow Removing System in Japan. [Proceedings of the 7th Asia-Pacific Conference of the International Society for Terrain-Vehicle Systems, 1, (2004), 483-491] H.Takahashi, T.Sai, A.Yamazaki, T.Fukahori and J.Yamada
- 割岩工法の自動化に関する基礎的研究. [資源・素材学会誌, 120 (9) , (2004) , 500-507] 高橋 弘, 阿部 弾
- 土質改良機の粘性土小割性能に関する研究. [第2回オーガナイズド・テラメカニックス・ワークショップ in 仙台 講演論文集, 1, (2004) ,13-20] 高橋 弘, 土肥将也, 須藤祐子, 橋本久儀
- 非拡散型高含水比泥土掘削装置の開発に関する研究. [第2回オーガナイズド・テラメカニックス・ワークショップ in 仙台 講演論文集, 1, (2004) , 21-24] 高橋 弘, 原田幸宏, 須藤祐子
- 小口径自律土壤掘進機械の開発に関する基礎的研究. [第2回オーガナイズド・テラメカニックス・ワークショップ in 仙台 講演論文集, 1, (2004) ,27-30] 高橋 弘, 鮫島 徹, 須藤祐子
- 次世代型氷床内部探査システムのための熱融解掘進ドリルの開発に関する基礎的研究. [第2回オーガナイズド・テラメカニックス・ワークショップ in 仙台, 1, (2004) ,55-58] 須藤祐子, 斎藤聰輔, 高橋 弘
- Durability and Utilization System of Fiber-Cement-Stabilized-Mud Produced from Construction Sludge. [Proc. of the 2nd Int. Workshop on Earth Science and Technology, 1, (2004), 209-214] M.Mori, H.Takahashi and K.Kumakura
- Study on Recognition of Fragment Rock Piles and Estimation of the Amount of Sediment Rocks by use of Stereo Vision System. [Proc. of the 2nd Int. Workshop on Earth Science and Technology, 1, (2004), 223-228] H.Takahashi and M.Yokoyama

自然共生システム学講座

環境分析化学分野

- Facile Synthesis of Thiocalix[n]arenes ($n = 4, 6$, and 8) Consisting of p-tert-Butylphenol and Methylenesulfide Alternating Linkage and Metal-Binding Property of the $n = 4$ Homologue. [Tetrahedron Lett., 45 (12), (2004), 2076-211] N.Kon, N.Iki, Y.Yamane, S.Shirasaki, and S.Miyano

- Sulfonylcalix[4]arenemetrasulfonate as Pre-column Chelating Reagent for Selective Determination of Aluminum(III), Iron(III), and Titanium(IV) by Ion-Pair Reversed-Phase High-Performance Liquid Chromatography with Spectrophotometric Detection. [Talanta, 62 (2), (2004), 337-342] H. Matsumiya, N. Iki, and S. Miyano
- Tuning of the Cavity of Water-soluble Thiocalix[4]arene for the Control of Inclusion Ability toward Water-miscible Organic Molecules. [69, (2004), 1080-1096] N. Kon, N. Iki, Y. Sano, S. Ogawa, C. Kabuto, and S. Miyano
- Preconcentration of copper, cadmium, and lead with a thiocalix[4]arenemetrasulfonate loaded Sephadex A-25 anion-exchanger for graphite-furnace atomic absorption. [Anal. Bioanal. Chem., 379 (5-6), (2004), 867-871] H. Matsumiya, N. Iki, S. Miyano, and M. Hiraide
- A p-tert-Butylidithiocalix[4]arene-Copper(II) Complex Having Double-Cone Shape of Unique Heteroditopic Inclusion Behavior. [Chem. Lett., 2004 (8), (2004), 1046-1047] N. Kon, N. Iki, Takashi Kajiwara, Tasuku Ito and Sotaro Miyano
- Octa-Lanthanide Wheels Supported by p-tert-Butylsulfonylcalix[4]arene. [Angew. Chem. Int. Ed., 43, (2004), 1832-1835] Takashi Kajiwara, Hashen Wu, Tasuku Ito, Nobuhiko Iki, and Sotaro Miyano

環境生命機能学分野

- Dielectrophoretic Micropatterning of Microparticles Monolayer Covalently Linked to Glass Surface. [Langmuir, 25, (2004), 11005-11011] M. Suzuki, T. Yasukawa, D. Oyamatsu, H. Shiku, T. Matsue
- Proliferation Assay on Chip Applicable for Tumors Extirpated from Mammilians.. [Int. J. Cancer, 109, (2004), 302-308] Y. Torisawa, H. Shiku, S. Kasai, M. Nishizawa, T. Matsue
- Respiration activity of Escherichia coli entrapped in a cone-shaped microwell and cylindrical micropore monitored by scanning electrochemical microscopy(SECM). [Analyst, 129, (2004), 529-534]
- A. Microelectrochemical Approach to Induce Local Cell Adhesion and Growth on Substrates. [Langmuir, 20, (2004), 16-19] H. Kaji, K. Kanada, D. Oyamatsu, T. Matsue, M. Nishizawa
- Respiration Activity of Single Bovine Embryos Entrapped in a Cone-Shaped Microwell Monitored by Scanning Electrochemical Microscopy. [Anal. Chim. Acta., 522, (2004), 51-58] H. Shiku, T. Shiraishi, S. Aoyagi, Y. Utsumi, M. Matsudaira, H. Abe, H. Hoshi, S. Kasai, H. Ohya, T. Matsue
- On-chip Electrochemical Measurement of β -Galactosidase Expression Using a Microbial Chip. [Chem. Commun., (2004), 248-249] T. Kaya, K. Nagamine, N. Matsui, T.

Yasukawa, H. Shiku, T. Matsue

- バイオチップの最新技術と応用（執筆担当部分）4章第1節 細胞・微生物チップの開発。[(2004) 6月] 彼谷高敏, 安川智之, 珠玖仁, 末永智一
3) In Vitro Culture and Evaluation of Embryos for Production of High Quality Bovine Embryos. [J. Mamm. Ova Res., 21, (2004), 22-30] H. Abe, H. Shiku, S. Aoyagi, H. Hoshi
- 走査型電気化学顕微鏡のセンサへの利用と距離制御による高解像度化。[Electrochemistry, 72 (2), (2004), 137-142] 平野悠, 小谷松大祐, 安川智之, 珠玖仁, 末永智一
- 電気化学オントップ遺伝子工学：オントップ培養とその評価。[ぶんせき, 2004 (11), (2004), 671-673] 彼谷高敏, 珠玖仁, 安川智之, 末永智一
- Amperometric detection of the bacterial metabolic regulation with a microbial array chip. [Biosens. Bioelectron., (2004)] K. Nagamine, N. Matsui, T. Kaya, T. Yasukawa, H. Shiku, T. Nakayama, T. Nishino, T. Matsue
- 電気化学顕微鏡を用いた細胞計測法の実用化をめざして。[生物物理, 44 (1), (2004), 36-39]
- 細胞チップを用いるバイオアッセイ。[分析化学, 53 (5), (2004), 367-382] 鳥澤勇介, 珠玖仁, 安川智之, 末永智一
- 電気化学顕微鏡のセンサへの利用と距離制御による高解像度化。[Electrochemistry, 72, (2004), 137-142] 平野悠, 小谷松大祐, 安川智之, 珠玖仁, 末永智一

環境修復生態学分野

- 環境リスクの評価と管理の今後。[(社) 特殊鋼倶楽部 特殊鋼, 53 (9), (2004), 5-8] 千田信, 井上千弘
- Isolation and characterization of sulfate reducing bacteria possessing the capacity to reduce polysulfide. [Proceedings of 1st International Workshop on Water Dynamics, (2004), 173-175] Y. Takahashi, K. Suto, C. Inoue, T. Chida
- 環境リスクの評価と管理の今後。[特殊鋼, 53 (5), (2004), 5-8] 千田信, 井上千弘
- 水溶性ポリマー生産微生物を用いたMEORのための数値モデルの構築。[石油技術協会誌, 69 (3), (2004), 261-271] 菅井裕一, 洪承燮, 千田信, 榎本兵治
- Characterization of a Water-insoluble Polymer Producing Bacterium Enterobacter sp. CJF-002 for MEOR. [Journal of the Japan Petroleum Institute, 47 (4), (2004), 282-292] Makiko Otsuka, Kazuhiro Fujiwara, Yuichi Sugai, Atsushi Kishita, Heiji Enomoto, Tadashi Chida, Nintoku Yazawa, Keiji Nagase, Chengxie Hong, and Cui Ji
- 水溶性ポリマー生産微生物を用いたMEORにおける油層内挙動と石油増進回収機構に関するシミュレーション研究。[石油技術協会誌, 69 (4), (2004), 336-347] 菅井裕一, 洪承燮, 千田信, 榎本兵治
- 水溶性ポリマー生産微生物を用いたMEORの数値実験。[石油技術協会誌, 69 (5), (2004), 563-573] 菅井裕一, 洪承燮, 千田信, 榎本兵治
- 有機塩素化合物による土壤汚染とその浄化技術。[リサ

イクル設計と分離精製技術], 9, (2004), 50-57] 井上千弘, 白鳥寿一, 千田信

- Mapping of Heavy Metals Accumulated in Plants Using Submilli-PIXE Camera. [International Journal of PIXE, 14 (1&2), (2004), 35-41]

- Bacterial generation of hydrogen sulfide from polysulfide. [Proceedings of 2nd International workshop on Water Dynamics, (2004), 323-324] Y. Takahashi, K. Suto, C. Inoue, T. Chida

- Photodegradation of trichloroethene with oxalic acid and iron ion. [Proceedings of 2nd International workshop on Water Dynamics, (2004), 325-326] W. Hareyama, J. Hara, K. Suto, C. Inoue, T. Chida, H. Nakazawa

- Chemical reduction of organohalogen compound by sulfides. [Proceedings of 2nd International workshop on Water Dynamics, (2004), 327-328] J. Hara, C. Inoue, T. Chida

- Substrates for fungus in an enrichment culture of iron-oxidizing bacteria. [Proceedings of 2nd International workshop on Water Dynamics, (2004), 339-340] J. Seongjin, K. Suto, C. Inoue, T. Chida

- Numerical simulation of rock and soil alteration using T-P-H coupled model in fluid = rock interaction process. [Water Dynamics, 1, (2004), 139-141] Hara, J., Tsuchiya, N. and Chida, T.

- Character of Silica Sinter and Other Geothermal Manifestations at the Shalgaljuut Springs, Mongolia. [Water Dynamics, 1, (2004), 159-161] Bignall, G., Batkhishig, B., Hara, J. and Tsuchiya, N.

環境共生機能学分野

- 放射光科学入門（執筆担当部分）10.3.1. [(2004) 3月] 渡辺誠, 佐藤繁編
- Decomposition chlorinated organic compounds to diamond structures carbon at moderate hydrothermal conditions. [Transactions of the Materials Research Society of Japan, 29 (5), (2004), 2371-2374] S. Korablov, K. Yokosawa, K. Tohji, N. Yamasaki
- Simple methods for site-controlled carbon nanotube growth using radio-frequency plasma-enhanced chemical vapor deposition. [Applied Physics A, 79, (2004), 85-87] G.-H. Jeong, N. Satake, T. Kato, T. Hirata, R. Hatakeyama, K. Tohji
- Ultra-stable nanoparticles of CdSe revealed from mass spectrometry. [nature materials, 3, (2004), 99-102] A. Kasuya, R. Sivamohan, Y. A. Baanakov, I. M. Dmitruk, T. Nirrasawa, V. R. Romanyuk, V. Kumar, S. V. Mamkin, K. Tohji, B. Jeyadevan, K. Shinoda, T. Kudo, O. Terasaki, Z. Liu, R. V. Belosludov, V. Aundararajan, Y. Kawazoe
- The Role of Water for Photodecomposition of Aqueous Hydrogen Sulfide using Stratified Photocatalyst-Theoretical Part. [1st Int. Workshop on WATER DYNAMICS, (2004),

59-61] T. Matsumoto, T. Arai, K. Shinoda, U. Nagashima and K. Tohji
● Process Control of Carbon Nanotube Formation Using RF Glow-Discharge Plasma in Strong Magnetic Field. [Int. Symposium on Nobel Materials Processing by Advanced Electromagnetic Energy Sources, (2004)] T. Kaneko, H. Matsuoka, T. Hirata, R. Hatakeyama, and K. Tohji
● 古くて新しい光触媒. [新素材マニュアル, 21, (2004) ,14-23] 田路和幸
● The Role of Water for Photodecomposition of Aqueous Hydrogen Sulfide using Stratified Photocatalyst - EXperimental Part. [Proceedings of 1st Int. Workshop on WATER DYNAMICS, (2004), 62-65] T. Arai, T. Matsumoto, S. Sakima, K. shioda, U. Nagashima, K. Tohji
● Effects of Strong magnetic Field on Carbon Nanotube Formation Using RF Glow-Discharge Plasma. [Asia Pacific Conference on Plasma Science and Technology & Symposium on Plasma Science for Materials, (2004), 1-12] T. Kaneko, H. Matsuoka, T. Hirata, R. Hatakeyama, and K. Tohji
● Production and Growth Mechanism of Individually- and Vertically -Aligned Single-Walled Carbon Nanotubes under the Plasma-Enhanced Chemical Vapor Deposition Method. [Abstract of Int. Conf. on the Science and Application of Nanotubes, (2004)] T. Kato, G.-H. Jeong, T. Hirata, R. Hatakeyama, K. Tohji
● 高保磁力ナノ粒子の化学合成—酸化物および金属ナノ粒子について—. [日本応用磁気学会誌, 28 (8), (2004), 896-905] B. ジャヤデワン, 佐藤王高, 小川智之, 久野誠一, 田路和幸, 高橋研
● Individual Single-Walled Carbon Nanotubes with Vertical Alignment. [Proc. of IEEE Conference on Nanotechnology, (2004)] T. Kato, G.-H. Jeong, T. Hirata, R. Hatakeyama, K. Tohji
● 光触媒を用いた硫黄循環による水素の製造. [J. of the Society of Inorganic Materials, Japan, 11, (2004), 466-473] 荒井健男, 松本高利, 松本博道, 田路和幸
● Large-Scale Production of Ba²⁺-Alginate-Coated Vesicles of Carbon Nanofibers for DNA-Interactive Pollutant Elimination. [Bull. Chemical Society of Japan, 77, (2004), 1945-1950] B. Fugetsu, S. Satoh, T. Shiba, T. Mizutani, Y. Nodasaka, K. Yamasaki, K. Shimizu, M. Shindoh, K. Shibata, N. Nishi, Y. Sato, K. Tohji, F. Watari
● 光で水素をつくる. [21世紀を拓く水素の世界 新材料とクリーンエネルギー・システム, (2004), 86-94] 田路和幸
● MECHANICAL PROPERTIES AND MICROSTRUCTURAL INVESTIGATION OF SINGLE-WALLED CARBON NANOTUBE SOLIDS. [2nd Int. Workshop on Water Dynamics, (2004), 261-265] G. Yamamoto, Y. Sato, T. Takahashi, M. Omori, K. Tohji, T. Hashida
● Synthesize and Characterization of Mn-ZnO. [2nd Int. Workshop on Water Dynamics, (2004), 283-284] T. Hinotsu,

Y. Sato, K. Shinoda, B. Jeyadevan, K. Tohji
● Influence of Cu in the Photocatalytic Activity of ZnS Nanoparticles. [2nd Int. Workshop on Water Dynamics, (2004), 285-288] S. Senda, T. Arai, Y. Sato, K. Shinoda, B. Jeyadevan, K. Tohji
● Surface Structure and Activity of CdS Thin Film Prepared by Chemical Bath Deposition. [2nd Int. Workshop on Water Dynamics, (2004), 289-292] I. Ishiyama, T. Arai, Y. Sato, K. Shinoda, B. Jeyadevan, K. Tohji
● Application of Multi-Walled Carbon Nanotubes to CdS Photocatalytic System. [2nd Int. Workshop on Water Dynamics. (2004), 293-298] Y. Sawada, T. Arai, Y. Sato, K. Shinoda, B. Jeyadevan, K. Tohji
● Synthesize of ZnxCd(1-x)S Solid Solution by Stratified Method. [2nd Int. Workshop on Water Dynamics, (2004), 297-302] T. Arai, M. Nakazato, K. Shinoda, B. Jeyadevan, K. Tohji
● Formatin of Diamond Under Hydrothermal Conditions. [2nd Int. Workshop on Water Dynamics, (2004), 313-318] K. Yokosawa, S. Korablov, K. Tohji, N. Yamasaki
● Freestanding individual single-walled carbon nanotube synthesis based on plasma sheath effects. [Applied Physics A, (2004)] T. Kato, G.-H. Jeong, T. Hirata, R. Hatakeyama, K. Tohji
● Caged Multiwalled Carbon Nanotubes as the Adsorbents for Affinity-Based Elimination of Ionic Dyes. [Environ. Sci. & Technol., (2004)] B. Fugetsu, S. Satoh, T. Shiba, T. Mizutani, Y.-B. Lin, N. Terui, Y. Nodasaka, K. Sasa, K. Shimizu, T. Akasaka, M. Shindoh, K. Shibata, A. Yokoyama, M. Mori, K. Tanaka, Y. Sato, K. Tohji, S. Tanaka, N. Nishi, F. Watari
● Ambient-temperature synesis of nanocrystalline ZnO and its application in the generation of hydrogen. [Phys. stat. sol. 1 (4), (2004), 803-806] O. J. Perales-Perez, M. S. Tomar, S. P. Singh, A. Watanabe, T. Arai, A. Kasuya and K. Tohji
● Electronic properties of radial single-walled carbon nanotubes. [Chemical Physics Letters, 385, (2004), 323-328] Y. Sato, B. Jeyadevan, R. Hatakeyama, A. Kasuya, K. Tohji
● Influence of chromium on the local structure and morphology of ferric oxyhydroxides. [Corrosion Science, 46, (2004), 1751-1763] S. Suzuki, Y. Takahashi, T. Kamimura, H. Miyuki, K. Shinoda, K. Tohji, Y. Waseda
● Consolidation of Multi-Walled Carbon Nanotube and Hydroxyapatite Coating by the Spark Plasma System (SPS). [Key Engineering Materials, (2004), 254-256] M. Omori, A. Okubo, M. Otsubo, T. Hashida and K. Tohji
● Preparation of Carbon Nanotubes for Biomedical Applications: Size-separation and its Biocompatibility. (2004) K. Tohji, Y. Akimoto, Y. Sato, B. Jeyadevan, K. Tamura, T. Akasaka, M. Uo, A. Yokoyama, K.I. Shibata and F. Watari
● 高保持力磁性ナノ粒子の合成と磁気特性. [応用磁気学会, (2004)] B. ジャヤデワン, 高橋研, 田路和幸

●東北大學が下水処理場を舞台に水素を作り出す夢の研究。
[公共投資ジャーナル社 週間下水道情報, (1377), (2004)]
田路和幸

●Size separation of carbon nanotubes for biomedical applications. [Proc. SPIE Int. Soc. Opt. Eng., 5593, (2004), 13-17] Yoshinori Sato, Yuki Akimoto, Balachandran Jeyadevan, Ken-ichi Motomiya, Rikizo Hatakeyama, Kazuchika Tamura, Tsukasa Akasaka, Motohiro Uo, Atsuro Yokoyama, Ken-ichi-ro Shibata, Fumio Watari and Kazuyuki Tohji

●Biocompatibility of carbon nanodisk. [Proc. SPIE Int. Soc. Opt. Eng., 5593, (2004), 623-627] Yoshinori Sato, Makoto Ohtsubo, Balachandran Jeyadevan, Kazuyuki Tohji, Kenichi Motomiya, Rikizo Hatakeyama, Go Yamamoto, Mamoru Omori, Toshiyuki Hashida, Kazuchika Tamura, Tsukasa Akasaka, Motohiro Uo, Atsuro Yokoyama, and Fumio Watari.

●Synthesis and size classification of metal oxide nanoparticles for biomedical applications. [Proc. SPIE Int. Soc. Opt. Eng., 5593, (2004), 628-636] Takashi Atsumi, Balachandran Jeyadevan, Yoshinori Sato, Kazuchika Tamura and Kazuyuki Tohji

●科学手法を用いた磁性ナノ粒子合成の現状と応用。[MATERIAL STAGE, 5, (2004), 42-53] B. Jeyadevan

●ポリオールプロセスを用いた金属および合金ナノ粒子の合成。[第138回研究会試料, (2004)] バラチャンドラン ジャヤデワン

●Present status and perspective of magnetic nanoparticle synthesis by polyol process. [第 87 回研究会試料、(2004)] B. Jeyadevan

●糖鎖によるカーボンナノチューブの表面修飾。[傾斜機能材料論文集, 15, (2004), 116-121] 赤坂司, 佐藤義倫, 田路和幸, 巨理文夫

●単層カーボンナノチューブ焼結体の機械的特性に及ぼす不純物の影響。[傾斜機能材料論文集, 15, (2004), 157-162] 山本剛, 大坪誠, 佐藤義倫, 高橋亨, 大森守, 田路和幸, 橋田俊之

●バイオ用カーボンナノファイバーの開発。[傾斜機能材料論文集 FGM2003, 15, (2004), 34-39] 佐藤義倫, 秋本結輝, 大坪誠, 畠山力三, 田路和幸

●Size and Structure Control of Magnetic Nanoparticles by Using a Modified Polyol Process. [Journal of Applied Physics, 95 (11), (2004), 7477-7479] T. Hinotsu, B. Jeyadevan, C. N. Chinnasamy, K. Shinoda, and K. Tohji

●Crystallographic structures and magnetic properties of L1(0)-type FePt nanoparticle monolayered films stabilized on functionalized surfaces. [JOURNAL OF MAGNETISM AND MAGNETIC MATERIALS, 282, (2004), 122-126] Sasaki Y, Mizuno M, Yu ACC, Inoue M, Yazawa K, Ohta I, Takahashi M, Jeyadevan B, Tohji K

資源循環プロセス学講座

循環社会開発学分野

●防火・防爆対策技術ハンドブック（執筆担当部分）第2編火災・爆発現象第5章噴霧および粉じん爆発。[(2004) 9月] 櫻本兵治

●湿式燃焼火攻法のモデル解析。[石油技術協会誌, 69 (1), (2004), 73-82] 坂本靖英, 菅井裕一, 櫻本兵治, 洪承燮

●Conversion Mechanism of Cellulosic Biomass to Lactic Acid in Subcritical Water and Acid-base Catalytic Effect of Subcritical Water. [Chemistry Letters, 33 (2), (2004), 126-127] Fangming Jin, Zhouyu Zhou, Heiji Enomoto, Takehiko Moriya, and Hisao Higashijima

●Effect of Lignin on Acetic Acid Production in Wet Oxidation of Lignocellulosic Wastes. [Chemistry Letters, 33 (7), (2004), 910-911] Fangming Jin, Jianxun Cao, Zhouyu Zhou, Takehiko Moriya, and Heiji Enomoto

●水溶性ポリマー生産微生物を用いたMEORのための数値モデルの構築。[石油技術協会誌, 69 (3), (2004), 261-271] 菅井裕一, 洪承燮, 千田信, 櫻本兵治

●Characterization of a Water-insoluble Polymer Producing Bacterium Enterobacter sp.CJF-002 for MEOR. [Journal of the Japan Petroleum Institute, 47 (4), (2004), 282-292] Makiko OTSUKA, Kazuhiro FUJIWARA, Yuichi SUGAI, Atsushi KISHITA, Heiji ENOMOTO, Tadashi CHIDA, Nintoku YAZAWA, Keiji NAGASE, Chengxie HONG, and Cui JI

●水溶性ポリマー生産微生物を用いたMEORにおける油層内挙動と石油増進回収機構に関するシミュレーション研究。[石油技術協会誌, 69 (4), (2004), 335-347] [菅井裕一, 洪承燮, 千田信, 櫻本兵治

●Wet Oxidation of Lignin Model Compounds and Acetic Acid Production. [Sixth International Conference on Solvothermal Reactions, Or-40, (2004), 78] Hiroyuki Suzuki, Jianxun Cao, Fangming Jin, Asushi Kishita, Takehiko Moriya, Heiji Enomoto

●Hydrothermal Conversion of Biomass into Acetic Acid. [Sixth International Conference on Solvothermal Reactions, Or-46, (2004), 84] Fangming Jin, Zhouyu Zhou, Atsushi Kishita, Heiji Enomoto

●A NEW HYDROTHERMAL PROCESS FOR IMPROVING ACETIC ACID YIELD FROM CELLULOSIC BIOMASS. [14th International Conference on the Properties of Water and Steam, (2004), 186] X. Y. Yan, F. M. Jin, H. Enomoto, T. Moriya, H. Higashijima, H. Kishida

●FORMATION MECHANISM OF 2-FURALDEHYDE FROM GLUCOSE IN HYDROTHERMAL REACTION. [14th International Conference on the Properties of Water and Steam, (2004), 85] Y. Takeuchi, F. Jin, A. Kishita, H. Enomoto

●Biotechnological approach for development of microbial

enhanced oil recovery technique. [PETROLEUM BIOTECHNOLOGY Developments and Perspectives, 151, (2004), 405-445] K. Fujiwara, Y. Sugai, N. Yazawa, K. Ohno, C. X. Hong and H. Enomoto

●石油学会の役割. [社団法人石油学会 ペトロテック, 27 (11), (2004), 847] 榎本兵治

●A continuouis flow reaction system for production acetic acid by wet oxidation of biomass waste. [in press, (2004)] Zhouyu Zhou, fangming Jin, Heiji Enomoto, Takehiko Moriya, Hisao Higashijima

● Solidification of Coal Fly-ash with Hydrothermal Processing. [J Material Science, in press, (2004)] Zhenzi Jing, Norihisa Matsuoka, Fangming Jin, Koichi Suzuki, Toshiyuki Hashida, and Nakamichi Yamasaki

●水の超臨界条件下におけるポリエチレン. ポリプロピレン. ポリスチレンの水熱分解. [環境資源工学, in press, (2004)] 木下睦, 菅井裕一, 竹森進也, 小泉信吾, 金 放鳴, 榎本兵治, 守谷武彦

●水の超臨界条件下におけるポリエチレン. ポリプロピレン. ポリスチレン混合物の水熱分解. [環境資源工学, in press, (2004)] 木下睦, 菅井裕一, 小泉信吾, 金 放鳴, 榎本兵治, 守谷武彦

●MEORに有用な非水溶性ポリマー生産微生物 CJF-002 の特性. [J Jpn Pet Inst, 47 (4), (2004), 282-292] 大塚牧子, 藤原和弘, 菅井裕一, 木下睦, 榎本兵治, 矢沢仁徳, 永瀬圭司, HONG C, JI C

環境グリーンプロセス学分野

● Specific behavior of acid–base and neutralization reactions in supercritical water. [The Journal of Supercritical Fluids, 28 (1), (2004), 57-68] Kiwamu Sue and Kunio Arai

● Analysis of the density effect on partial oxidation of methane in supercritical water. [The Journal of Supercritical Fluids, 28 (1), (2004), 69-77] Takafumi Sato, Masaru Watanabe, Richard L. Smith, Jr. Tadafumi Adschari and Kunio Arai

● Water density dependence of formaldehyde reaction in supercritical water. [The Journal of Supercritical Fluids, 28 (2-3), (2004), 219-224] Mitsumasa Osada, Masaru Watanabe, Kiwamu Sue, Tadafumi Adschari and Kunio Arai

● Apparatus for direct pH measurement of supercritical aqueous solutions. [The Journal of Supercritical Fluids, 28 (2-3), (2004), 287-296] Kiwamu Sue, Munehiro Uchida, Toshihiko Usami, Tadafumi Adschari and Kunio Arai

● Non-catalytic recovery of phenol through decomposition of 2-isopropylphenol in supercritical water. [Chemical Engineering Science, 59 (6), (2004), 1247-1253] Takafumi Sato, Eiji Haryu , Tadafumi Adschari and Kunio Arai

● Determination of sulfuric acid first dissociation constants to 400 °C and 32 MPa by potentiometric pH measurements

ARTICLE. [The Journal of Supercritical Fluids, (2004)] Kiwamu Sue , Munehiro Uchida , Tadafumi Adschari and Kunio Arai

● Water gas shift reaction kinetics under noncatalytic conditions in supercritical water. [The Journal of Supercritical Fluids, 29 (1-2), (2004), 113-119] Takafumi Sato , Shutaro Kurokawa , Richard L. Smith, Jr. , Tadafumi Adschari and Kunio Arai

● "Totsu"-window optical cell for absorption and emission studies of high-pressure liquids and supercritical fluids. [The Journal of Supercritical Fluids, 29 (3), (2004), 313-317] Takafumi Aizawa , Mitsuhiro Kanakubo , Yutaka Ikushima , Norio Saitoh , Kunio Arai and Richard L. Smith, Jr

● Titanyl phthalocyanine solubility in supercritical acetone. [The Journal of Supercritical Fluids, 30, (2004), 281-285] Kiwamu Sue, Takakazu Mizutani, Toshihiko Usami, Kunio Arai, Hitoshi Kasai, Hachiro Nakanishi

● Effect of cations and anions on properties of zinc oxide particles synthesized in supercritical water. [The Journal of Supercritical Fluids, 30, (2004), 325-331] Kiwamu Sue, Kazuhito Kimura, Kenji Murata, Kunio Arai

● Hydrothermal synthesis of zinc oxide crystals in homogeneous mixture of carbon dioxide, hydrogen, and water. [Chemistry Letters, 33 (6), (2004), 708-709] Kiwamu Sue, Kazuhito Kimura, Kenji Murata, Kunio Arai

● 超臨界水環境における金属酸化物被膜の溶解度計算. [Zairyō-to-Kankyo, 53, (2004), 264-269] 陶究, 新井邦夫

● Continuous production of nickel one particles by hydrogen reduction in near-critical water. [Industrial and Engineering Chemistry Research, (2004)]

● Hydrothermal synthesis of ZnO nanocrystals using microreactor. [Materials Letters, (2004)] Kiwamu Sue, Kazuhito Kimura, Kunio Arai

● Rapid hydrothermal synthesis of ZnO nanorods without organics. [Materials Letters, (2004)] Kiwamu Sue, Kazuhito Kimura, Maki Yamamoto, Kunio Arai

循環材料プロセス学分野

●日本鉄鋼協会第30回鉄鋼工学セミナーテキスト（執筆担当部分）速度論 I（移動速度論）213-234, 速度論 II（反応速度論）235-254, [日本鉄鋼協会, (2004) 7月] 谷口尚司

● Hybrid Stirring Rotational and Vertical Traveling Magnetic Fields. [Proc. of the 1st Asian EPM Workshop, Jan.11-13, 2004, Tokyo, Japan, (2004), 86-89] K. Ueno, S. Taniguchi, K. Maitake, M. Okubo and T. Ando

●微小介在物粒子の乱流凝集に及ぼす粒子形状, 濡れの影響. [(独) 日本学術振興会製鋼第19委員会反応プロセス研究会提出資料, 2004年2月5日, 札幌, (2004), 1-10] 中岡威博, 谷口尚司

● 2軸移動磁界攪拌装置における攪拌効果の検証—Al-Bi 合金の凝固実験—. [(独) 日本学術振興会製鋼第19委員会凝

固プロセス研究会提出資料, 2004年2月5日, (2004), 1-23]
谷口尚司, 鈴木健史, 舞嶽孝二, 上野和之, 笠原泰文

●溶融金属中介在物の乱流凝集特性の水モデル実験による評価法. [（独）日本学術振興会製鋼第19委員会凝固プロセス研究会提出資料, 2004年2月6日, 札幌, (2004), 1-8]
谷口尚司, 中岡威博, 松本克才

● Grinding of Blast Furnace (BF) Slag Bearing High TiO₂ Assisted by Microwave Grinding of Blast Furnace (BF) Slag Bearing High TiO₂ Assisted by Microwave. [Proc. Int. Symp. on Microwave Science and Its Application to Related Fields, (Microwave 2004), Takamatsu, Japan, (2004), 304-306] Yan Chen, Etsuko Ishizuka, Noboru Yoshikawa and Shoji Taniguchi

● Simulation of conducting liquid flow around two non-conducting particles in the presence of a dc electromagnetic field (oblique configuration of particles to the field). [Modelling Simul. Mater. Sci. Eng., 12 (4), (2004), 709-718] Takuma Ogasawara, Noboru Yoshikawa, Shoji Taniguchi, Toshifumi Asai

● Thermal Runaway during Microwave Heating of BF Slag Bearing High TiO₂. [Proc. Int. Symp. on Microwave Science and Its Application to Related Fields, (Microwave 2004), Takamatsu, Japan, (2004), 304-306] Yan Chen, Etsuko Ishizuka, Noboru Yoshikawa and Shoji Taniguchi

● Flow of Conducting Liquid around Two Nonconducting Particles in DC Electromagnetic Field and the Electromagnetic Migration Force. [Metall. Mater. Trans., 35B, (2004), 847-855] T.Ogasawara, N. Yoshikawa, S. Taniguchi and T. Asai

● 亂流液中における固体粒子の相対速度. [鉄と鋼, 90 (8), (2004), 538-545] 嶋崎真一, 和田敏之, 谷口尚司

● Application of EPM to Environmental Engineering. [Proc. of the Int. Workshop on EPM, Oct.13-14, 2004, Shanghai, China, (2004), 6-6] S. Taniguchi

● Advanced Applications of Electromagnetic Force to Clean Metal Production. [The 3rd International Conference on Continuous Casting of Steel in Developing Countries, CCC'04, Beijing, 2004, Supplement of Iron and Steel, 39, (2004), 605-608] S. Taniguchi, K. Ueno, K. Takahashi, S. Shimasaki

● Al廃棄物利材化を目的とした石英ガラスと溶融Alとの置換反応. [日本金属学会誌, 68 (10), (2004), 857-861] 吉川昇, 北原学, 山口英明, 谷口尚司

● Water Model Experiments on Hydrodynamic Behaviors of Inclusion Particles in Liquid Steel. [Proc. of the 10th Japan-China Symposium on Science and Technology of Iron and Steel, Nov.18 19, 2004, Chiba, Japan, (2004), 135-142] S. Shimasaki, T. Wada and S. Taniguchi

● 移動磁界に置いた金属片に作用する駆動力. [交流電磁力利用マテリアルプロセッシング研究会提出資料, 2004年12月15日, 東京, (2004), 1-16] 長坂進介, 谷口尚司, 上野和之

● 東北大大学マテリアル・開発系のオープンキャンパス. [ものづくり教育を考える会会報, 環境特集, (2004) 1月] 吉川昇

● Change of Electric Resistivity of Water by Magnetic Treatment. [2nd International Workshop on Water Dynamics, (2004), 115-116] Senshin Umeki, Takuya Kato, Noboru Yoshikawa and Shoji Taniguchi

循環生態系計画学分野

● 環境ホルモンとダイオキシン－人間と自然生態系の共生のために－(執筆担当部分) 全. [(2004) 9月] 彼谷邦光

● Polymer-based adsorption medium prepared using a fragment imprinting technique for homologues of chlorinated bisphenol A produceds in the environment. [J. Chromatogr. A, 1029, (2004), 37-41] Kubo, T., Hosoya, K., Watabe, Y., Ikegami, T., Tanaka, N., Sano, T., and Kaya, K.

● Novel surface modification techniques for polymer-based separation media: stimulus-responsive phenomena based on double polymeric selectors. [J. Chromatogr. A, 1030, (2004), 237-246] Hosoya, K., Watabe, Y., Kubo, T., Hoshino, N., Tanaka, N., Sano, T., and Kaya, K.

● Recognition of hepatic homologues of microcystin using a combination of selective adsorption media. [J. Sep. Sci., 27, (2004), 316-324] Kubo, T., Hosoya, K., Watabe, Y., Tanaka, N., Sano, T., and Kaya, K.

● Toxicity recognition of hepatotoxin, homologues of microcystin with artificial trapping devices. [J. Environ. Sci. & Health part A, 39, (2004), 2597-2614] Kubo, T., Hosoya, K., Watabe, Y., Tanaka, N., Sano, T., and Kaya, K.

● Morphology, genetic diversity, temperature tolwrance and toxicity of cylindrospermopsis raciborskii (Nostocales, cyanobacteria) strain from Thailand and Japan. [FEMS Microbiology Ecology, 48, (2004), 345-355] Chonudomkul, D., Yongmanitchai, W., Theeragool, G., Kawachi, M., Kasai, F., Kaya, K., Watanabe, M.M.

● Evidence for recombination in the microcystin synthetase (mcy) genes of toxic cyanobacteria *Microcystis* spp. [J. Molecular Evolution, 58, (2004), 633-641] Tanabe, Y., Kaya, K., Watanabe, M. M.

● A Dhb-microcystin from the filamentous cyanobacterium *Planktothrix rubescens*. [J. Phytochemistry, 65, (2004), 2159-2162] Sano, T., Takagi, H., Kaya, K.

● Interval immobilization technique for recognition toward a highly hydrophilic cyanobacterium yoxin. [J. Chromatography B, 806, (2004), 229-235] Kubo, T., Hosoya, K., Watabe, Y., Tanaka, N., Tagagi, H., Sano, T., Kaya, K.

● Ultra-stable nanoparticles of CdSe revealed from mass spectrometry. [Nature Materials, 3 (2), (2004), 99-102] A. Kasuya, R. Sivamohan, Y. A. Barnakov, I. M. Dmitruk, T. Nirasawa, V. R. Romanyuk, V. Kumar, S. V. Mamykin, K. Tohji, B. Jeyadevan, K. Shinoda, T. Kudo, O. Terasaki, Z. Liu, R. V. Belosludov, V. Sundararajan, Y. Kawazoe

● Size and structure control of magnetic nanoparticles by using a modioed polyol process. [Journal of Applied Physics,

95 (11), (2004), 7477-7479] T. Hinotsu, B. Jeyadevan, C. N. Chinnasamy, K. Shinoda, K. Tohji

● Influence of chromium on the local structure and morphology of ferric oxyhydroxides. [Corrosion Science, 46, (2004), 1751-1763] S. Suzuki, Y. Takahashi, T. Kamimura, H. Miyuki, K. Shinoda, K. Tohji, Y. Waseda

● Target selective ion-exchange media for highly hydrophilic compounds: a possible solution through "interval Immobilization Technique". [Anal. Bioanal. Chem., 378, (2004), 84-88] T. Kubo, N. Tanaka and K. Hosoya

● Novel Surface-modified Molecularly Imprinted Polymer Focused on the Removal of Interference in Environmental Water Samples. [Chem. Lett., 33 (7), (2004), 806-807] Y. Watabe, K. Hosoya, N. Tanaka, T. Kubo, T. Kondo, and M. Morita

● An examination of the gelation of methacrylate type crosslinking agents for the preparation of polymer monolith with 3D ordered network structure. [Chem. Lett., 33 (9), (2004), 1134-1135] H. Aoki, T. Kubo, Y. Watabe, N. Tanaka, T. Norisuye, K. Hosoya and K. Shimbo

● A molecular recognition strategy towards Tetra-chlorinated dibenzo-p-dioxins, TCDDs. [Biosensors and Bioelectronics, 20, (2004), 1185-1189] K. Hosoya, Y. Watabe, T. Ikegami, N. Tanaka, T. Kubo, T. Sano and K. Kaya

● Chromatographic molecular recognition for catechol-related compounds using thiocalix[4]arene as an effective selector. [Anal. Bioanal. Chem., 380, (2004), 343-345] K. Hosoya, N. Hira, Y. Watabe, N. Tanaka, T. Kubo and K. Kaya

環境創成計画学講座

環境分子化学分野

● Interconversion between syn and anti Conformations of 1,3-Bis(O-cyanomethyl)-p-tert-butylthiocalix[4]arene. [Chem. Lett., 33, (2004), 184-185] Vandana Bhalla, Manoj Kumar, Chizuko Kabuto, Tetsutaro Hattori, and Sotaro Miyano

● Synthesis of an inherently chiral O,O'-biridged thiocalix [4] crown carboxylic acid and its application to a chiral solvating agent. [Tetrahedron, 60, (2004), 7827-7833] Fumitaka Narumi, Tetsutaro Hattori, Nobuji Matsumura, Toru Onodera, Hiroshi Katagiri, Chizuko Kabuto, Hiroshi Kameyama, and Sotaro Miyano

● Racemic [1SR,2RS,(RS)] -N-cyano(phenyl)methyl-1-aminoindan-2-ol: crystal structure and reactivity towards thermal epimerization in the solid state. [Tetrahedron, 60, (2004), 10553-10557] Rumiko Sakurai, Osamu Itoh, Akira Uchida, Tetsutaro Hattori, Sotaro Miyano, Masanori Yamaura

● Asymmetric synthesis of ternaphthalenes via an ester-mediated nucleophilic aromatic substitution reaction. [Tetrahedron: Asymmetry, 15, (2004), 881-887] Tetsutaro Hattori, Hiroaki Iwato, Koichi Natori and Sotaro Miyano

● Epimerization of Diastereomeric α-Amino Nitriles to Single

Stereoisomers in the Solid State. [Org. Lett., 6, (2004), 2241-2244] Rumiko Sakurai, Shuji Suzuki, Junichi Hashimoto, Manabu Baba, Osamu Itoh, Akira Uchida, Tetsutaro Hattori, Sotaro Miyano, and Masanori Yamaura

● Stereoselective synthesis of all stereoisomers of vicinal and distal bis(O-2-aminoethyl)-p-tert-butylthiocalix[4]arene. [Tetrahedron, 60, (2004), 5881-5887] Vandana Bhalla, Manoj Kumar, Tetsutaro Hattori and Sotaro Miyano

● Stereoselective dialkylation of the proximal hydroxy groups of calix- and thiocalix[4]arenes. [Org. Biomol. Chem., (2004), 890-898] Fumitaka Narumi, Tetsutaro Hattori, Naoya Morohashi, Nobuji Matsumura, Waka Yamabuki, Hiroshi Kameyama and Sotaro Miyano

ライフサイクル評価学分野

● Phase Equilibria of Two-liquid CaO-MgO-FeO-P2O5 Slag Saturated with (Mg,Fe)O. [ISIJ International, 44 (3), (2004), 476-481] Teppei Tamura, Tetsuya Nagasaka and Mitsutaka Hino

● Dissolution Behavior of Nutrition Elements from Steelmaking Slag into Seawater. [ISIJ International, 44 (4), (2004), 753-761] T. Futatsuka, K. Shitogiden, T. Miki, T. Nagasaka and M. Hino

● Dissolution Behavior of Environmentally Regulated Elements from Steelmaking Slag into Seawater. [ISIJ International, 44 (4), (2004), 762-769] T. Miki, Takayuki T. Futatsuka, K. Shitogiden, T. Nagasaka and M. Hino

● Thermodynamics of High Alloy Steel Production. [Proceedings of Scanmet II, 2nd International Conference on Process Development in Iron and Steelmaking, 2, (2004), 49-58] Y. Mizukami, T. Itoh, M. Kimoto, K. Higuchi, T. Miki, T. Nagasaka and M. Hino

● Enhancement of phytosynthetic CO₂ fixation by marine phytoplankton with steelmaking slags as a nutrient source. [Proceedings of the Fifth International Symposium on Waste Processing and Recycling in Mineral and Metallurgical Industries, (2004), 611-624] M. Hino, T. Miki and T. Nagasaka

● Kinetic study on recovery of metal values in anode slime from used lead batteries. [(2004), 641-655] S. Itoh, T. Nagasaka, J. Ono and M. Hino

● マテリアルフロー・アカウンティング. [化学工業, 55 (9), (2004), 704-711] 横山一代, 中島謙一, 長坂徹也

● 産業廃棄物の情報管理の現状と課題. [東北大學国際文化研究科創立10周年記念論文集, (2004), 199-213] 劉庭秀, 中澤重厚, 重野芳人, 岩崎玲子, 大谷博司, 大村道明

● アンケート調査に基づく産業廃棄物再利用の際の問題点とその解決策—仙台市の事例から—. [東北大學大学院国際文化研究科創立10周年記念論文集, (2004), 215-227] 重野芳人, 劉庭秀, 岩崎玲子, 大村道明, 大谷博司, 中澤重厚

● New Activity Measurement Technique by Vacuum-Sealed Quartz Cell/Atomic Absorption Spectrophotometer

Combination and Its Application to Liquid Bi-In Binary System. [Materials Transactions, 45 (9), (2004), 2871-2877] Shigeatsu Nakazawa, Minoru Sunada, Takeshi Azakami, Tetsuya Nagasaka

● Phase Equilibria in Liquid Lead-M-Oxygen (M=Antimony, Bismuth) System at 1173 and 1223 K. [High Temperature Materials and Processes, 23 (5-6), (2004), 291-304] Satoshi Itoh and Atsushi Kikuchi

● 廃棄物産業連関分析の動学的拡張. [廃棄物学会論文誌, 15 (5), (2004)] 横山一代

環境調和素材学分野

● Seeking the Earth and Human Conscious Materials and Manufacturing. [8th Int. Symposium on Synergy Ceramics (Tokyo), (2004), 8-11] Emile H. Ishida

● Channeling the Forces of Nature. [Qualicer 2004 G.C.(Castellon Spain), (2004), 3-23] Emile H. Ishida

● Hydrothermally Solidified Mesoporous Material from Water Purification Plant Sludge. [Adv. in Tech. Mat. and Mat. Proc. J., 6 (2), (2004), 224-229 [H. Maenami, H. Tanaka, N. Isu and E. H. Ishida

● Solidification of Al-Rich Inorganic Waste Materials Using Hydrothermal Technology. [J. of the Ceram. Soc. of Japan, 112 (5), (2004), S1316-S1322] H. Maenami, N. Isu and H. Ishida

● Recycling of inorganic waste as paving tile by hydrothermal technology. [J. of the Ceram. Soc. of Japan, 112 (5), (2004), S1368-S1372] M. Oida, H. Maenami, H. Isu and E. H. Ishida

● Hydrothermally Solidified Water Purification Sludge with High Specific Surface Area. [J. of the Ceram. Soc. of Japan, 112 (5), (2004), S1364-S1367] H. Isu, H. Maenami and E. H. Ishida

● Hydrothermal Solidification of Calcium Phosphate Treated by Dry Ball Milling. [J. of the Ceram. Soc. of Japan, 112 (5), (2004), S1377-S1380] K. Ohashi, H. Maenami, H. Isu and E. H. Ishida

● 土を用いた環境材料. [セラミックス, (2004)] 井須紀文, 石田秀輝

● Electron Microscopy and Phase Analysis of Fly Ash from Pressurized Fluidized Bed Combustion. [Cement Concr. Res, 34, (2004), 781-788] H. Maenami, N. Isu, E. H. Ishida and T. Mitsuda

● 無機系廃棄物を用いた機能性水熱固化体. [廃棄物学会誌, 15 (4), (2004), 196-202] 井須紀文, 石田秀輝

● Dynamic Activity of Water on the Nature Technology. [Proceedings for the 2nd Int. Workshop on Water Dynamics, (2004), 1-17] Emile H. Ishida

● これからの技術立国“日本”のものづくりと文明開化. [テクノプラザ材料マニュアル 2004, 21, (2004), 6-13] 石田秀輝, 柳田博明, 神谷忠雄, 大家寛二, 大貫徹, 青木正義

● 機能性ナノ細孔を水でつくる. [テクノプラザ Ceramic Data Book 2004, 32, (2004), 108-110] 大橋浩介, 三浦正嗣, 石田秀輝

● 循環型社会を目指した新しいタイルつくり. [東海の建築,

(61), (2004), 3-4] 井須紀文, 石田秀輝

● 酔庵主にわか文化人になる. [(社)セメント協会 セメント・コンクリート, (692), (2004), 20-21] 石田秀輝

● Hydrothermal Preparation of Granular Hydroxyapatite with Controlled Surface. [Key Engineering Materials Vols. 254-256 (Bioceramics16), 19-22 (2004)] Koji Ioku, Manami Toda, Hirotaka Fujimori, Seishi Goto, Masahiro Yoshimura,

● In Vitro Osteogenic Activity of Rat Bone Marrow Derived Mesenchymal Stem Cells Cultured on Transparent Hydroxyapatite Ceramics [Key Engineering Materials Vols. 254-256 (Bioceramics16), 1055-1058 (2004)] Noriko Kotobuki, Daisuke Kawagoe, Hirotaka Fujimori, Seishi Goto, Koji Ioku, Hajime Ohgushi,

● Hydrothermal preparation of porous calcium phosphates [Proceedings of the Workshop on Biomechanical Engineering and Biomaterials, International Symposium on Bio-inspired System (ISBS2004), ed by H. Yamada, M. Tamagawa, K. Miyazaki and Toshiki Miyazaki, Graduate School of Life Science and Systems Engineering, Kyushu Institute of Technology (2004) pp.19-23.] K. Ioku, H. Fujimori and S. Goto,

● Structural Phase Transitions between 700 and 850 °C in SrZrO₃ Studied by Raman Spectroscopy [J. Ceram. Soc. Japan, 112[4], 189-192 (2004)] H. Fujimori, M. Kakihana, K. Ioku, S. Goto, M. Yoshimura

● Amorphous Layeres Controlling the Rate of Hydration of Cement Minerals [J. Ceram. Soc. Japan, 112[5], S1308-1310 (2004)] S. Goto, K.S. You, K. Ioku, H. Fujimori

● Heat Liberation of Carbonation Reaction of Steel-Making Slag [J. Ceram. Soc. Japan, 112[5], S1381-1383 (2004)] Y. Nakano, K. Ioku, H. Fujimori, S. Goto, M. Fukuhara, K. Watanabe, T. Takahashi

● Transparent β -Tricalcium Phosphate Ceramics Prepared by Spark Plasma Sintering [J. Ceram. Soc. Japan, 112 [8], 462-463 (2004)] Daisuke Kawagoe, Koji Ioku, Hirotaka Fujimori, Seishi Goto

● Preparation of functional apatite by controlling crystal surface [Japanese J. Clinical Biomechanics (日本臨床バイオメカニクス学会誌), 25, 63-68 (2004)] Koji Ioku, Manami Toda, Shuji Sasaki, Hirotaka Fujimori, Seishi Goto

● Transparent Hydroxyapatite and β -Tricalcium Phosphate Ceramics Prepared by Spark Plasma Sintering [Trans. Mater. Res. Soc. Japan, 29[6], 2623-2626 (2004)] Daisuke Kawagoe, Daishiro Nomura, Hirotaka Fujimori, Seishi Goto, Yan-Sheng Kang, Koji Ioku

● Analysis of Inorganic Substance Deposited *in vivo* [Trans. Mater. Res. Soc. Japan, 29 [6], 2627-2630 (2004)] Giichiro Kawachi, Yoji Tamura, Hirotaka Fujimori, Seishi Goto, Koji Ioku,

● Hydrothermal preparation of porous materials of carbonate-containing hydroxyapatite [Archives of BioCeramics

- Research, 4, 12-15 (2004)] Giichiro Kawachi, Hirotaka Fujimori, Seishi Goto, Koji Ioku
- Porous ceramics of β -tricalcium phosphate composed of rod-shaped particles [Archives of BioCeramics Research, 4, 121-124 (2004)] Koji Ioku, Hideyuki Minagi, Ikuho Yonezawa, Takatoshi Okuda, Hisashi Kurosawa, Tohru Ikeda, Hidetoshi, Misumi, Kazuhiko Nakahara, Hirotaka Fujimori, Seishi Goto,
- 水熱法を用いたハイドロキシアパタイトの機能デザイン [日本機械学会第15回バイオフロンティア講演会講演論文集, [04-39], 53-54 (2004)] 川内義一郎, 山崎伸道, 藤森宏高, 後藤誠史, 井奥洪二
- CaO-ZnO-P₂O₅系生体活性ガラスの合成 [日本機械学会第15回バイオフロンティア講演会講演論文集, [04-39], 55-56 (2004)] 石川賢, 藤森宏高, 大城和宣, 井奥洪二, 後藤誠史, 山本節夫
- 細胞活動観察を目的としたリン酸カルシウムセラミックス透明体の作製 [日本機械学会第15回バイオフロンティア講演会講演論文集, [04-39], 67-68 (2004)] 古賀祥啓, 川越大輔, 藤森宏高, 後藤誠史, 山崎伸道, 井奥洪二
- Reaction Mechanisms of Mass Transformation in Water Vapor near Critical Point [Proc. 2nd Int. Workshop on Water Dynamics, 247-250 (2004)] Yongcheng JIN, Hideyuki KATO, Inna R. KORABLOVA, Koji IOKU, Hideki ISHIDA, Nakamichi YAMASAKI
- Effect of Copper on Formation of Aluminum Silicate Film [Proc. 2nd Int. Workshop on Water Dynamics, 257-259 (2004)] Hideyuki Kato, Yongcheng Jin, Inna Korablova, Lihui Liu, Koji Ioku, Atsushi Minagawa, Greg Bignall, Noriyoshi Tsuchiya, Nakamichi Yamasaki
- Microstructure Designing of Magnetite/Apatite Porous Composite Prepared by Hydrothermal Methods [Proc. 2nd Int. Workshop on Water Dynamics, 265-268 (2004)] Koji Ioku, Setsuaki Murakami, Hirotaka Fujimori, Setsuo Yamamoto, Seishi Goto, Nakamichi Yamasaki
- Hydrothermal Preparation of Hydroxyapatite Sheet [Proc. 2nd Int. Workshop on Water Dynamics, 269-271 (2004)] Giichiro Kawachi, Nakamichi Yamasaki, Hirotaka Fujimori, Seishi Goto, Koji Ioku
- Effect of Hydrothermal Treatment on Sinterability of Hydroxyapatite [Proc. 2nd Int. Workshop on Water Dynamics, 273-276 (2004)] Daisuke Kawagoe, Hirotaka Fujimori, Seishi Goto, Nakamichi Yamasaki, Koji Ioku
- Tailored Hydroxyapatite Porous Material prepared by Hydrothermal method [Proc. 4th Asian Int. Symp. Biomater. (AISB4) and 2nd Int. Symp. Fusion Nano Bio Technol. (FNB2004) 57-58 (2004)] Koji Ioku, Giichiro Kawachi, Nakamichi Yamasaki, Hirotaka Fujimori, Seishi Goto
- Utilization of carbonation of calcium silicate [Proc. 2nd Korea-Japan International Symposium on Materials Science & Resources Recycling, Ed. by J-K. Park, K-S. You, J-H. kim, S-M. Joo, 110-118 (2004)] Seishi Goto, H. Fujimori, K. Ioku, M. Fukuhara, T. Takahashi
- Functional apatite materials prepared by hydrothermal method [Proc. 2nd Korea-Japan International Symposium on Materials Science & Resources Recycling, Ed. by J-K. Park, K-S. You, J-H. kim, S-M. Joo, 141-147 (2004)] Koji Ioku, Giichiro Kawachi, Nakamichi Yamasaki, Hirotaka Fujimori, Seishi Goto
- Hydroxyapatite Sheet Prepared by Hydrothermal Method [Phosph. Res. Bull., 17, 227-230 (2004)] Giichiro Kawachi, Hirotaka Fujimori, Seishi Goto, Nakamichi Yamasaki, Koji Ioku
- Hydroxyapatite Sheet Prepared by Hydrothermal Method [Phosph. Res. Bull., 17, 246-251 (2004)] Daisuke Kawagoe, Hirotaka Fujimori, Seishi Goto, Nakamichi Yamasaki, Koji Ioku
- Effect of Hydrothermal Treatment on Preparation of Transparent Apatite Ceramics by Spark Plasma Sintering. [Phosph. Res. Bull., 17, (2004), 246-251] Daisuke Kawagoe, Hirotaka Fujimori, Seishi Goto, Nakamichi Yamasaki, Koji Ioku
- 生命体の多様性は何処まで? . [The Division, (40), (2004), 3] 井奥洪二
- 超臨界流体とナノテクノロジー (執筆担当部分) 第3章 6.9 生体ナノ材料. [(2004) 9月] 井奥洪二

環境調和材料強度学分野

- Microstructural Characterization of Type IV Failure in Weldment of a Mod. 9Cr-1Mo Steel. [Proceedings of the 6th International Symposium on Risk, Economy and Safety, Failure Mechanism and Analysis, (2004), 211-233] J. S. Lee, K. Maruyama, I. Nonaka and T. Ito
- Correlation between Premature Failure and Laves Phase Growth in 9Cr-1.8W-0.5Mo-VNb Steel. [Proceedings of the Second International Conference on Advanced Structural Steels (ICASS2004), (2004), 838-842] J.S. Lee and K. Maruyama
- Mg-Al-Ca 系チクソモールディングR成形材のミクロ組織およびクリープ強化機構. [日本学術振興会第 123 委員会報告, 45 (3), (2004), 255-262] 鈴木真由美, 附田之欣, 斎藤研, 丸山公一
- Effects of zinc on creep strength and deformation substructures in Mg-Y alloy. [Materials Science and Engineering A, 387-389, (2004), 706-709] M. Suzuki, T. Kimura, J. Koike and K. Maruyama
- Creep of Lamellar TiAl Alloys: Degradation, Stabilization and Design of Lamellar Boundaries. [Materials Science and Engineering A, 387-389, (2004), 910-917] K. Maruyama, Hee. Y. Kim and Hanliang Zhu
- Effect of Microstructural Stability on Creep Behavior of 47XD TiAl Alloys with Fine-grained Fully Lamellar Structure.

[Scripta Materialia, 52, (2004), 45-50] Hanliang Zhu, D. Y. Seo, K. Maruyama, P. Au

● Microstructural Characteristics and Creep Behavior of 45XD TiAl Alloys. [Materials Transactions, 45, (2004), 2618-2621] Hanliang Zhu, D. Y. Seo, K. Maruyama

● Effects of Lamellar Boundary Structural Change on Lamellar Size Hardening of TiAl Alloy. [Acta Materialia, 52 (17), (2004), 5185-5194] K. Maruyama, M. Yamaguchi, G. Suzuki, Hanliang Zhu, Hee Y. Kim, M.H. Yoo

● AZ61 マグネシウム合金圧延材における破断伸びの異方性と配向性の関係. [日本金属学会誌, 68 (1), (2004) , 27-33] 大山礼, 小池淳一, 鈴木真由美, 丸山公一

● 地球温暖化抑制に向けた高温材料の課題. [金属, 74 (11), (2004), 1122-1126] 丸山公一

● 新規に開発された耐熱性マグネシウム合金チクソモールディング (R) 材の機械的性質. [耐熱金属材料第 123 委員会研究報告, 45, (2004), 251-254] 附田之欣, 山口毅, 斎藤研, 鈴木真由美, 小池淳一, 丸山公一

環境物質制御学講座（同和鉱業）（寄附講座）

環境物質制御学分野

● 水熱ダイナミクスと廃棄物処理. [廃棄物学会誌, (15),(2004),182-188] 山崎仲道

● ソルボサーマル法によるトリクロロエチレンの脱塩素化分解. [廃棄物学会誌,(15), (2004),363-371] 池田博史, 浦上昌也, 笹辺慶, 宮本佳紀, 山崎仲道

● Protective mineral layers for med from granite- dry steam interaction. [Applied Geochemistry, 19, (2004),1529-1535] I.R. Korablova, S.F.Korablov

● Decomposition of chlorinated organic compounds to diamond structured carbon at moderate hydrothermal conditions. [Transactions of the Materials Research Society of Japan, (29(5)), (2004), 2371-2374] Sergiy Korablov, Kazunori Yokosawa, Kazuyuki Tohji, Nakamichi Yamasaki

● アルカリメタノールによる絶縁油中の脱塩素化処理. [化学工学論文集, (30 (2)), (2004), 211-216] 池田博, 浦上昌也, 笹辺慶, 山崎仲道

● Hydrothermal deposition of nickel on Teflon substrate. [Mat. Sci. Lett. (58), (2004), 768 -771] Nakamichi Yamasaki, I.R.Korablova, S.F.Korablov

● MNAの適用に向けて. [土壤環境センターニュース, vol.9, (2004), p.72-77] 白鳥寿一