

## REVIEW ARTICLES AND TEXTBOOKS

### Department of Theoretical Studies

**T. IKEGAMI and S. IWATA**, "Intracluster Reaction Dynamics of  $\text{Ar}_4^+$ ," in *The Transition State, Theoretical Approach*, Fueno, Ed., Kodansha; Tokyo, p. 115, (1999).

**Y. OKAMOTO**, "Protein Folding Mechanism as Studied by Monte Carlo Simulations" (in Japanese), *Bussei Kenkyu* **70**, September, pp.719-742 (1998).

**Y. OKAMOTO**, "New Sampling Method That Solves Complex Systems:Multicanonical Molecular Dynamics Algorithm" (in Japanese), *Chemistry* **53**, September, pp. 66-67 (1998).

**Y. OKAMOTO**, "Protein Tertiary Structure Predictions by Monte Carlo Simulations" (in Japanese), *Biophysics* **38**, October, pp. 203-207 (1998).

**Y. OKAMOTO**, "Protein Folding Simulations by Generalized-Ensemble Algorithms" (in Japanese), *Bussei Kenkyu* **71**, December, pp. 335-347 (1998).

**U. H. E. HANSMANN and Y. OKAMOTO**, "The Generalized-Ensemble Approach for Protein Folding Simulations" in *Annual Reviews of Computational Physics VI*, D. Stauffer, Ed., World Scientific; Singapore, pp. 129-157 (1999).

**U. H. E. HANSMANN and Y. OKAMOTO**, "Tackling the Protein Folding Problem by a Generalized-Ensemble Approach with Tsallis Statistics," in Special Issue, 'Nonextensive statistical mechanics and thermodynamics,' *Braz. J. Phys.* **29**, pp. 187-198 (1999).

**U. H. E. HANSMANN and Y. OKAMOTO**, "New Monte Carlo Algorithms for Protein Folding," *Curr. Opin. Struct. Biol.* **9**, pp. 177-183 (1999).

**H. NAKAMURA**, "Chemical Reaction Dynamics and Potential Ridge—Beyond the Transition State" in *The Transition State—A Theoretical Approach*, T. Fueno, Ed., Kohdansha and John Wiley & Sons; pp. 193-215 (1999).

**M. HIYAMA and H. NAKAMURA**, "Characteristics and Dynamics of Superexcited States of Diatomic Molecules" in *Structure and Dynamics of Electronic Excited States*, J. Laane, H. Takahashi and A. Bandrauk, Eds., Springer-Verlag, pp. 296-315 (1999).

**Y. TANIMURA, K. YAMASHITA and P. A. ANFINRUD**, "Femtochemistry," *Proc. Natl. Acad. Sci. U. S. A.* **96**, pp. 8823-8824 (1999).

**K. OKUMURA**, "Liquid Dynamics Probed by Two-Dimensional Raman Spectroscopy—An Approach by the Brownian Oscillator Model," *Kagaku to Kogyo (Chemistry and Chemical Industry)* (in Japanese) **52-2**, pp. 115-118 (1999).

**F. HIRATA, H. SATO, S. TEN-NO and S. KATO**, "RISM-SCF Study of Solvent Effect on Electronic Structure and Chemical Reaction in Solution: Temperature Dependence of  $\text{p}K_w$ " in *Combined Quantum Mechanical and Molecular Mechanical Methods*, J. Gao and M. A. Thompson Eds., ACS symposium series 712, American Chemical Society; Washington DC, pp. 188-200 (1998).

### Department of Molecular Structure

**S. SAITO**, "Sulfur-Bearing Carbon-Chain Molecules in Space and in the Laboratory," *Sulfur Reports* **21**, 401 (1999).

**T. AKASAKA, T. WAKAHARA, S. NAGASE and K. KOBAYASHI**, "Are Encapsulated Metals inside a Fullerene Cage Still?" *Kagaku* (in Japanese) **53**, 72 (1998).

**T. AKASAKA, S. OKUBO, T. WAKAHARA, K. KOBAYASHI, S. NAGASE, M. KAKO, Y. NAKADAIRA, T. KATO, K. YAMAMOTO, H. FUNASAKA and K. MATSUURA**, "Endohedrally Metal-Doped Heterofullerenes," in *Recent Advances in the Chemistry and Physics of Fullerenes*, K. Kadish and R. Ruoff, Eds., The Electrochemical Society; Pennington, NJ (1998).

**S. NAGASE, K. KOBAYASHI and T. AKASAKA**, "Recent Advances in the Structural Determination of Endohedral Metallofullerenes," *J. Comput. Chem.* **19**, 232 (1998).

**Y. MIZUTANI**, "Vibrational Energy Relaxation of Hemeproteins: A Physicochemical Process in Proteins" (in Japanese), *Seibutsu Butsuri* **38**, 256 (1998).

**T. KATO**, "Spectroscopic Studies on Radicals of Fullerenes" in *Recent Research and Development in Physical Chemistry*, Transworld Research Network, vol. 2, 981 (1998).

**T. KATO, K. SATO, T. TAKUI, D. HURUM, R. W. KREILICK, S. OKUBO and T. AKASAKA**, "Determination of the Cage Structure of  $\text{La@C}_{82}$ " in *Proceedings of the Symposium on Recent Advances in the Chemistry and Physics of Fullerenes and Related Materials*, K. M. Kadish, Ed., The Electrochemical Society, Inc.; Pennington, **6**, 967 (1998).

**Department of Electronic Structure**

**N. NISHI**, "Cluster Structures in Hydrogen-bonding Solutions" in *Development in Microcluster Science*, Kikan Kagaku Sosetsu No. 38, Japan Scientific Societies Press, 173 (1998).

**Y. ENDO and M. FUJII**, "Double Resonance (MODR, OODR) Spectroscopy," in *Nonlinear Spectroscopy for Molecular Structure Determination*, R. W. Field, E. Hirota, J. P. Maier and S. Tsuchiya, Eds., Blackwell Science, pp. 29-54 (1998).

**M. FUJII**, "Jahn-Teller Effect," *Chemistry* **53**, pp. 48-49 (1998).

**M. FUJII**, "Observation of Highly Vibrationally Excited Molecules and Possibility of Application to Reaction Control," *The Review of Laser Engineering* **27**, 404 (1999).

**Y. MO and T. SUZUKI**, "Optical Detection of Angular Momentum Polarization and Its Application to Photo-dissociation Dynamics" in *Advances in Multi-Photon Processes and Spectroscopy* **12**, S. H. Lin, A. A. Villaeys and Y. Fujimura, Eds., World Scientific; Singapore (1999).

**N. TAMAI**, "Spectroscopy with the Best Temporal Resolution" in *World Record Collection in Chemistry* (in Japanese), Kagakudojin, 10 (1999).

**X. YANG, A. MIURA and N. TAMAI**, "Electron Transfer and Carrier Dynamics of Titanium Dioxide Electrodes," *Photochemistry* (in Japanese) **30**, 128 (1999).

**Department of Molecular Assemblies**

**S. MIYAJIMA and O. OISHI**, "Measurement of Anisotropic Self-Diffusion Coefficient Tensors by PGSE-NMR," *DIM Newsletter* **12**, pp. 16-20 (1998).

**S. MIYAJIMA and T. NAKAI**, "Experimental Spectroscopy of Liquid Crystals, No. 4, NMR Spectroscopy -1-," *EKISHO* (in Japanese) **3**, 43-51 (1999).

**S. MIYAJIMA and T. NAKAI**, "Experimental Spectroscopy of Liquid Crystals, No. 5, NMR Spectroscopy -2-," *EKISHO* (in Japanese) **3**, 124-132 (1999).

**S. MIYAJIMA and T. NAKAI**, "Experimental Spectroscopy of Liquid Crystals, No. 6, NMR Spectroscopy -3-," *EKISHO* (in Japanese) **3**, 205-212 (1999).

**S. MIYAJIMA**, *Essential Dictionary of Chemistry* (in Japanese) Tokyo Kagaku Dojin (1999).

**Department of Applied Molecular Science**

**Y. MISAKI and T. MORI**, "TTP Type Conductors —Development of p-Electron Framework Toward Increase of Dimensionality—," *Solid State Physics* (in Japanese) **33**, pp. 1014-1024 (1999).

**K. NAGATO**, "Chemical Composition of Atmospheric Ions," *Proceedings of the Institute of Electrostatics of Japan* (in Japanese) **23**, 37 (1999).

**Department of Vacuum UV Photoscience**

**Y. TAKATA and N. KOSUGI**, "A Unified View of Inner-Shell Resonant Photoemission at the Ni 2p Absorption Edge of Nickel Oxide, Metal and Complexes," *J. Jpn. Soc. Synchrotron Radiat. Res.* (in Japanese) **12**, 117 (1999).

**W. SASAKI, K. KUROSAWA, S. KUBODERA and J. KAWANAKA**, "The State of the Art of Rare Gas Excimer Lasers and Lamps as a Light Source For Giga-Bit Lithography," *J. Photopolymer Sci. Tech.* **11**, 361 (1998).

**N. TAKEZOE, A. YOKOTANI and K. KUROSAWA**, "Thin Film Preparation Using Vacuum Ultraviolet Rare Gas Excimer Lamps," *Hyomen Kagaku* (in Japanese) **20**, 402 (1999).

**K. KUROSAWA**, "Understanding Lasers," *OPTRONICS* (in Japanese) (1999).

**Coordination Chemistry Laboratories**

**M. FUJITA**, "Metal-Directed Self-Assembly of Two- and Three-Dimensional Synthetic Receptors," *Chem. Soc. Rev.* **27**, pp. 417-425 (1998).

**M. FUJITA**, "Self-Assembly of [2]Catenanes Containing Metals in Their Backbones," *Acc. Chem. Soc.* **32**, pp. 53-61 (1999).

**M. FUJITA**, "Transition Metal-Incorporating Catenanes" in *Molecular Catenanes, Rotaxanes, and Knots*, Sauvage, J.-P. and Dietrich-Buchecker, C. O., Eds., Wiley-VCH; Weinheim, USA, Chapter 4 (1999).

**Laser Research Center for Molecular Science**

**N. SARUKURA**, "Special Issues on New Materials in Ultraviolet Region," *Rev. Laser Eng.* (in Japanese) **27**, 518 (1999).

**T. TAIRA**, "Concept for Measuring Laser Beam-Quality Parameters," *Rev. Laser Eng.* **26**, 723 (1998).

**S. KURIMURA** *et al.*, "Handbook of Optical Science," *Optronics* (1998).

**S. KURIMURA** *et al.*, "Handbook of Optical-Device Fabrication," *Optronics* (1998).

**T. TAIRA**, "Microchip Solid-State Lasers," *Rev. Laser Eng.* **26**, 847 (1998).

**T. TAIRA**, "Yb<sup>3+</sup>-Doped Solid-State Lasers," *Kougaku* **28**, 435 (1999).