

- [188] "Structural and Property Development for Conventional Polymers Utilizing Molecular Anisotropy and Entanglement Characteristics"  
H. Uehara  
高分子論文集 (Japanese Journal of Polymer Science and Technology), **64**, (2007), 525-538
- [189] "Molecular Mobility of Chain Ends of Matrix Chains in Phase-separated Di-block Copolymers"  
K. Yamamoto, N. Kota, Y. Miwa, H. Takagi, S. Hara, S. Shimada  
高分子論文集 (Japanese Journal of Polymer Science and Technology), **64**, (2007), 286-293
- [190] "Grazing Incident Small Angle X-ray Scattering Study of Polymer Thin Films with Embedded Ordered Nanometer Cells"  
H. Yokoyama, C. Dutriez, H. Masunaga, S. Sasaki, L. Lei, T. Nemoto, K. Sugiyama, M. Takata, H. Okuda  
The Journal of Chemical Physics, **127**, (2007), 014904  
[2008]
- [191] "Hydration Process of Multi-stacked Phospholipid Bilayers to Form Giant Vesicles"  
M. Hishida, H. Seto, N. Yamada, K. Yoshikawa  
Chemical Physics Letters, **455**, (2008), 297-302
- [192] "Phase Transitions upon Heating for Melt-Drawn Ultra-High Molecular Weight Polyethylenes Having Different Molecular Characteristics"  
M. Kakiage, M. Sekiya, T. Yamanobe, T. Komoto, S. Sasaki, S. Murakami, H. Uehara  
The Journal of Physical Chemistry B, **112**, (2008), 5311-5316
- [193] "Dilute-Solution Properties of Polystyrene Polymacromonomer Having Side Chains of over 100 Monomeric Units"  
Y. Nakamura, M. Sugiyama, T. Norisuye  
Polymer Journal, **40**, (2008), 109-115
- [194] "The Crystallographic Study of Left-handed Z-DNA d(CGCGCG)<sub>2</sub> and Thermine Complexes Crystallized at Various Temperatures and at Various Concentration of Cations"  
H. Ohishi, M. Odoko, D. Zhou, K. Nakatani, T. Ishida, N. Okabe, Y. Tozuka, K. Grzeskowiak  
Biochemical and Biophysical Research Communications, **368**, (2008), 382-387
- [195] "Polyamines Stabilize Left-handed Z-DNA: Using X-ray Crystallographic Analysis, We Have Found a New Type of Polyamine (PA) that Stabilizes Left-handed Z-DNA"  
H. Ohishi, M. Odoko, K. Tsukamoto, D. Zhou, K. Fukuyama, K. Grzeskowiak, T. Ishida, Y. Hiyama, N. Maezaki, T. Tanaka, N. Okabe, K. Nakatani  
Biochemical and Biophysical Research Communications, **366**, (2008), 275-280

BL40XU

**Refereed Journals**

- [1999]
- [1] "Muscle Contraction: Challenges for Synchrotron Radiation"  
K. Wakabayashi, N. Yagi  
Journal of Synchrotron Radiation, **6**, (1999), 875-890  
[2000]
- [2] "Measurement of Gas Bremsstrahlung at the SPring-8 Insertion Device Beamline using PWO Scintillator"  
Y. Asano, H. Shimizu, T. Matsumura, R. Chiba, T. Hashimoto, A. Miura, Y. Tajima, H. Yuuki Yoshida  
Nuclear Instruments and Methods in Physics Research Section A, **451**, (2000), 685-696  
[2001]
- [3] "In-Vacuum X-Ray Helical Undulator for High Flux Beamline at SPring-8"  
T. Hara, T. Tanaka, T. Seike, T. Bizen, X. Marechal, T. Kohda, K. Inoue, T. Oka, T. Suzuki, N. Yagi, H. Kitamura  
Nuclear Instruments and Methods in Physics Research Section A, **467-468**, (2001), 165-168
- [4] "Present Status of High Flux Beamline (BL40XU) at SPring-8"  
K. Inoue, T. Oka, T. Suzuki, N. Yagi, K. Takeshita, S. Goto, T. Ishikawa  
Nuclear Instruments and Methods in Physics Research Section A, **467-468**, (2001), 674-677
- [5] "Downsizing of Johansson Spectrometer for X-Ray Fluorescence Trace Analysis with Brilliant Undulator Source"  
K. Sakurai, H. Eba, K. Inoue, N. Yagi  
Nuclear Instruments and Methods in Physics Research Section A, **467-468**, (2001), 1549-1552  
[2002]
- [6] "Structural Development of Natural Rubber during Uniaxial Stretching by in situ Wide Angle X-Ray Diffraction Using a Synchrotron Radiation"  
S. Murakami, K. Senoo, S. Toki, S. Kohjiya  
Polymer, **43**, (2002), 2117-2120

- [7] "Wavelength-Dispersive Total-Reflection X-ray Fluorescence with an Efficient Johansson Spectrometer and an Undulator X-ray Source: Detection of  $10^{-16}$  g-level Trace Metals"  
K. Sakurai, H. Eba, K. Inoue, N. Yagi  
Analytical Chemistry, **74**, (2002), 4532-4535
- [8] "New Insights into Structural Development in Natural Rubber during Uniaxial Deformation by In situ Synchrotron X-Ray Diffraction"  
S. Toki, I. Sics, S. Ran, L. Liu, Benjamin S. Hsiano, S. Murakami, K. Senoo, S. Kohjiya  
Macromolecules, **35**, (2002), 6578-6584
- [9] "Chemical Characterization using Relative Intensity of Manganese  $K\beta'$  and  $K\beta_5$  X-ray Fluorescence"  
K. Sakurai, H. Eba  
Nuclear Instruments and Methods in Physics Research Section B, **199**, (2003), 391-395
- [10] "Changes in Photoluminescence of SrS:Ce Induced by Synchrotron Radiation"  
F. Sato, T. Nakamura, K. Tanaka, S. Aihara, N. Saito, K. Inoue, N. Yagi, J. Mizuki  
Journal of Vacuum Science & Technology A, **21**, (2003), 14-18
- [11] "An X-Ray Diffraction Study on Early Structural Changes in Skeletal Muscle Contraction"  
N. Yagi  
Biophysical Journal, **84**, (2003), 1093-1102
- [12] "Detection Limits of Trace Elements for Wavelength Dispersive Total X-Ray Fluorescence under High Flux Synchrotron Radiation"  
N. Awaji, M. Takemura, S. Ozaki, J. Iihara, K. Inoue, N. Yagi, S. Komiya, K. Nomura, S. Doi, Y. Kamimuta, M. Takahashi, M. Takahashi, K. Miyatake, N. Yamazaki  
Japanese Journal of Applied Physics, **43**, (2004), 1644-1648
- [13] "Penetration of PBSU Spherulite into P(VDC-VC) Spherulite Observed with Microbeam- and Macrobeam-SAXS/WAXS Measurements"  
Y. Nozue, S. Hirano, N. Kawasaki, S. Ueno, N. Yagi, T. Nishi, Y. Amemiya  
Polymer, **45**, (2004), 8593-8601
- [14] "In situ Measurements of Crossbridge Dynamics and Lattice Spacing in Rat Hearts by X-Ray Diffraction Sensitivity to Regional Ischemia"  
James T. Pearson, M. Shirai, H. Ito, N. Tokunaga, H. Tsuchimochi, N. Nishiura, Daryl O. Schwenke, H. Ishibashi-Ueda, R. Akiyama, H. Mori, K. Kangawa, H. Suga, N. Yagi  
Circulation, **109**, (2004), 2983-2986
- [15] "The Role of Pigment Cells in the Brain of Ascidian Larva"  
D. Sakurai, M. Goda, Y. Kohmura, T. Horie, H. Iwamoto, H. Ohtsuki, M. Tsuda  
The Journal of Comparative Neurology, **475**, (2004), 70-82
- [16] "X-ray Imaging Microscopy using Fresnel Zone Plate Objective and Quasimonochromatic Undulator Radiation"  
Y. Suzuki, A. Takeuchi, H. Takano, K. Uesugi, T. Oka, K. Inoue  
Review of Scientific Instruments, **75**, (2004), 1155-1157
- [17] "Structural Transients of Contractile Proteins upon Sudden ATP Liberation in Skeletal Muscle Fibers"  
J. Wakayama, T. Tamura, N. Yagi, H. Iwamoto  
Biophysical Journal, **87**, (2004), 430-441
- [18] "X-ray Diffraction from a Left Ventricular Wall of Rat Heart"  
N. Yagi, J. Shimizu, S. Mohri, J. Araki, K. Nakamura, H. Okuyama, H. Toyota, T. Morimoto, Y. Morizane, M. Kurusu, T. Miura, K. Hashimoto, K. Tsujioka, H. Suga, F. Kajiya  
Biophysical Journal, **86**, (2004), 2286-2294
- [19] "CCD-based X-ray Area Detector for Time-resolved Diffraction Experiments"  
N. Yagi, K. Inoue, T. Oka  
Journal of Synchrotron Radiation, **11**, (2004), 456-461
- [20] "A Large-Area CMOS Imager as an X-ray Detector for Synchrotron Radiation Experiments"  
N. Yagi, M. Yamamoto, K. Uesugi, K. Inoue  
Journal of Synchrotron Radiation, **11**, (2004), 347-352
- [21] "Site Occupancy Determination for Manganese in Some Spinel-Type Oxides by  $K\beta$  X-Ray Fluorescence Spectra"  
H. Eba, K. Sakurai  
Journal of Solid State Chemistry, **178**, (2005), 370-375
- [22] "'Green' Nano-Composites Prepared from Natural Rubber and *In Situ* Silica"  
Y. Ikeda  
Kautschuk Gummi Kunststoffe, **58**, (2005), 455-460

- [23] "X-ray Microdiffraction and Conventional Diffraction from Frozen-Hydrated Biological Specimens"  
H. Iwamoto, K. Inoue, T. Fujisawa, N. Yagi  
Journal of Synchrotron Radiation, **12**, (2005), 479-483
- [24] "Structural Analysis of Single Wool Fibre by Scanning Microbeam SAXS"  
Y. Kajiuura, Y. Shinohara, Y. Amemiya, T. Itou, S. Watanabe, A. Iida  
Journal of Applied Crystallography, **38**, (2005), 420-425
- [25] "Studies of the Structural Change during Deformation in *Cryptomeria japonica* by Time-Resolved Synchrotron Small-Angle X-ray Scattering"  
T. Komiyama, H. Suzuki, J. Sugiyama  
Journal of Structural Biology, **151**, (2005), 1-11
- [26] "Natural Water Specimen Preparation for TXRF Analysis Using a Johansson Wavelength-Dispersive Spectrometer"  
S. Kurunczi, K. Sakurai  
X-Ray Spectrometry, **34**, (2005), 56-58
- [27] "A Secondary Electron Emission Detector for Measuring the Intensity of Synchrotron Radiation"  
N. Nariyama, S. Taniguchi  
Review of Scientific Instruments, **76**, (2005), 033302
- [28] "Structural Analysis of Cell Membrane Complex of a Hair Fibre by Micro-Beam X-ray Diffraction"  
N. Ohta, T. Oka, K. Inoue, N. Yagi, S. Kato, I. Hatta  
Journal of Applied Crystallography, **38**, (2005), 274-279
- [29] "Structural Transition of Bacteriorhodopsin is Preceded by Deprotonation of Schiff Base: Microsecond Time-Resolved X-ray Diffraction Study of Purple Membrane"  
T. Oka, K. Inoue, M. Kataoka, N. Yagi  
Biophysical Journal, **88**, (2005), 436-442
- [30] "Structural Changes of Actin-Bound Myosin Heads after a Quick Length Change in Frog Skeletal Muscle"  
N. Yagi, H. Iwamoto, J. Wakayama, K. Inoue  
Biophysical Journal, **89**, (2005), 1150-1164
- [31] [2006]  
"Mechanical Behavior of Cellulose Microfibrils in Tension Wood, in Relation with Maturation Stress Generation"  
B. Clair, T. Alm eras, H. Yamamoto, T. Okuyama, J. Sugiyama  
Biophysical Journal, **91**, (2006), 1128-1135
- [32] "Physiological Consequences of Thin Filament Cooperativity for Vertebrate Striated Muscle Contraction: A Theoretical Study"  
H. Iwamoto  
Journal of Muscle Research and Cell Motility, **27**, (2006), 21-35
- [33] "Evolution of Long-range Myofibrillar Crystallinity in Insect Flight Muscle as Examined by X-ray Cryomicrodiffraction"  
H. Iwamoto, K. Inoue, N. Yagi  
Proceedings of the Royal Society B Biological Sciences, **273**, (2006), 677-685
- [34] "Structural Analysis of Human Hair Single Fibres by Scanning Microbeam SAXS"  
Y. Kajiuura, S. Watanabe, T. Itou, K. Nakamura, A. Iida, K. Inoue, N. Yagi, Y. Amemiya  
Journal of Structural Biology, **155**, (2006), 438-444
- [35] "High-Resolution Powder Diffraction Study of Purple Membrane with a Large Guinier-Type Camera"  
T. Oka, K. Miura, K. Inoue, T. Ueki, N. Yagi  
Journal of Synchrotron Radiation, **13**, (2006), 281-284
- [36] "An X-Ray Diffraction Study on Mouse Cardiac Cross-Bridge Function In Vivo: Effects of Adrenergic  $\beta$ -Stimulation"  
R. Toh, M. Yokoyama, M. Shinohara, T. Takaya, T. Yamashita, S. Masuda, S. Kawashima, N. Yagi  
Biophysical Journal, **90**, (2006), 1723-1728
- [37] "Crystallization and Stress Relaxation in Highly Stretched Samples of Natural Rubber and Its Synthetic Analogue"  
M. Tosaka, D. Kawakami, K. Senoo, S. Kohjiya, Y. Ikeda, S. Toki, Benjamin S. Hsiao  
Macromolecules, **39**, (2006), 5100-5105
- [38] "Fast Tomography using Quasi-Monochromatic Undulator Radiation"  
K. Uesugi, N. Yagi, T. Sera  
Journal of Synchrotron Radiation, **13**, (2006), 403-407
- [39] "A Microbeam X-ray Diffraction Study of Insulin Spherulites"  
N. Yagi, N. Ohta, T. Iida, K. Inoue  
Journal of Molecular Biology, **362**, (2006), 327-333

- [40] "Structural Changes of Cross-Bridges on Transition from Isometric to Shortening State in Frog Skeletal Muscle"  
N. Yagi, H. Iwamoto, K. Inoue  
Biophysical Journal, **91**, (2006), 4110-4120
- [41] "Newly Developed Nanocomposites from Cellulose Acetate/Layered Silicate/Poly( $\epsilon$ -caprolactone): Synthesis and Morphological Characterization"  
M. Yoshioka, K. Takabe, J. Sugiyama, Y. Nishio  
Journal of Wood Science, **52**, (2006), 121-127  
[2007]
- [42] "Strain-induced Crystallization of Peroxide-crosslinked Natural Rubber"  
Y. Ikeda, Y. Yasuda, S. Makino, S. Yamamoto, M. Tosaka, K. Senoo, S. Kohjiya  
Polymer, **48**, (2007), 1171-1175
- [43] "Structural Analysis of the Cell Membrane Complex in the Human Hair Cuticle using Microbeam X-ray Diffraction: Relationship with the Effects of Hair Dyeing"  
T. Inoue, Y. Iwamoto, N. Ohta, K. Inoue, N. Yagi  
Journal of Cosmetic Science, **58**, (2007), 11-17
- [44] "Flight Muscle Myofibrillogenesis in the Pupal stage of *Drosophila* as Examined by X-ray Microdiffraction and Conventional Diffraction"  
H. Iwamoto, K. Inoue, T. Matuo, N. Yagi  
Proceedings of the Royal Society B Biological Sciences, **274**, (2007), 2297-2305
- [45] "X-ray Pinpoint Structural Measurement for Nanomaterials and Devices at BL40XU of the SPring-8"  
S. Kimura, Y. Moritomo, Y. Tanaka, H. Tanaka, K. Toriumi, K. Kato, N. Yasuda, Y. Fukuyama, J. Kim, H. Murayama, M. Takata  
AIP Conference Proceedings, **879**, (2007), 1238-1241
- [46] "Deformation Behavior of Isotactic Polypropylene Spherulite during Hot Drawing Investigated by Simultaneous Microbeam SAXS-WAXS and POM Measurement"  
Y. Nozue, Y. Shinohara, Y. Ogawa, T. Sakurai, H. Hori, T. Kasahara, N. Yagi, Y. Amemiya  
Macromolecules, **40**, (2007), 2036-2045
- [47] "Effects of Sustained Length-Dependent Activation on In Situ Cross-Bridge Dynamics in Rat Hearts"  
J. Pearson, M. Shirai, H. Tsuchimochi, D. Schwenke, T. Ishida, H. Suga, N. Yagi  
Biophysical Journal, **93**, (2007), 4319-4329
- [48] "Small-Angle Fibre Diffraction Studies of Corneal Matrix Astructure: a Depth-Profiled Investigation of the Human Eye-Bank Cornea"  
A. Quantock, R. Young, S. Hayes, H. Tanioka, S. Kawasaki, N. Ohta, T. Iida, N. Yagi, S. Kinoshita, C. Boote, K. Meek  
Journal of Applied Crystallography, **40**, (2007), 335-340
- [49] "X-ray Photon Correlation Spectroscopy of Filler in Rubber"  
Y. Shinohara, H. Kishimoto, T. Maejima, H. Nishikawa, N. Yagi, Y. Amemiya  
Japanese Journal of Applied Physics, **46**, (2007), L300-L302
- [50] "Crystallization of Stretched Network Chains in Cross-Linked Natural Rubber"  
M. Tosaka, K. Senoo, S. Kohjiya, Y. Ikeda  
Journal of Applied Physics, **101**, (2007), 084909
- [51] "A Structural Origin of Latency Relaxation in Frog Skeletal Muscle"  
N. Yagi  
Biophysical Journal, **92**, (2007), 162-171
- [52] "CMOS Flatpanel Detectors for SAXS/WAXS Experiments"  
N. Yagi, K. Inoue  
Journal of Applied Crystallography, **40**, (2007), s439-s441  
[2008]
- [53] "Time-Resolved Investigation of Nanosecond Crystal Growth in Rapid-Phase-Change Materials: Correlation with the Recording Speed of Digital Versatile Disc Media"  
Y. Fukuyama, N. Yasuda, J. Kim, H. Murayama, Y. Tanaka, S. Kimura, K. Kato, S. Kohara, Y. Moritomo, T. Matsunaga, R. Kojima, N. Yamada, H. Tanaka, T. Ohshima, M. Takata  
Applied Physics Express, **1**, (2008), 045001

## BL41XU

## Refereed Journals

- [1] "Fundamental Design of the High Energy Undulator Pilot Beamline for Macromolecular Crystallography at the SPring-8"  
N. Kamiya, T. Uruga, H. Kimura, H. Yamaoka, M. Yamamoto, Y. Kawano, T. Ishikawa, H. Kitamura, T. Ueki, H. Iwasaki, Y. Kashiwara, N. Tanaka, H. Moriyama, K. Hamada, K. Miki, I. Tanaka  
Review of Scientific Instruments, **66**, (1995), 1703-1705  
[1995]