

相関基礎科学系

青木 優 (Masaru Aoki)

青木 優. 準安定原子電子分光による化学吸着分子の局所電子分布. 触媒, **46**, 583-588, 2004.

生嶋 健司 (Kenji Ikushima)

Ikushima, K., Sakuma, H., Komiyama, S., Hirakawa, K. Imaging of cyclotron emission from edge channels in quantum Hall conductors. *Phys. Rev. Lett.*, **93**, 146804, 2004.

Kato, H., Sakai, H., Ikushima, K., Kambe, S., Tokunaga, Y., Aoki, D., Haga, Y., Onuki, Y., Yasuoka, H., Walstedt, R. E., Direct observation of ^{235}U NMR in an itinerant 5f electron system, *USb2. J. Phys. Soc. Jpn.*, **73**, 2085-2088, 2004.

Machida, T., Yamazaki, T., Ikushima, K., Komiyama, S., Electrical manipulation of nuclear spins in quantum Hall devices., *Physica E*, **21**, 921-927, 2004.

伊藤 健吾 (Kengo Itoh)

Itoh, K., Muraoka, A., Watanabe, K., Nagata, T., Nishikawa, M., Holroyd, R. A., Negative Charge Transport in Gaseous, Supercritical, and Liquid Carbon Dioxide, *J. Phys. Chem. B*, **108**, 10177-10184, 2004.

猪野 和住 (Kazusumi Ino)

Utsugi, A., Ino, K., Oshikawa, M. Random matrix theory analysis of cross correlations in financial markets, *Phys. Rev. E*, **70**, 026110-1-11, 2004.

Takada, Y., Ino, K., Yamanaka, M. Statistics of spectra for critical quantum chaos in one-dimensional quasiperiodic systems, *Phys. Rev. E*, **70**, 066203-1-6, 2004.

井口 佳哉 (Yoshiya Inokuchi)

井口 佳哉, 大橋 和彦. 芳香族分子クラスターイオンの質量選別光解離分光. 分光研究, **52**, 333-349, 2003.

Inokuchi, Y., Ohshimo, K., Misaizu, F., Nishi, N. Structures of $[\text{Mg} \cdot (\text{H}_2\text{O})_{12}]^+$ and $[\text{Al} \cdot (\text{H}_2\text{O})_{12}]^+$ ions studied by infrared photodissociation spectroscopy: Evidence of $[\text{HO-Al-H}]^+$ ion core structure in $[\text{Al} \cdot (\text{H}_2\text{O})_2]^+$. *Chem. Phys. Lett.*, **390**, 140-144, 2004.

Inokuchi, Y., Ohshimo, K., Misaizu, F., Nishi, N. Infrared photodissociation spectroscopy of $[\text{Mg} \cdot (\text{H}_2\text{O})_{14}]^+$ and $[\text{Mg} \cdot (\text{H}_2\text{O})_{14} \cdot \text{Ar}]^+$. *J. Phys. Chem. A*, **108**, 5034-5040, 2004.

Machinaga, H., Ohashi, K., Inokuchi, Y., Nishi, N., Sekiya, H. Infrared photodissociation spectra and solvation structures of Mg^+ $(\text{CH}_3\text{OH})_n$ ($n = 1-4$). *Chem. Phys. Lett.*, **391**, 85-90, 2004.

Ohashi, K., Terabaru, K., Inokuchi, Y., Mune, Y., Machinaga, H., Nishi, N., Sekiya, H. Infrared photodissociation spectroscopy of Mg^+ $(\text{NH}_3)_n$ ($n = 3-6$). Direct coordination and solvation through hydrogen bonding. *Chem. Phys. Lett.*, **393**, 264-270, 2004.

Okabe, C., Nakabayashi, T., Inokuchi, Y., Nishi, N., Sekiya, H. Ultrafast excited-state dynamics in photochromic N-salicylideneaniline studied by femtosecond time-resolved REMPI spectroscopy. *J. Chem. Phys.*, **121**, 9436-9442, 2004.

牛山 浩 (Hiroshi Shiyama)

Ushiyama, H., Takatsuka, K. Time-dependent probability of quantum tunneling in terms of the quasisemiclassical method., *J. Chem. Phys.*, **120**, 4561, 2004.

榎本 真哉 (Masaya Enomoto)

Itoi, M., Taira, A., Enomoto, M., Matsushita, N., Kojima, N., Kobayashi, Y., Asai, K., Koyama, K., Nakano, T., Uwatoko, Y., Yamaura, J. Crystal Structure and Structural Transition Caused by Charge-transfer Phase Transition For Iron Mixed-valence Complex, $(n\text{-C}_3\text{H}_7)_4\text{N}[\text{Fe}^{\text{II}}\text{Fe}^{\text{III}}(\text{dto})_3]$ (dithiooxalato: $\text{dto} = \text{C}_2\text{O}_2\text{S}_2$), *Solid State Commun.*, **130**, 415-420, 2004.

Itoi, M., Enomoto, M., Kojima, N. Ferromagnetism of Iron Mixed-valence Complex, $(n\text{-C}_3\text{H}_7)_4\text{N}[\text{Fe}^{\text{II}}\text{Fe}^{\text{III}}(\text{dto})_3]$ (dithiooxalato: $\text{dto} = \text{C}_2\text{O}_2\text{S}_2$), *J. Mag. Mag. Mater.*, **272-276**, 1093-1094, 2004.

Ikeda, K., Ono, Y., Enomoto, M., Kojima, N., Kobayashi, Y., Seto, M., Koyama, K., Uwatoko, Y. P-T Phase Diagram and Gold Valence State of New Gold Mixed-Valence Complexes, $\text{Cs}_2[\text{Au}^{\text{I}}\text{X}_2][\text{Au}^{\text{III}}\text{Y}_4]$ ($\text{X}, \text{Y} = \text{Cl}, \text{Br}, \text{I}; \text{X} \neq \text{Y}$), *Ceramics*, **48**, 159-164, 2004.

遠藤 泰樹 (Yasuki Endo)

Nakajima, M., Yoneda, Y., Sumiyoshi, Y., Endo, Y., Laser-induced fluorescence spectroscopy of NC_3S , *J. Chem. Phys.*, **120**, 2662-2666, 2004.

Sumiyoshi, Y., Tanaka, H., Endo, Y., "FTMW spectroscopy of the NC_2O and NC_3O radicals and ab initio calculations", *Chem. Phys. Lett.*, **387**, 116-123, 2004.

Katoh, K., Okabayashi, T., Tanimoto, M., Sumiyoshi, Y., Endo, Y., Electronic properties of CrF and CrCl in the $\text{X}^\infty\Sigma^+$ state: Observation of the halogen hyperfine structure by Fourier transform microwave spectroscopy, *J. Chem. Phys.*, **120**, 7927-7932, 2004.

業績リスト

- Ohshima, Y., Kanya, R., Sumiyoshi, Y., Endo, Y. FTMW spectroscopy of jet-cooled 9-cyanoanthracene, *J. Mol. Spectrosc.*, **223**, 148-151, 2004.
- Suma, K., Sumiyoshi, Y., Endo, Y., Enami, S., Aloisio, S., Hashimoto, S., Kawasaki, M., Nishida, S., Matsmi, Y., Equilibrium constants of the reaction of Cl with O₂ in the formation of ClOO, *J. Phys. Chem., A*, **108**, 8096-8099, 2004.
- Suma, K., Sumiyoshi, Y., Endo, Y., Fourier transform microwave spectroscopy and FTMW-millimeter wave double resonance spectroscopy of the ClOO radical, *J. Chem. Phys.*, **121**, 8351-8359, 2004.

太田 浩一 (Koichi Ohta)

- Lenz, F., Ohta, K., Thies, M., Yazaki, K. Chiral symmetry in light-cone field theory. *Phys. Rev. D*, **70**, 025015-1-13, 2004.
- 太田 浩一. 空の青さに分子を見た—ローレンス. *パリテイ*, **19**(1), 91-94, 2004.
- 太田 浩一. 精密さを追い求めたりベラリスト—エトヴォシユ. *パリテイ*, **19**(2), 78-81, 2004.
- 太田 浩一. 貧乏と物理と数学と—ヘヴィサイド. *パリテイ*, **19**(3), 72-75, 2004.
- 太田 浩一. 汽車に乗ってコークに行こう—フィッツジェラルド. *パリテイ*, **19**(4), 67-70, 2004.
- 太田 浩一. エーテルの波は永遠に—ヘルツ. *パリテイ*, **19**(5), 66-69, 2004.
- 太田 浩一. ライン河の流れのように—ローレンツ. *パリテイ*, **19**(6), 62-65, 2004.
- 太田 浩一. 戦場に散った熱情—ハーゼンエールル. *パリテイ*, **19**(7), 66-69, 2004.
- 太田 浩一. はるかなるエルベ河の畔で—リーマン. *パリテイ*, **19**(8), 54-58, 2004.
- 太田 浩一. 工場の煙と塵の中から—ジュール. *パリテイ*, **19**(9), 62-65, 2004.
- 太田 浩一. ほくはスピノザを愛している—アインシュタイン. *パリテイ*, **19**(10), 64-68, 2004.
- 太田 浩一. ラーグス残照—ケルヴィン. *パリテイ*, **19**(11), 72-75, 2004.
- 太田 浩一. ふっくらほかほかのパン—ネーター. *パリテイ*, **19**(12), 72-75, 2004.

岡本 拓司 (Takuji Okamoto)

- Okamoto, T. Percy Williams Bridgman and the Establishment of Theoretical Physics at Harvard. *Hist. Sci.*, **14**, 1-48, 2004.

小川 桂一郎 (Keiichiro Ogawa)

- Fujiwara, T., Harada, J., Ogawa, K. Solid-state thermochromism studied by variable-temperature diffuse reflectance spectroscopy: A new perspective on the chromism of salicylideneanilines. *J. Phys. Chem. B*, **108**, 4035-4038, 2004.
- Harada, J., Ogawa, K. X-ray diffraction analysis of nonequilibrium states in crystals: Observation of an unstable conformer in flash-cooled crystals. *J. Am. Chem. Soc.*, **126**, 3539-3544, 2004.
- Harada, J., Harakawa, M., Ogawa, K. Torsional vibration and central bond length of *N*-benzylideneanilines. *Acta Cryst. Sect. B*, **60**, 578-588, 2004.
- Harada, J., Harakawa, M., Ogawa, K. Conformational change of *N*-benzylideneanilines in crystals. *Acta Cryst. Sect. B*, **60**, 589-597, 2004.
- Ogawa, K., Harada, J., Fujiwara, T., Takahashi, H. UV-vis absorption spectra of powdered materials: Direct measurements by optical waveguide spectroscopy *Chem. Lett.*, **33**, 1446-1447, 2004.

尾中 篤 (Makoto Onaka)

- Okachi, T., Onaka, M. Formaldehyde Encapsulated in Zeolite: A Long-Lived, Highly Activated One-Carbon Electrophile to Carbonyl-Ene Reactions. *J. Am. Chem. Soc.*, **126**, 2306-2307, 2004.
- Oikawa, T., Ookoshi, T., Tanaka, T., Yamamoto, T., Onaka, M. A New Heterogeneous Olefin Metathesis Catalyst Composed of Rhenium Oxide and Mesoporous Alumina. *Micropor. Mesopor. Mater.*, **74**, 93-103, 2004.
- Imachi, S., Onaka, M. Entrapment of Cyclopentadiene in Zeolite NaY and its Application for Solvent-Free Diels-Alder Reactions in the Nanosized Confined Environment. *Tetrahedron Lett.*, **45**, 4943-4946, 2004.
- 尾中 篤. ナノ空間を反応場とする触媒有機反応. *ナノ学会会報*, **2**, 89-97, 2004.
- 尾中 篤, 井町昌平, 關 祐威. ファインケミカルズ合成を指向した固体酸・塩基触媒反応の新しい展開. *触媒*, **46**, 334-339, 2004.
- 尾中 篤. 全国高校化学グランプリ 2003 —二次問題の紹介. *化学と教育*, **52**, 323-327, 2004.

鹿兒島 誠一 (Seiichi Kagoshima)

- Kondo, R., Higa, M., Kagoshima, S., Hoshino, H., Mori, T., Mori, H. Molecular arrangement and electronic band structure of θ -(BEDT-TTF)₂CsZn(SCN)₄ controlled by uniaxial compression. *Current Appl. Phys.*, **4**, 484-487, 2004.
- Kondo, R., Kagoshima, S. Crystal and electronic structures of α -(BEDT-TTF)₂I₃ under uniaxial strains. *J. Phys. IV (France)*, **114**, 523-525, 2004.
- 近藤 隆祐, 鹿兒島 誠一. 一軸性圧縮を用いた有機超伝導体の構造制御. *日本結晶学会誌*, **46**, 145-151, 2004.
- Kagoshima, S., Kondo, R. Control of Electronic Properties of Molecular Conductors by Uniaxial Strain. *Chemical Reviews*, **104**, 5593-5608, 2004.

風間 洋一 (Yoichi Kazama)

Aisaka, Y., Kazama, Y. Relating Green-Schwarz and Extended Pure Spinor Formalisms by Similarity Transformation. *JHEP*, **0404**, 070, 2004.

金子 邦彦 (Kunihiko Kaneko)

Fujimoto, K., Kaneko, K. Convective Instability with Time Scale Translation of the Transmitted Disturbance. *Physica D*, **196**, 67-89, 2004.

Togashi, Y., Kaneko, K. Molecular discreteness in reaction-diffusion systems yields steady states not seen in the continuum limit. *Phys. Rev. E*, **70**, 020901 (R), 2004.

Awazu, A., Kaneko, K. Is relaxation to equilibrium hindered by transient dissipative structures in closed systems?. *Phys. Rev. Lett.*, **92**, 258302, 2004.

Nakagawa, N., Kaneko, K. Autonomous Energy Transducer: Proposition, Example, Basic Characteristics. *Physica A*, **338**, 511-536, 2004.

Morita, H., Kaneko, K. Self-Organized Bottleneck in Energy Relaxation. *Europhys. Lett.*, **66** (2), 198-204, 2004.

金子 邦彦. 計測と制御. 計測自動制御学会. **43** (1), 2004.

古澤 力, 金子 邦彦. 複雑系としての生命システムの論理: 細胞状態の普遍統計則を中心にして. 細胞工学, **23** (4), 452-457, 2004.

Kaneko, K. Constructive and Dynamical Systems Approach to Life. Proceedings of Modelling and Theory in Biological systems, Function and Regulation of Cellular Systems: Experiments and Models, 213-224, ed. by A. Deutsch, M. Falcke, J. Howard, W. Zimmermann (Birkhaeuser Verlag Basel), 2004.

金子 邦彦. 愛づるの話: 生命—多様化するという普遍性 (中村 桂子 編) 56-69, JT 生命誌研究館 (大阪) 2004.

金子 智行 (Tomoyuki Kaneko)

Kojima, K., Kaneko, T., Yasuda, K. A novel method of cultivating cardiac myocytes in agarose microchamber chips for studying cell synchronization. *J. Nanobiotechnology*, **2**, 9, 2004.

Sugio, Y., Kojima, K., Moriguchi, H., Takahashi, K., Kaneko, T., Yasuda, K. An agar-based on-chip neural-cell cultivation system for stepwise control of network pattern generation during cultivation. *Sens. & Actuat. B*, **99**, 156-162, 2004.

Moriguchi, H., Kojima, K., Suzuki, I., Hattori, A., Kaneko, T., Yasuda, K. Microfabrication of hydrogels for the constructional analysis of cultured cellular networks with controlled network shapes and community sizes. *Proceedings of Micro Total Analysis Systems 2004*, **1**, 393-395, 2004.

川本 清 (Kiyoshi Kawamoto)

Jo, M., Yasuhara, N., Ishida, K., Kawamoto, K., Fukatsu, S. Highly efficient radiative recombination of electron-hole pairs localized at compound semiconductor quantum dots embedded in Si. *Physica E*, **21**, 354-357, 2004.

Fukatsu, S., Jo, M., Ishida, K., Yasuhara, N., Kawamoto, K. Evidence for amplified interband spontaneous emission in Si-based trans-column quantum dots. *Mater. Sci. Eng.*, **C23**, 683-686, 2003.

北野 晴久 (Haruhisa Kitano)

Inoue, R., Miwa, K., Kitano, H., Maeda, A., Odate, Y., Tanabe, E. Highly Accurate and Real-Time Determination of Resonant Characteristics: Complex Linear Regression of the Transmission Coefficient. *IEEE Trans. Microwave Theory and Techniques*, **52**, 2163-2168, 2004.

Kitano, H., Ohashi, T., Ryuzaki, H., Maeda, A., Tsukada, I. Frequency-dependent microwave conductivity of $\text{La}_{2x}\text{Sr}_x\text{CuO}_4$ thin films. *Physica C*, **412-414**, 130-133, 2004.

Kinoshita, K., Kitano, H., Maeda, A., Nishizaki, T., Maeda, M., Shibata, K., Kobayashi, N. Impurity effect on the electronic state of the vortex core in the mixed state of $\text{YBa}_2\text{Cu}_3\text{O}_y$. *Physica C*, **412-414**, 530-534, 2004.

久我 隆弘 (Takahiro Kuga)

Yoshikawa, Y., Sugiura, T., Torii, Y., Kuga, T. Observation of superradiant Raman scattering in a Bose-Einstein condensate. *Phys. Rev. A*, **69**, 041603-1-4, 2004.

久我 隆弘. 原子気体のボースアインシュタイン凝縮. 物性研究, **81**, 733-739, 2004.

久我 隆弘, 鳥井 寿夫. 現代物理学の歴史 II —ボースアインシュタイン凝縮. (大系編集委員会編). 484-496, 朝倉書店, 2004.

久我 隆弘. 理想気体のボース・アインシュタイン凝縮. アインシュタインと 21 世紀の物理学, (日本物理学会編), 19-34, 日本物理学会, 2004.

国場 敦夫 (Atsuo Kuniba)

Kuniba, A., Takagi, T., Takenouchi, A. Factorization, reduction and embedding in integrable cellular automata. *J. Phys. A*, **37**, 1691-1709, 2004.

Kuniba, A., Okado, M., Takagi, T., Yamada, Y. Tropical R and tau functions, *Commun. Math. Phys.*, **245**, 491-517, 2004.

業績リスト

小島 憲道 (Norimichi Kojima)

- Kojima, N., Ono, Y., Kobayashi, Y., Seto, M. Control of Charge Transfer Phase Transition in Iron Mixed-valence System, $(n\text{-C}_{2n+1}\text{H}_{2n+1})_4\text{N}[\text{Fe}^{\text{II}}\text{Fe}^{\text{III}}(\text{dto})_3]$ ($n = 3-6$; $\text{dto} = \text{C}_2\text{O}_2\text{S}_2$). *Hyperfine Interactions*, **156-157**, 175-179, 2004.
- Ikeda, K., Kojima, N., Ono, Y., Kobayashi, Y., Seto, M., Liu, X.J., Moritomo, Y. Study on Chemical Bond and Electronic State of New Gold Mixed-Valence Complexes, $\text{Cs}_2[\text{Au}^{\text{I}}\text{X}_2][\text{Au}^{\text{III}}\text{Y}_4]$ ($\text{X}, \text{Y} = \text{Cl}, \text{Br}, \text{I}, \text{etc.}$). *Hyperfine Interactions*, **156-157**, 311-314, 2004.
- Moritomo, Y., Isobe, Y., Liu, X.J., Kawamoto, T., Nakamoto, A., Kojima, N., Kato, K., Takata, M. Dynamical Phase Transition under Photo-excitation in a Spin-crossover Complex, *J. Luminescence*, **108**, 229-232, 2004.
- Itoi, M., Taira, A., Enomoto, M., Matsushita, N., Kojima, N., Kobayashi, Y., Asai, K., Koyama, K., Nakano, T., Uwatoko, Y., Yamaura, J. Crystal Structure and Structural Transition Caused by Charge-transfer Phase Transition for Iron Mixed-valence Complex, $(n\text{-C}_3\text{H}_7)_4\text{N}[\text{Fe}^{\text{II}}\text{Fe}^{\text{III}}(\text{dto})_3]$ ($\text{dto} = \text{C}_2\text{O}_2\text{S}_2$). *Solid State Commun.*, **130**, 415-420, 2004.
- Itoi, M., Enomoto, M., Kojima, N. Ferromagnetism of Iron Mixed-valence Complex, $(n\text{-C}_3\text{H}_7)_4\text{N}[\text{Fe}^{\text{II}}\text{Fe}^{\text{III}}(\text{dto})_3]$ (dithiooxalato: $\text{dto} = \text{C}_2\text{O}_2\text{S}_2$). *J. Mag. Mater.*, **272-276**, 1093-1094, 2004.
- Kobayashi, Y., Itoi, M., Kojima, N., Asai, K. Pressure-induced Charge-transfer Phase Transition in a Mixed-valence Iron Complex. *J. Mag. Mater.*, **272-276**, 1091-1092, 2004.
- Sakata, M., Itsubo, T., Nishibori, E., Moritomo, Y., Kojima, N., Ohishi, Y., Takata, M. Charge Density Study under High Pressure. *J. Phys. Chem. Solids*, **65**, 1973-1976, 2004.
- Ikeda, K., Ono, Y., Enomoto, M., Kojima, N., Kobayashi, Y., Seto, M., Koyama, K., Uwatoko, Y. P-T Phase Diagram and Gold Valence State of New Gold Mixed-Valence Complexes, $\text{Cs}_2[\text{Au}^{\text{I}}\text{X}_2][\text{Au}^{\text{III}}\text{Y}_4]$ ($\text{X}, \text{Y} = \text{Cl}, \text{Br}, \text{I}; \text{X} \neq \text{Y}$). *Ceramics*, **48**, 159-164, 2004.
- 小島 憲道. 光とスピンの演ずる物質とは. 金属元素が拓く 21 世紀の新しい化学の世界. (日本学術振興会・放送大学・日本化学会). 69-78, クバプロ, 2004.
- 小島 憲道. 磁気光学効果. 化学便覧: 基礎編 II. (日本化学会編). 654-657, 丸善, 2004.
- 小島 憲道, 渡辺 直寛. 種々の磁気効果. 実験化学講座: 第 7 巻『電気物性, 磁気物性』. (日本化学会編). 343-357, 丸善, 2004.
- 小島 憲道. 混合原子価錯体. 実験化学講座: 第 22 巻『金属錯体・遷移金属クラスター』. (日本化学会編). 471-477, 丸善, 2004.

小宮山 進 (Susumu Komiyama)

- Ikushima, K., Sakuma, H., Komiyama, S., Hirakawa, K. Imaging of cyclotron emission from edge channels in quantum Hall conductors. *Phys. Rev. Lett.*, **93**, 146804 (1-4), 2004.
- Komiyama, S., Astafiev, O., Machida, T. Application of quantum Hall edge channels. *Physica E*, **20**, 43-56, 2003.
- Machida, T., Yamazaki, T., Ikushima, K., Komiyama, S. Electrical manipulation of nuclear spins in quantum Hall devices. *Physica E*, **21**, 921-927, 2004.
- Komiyama, S. Playing with quantum Hall effects and single-electron-tunneling effects. *Superlattices and Microstructures (Elsevier)*, **33**, 405-423, 2003.
- 小宮山 進. 量子ドット遠赤外検出器. 光学, **33** (11), 654-656, 2004.

近藤 隆祐 (Ryusuke Kondo)

- Sato, T., Hasegawa, T., Akutagawa, T., Nakamura, T., Kondo, R. $2K_F$ transitions in a series of $(\text{DMET})_2(\text{X}_1\text{X}_2\text{TCNQ})$ ($\text{X}_1, \text{X}_2 = \text{Br}, \text{Cl}, \text{F}, \text{CH}_3, \text{H}$): Subsidiary lattice effect by anion radicals. *Phys. Rev. B*, **69**, 075103-1-5, 2004.
- Kondo, R., Kagoshima, S. Crystal and electronic structure of α - $(\text{BEDT-TTF})_2\text{I}_3$ under the uniaxial strains. *J. Phys. IV France*, **114**, 523-525, 2004.
- Takahashi, M., Hiraki, K., Takahashi, T., Hasegawa, T., Kondo, R., Kagoshima, S. Phase transition on $(\text{BEDO-TTF})(\text{Cl}_2\text{TCNQ})$: Spin dynamics observed by NMR measurements. *J. Phys. IV France*, **114**, 141-142, 2004.
- 近藤 隆祐, 鹿見島 誠一. 一軸性圧縮を用いた有機超伝導体の構造制御. 日本結晶学会誌, **46**, 145-151, 2004.

齋藤 晴雄 (Haruo Saito)

- Saito, H., Hyodo, T. Positron Lifetime Spectrometer for the Measurement of Parapositronium Lifetime in Solids. *Materials Science Forum*, **445-446**, 457-461, 2004.

齋藤 文修 (Fuminori Saito)

- Nagashima, Y., Saito, F., Itoh, Y., Goto, A., Hyodo, T. Measurement of Cu K-Shell and Ag L-Shell Ionization Cross Sections by Low-Energy Positron Impact. *Phys. Rev. Lett.*, **92**, 223201-1-4, 2004.
- Saito, F., Yotoryama, T., Nagashima, Y., Suzuki, Y., Itoh, Y., Goto, A., Iwaki, M., Nishiyama, I., Hyodo, T. Study of Ion Irradiated Poly-Lactic Acid Using Slow Positron Beam. *Materials Science Forum*, **445-446**, 340-342, 2004.
- Nagashima, Y., Saito, F., Itoh, Y., Goto, A., Hyodo, T. Measurement of Characteristic X-rays by Positron Impact. *Materials Science Forum*, **445-446**, 440, 2004.

酒井 邦嘉 (Kuniyoshi Sakai)

- Sakai, K. L., Miura, K., Narafu, N., Muraishi, Y. Correlated functional changes of the prefrontal cortex in twins induced by classroom education of second language. *Cerebral Cortex*, **14**, 1233-1239, 2004.
- Hashimoto, R., Sakai, K. L. Learning letters in adulthood: Direct visualization of cortical plasticity for forming a new link between orthography and phonology. *Neuron*, **42**, 311-322, 2004.
- 酒井 邦嘉. 脳の文法処理と再帰的計算一言語の脳科学をめざして一. 電子情報通信学会技術研究報告, **103** (520), 19-22, 2003.
- 酒井 邦嘉. 経頭蓋的磁気刺激法による大脳皮質言語野の機能的連関の解明. 三菱財団研究報告集, 308-311, 2004.
- 酒井 邦嘉. 脳機能イメージングで言語教育の効果を見る. 実験医学, **22**, 1322-1323, 2004.
- 酒井 邦嘉. 文法遺伝子は本当にあるのか. 分子精神医学, **4**, 302-308, 2004.
- 酒井 邦嘉. 赤ちゃんはどうして言葉を覚えるのか. 科学の最前線で研究者は何を見ているのか. (瀬名 秀明 編). 116-133, 日本経済新聞社 (東京), 2004.

佐々 真一 (Shin-ichi Sasa)

- Hayashi, K., Sasa, S., Effective temperature in nonequilibrium steady states of Langevin systems with tilted periodic potential *Phys. Rev. E*, **69**, 066119-1-6, 2004.

佐々木 力 (Chikara Sasaki)

- 共著, 笠松 幸一, K・A・シュブレンガルト編. 『現代環境思想の展開—20世紀の自然観を創る』の一章. 新泉社, 2004.
- 佐々木 力, 山本 義隆, 桑野 隆 編訳. 『物理学者ランダウ—スターリン体制への叛逆』. みすず書房, 2004.

柴田 尚和 (Naokazu Shibata)

- Shibata, N., Yoshioka, D. Stripe State in the Lowest Landau Level. *J. Phys. Soc. Jpn.*, **73**, 1-4, 2004.
- Maruyama, I., Shibata, N., Ueda, K. Conductance through Quantum Dots Studied by Finite Temperature DMRG. *J. Phys. Soc. Jpn.*, **73**, 434-440, 2004.
- Shibata, N., Yoshioka, D. Real Space Effective Interaction and Phase Transition in the Lowest Landau Level. *J. Phys. Soc. Jpn.*, **73**, 2169-2173, 2004.

清水 明 (Akira Shimizu)

- Ukena, A., Shimizu, A. Appearance and Stability of Anomalously-Fluctuating States in Shor's Factoring Algorithm. *Phys. Rev. A*, **69**, 022301-1-022301-15, 2004.
- Koshino, K., Shimizu, A. Quantum Zeno Effect for Exponentially Decaying Systems. *Phys. Rev. Lett.*, **92**, 030401-1-030401-4, 2004.
- Shimizu, A., Ukena, A., Miyadera, T. Anomalous quantum states in finite macroscopic systems, *International Journal of Quantum Information*, **1**, 561-568, 2003.
- Koshino, K., Shimizu, A. Decay of an excited atom under imperfect photon counting measurement. *J. Phys. Soc. Jpn.*, **72**, Suppl. C, 77-80, 2003.
- 清水 明. EPRパラドックスからベルの不等式へ, 2004年度日本物理学会科学セミナー「アインシュタインと21世紀の物理学—2005世界物理年へ向けて—」講演テキスト. 86-100, 2004.
- 清水 明. 何を学ぶか—物理学. 蛍雪時代4月臨時増刊全国大学学部・学科案内号. 333-335, 旺文社 (東京), 2004.
- 清水 明. 新版 量子論の基礎—その本質のやさしい理解のために. 1-264, サイエンス社 (東京), 2004.

下井 守 (Mamoru Shimoi)

- 下井 守. 第5版実験化学講座 **22**: 金属錯体遷移金属クラスター. (日本化学会編). 367-372, 丸善 (東京), 2004.

菅原 正 (Tadashi Sugawara)

- Takasu, I., Sugawara, T., Mochida, T. Dielectric Response in Bisquaric Acid Crystal: Possible Generation of Protonic Soliton in a Quasi-One-Dimensional Hydrogen-Bonded System. *J. Phys. Chem. B*, **108** (48), 18495-18499, 2004.
- Takakura, K., Sugawara, T. Membrane Dynamics of a Myelin-like Giant Multilamellar Vesicle Applicable to a Self-Reproducing System. *Langmuir*, **20** (10), 3832-3834, 2004.
- Taniguchi, S., Yokoi, T., Izuoka, A., Matsushita, M. M., Sugawara, T. Noncatalytic, solvent-free thermal formation of cyclic trimers using 1,6-bis (acyloxymethyl) hexa-2,4-diyne derivatives. *Tetrahedron Lett.*, **45**, 2671-2675, 2004.
- Takasu, I., Izuoka, A., Sugawara, T., Mochida, T. Observation of Quantum Paraelectricity in an Intermolecular Ionic Hydrogen-Bonded Crystal of a Squaric Acid Derivative. *J. Phys. Chem. B*, **108** (18), 5527-5531, 2004.
- Matsuo, T., Ohama, M., Mochida, T., Sugawara, T. Coherent tunneling of proton in the intramolecular hydrogen bond of crystalline bromo-hydroxyphenalenone at low temperature. *J. Mol. Structure*, **700**, 127-131, 2004.
- Tanabe, J., Terao, H., Matsushita, M. M., Sugawara, T., Kudo, T., Tejima, T., Izuoka, A., Kawada, Y. Polyhedral Building Block with Specific Facial Interaction for Conducting Supramolecular Self-Assembly. *J. Mater. Chem.*, **14** (19), 2842-2847, 2004.
- Nagao, O., Harada, G., Sugawara, T., Sasaki, A., Ito, Y. Small-Angle X-Ray Scattering Method to Determine the Size Distribution of Gold Nanoparticles Chemisorbed by Thiol Ligands. *Jpn. J. Appl. Phys.*, **43** (11A), 7742-7746, 2004.

業績リスト

- Toyota, T., Takakura, K., Sugawara, T. Temporal Emergence of Giant Vesicles Accompanied by Hydrolysis of Ammonium Amphiphiles with a Schiff-base Segment. *Chem. Lett.*, 1442-1443, 2004.
- Maru, N., Shohda, K., Sugawara, T. Assembling liposomes by means of an oligonucleotide tagged with a lipophilic unit. *Nucleic Acids Symposium Series*, **48**, Oxford University Press, 95-96, 2004.
- Shohda, K., Sugawara, T. Morphological change of a liposome induced by an oligonucleotide tagged with lipophilic unit. *Nucleic Acids Symposium Series*, **48**, Oxford University Press, 245-246, 2004.
- 谷口 伸一, 松下 未知雄, 菅原 正. π 型分子ワイヤーで連結した金ナノ粒子ネットワークの構造と電子輸送. (Structures and Electron Transport of Gold Nanoparticle Network Connected by π -Molecular Wire). *ナノ学会会報*. **2** (2), 55-62, 2004.
- 菅原 正. 有機 π 配位子による金ナノ粒子の機能化とネットワーク化. *有機合成化学協会誌特集号*. **62** (5). 447-458, 2004.
- 菅原 正, 豊田 太郎, 高倉 克人, 庄田 耕一郎. 自己複製するリポソーム型人工細胞を目指して—膜ダイナミクスの解明とその制御—. *Bio Medical Quick Review Net*. 記事番号 4020, 2004.
- 菅原 正. 金ナノ粒子ネットワークで回路をつくる. *先端化学シリーズVI「界面・コロイド/ナノテクノロジー/分子エレクトロニクス/ナノ分析」*(日本化学会編). 136-145, 丸善(東京), 2004.

住吉 吉英 (Yoshihiro Sumiyoshi)

- Nakajima, M., Yoneda, Y., Sumiyoshi, Y., Endo, Y. Laser induced fluorescence spectroscopy of NC_3S . *J. Chem. Phys.*, **120**, 2662-2666, 2004.
- Ohshima, Y., Kanya, R., Sumiyoshi, Y., Endo, Y. FTMW spectroscopy of jet-cooled 9-cyanoanthracene. *J. Mol. Spectrosc.*, **223**, 148-151, 2004.
- Sumiyoshi, Y., Takada, H., Endo, Y. FTMW spectroscopy of the NC_2O and NC_3O radicals and *ab initio* calculations. *Chem. Phys. Lett.*, **387**, 116-123, 2004.
- Suma, K., Sumiyoshi, Y., Endo, Y., FTMW spectroscopy of the Ar-SH ($^2\Pi$) complexes (Rg:Ne, Kr): Determination of the intermolecular potential energy surfaces. *J. Chem. Phys.*, **120**, 6935-6943, 2004.
- Katoh, K., Okabayashi, T., Tanimoto, M., Sumiyoshi, Y., Endo, Y., Electronic properties of CrF and CrCl in the X Σ state: Observation of the halogen hyperfine structure by Fourier-transform microwave spectroscopy. *J. Chem. Phys.*, **120**, 7927-7932, 2004.
- Suma, K., Sumiyoshi, Y., Endo, Y., Enami, S., Aloisio, S., Hashimoto, S., Kawasaki, M., Nishida, S., Matsumi, Y., Equilibrium constants of the reaction of Cl with O_2 in the formation of ClOO. *J. Phys. Chem.*, **A180**, 8096-8099, 2004.
- Suma, K., Sumiyoshi, Y., Endo, Y., Fourier transform microwave spectroscopy and FTMW-millimeter wave double resonance spectroscopy of the ClOO radical. *J. Chem. Phys.*, **121**, 8351-8359, 2004.

染田 清彦 (Kiyohiko Someda)

- Yasuike, T., Someda, K. He-He chemical bonding in high-frequency intense laser fields. *J. Phys. B*, **37**, 3149-3162, 2004.
- Itakura, R., Yamanouchi, K., Yasuike, T., Someda, K. Formation of $[\text{C}_5\text{H}_5(\text{NH}_3)_2]^+$ and $[\text{NH}_4(\text{NH}_3)_m]^+$ ($m = 1-3$) from size-selected aniline-ammonia cluster cations in intense laser fields. *Chem. Phys. Lett.*, **396**, 208-212, 2004.

高塚 和夫 (Kazuo Takatuka)

- Yanao, T., Takatsuka, K. Kinematic effects associated with molecular frames in structural isomerization dynamics of clusters. *J. Chem. Phys.* **120**, 8924, 2004.
- Takahashi, S., Takatsuka, K. A Geometrical evaluation of the Maslov index. *Phys. Rev. A*. **69**, 022110, 2004.
- Ushiyama, H., Takatsuka, K. Time-dependent probability of quantum tunneling in terms of quasi-semiclassical method. *J. Chem. Phys.* **120**, 4561-4572, 2004.
- Yaguma, S., Odagiri, K., Takatsuka, K. Coupled cellular-automaton study on stochastic and pattern-formation dynamics under spatiotemporal fluctuation of temperature. *Physica D*. **171**, 34-62, 2004.
- Takahashi, S., Takatsuka, K. Renormalized semiclassical quantization for rescalable Hamiltonian. *Phys. Rev. A*. **70**, 052103 (10 pages), 2004.
- Takatsuka, K. Multichannel chemical reaction beyond the transitions-state concept. - Microcanonical temperature, geometry, and variational Statistical Theory. - *Adv. Chem. Phys.* **130**, 25-85, 2004.
- Yanao, T., Takatsuka, K. Effects of an intrinsic metric of molecular internal space on chemical reaction dynamics. *Adv. Chem. Phys.* **130**, 87-128, 2004.

鳥居 寛之 (Hiroyuki A. Torii)

- Morishita, Y., Hutton, R., Torii, H. A., Komaki, K., Brage, T., Ando, K., Ishii, K., Kanai, Y., Masuda, H., Sekiguchi, M., Rosmej, F. B., Yamazaki, Y. Direct observation of the initial-state distribution of the first electron transferred to slow highly charged ions interacting with a metal surface. *Phys. Rev. A*, **70**, 012902-1-6, 2004.
- Iwai, Y., Kanai, Y., Nakai, Y., Ikeda, T., Oyama, H., Ando, K., Masuda, H., Nishio, K., Nakao, M., Torii, H. A., Komaki, K., Yamazaki, Y. High-resolution soft X-ray spectroscopy of slow highly charged ions transmitted through a microcapillary target. *Nucl. Instrum. and Meth. in Phys. Res. B*, **205**, 762-766, 2003.
- Hori, M., Eades, J., Widmann, E., Yamazaki, T., Hayano, R. S., Ishikawa, T., Torii, H. A., von Egidy, T., Hartmann, F. J., Ketzner, B., Maierl, C., Pohl, R., Kumakura, M., Morita, N., Horváth, D., Sugai, I. Populations and lifetimes in the $v = n-l-1 = 2$ and 3

metastable cascades of $\bar{p}\text{He}^+$ measured by pulsed and continuous antiproton beams. *Phys. Rev. A*, **70**, 012504-1-16, 2004.
Yamaguchi, H., Hayano, R. S., Ishikawa, T., Sakaguchi, J., Widmann, E., Eades, J., Hori, M., Torii, H. A., Juhász, B., Horváth, D., Yamazaki, T. Systematic study of the decay rates of antiprotonic helium states. *Phys. Rev. A*, **70**, 012501-1-5, 2004.

鳥井 寿夫 (Yoshio Torii)

Yoshikawa, Y., Sugiura, T., Torii, Y., Kuga, T. Observation of superradiant Raman scattering in a Bose-Einstein condensate. *Phys. Rev. A*, **69**, 041603-1-4, 2004.
久我 隆弘, 鳥井 寿夫. ボースーアインシュタイン凝縮. 現代物理学の歴史 II (朝倉物理学大系 21 大系編集委員会編). 484-496, 朝倉書店, 2004.

永田 敬 (Takashi Nagata)

Itoh, K., Muraoka, A., Watanabe, K., Nagata, T., Nishikawa, M., Holroyd, R. A., Negative charge transport in gaseous, supercritical, and liquid carbon dioxide. *J. Phys. Chem. B*, **108**, 10177-10184, 2004.

信原 幸弘 (Yukihiko Nobuhara)

信原 幸弘. 知覚と表象. 理想, **672**, 83-96, 2004.
信原 幸弘. デイヴィッドソンの概念枠批判について. 筑波哲学, **13**, 22-32, 2004.
信原 幸弘. 心の哲学のおもな流れ. シリーズ心の哲学. 人間篇. (信原 幸弘 編). 1-23, 勁草書房(東京), 2004.
信原 幸弘. 認知哲学のおもな流れ. シリーズ心の哲学「ロボット篇. (信原 幸弘 編). 1-26, 勁草書房(東京), 2004.
信原 幸弘. 心の哲学の基本問題. シリーズ心の哲学「翻訳篇. (信原 幸弘 編). 1-16, 勁草書房(東京), 2004.
信原 幸弘. 心の哲学. 認知哲学への招待. (大津 由起雄・波多野 諒余夫 編). 251-263, 研究社(東京)1, 2004.

橋本 幸士 (Koji Hashimoto)

Hashimoto, K., Terashima, S. Boundary String Field Theory as a Field Theory - Mass Spectrum and Interaction. *Journal of High Energy Physics*, **0410**, 040, 2004.
Hashimoto, K., Terashima, S. Brane Decay and Death of Open Strings. *Journal of High Energy Physics*, **0406**, 048, 2004.
Hashimoto, K. The Shape of Nonabelian D-branes. *Journal of High Energy Physics*, **0404**, 004, 2004.

畠山 温 (Atsushi Hatakeyama)

Hirayama, Y., Shimoda, T., Izumi, H., Yano, H., Yagi, M., Hatakeyama, A., Levy, C.D.P., Jackson, K.P., Miyatake, H. Spectroscopic study of ^{11}Be through beta-delayed neutron- and gamma-decays of spin-polarized ^{11}Li . *Nuclear Physics, A*, **738**, 201-205, 2004.
Hatakeyama, A., Enomoto, K., Yabuzaki, T. Properties of alkali atoms confined in a cold helium gas. *Physica Scripta, T*, **110**, 294-298, 2004.

原田 潤 (Jun Harada)

Harada, J., Ogawa, K. X-ray Diffraction Analysis of Nonequilibrium States in Crystals: Observation of an Unstable Conformer in Flash-Cooled Crystals. *J. Am. Chem. Soc.*, **126**, 3539-3544, 2004.
Fujiwara, T., Harada, J., Ogawa, K. Solid-State Thermochromism Studied by Variable-Temperature Diffuse Reflectance Spectroscopy. A New Perspective on the Chromism of Salicylideneanilines. *J. Phys. Chem. B*, **108**, 3539-3544, 2004.
Harada, J., Harakawa, M., Ogawa, K. Torsional Vibration and Central Bond Length of N-Benzylideneanilines. *Acta Cryst. B*, **60**, 578-588, 2004.
Harada, J., Harakawa, M., Ogawa, K. Conformational Change of N-benzylideneanilines in Crystals. *Acta Cryst. B*, **60**, 589-597, 2004.
Ogawa, K., Harada, J., Fujiwara, T., Takahashi, H. UV-vis Absorption Spectra of Powdered Materials: Direct Measurements by Optical Waveguide Spectroscopy. *Chem. Lett.*, **33**, 1446-1447, 2004.

兵頭 俊夫 (Toshio Hyodo)

Nagashima, Y., Saito, F., Itoh, Y., Goto, A., Hyodo, T. Measurement of Cu K-shell and Ag L-shell ionization cross sections by low-energy positron impact. *Phys. Rev. Lett.*, **92**, 223201-1-4, 2004.
Hyodo, T., Kobayashi, Y., Nagashima, Y., Saito, H. eds. Positron Annihilation ICPA-13: Proceedings of the 13th International Conference on Positron Annihilation. *Materials Science Forum.*, **445-446**, 542 pp.
Saito, F., Yotoriyama, T., Nagashima, Y., Suzuki, Y., Ito, Y., Goto, A., Iwaki, M., Nishijima, I., Hyodo, T. Study of irradiated poly-lactic acid using slow positron beam. *Materials Science Forum.*, **445-446**, 340-323, 2004.
Suzuki, N., Saito, H., Nagashima, Y., Hyodo, T., Murakami, H., Sano, M., Bondarev, I.V., Kuten, S.A. Search for the positronium quadrupole interaction in molecular crystals. *Materials Science Forum.*, **445-446**, 410-412, 2004.
Nagashima, Y., Saito, F., Itoh, Y., Goto, A., Hyodo, T. Measurement of characteristic X-rays by positron impact. *Materials Science Forum.*, **445-446**, 440-442, 2004.
Saito, H., Hyodo, T. Positron lifetime spectrometer for the measurement of parapositronium lifetime in solids, *Materials Science Forum.*, **445-446**, 457-461, 2004.

業績リスト

深津 晋 (Susumu Fukatsu)

- Yasuhara, N., Fuaktsu, S. Anomalous relaxation of dynamically-localized indirect excitons in a pseudomorphic $\text{Si}_{1-x}\text{Ge}_x$ double quantum well. *Physica E*, **21**, 798-801, 2004.
- Jo, M., Yasuhara, N., Kawamoto, K., Fukatsu, S., Highly efficient radiative recombination of electron-hole pairs localized at compound semiconductor quantum dots embedded in Si. *Physica E.*, **21**, 354-357, 2004.
- Yasuhara, N., Fuaktsu, S. Voltage-controlled emission wavelength switching in a pseudomorphic $\text{Si}_{1-x}\text{Ge}_x/\text{Si}$ double quantum well. *Jpn. J. Appl. Phys.*, **43**, 2073-2075, 2004.
- Sugawara, Y., Kishimoto, Y., Akai, Y., Fukatsu, S., Time-domain analysis of diminution of nonradiative recombination in near-surface pseudomorphic $\text{Si}_{1-x}\text{Ge}_x/\text{Si}$ quantum wells. *Extended Abstract of International Conference on Solid State Devices and Materials 2004*, 636-637, 2004.
- 深津 晋. シリコンをベースとした光機能素子の開発. OHM. 8月号, 10-11. オーム社, 2004.
- 深津 晋. Si分子線エピタキシー (Si-MBE). 表面科学の基礎と応用. (日本表面科学会編). 459-461, エヌ・ティー・エス, 2004.
- 深津 晋. IV族半導体ヘテロ界面の形成と評価. 表面科学の基礎と応用. (日本表面科学会編). 899-902, エヌ・ティー・エス, 2004.

福島 孝治 (Koj Hukushimai)

- Takayama, H., Hukushima, K. Field-Shift Aging Protocol on the 3D Ising Spin-Glass Model: Dynamical Crossover between the Spin-Glass and Paramagnetic States. *J. Phys. Soc. Jpn.*, **73**, 2077-2080, 2004.
- 井上 真郷, 福島 孝治, 岡田 真人, 樺島 祥介, Sourlas 符号の PCA による解析 II, 第 7 回情報論的学習理論ワークショップ (IBIS2004), 152-157, 2004.

藤井 宏次 (Hirotugu Fujii)

- Fujii, H. Ohtani, M. Sigma and hydrodynamic modes along the critical line. *Phys. Rev. D*, **70**, 014016-1-18, 2004.
- Fujii, H., Ohtani, M. Soft modes at the critical end point in the chiral effective models. *Prog. Theor. Phys. Suppl.*, **153**, 157-164, 2004.
- Fujii, H., Ohtani, M. Mode softening near the critical point within effective approaches to QCD. Compact Stars: Quest for New States of Dense Matter. (Hong, D. K., Lee, C. H., Lee, H. K., Min, D. P., Park, T. S., Rho, M. ed). World Scientific Pub. Co, 2004.

藤本 仰一 (Koichi Fujimoto)

- Fujimoto, K., Kaneko, K. Convective Instability with Time Scale Translation of the Transmitted Disturbance. *Physica D*, **196**, 67-89, 2004.

前田 京剛 (Atsutaka Maeda)

- 前田 京剛. 高温超伝導体磁束格子のダイナミクスを利用した摩擦の物理の研究. 物性研究, **81**, 884-887, 2004.
- Kinoshita, K., Kitano, H., Maeda, A., Nishizaki, T., Maeda, M., Shibata, K., Kobayashi, N. Impurity effect on the electronic state of the vortex core in the mixed state of $\text{YBa}_2\text{Cu}_3\text{O}_7$. *Physica C*, **412-414**, 530-534, 2004.
- Kitano, H., Ohashi, T., Ryuzaki, H., Maeda, A., Tsukada, I. Frequency dependent microwave conductivity of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ thin films. *Physica C*. **412-414**, 130-133, 2004.
- Inoue, R., Miwa, K., Kitano, H., Maeda, A., Odate, Y., Tanabe, E. Highly accurate real-time method of determination of resonant characteristics: complex linear regression of the transmission coefficient. *IEEE Trans. Microwave Theory and Tech.* **582**, 2163-2168, 2004.
- Kitano, H., Maeda, A., Takenobu, T., Iwasa, Y. Microwave conductivity of fullerene intercalation compounds: Mott transition driven by the orthorhombic distortion. "The Building Blocks of Next Generation Nanodevices 2003", edited by P. V. Kamat, D. M. Guldi, F. D' Souza, (Proc. Fullerenes, Nanotubes, and Carbon Nanoclusters Symposia, France, 2003, The Electrochemical Society, Inc.), 469-473, 2003.
- Inoue, R., Kitano, H., Maeda, A. Geometrical factors in the measurement of high temperature superconductors by the enclosed cavity perturbation technique. "Extended abstract of 2003 Asia-Pacific Microwave Conference (APMC '03)", Seoul, **3**, FE6-5, 2040-2043, 2003.
- 前田 京剛, 北野 晴久, 井上 祐吉. "摩擦のモデル系としての固体量子凝縮相—超伝導磁束格子や密度波のナノトライボロジー—" トライボロジスト「特集 ナノトライボロジー」, **49**, 493-498, 2003.
- 前田 京剛. 第 5 版 実験化学講座「第 7 章 電気物性, 磁気物性」より「非線形伝導, ノイズ測定」, 124-130, 丸善 (東京), 2003.
- 前田 京剛. 応用物理学会スクールテキスト「高温超伝導体の超伝導状態—臨界磁場・磁場侵入長・準粒子電気伝導など—」. 201-220, 応用物理学会 超伝導分科会. (東京), 2004.
- Kuriki, S., Hirano, S., Maeda, A., Kiss, T. "Vortex in high- T_c superconductors" in "Vortex Electronics and SQUIDS", edited by Kobayashi, T., 5-51, Springer Verlag. (Tokyo), 2003.

増田 茂 (Shigeru Masuda)

- 増田 茂. 準安定原子電子分光. ナノテクノロジー大事典. (青野 正和 他編). 333-340, 工業調査会, 2003.

増田 茂. 準安定原子電子分光 (MAES). 新訂版・表面科学の基礎と応用. (日本表面科学会編). 766-770, エヌ・ティ・エス, 2004.

松下 信之 (Nobuyuki Matsusita)

Wada, Y., Matsushita, N., Haneda, H. Ultrafast dynamics of lattice relaxed states in quasi-one-dimensional MX-chain compounds. *J. Lumi.*, **108**, 285-289, 2004.

Itoi, M., Taira, A., Enomoto, M., Matsushita, N., Kojima, N., Kobayashi, Y., Asai, K., Koyama, K., Nakano, T., Uwatoko, Y., Yamamura, J. Crystal structure and structural transition caused by charge-transfer phase transition for iron mixed-valence complex $(n\text{-C}_3\text{H}_7)_4\text{N}[\text{Fe}^{\text{II}}\text{Fe}^{\text{III}}(\text{dto})_3]$ (dto = $\text{C}_2\text{O}_2\text{S}_2$). *Solid State Commun.*, **130**, 415-420, 2004.

松下 未知雄 (Michio Matsusita)

Taniguchi, S., Yokoi, T., Izuoka, A., Matsushita, M. M. Sugawara, T. Noncatalytic, solvent-free thermal formation of cyclic trimers using 1,6-bis (acyloxymethyl) hexa-2,4-diyne derivatives. *Tetrahedron Lett.*, **45**, 2671-2675, 2004.

Tanabe, J., Terao, H., Matsushita, M. M., Sugawara, T., Kudo, T., Tejima, T., Izuoka, A., Kawada, Y. Polyhedral Building Block with Specific Facial Interaction for Conducting Supramolecular Self-Assembly. *J. Mater. Chem.*, **14** (19), 2842-2847, 2004.

谷口 伸一, 松下 未知雄, 菅原 正. π 型分子ワイヤーで連結した金ナノ粒子ネットワークの構造と電子輸送. (Structures and Electron Transport of Gold Nanoparticle Network Connected by π -Molecular Wire). ナノ学会会報, **2** (2), 55-62, 2004.

真船 文隆 (Fumitaka Mafune)

Mafuné, F., Kondow, T. Selective Laser Fabrication of Small Nanoparticles and Nano-networks in Solution by Irradiation of UV Pulsed Laser onto Platinum Nanoparticles. *Chem. Phys. Lett.*, **383**, 343-347, 2003.

Kohno, J., Mafuné, F., Kondow, T. Ejection of Large Neutral Cluster from Liquid Beam Surface Following IR Laser Irradiation. *J. Phys. Chem. A*, **108**, 971-977, 2004.

Kohno, J., Mafuné, F., Kondow, T. Ejection of Clusters from Liquid Beam Surface by IR Laser Irradiation. *Isr. J. Chem.*, **44**, 215-220, 2004.

Sakai, T., Takeda, Y., Mafuné, F., Kondow, T. Surface Properties of Surfactant-Free Oil Droplets Dispersed in Water Studied by Confocal Fluorescence Microscopy. *J. Phys. Chem. B*, **108**, 6359-6364, 2004.

Mafuné, F. Structure Diagram of Gold Nanoparticles in Solution under Irradiation of UV Pulse Laser. *Chem. Phys. Lett.*, **397**, 133-137, 2004.

Takeda, Y., Mafuné, F., Kondow, T. Entropy Production Mapping on Stretched DNA Interacted with Proteins. *J. Biotech.*, **114**, 47-53, 2004.

Takeda, Y., Mafuné, F., Kondow, T. Self-Organization of Histone-Jointed Three-Dimensional DNA Network. *Materials Sci. and Eng. C*, **24**, 769-733, 2004.

簗口 友紀 (Tomoki Minoguchi)

Caupin F, Minoguchi T Density functional theory of freezing of superfluid helium 4 *J. Low Temp. Phys.*, **134** (1-2), 181-186, 2004.

村田 純一 (Junichi Murata)

Murata, J. Philosophy of Technology, and/or, Redefining Philosophy, UTCP (University of Tokyo, Center for Philosophy) Bulletin, **1**, 5-14, 2003.

Murata, J. Technology and Ethics-Pragmatism and the Philosophy of Technology, The Proceedings for the UTCP International Symposium on Pragmatism and the Philosophy of Technology in the 21st Century, **2**, 60-70, 2003.

山崎 泰規 (Yasunori Yamazaki)

Azuma, T., Takabayashi, Y., Ito, T., Komaki, K., Yamazaki, Y., Takada, E., Murakami, T. Convoy electron emission from resonant coherently excited 390MeV/u hydrogen-like Ar ions. *Nucl. Instrum. Methods B*, **212**, 397-401, 2003.

Amoretti, M., Amsler, S., Bazzano, B., Bonomi, G., Bouchta, A., Bowe, P.D., Canali, C., Carraro, C., Cesar, C.L., Charlton, M., Doser, M., Fontana, A., Fujiwara, M.C., Funakoshi, R., Geneva, P., Hangst, J.S., Hayano, R.S., Johnson, I.S., Jørgensen, L.V., Kellerbauer, A., Lagomarsino, V., Landua, R., Lodi Rizzini, E., Macrø, M., Madsen, N., Manuzio, G., Marchesotti, M., Mitchard, D., Ottone, F., Regenfus, C., Riedler, P., Rotondi, A., Testera, G., Variola, A., Venturelli, L., Yamazaki, Y., van der Werf, D.P., Zurlo, N. Antihydrogen production temperature dependence. *Phys. Lett. B*, **583**, 59-67, 2004.

Wada, M., Yamazaki, Y. Technical developments toward antiprotonic radioactive nuclear atoms for nuclear structure study. *Nucl. Instrum. Methods B*, **214**, 196-200, 2004.

Fujiwara, M.C., Amoretti, M., Bonomi, G., Bouchta, A., Bowe, P.D., Carraro, C., Cesar, C.L., Charlton, M., Doser, M., Filippini, V., Fontana, A., Funakoshi, R., Genova, P., Hangst, J.S., Hayano, R.S., Jørgensen, L.V., Lagomarsino, V., Landua, R., Lodi-Rizzini, E., Marchesotti, M., Macri, M., Madsen, M., Manuzio, G., Montagna, P., Riedler, P., Rotondi, P., Rouleau, G., Testera, G., Variola, A., van der Werf, D.P., Yamazaki, Y. Three-Dimensional Annihilation Imaging of Trapped Antiprotons, *Phys. Rev. Lett.*, **92**, 065005-4, 2004.

Morishita, Y., Hutton, R., Torii, H.A., Komaki, K., Brage, T., Ando, K., Ishii, K., Kanai, Y., Masuda, H., Sekiguchi, M., Rosmej, F.B.,

業績リスト

- Yamazaki, Y. Direct observation of initial-state distribution of the first electron transferred to slow highly charged ions interacting with a metal surface. *Phys. Rev. A*, **70**, 012902-6, 2004.
- Amoretti, M., Amsler, C., Bonomi, G., Bouchta, A., Bowe, P.D., Carraro, C., Cesar, C.L., Charlton, M., Doser, M., Filippini V., Fontana, G.A., Fujiwara, M.C., Funakoshi, R., Genova, P., Hangst, J.S., Hayano, R.S., Joergensen, L.V., Kellerbauer, A., Lagomarsino, V., Landua, R., Lindelof, D., Lodi Rizzini, E., Macri, M., Madsen, N., Manuzio, G., Montagna, P., Pruys, H., Regenfus, C., Rotondi, A., Testera, G., Variola, A., van der Werf, D.P., Yamazaki, Y. Dynamics of antiproton cooling in a positron plasma during antihydrogen formation. *Phys. Lett. B*, **590**, 133-142, 2004.
- Higaki, H., Kuroda, N., Yoshiaki Franzen, K., Wang, Z., Hori, M., Mohri, A., Komaki, A., Yamazaki, Y. Radial compression of protons and H_3^+ ions in the multiring trap for the production of ultra low energy antiproton beams. *Phys. Rev. E*, **70**, 026501-5, 2004.
- Nakamura, N., Nakai, Y., Kanai, Y., Komaki, K., Endo, A., Yamazaki, Y. Compact electron beam ion source with high-TC bulk superconductors. *Rev. Sci. Instrum.*, **75**, 3034-3038, 2004.
- Fujiwara, M.C., Yamazaki, Y., et al. The first cold antihydrogen. *Nucl. Instrum. Methods A*, **532**, 229-236, 2004.
- Ohshima, N., Kojima, T.M., Niigaki, M., Mohri, A., Komaki, K., Yamazaki, Y. A new positron accumulation scheme in ultra high vacuum. *Phys. Rev. Lett.*, **93**, 195001-4, 2004.
- Nakamura, N., Terada, M., Endo, A., Nakai, Y., Kanai, Y., Komaki, K., Yamazaki, Y. Application of Bulk High-Tc Superconductors to Electron Beam Ion Sources: Present Status and Outlook. *J. Phys. Conference Series*, **2**, 1-8, 2004.
- Oshima, N., Niigaki, M., Inoue, M., Kojima, T.M., Mohri, A., Kanai, Y., Nakai, Y., Komaki, K., Yamazaki, Y. Project to Produce Cold Highly Charged Ions using Positron and Electron Cooling Techniques. *J. Phys. Conference Series*, **2**, 127-133, 2004.
- Kuroki, K., Komaki, K., Yamazaki, Y. Potential sputtering of protons from hydrogen- and H₂O-terminated Si (100) surfaces with slow highly charged ions. *Nucl. Instrum. Methods B*, **203**, 183-191, 2004.
- Yamazaki, Y. Interaction of slow highly charged ions with surfaces in book of the physics of multiply and highly charged ions II, 47-67, Kluwer Academic Publishers, Dordrecht, The Netherlands, ed. F.J. Currell, 2003.
- Yamazaki, Y. Intense ultra-slow p beam and its application. *Physica Scripta*, **T110**, 286-291, 2004.
- Yamazaki, Y. Efficient accumulation of antiprotons and positrons, production of slow mono-energetic beams, and their applications. *Material Forum.*, **445** (4), 430-434, 2004.

吉岡 大二郎 (Daijiro Yoshioka)

- Shibata, N., Yoshioka, D. Stripes in the Lowest Landau Level. *J. Phys. Soc. Jpn.*, **73**, 1-4, 2004.
- Hamada, K., Yoshioka, D. Nontrivial behavior of the Fermi arc in the staggered-flux ordered phase'. *J. Phys. Soc. Jpn.*, **73**, 1631-1634, 2004.
- Yoshioka, D. Theory of "Charge" Measured by the Shot Noise Experiment in the Fractional Quantum Hall Effect. *J. Phys. Soc. Jpn.*, **73**, 1639-1642, 2004.
- Shibata, N., Yoshioka, D. Real Space Effective Interaction and Phase Transition in the Lowest Landau Level. *J. Phys. Soc. Jpn.*, **73**, 2169-2173, 2004.
- Nomura, K., Yoshioka, D. Gap evolution in $\nu = 1/2$ bilayer quantum Hall systems. *J. Phys. Soc. Jpn.*, **73**, 2612-2615, 2004.
- Nomura, K., Yoshioka, D., Jungwirth, T., MacDonald, A.H. Numerical investigation on asymmetric bilayer system at integer filling factor. *Physica E*, **22**, 60-63, 2004.
- Shibata, N., Yoshioka, D. Ground state phase diagram of 2d electrons in high magnetic field. *Physica E*, **22**, 111-114, 2004.

吉川 豊 (Yutaka Yoshikawa)

- Yoshikawa, Y., Sugiura, T., Torii, Y., Kuga, T., Observation of superradiant Raman scattering in a Bose-Einstein condensate, *Phys. Rev. A*, **69**, 041603 (R)-1-4, 2004.

米谷 民明 (Tamiaki Yoneya)

- Asano, M., Sekino, Y., Yoneya, T. PP-Wave Holography for Dp-Brane Backgrounds. *Nucl. Phys. B*, **678**, 197-232, 2004.
- 米谷 民明. 物理学この1年: 超弦理論と量子重力. *パリテイ* **19** (1), 32-33, 2004.
- 米谷 民明. 弦から重力だって!. *パリテイ* **19** (10), 50-52, 2004.

和田 純夫 (Sumio Wada)

- 大上 雅史, 和田 純夫. 数学が解き明かした物理の法則. ベレ出版(東京), 2003.
- 和田 純夫. 宇宙創世から人類誕生までの自然史. ベレ出版(東京), 2004.
- はじめての地学・天文学史. (矢島 道子・和田 純夫 編著). ベレ出版(東京), 2004.