

## Instrumentation & Technique

### Refereed Papers

[1998]

- [1] "Thermal and Deformation Analyses of Side-Cooled Monochromator Mirrors for the SPring-8/Figure-8 Soft X-Ray Undulator"  
 N. Kihara, K. Mashima, S. Miura, A. Miyaji, K. Wakamiya, S. Takahashi, M. Kageyama, S. Ichikawa  
*Journal of Synchrotron Radiation*, **5**, (1998), 811-813

[1999]

- [2] "Feasibility Study of Silicon PN Photodiodes as X-Ray Intensity Monitors for High Flux X-Ray Beam with Synchrotron Radiation"  
 K. Sato  
*Nuclear Instruments and Methods in Physics Research Section A*, **436**, (1999), 285-290
- [3] "A Multiple CCD X-Ray Detector and Its First Operation with Synchrotron Radiation X-Ray Beam"  
 M. Suzuki, M. Yamamoto, T. Kumasaka, K. Sato, H. Toyokawa, Ian F. Aries, Paul A. Jerram, T. Ueki  
*Nuclear Instruments and Methods in Physics Research Section A*, **436**, (1999), 174-181
- [4] "A Multiple-CCD X-Ray Detector and Its Basic Characterization"  
 M. Suzuki, M. Yamamoto, T. Kumasaka, K. Sato, H. Toyokawa, Ian F. Aries, Paul A. Jerram, D. Gullick, T. Ueki  
*Journal of Synchrotron Radiation*, **6**, (1999), 6-18
- [5] "Characterization of Diamond Single Crystals for Synchrotron Radiation Monochromators"  
 Y. Tsusaka, S. Takeda, K. Takai, K. Yokoyama, Y. Kagoshima, J. Matsui, S. Sato, N. Toda, S. Kimura  
*Japanese Journal of Applied Physics*, **38 Suppl. 38-1**, (1999), 616-619

[2000]

- [6] "Benchmark Experiment for Radiation Shielding Around the Beam Dump of the SPring-8 Injector"  
 Y. Asano, N. Sasamoto  
*Journal of Nuclear Science and Technology*, **Suppl. 1**, (2000), 535-539
- [7] "X-Ray Microbeam with Sputtered-Sliced Fresnel Zone Plate at SPring-8 Undulator Beamline"  
 Y. Suzuki, M. Awaji, Y. Kohmura, A. Takeuchi, N. Kamijo, S. Tamura, K. Handa  
*X-Ray Microscopy: Proceedings of the Sixth International Conference (AIP Conference Proceedings 507)*,  
**CP507**, (2000), 535-538
- [8] "Timing Control of an Intense Picosecond Pulse Laser to the SPring-8 Synchrotron Radiation Pulses"  
 Y. Tanaka, T. Hara, H. Kitamura, T. Ishikawa  
*Review of Scientific Instruments*, **71**, (2000), 1268-1274

[2001]

- [9] "High Resolution X-Ray Fluorescence Measurements Using a Flat Analyzer Crystal and an X-Ray CCD"  
 S. Hayakawa, Y. Kagoshima, Y. Tsusaka, J. Matsui, T. Hirokawa  
*Journal of Trace and Microprobe Techniques*, **19**, (2001), 615-621
- [10] "Characterization of the Sputtered-Sliced Zone Plate for High Energy X-Rays"  
 N. Kamijo, Y. Suzuki, M. Awaji, A. Takeuchi, K. Uesugi, M. Yasumoto, S. Tamura, Y. Kohmura, A. Duevel,  
 D. Rudolph, G. Schmahl  
*Nuclear Instruments and Methods in Physics Research Section A*, **467-468**, (2001), 868-871
- [11] "Improvement of a High Pressure Cell with Diamond Windows for Solution X-Ray Scattering of Proteins"  
 Y. Nishikawa, T. Fujisawa, Y. Inoko, M. Moritoki  
*Nuclear Instruments and Methods in Physics Research Section A*, **467-468**, (2001), 1384-1387
- [12] "Background Noise in a Cauchois-Type High-Resolution Compton Scattering Spectrometer at SPring-8"  
 Y. Sakurai, N. Hiraoka, M. Itou, M. Mizumaki, T. Ohata, A. Deb, H. Toyokawa, M. Suzuki, N. Sakai  
*Journal of Physics and Chemistry of Solids*, **62**, (2001), 2099-2102
- [13] "Tuning of X-Ray Phase Retarder for Magnetic EXAFS Spectroscopy in Helicity Modulation Mode"  
 M. Suzuki, N. Kawamura, T. Ishikawa  
*Journal of Synchrotron Radiation*, **8**, (2001), 357-359
- [14] "Diffraction-Limited Microbeam with Fresnel Zone Plate Optics in Hard X-Ray Regions"  
 Y. Suzuki, A. Takeuchi, H. Takano, T. Ohigashi, H. Takenaka  
*Japanese Journal of Applied Physics*, **40**, (2001), 1508-1510

- [15] "A YAP(Ce) Imager Operated in High Energy X-Ray Region"  
M. Suzuki, H. Toyokawa, M. Mizumaki, Y. Ohashi, N. Yagi, H. Kamitsubo, K. Kuroda, A. Gorin, I. Manuilov, A. Riazantsuev, M. Nomachi, M. Yosoi, T. Ishikawa, K. Morimoto, F. Tokanai  
Nuclear Instruments and Methods in Physics Research Section A, **467-468**, (2001), 1121-1124
  - [16] "Hard X-Ray Microtomography Using X-Ray Imaging Optics"  
A. Takeuchi, K. Uesugi, Y. Suzuki, S. Aoki  
Japanese Journal of Applied Physics, **40**, (2001), 1499-1503
  - [17] "Synchronization of Picosecond Laser Pulses to the Target X-Ray Pulses at SPring-8"  
Y. Tanaka, T. Hara, H. Kitamura, T. Ishikawa  
Nuclear Instruments and Methods in Physics Research Section A, **467-468**, (2001), 1451-1454
  - [18] "X-Ray Absorption Spectroscopy of Diluted System by Undulator Photon Source and Mult-Element Solid-State Detector"  
H. Tanida, M. Ishii  
Nuclear Instruments and Methods in Physics Research Section A, **467-468**, (2001), 1564-1567
  - [19] "Development of a One-Dimensional Microstrip Germanium Detector for Compton Scattering Experiment at SPring-8"  
H. Toyokawa, M. Itou, M. Mizumaki, Y. Sakurai, M. Suzuki, N. Hiraoka, N. Sakai  
Nuclear Instruments and Methods in Physics Research Section A, **467-468**, (2001), 1132-1135
  - [20] "Performance of a Micro-Strip Gas Chamber in Solution X-Ray Scattering"  
H. Toyokawa, T. Fujisawa, Y. Inoko, T. Nagayoshi, Y. Nishi, Y. Nishikawa, A. Ochi, M. Suzuki, T. Tanimori  
Nuclear Instruments and Methods in Physics Research Section A, **467-468**, (2001), 1144-1147
  - [21] "Synchrotron Radiation Microangiography System for Observation of Blood Flow in Murine Tumor Vasculature"  
K. Umetani, S. Itasaka, M. Ogura, H. Kimura, M. Hiraoka  
Bioimages, **9**, (2001), 97-106
  - [22] "Synchrotron Radiation Microangiography for Real-Time Observation of Angiogenic Vessels in Cancer"  
K. Umetani, T. Yamashita, N. Maehara, S. Imai, Y. Kajihara  
Analytical Sciences, **17**.Supplement, (2001), i531-i534
  - [23] "Nuclear Resonant Scattering Beamline at SPring-8"  
Y. Yoda, M. Yabashi, K. Izumi, X. W. Zhang, S. Kishimoto, S. Kitao, M. Seto, T. Mitsui, T. Harami, Y. Imai, S. Kikuta  
Nuclear Instruments and Methods in Physics Research Section A, **467-468**, (2001), 715-718
  - [24] "EPR Spectrometer Installed in a Soft X-Ray Beamline at SPring-8 for Biophysical Studies"  
A. Yokoya, K. Akamatsu  
Nuclear Instruments and Methods in Physics Research Section A, **467-468**, (2001), 1333-1337
- [2002]
- [25] "Performance of  $\text{YB}_{66}$  Double-Crystal Monochromator for Dispersing Synchrotron Radiation at SPring-8"  
M. Kitamura, H. Yoshikawa, T. Mochizuki, A. M. Vlaicu, A. Nisawa, N. Yagi, M. Okui, M. Kimura, T. Tanaka, S. Fukushima  
Advances in X-Ray Analysis, **46**, (2002),
  - [26] "Use of a MicroStrip Gas Chamber Conductive Capillary Plate for Time-Resolved X-Ray Area Detection"  
A. Ochi, T. Tanimori, Y. Nishi, Y. Nishi, T. Nagayoshi, Y. Ohashi, H. Uekusa, H. Toyokawa  
Nuclear Instruments and Methods in Physics Research Section A, **477**, (2002), 48-54
  - [27] "Fast Multigrid Fluorescent Ion Chamber with 0.1 ms Time Response"  
M. Suzuki, N. Kawamura, Farrel W. Lytle, T. Ishikawa  
Journal of Synchrotron Radiation, **9**, (2002), 99-102
  - [28] "X-Ray Refraction-Enhanced Imaging and a Method for Phase Retrieval for a Simple Object"  
Y. Suzuki, N. Yagi, K. Uesugi  
Journal of Synchrotron Radiation, **9**, (2002), 160-165
  - [29] "Optical Switching of X-Rays Using Laser-Induced Lattice Expansion"  
Y. Tanaka, T. Hara, H. Yamazaki, H. Kitamura, T. Ishikawa  
Journal of Synchrotron Radiation, **9**, (2002), 96-98
  - [30] "Synchrotron Radiation Microangiography Using X-Ray SATICON for Observation of Tumor"  
K. Umetani, T. Yamashita, N. Maehara, S. Imai  
映像情報メディア学会誌 (The Journal of the Institute of Image Information and Television Engineers), **56**, (2002), 492-494

- [31] "X-Ray SATICON Based Direct-Sensing Detector for Small-Field Angiographic Imaging"  
 K. Umetani, T. Yamashita, N. Maehara, S. Imai, Y. Kajihara  
 Proceedings of Joint Symposium on Bio-Sensing and Bio-Imaging 2001, , (2002), 101-104  
 [2003]
- [32] "PILATUS: a Two-Dimensional X-Ray Detector for Macromolecular Crystallography"  
 E. Eikenberry, Ch. Brannemann, G. Hulsen, H. Toyokawa, R. Horisberger, B. Schmitt, C. Schulze-Briese, T. Tomizaki  
 Nuclear Instruments and Methods in Physics Research Section A, **501**, (2003), 260-266
- [33] "Fundamental Properties of YAP Imager"  
 A. Gorin, K. Kuroda, I. Manuilov, A. Riazantsev, T. Ishikawa, H. Kamikubo, M. Suzuki, H. Toyokawa  
 Nuclear Instruments and Methods in Physics Research Section A, **510**, (2003), 76-82
- [34] "High Resolution-High Energy X-Ray Photoelectron Spectroscopy Using Third-Generation Synchrotron Radiation Source, and Its Application to Si-High  $k$  Insulator Systems"  
 K. Kobayashi, M. Yabashi, Y. Takata, T. Tokushima, S. Shin, K. Tamasaku, D. Miwa, T. Ishikawa, H. Nohira, T. Hattori, Y. Sugita, O. Nakatsuka, A. Sakai, S. Zaima  
 Applied Physics Letters, **83**, (2003), 1005-1007
- [35] "Phase Retrieval of Diffraction Patterns from Noncrystalline Samples Using the Oversampling Method"  
 J. Miao, T. Ishikawa, Erik H. Anderson, Keith O. Hodgson  
 Physical Review B, **67**, (2003), 174104
- [36] "Direct Determination of the Absolute Electron Density of Nanostructured and Disordered Materials at Sub-10nm Resolution"  
 J. Miao, James E. Amonette, Y. Nishino, T. Ishikawa, Keith O. Hodgson  
 Physical Review B, **68**, (2003), 012201
- [37] "Thermal Desorption Process of Bromide on Si (111) Studied by High Sensitive Mass Spectroscopy"  
 T. Shirao, K. Shudo, Y. Tanaka, T. Nakajima, T. Ishikawa, M. Tanaka  
 Japanese Journal of Applied Physics, **42**, (2003), 593-596
- [38] "Thermal Effect of Picosecond-Pulsed Laser Irradiation on Cl-Adsorbed Si (111) Surface"  
 T. Shirao, K. Shudo, Y. Tanaka, T. Ishikawa, M. Tanaka  
 Japanese Journal of Applied Physics, **42**, (2003), L386-L388
- [39] "Unambiguous X-Ray Phase Retrieval from Small Angle Scattering Data"  
 Karen K.-W. Siu, Andrei Y. Nikulin, P. Wells, E. Harvey, T. Bigault, Andreas K. Freund, T. Ishikawa  
 Journal of Applied Physics, **93**, (2003), 5161-5166
- [40] "Application of Phase-Retrieval X-Ray Diffractometry to Carbon Doped SiGe(C)/Si(C)"  
 Karen K.-W. Siu, Andrei Y. Nikulin, P. Zaumsei, H. Yamazaki, T. Ishikawa  
 Journal of Applied Physics, **94**, (2003), 1007-1012
- [41] "A 128-Channel Microstrip Germanium Detector for Compton Scattering Experiments at SPring-8 Facility"  
 M. Suzuki, H. Toyokawa, K. Hirota, M. Itou, M. Mizumaki, Y. Sakurai, N. Hiraoka, N. Sakai  
 Nuclear Instruments and Methods in Physics Research Section A, **510**, (2003), 63-75  
 [2004]
- [42] "The Design and Performance of Beamline BL16XU at SPring-8"  
 Y. Hirai, S. Yasuami, A. Kobayashi, Y. Hirai, J. Nishino, M. Shibata, K. Yamaguchi, K. Liu, S. Kawado, T. Yamamoto, S. Noguchi, M. Takahashi, I. Konomi, S. Kimura, M. Hasegawa, N. Awaji, S. Komiya, T. Hirose, S. Ozaki, T. Okajima, T. Ishikawa, H. Kitamura  
 Nuclear Instruments and Methods in Physics Research Section A, **521**, (2004), 538-548
- [43] "Infrared Microspectroscopy Station at BL43IR of SPring-8"  
 Y. Ikemoto, T. Moriwaki, T. Hirono, S. Kimura, K. Shinoda, M. Matsunami, N. Nagai, T. Nanba, K. Kobayashi, H. Kimura  
 Infrared Physics and Technology, **45**, (2004), 369-373
- [44] "An X-ray BBB Michelson Interferometer"  
 John P. Sutter, T. Ishikawa, U. Kuettgens, G. Materlik, Y. Nishino, A. Rostomyan, K. Tamasaku, M. Yabashi  
 Journal of Synchrotron Radiation, **11**, (2004), 378-385
- [45] "Intensity Interferometry for the Study of X-Ray Coherence"  
 M. Yabashi, K. Tamasaku, T. Ishikawa  
 Physical Review A, **69**, (2004), 023813

- [46] "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  
 [2005]
- [47] "Three-Dimensional Atomic-Image Reconstruction from a Single Energy Si Photoelectron Hologram"  
 T. Matsushita, A. Agui, A. Yoshigoe  
*Journal of Electron Spectroscopy and Related Phenomena*, **144-147**, (2005), 291-294

## Optics

### Refereed Papers

[1998]

- [1] "Position of Exit X-Rays from Rotated-Inclined Double Crystal Monochromators"  
 Y. Kashihara, H. Yamazaki, K. Tamasaku, T. Ishikawa  
*Journal of Synchrotron Radiation*, **5**, (1998), 679-681
- [2] "Fabrication of Silicon Crystals for Pin-Post Water-Cooling System at SPring-8"  
 M. Kuroda, H. Yamazaki, M. Suzuki, H. Kimura, I. Kagaya, C. Yamashita, T. Ishikawa  
*Journal of Synchrotron Radiation*, **5**, (1998), 1211-1214
- [3] "Helicity-Modulation Technique Using Diffractive Phase Retarder for Measurements of X-Ray Magnetic Circular Dichroism"  
 M. Suzuki, N. Kawamura, M. Mizumaki, A. Urata, H. Maruyama, S. Goto, T. Ishikawa  
*Japanese Journal of Applied Physics*, **37**, (1998), L1488-L1490
- [4] "Focusing and Reflection by a Bent Crystal for High-Energy Synchrotron Radiation"  
 H. Yamaoka, K. Ohtomo, T. Ishikawa  
*Journal of Synchrotron Radiation*, **5**, (1998), 687-689
- [5] "Bent-Crystal Monochromators for High-Energy Synchrotron Radiation"  
 H. Yamaoka, T. Mochizuki, Y. Sakurai, H. Kawata  
*Journal of Synchrotron Radiation*, **5**, (1998), 699-701

[1999]

- [6] "Polarization-Modulation Technique with Diamond Phase Retarder to Improve the Accuracy of XMCD Measurements"  
 M. Suzuki, N. Kawamura, M. Mizumaki, A. Urata, H. Maruyama, S. Goto, T. Ishikawa  
*Journal of Synchrotron Radiation*, **6**, (1999), 190-192

[2001]

- [7] "A Compact Optical Design for Bragg Reflections Near Backscattering"  
 Alfred Q. R. Baron, Y. Tanaka, D. Ishikawa, D. Miwa, M. Yabashi, T. Ishikawa  
*Journal of Synchrotron Radiation*, **8**, (2001), 1127-1130
- [8] "Diamond Double-Crystal Monochromator in Bragg Geometry Installed on BL-11XU at SPring-8"  
 M. Marushita, T. Mitsui, T. Fukuda, M. Takahasi, T. Inami, Y. Katayama, H. Shiwaku, J. Mizuki  
*Nuclear Instruments and Methods in Physics Research Section A*, **467-468**, (2001), 392-395
- [9] "Cryogenic Cooling Monochromators for the SPring-8 Undulator Beamlines"  
 T. Mochizuki, Y. Kohmura, M. Awaji, Y. Suzuki, A. Q. R. Baron, K. Tamasaku, M. Yabashi, H. Yamazaki, T. Ishikawa  
*Nuclear Instruments and Methods in Physics Research Section A*, **467-468**, (2001), 647-649
- [10] "Monochromator for a Soft X-Ray Photochemistry Beamline BL27SU of SPring-8"  
 H. Ohashi, E. Ishiguro, Y. Tamenori, H. Okumura, A. Hiraya, H. Yoshida, Y. Senba, K. Okada, N. Saito, I. H. Suzuki, K. Ueda, T. Ibuki, S. Nagaoka, I. Koyano, T. Ishikawa  
*Nuclear Instruments and Methods in Physics Research Section A*, **467-468**, (2001), 533-536
- [11] "Refractive X-Ray lens for High Pressure Experiments at SPring-8"  
 Y. Ohishi, A. Q. R. Baron, M. Ishii, T. Ishikawa, O. Shimomura  
*Nuclear Instruments and Methods in Physics Research Section A*, **467-468**, (2001), 962-965
- [12] "R&D on Third Generation Multi-Segmented Piezoelectric Bimorph Mirror Substrates at SPring-8"  
 R. Signorato, T. Ishikawa  
*Nuclear Instruments and Methods in Physics Research Section A*, **467-468**, (2001), 271-274