

## 発表論文リスト

SPRING-8年報は年度毎に発刊されているが、論文に関しては発刊「年」で編集している。今回は、2004年（1月～12月）に発刊された原著論文で、2005年6月30日までにSPRING-8研究成果発表データベースに登録された論文を掲載している。それぞれのデータは順に以下の項目を示す。

SPRING-8研究成果発表データベースの登録レコードNo.、論文タイトル、著者名、雑誌名、巻、発行年、掲載ページ

### 共用ビームライン

#### **BL01B1**

5596

Direct Speciation of Tin Compounds in Environmental Samples Using Sn K-Edge XANES

Naoki Sakakibara, Y. Takahashi, Y. Yamaguchi, K. Shibata, T. Uruga

Chemistry Letters, **33** (2004) 264-265

5621

Supramolecular Catalysts by Encapsulating Palladium Complexes within Dendrimers

Masahiko Ooe, M. Murata, T. Mizugaki, K. Ebitani, K. Kaneda  
Journal of the American Chemical Society, **126** (2004) 1604-1605

5623

Highly Active Trimetallic Ru/CeO<sub>2</sub>/CoO(OH) Catalyst for Oxidation of Alcohols in the Presence of Molecular Oxygen  
Kohki Ebitani, H. Ji, T. Mizugaki, K. Kaneda

Journal of Molecular Catalysis A: Chemical, **212** (2004) 161-170

5915

Role in Photocatalysis and Coordination Structure of Metal Ions Adsorbed on Titanium Dioxide Particles: A Comparison between Lanthanide and Iron Ions

Shuji Matsuo, N. Sakaguchi, K. Yamada, T. Matsuo, H. Wakita  
Applied Surface Science, **228** (2004) 233-244

5947

Thermal Annealing Effect in GaInNAs Thin Films Estimated by Fluorescence X-Ray Absorption Fine Structure Spectroscopy

Kazuyuki Uno, M. Yamada, T. Takizawa, I. Tanaka  
Japanese Journal of Applied Physics, **43** (2004) 1944-1946

5950

Accelerated Decay of the 31-yr Isomer of Hf-178 Induced by Low-Energy Photons and Electrons

Carl Collins, N. Zoita, F. Davanloo, S. Emura, Y. Yoda, T. Uruga, B. Patterson, B. Schmitt, J. Pouvesle, I. Popescu, V. Kirischuk, N. Strilchuk

Laser Physics, **14** (2004) 154-165

6017

A Ruthenium-Grafted Hydrotalcite as a Multifunctional Catalyst for Direct  $\alpha$ -Alkylation of Nitriles with Primary Alcohols  
Kiyotomi Kaneda, K. Motokura, D. Nishimura, K. Mori, T. Mizugaki, K. Ebitani

Journal of the American Chemical Society, **126** (2004) 5662-5663

6342

XAFS and XRD Study on Ceria Doped with Pr, Nd or Sm  
Hiroaki Nitani, T. Nakagawa, M. Yamanouchi, T. Osuki, M. Yuya, T. Yamamoto  
Materials Letters, **58** (2004) 2076-2081

6664

Direct Determination of the “Organic Extent” of Tin Species in Environmental Samples by X-ray Absorption Near-Edge Structure Spectroscopy

Yoshio Takahashi, N. Sakakibara, M. Nomura

Analytical Chemistry, **76** (2004) 4307-4314

6665

Geochemical Study of ODP Leg 191 Site 1179 Sediments : Direct Observation of Mn and Ce Oxidation States  
Yoshio Takahashi, M. Fukukawa, H. Shimizu, Y. Hayasaka, Y. Sakai

Proceedings of the Ocean Drilling Program, Scientific Results, **191** (2004) 191SR007

- 6706  
Accelerated Emission from Isomeric Nuclei  
Carl B. Collins, N. C. Zoita, F. Davanloo, S. Emura, Y. Yoda, T. Uruga, V. I. Kirischuk, Nikolay V. Strilchuk, J. Pouvesle, I. Popescu, B. Patterson, B. Schmitt  
Radiation Physics and Chemistry, **71** (2004) 619-625
- 6841  
Hydroxyapatite-Supported Palladium Nanoclusters: A Highly Active Heterogeneous Catalyst for Selective Oxidation of Alcohols by Use of Molecular Oxygen  
Kousuke Mori, T. Hara, K. Ebitani, T. Mizugaki, K. Kaneda  
Journal of the American Chemical Society, **126** (2004) 10657-10666
- 6878  
 $\text{Ce}_{1-x}\text{Rh}_x\text{O}_{2-x}$  Solid Solution Formation in Combustion Synthesized Rh/CeO<sub>2</sub> Catalysts by XRD, TEM, XPS and EXAFS  
Arup Gayen, K. R. Priolkar, P. R. Sarode, M. S. Hegde, G. N. Subbanna, S. Emura  
Chemistry of Materials, **16** (2004) 2317-2326
- 6883  
Carbon-Supported Pt-Fe Alloy as a Methanol-Resistant Oxygen-Reduction Catalyst for Direct Methanol Fuel Cells  
A. K. Shukla, K. Priolkar, P. Sarode, S. Emura, N. A. Choudhury, R. K. Raman, R. Kumashiro  
Journal of Electroanalytical Chemistry, **563** (2004) 181-190
- 6999  
Chemical Forms of Mercury and Cadmium Accumulated in Marine Mammals and Seabirds as Determined by XAFS Analysis  
Teruko Arai, T. Ikemoto, A. Hokura, Y. Terada, T. Kunito, S. Tanabe, I. Nakai  
Environmental Science & Technology, **38** (2004) 6468-6474
- BL02B1**
- 5848  
Studies of Unusual Magnetic and Electronic Properties of the Low-Carrier System CeP by Synchrotron X-rays  
M. Kogi, K. Iwasa, K. Kuwahara, A. Hannan, D. Kawana, Y. Noda, T. Shobu, K. Katsumata, Y. Narumi, Y. Tabata  
Physica B, **345** (2004) 55-58
- 5854  
Structural Phase Transition of -(BEDT-TTF)<sub>2</sub>RbZn(SCN)<sub>4</sub> under High Pressure
- Masashi Watanabe, Y. Noda, Y. Nogami, H. Mori  
Journal of the Physical Society of Japan, **73** (2004) 921-925
- 6340  
Estimation of Spalling Stress in Thermal Barrier Coating using High Energy X-rays from Synchrotron  
Kenji Suzuki, K. Tanaka, Y. Akiniwa, M. Kawamura, K. Nishio, H. Okado  
日本機械学会論文集 A編 (Transactions of the Japan Society of Mechanical Engineers, Series A), **70** (2004) 724-739
- 6491  
Oxidization of Thermal Barrier Coatings and Spalling Stress Analyzed with Synchrotron X-Rays  
Kenji Suzuki, T. Kubo, K. Tanaka, Y. Akiniwa, H. Okado  
材料 (Journal of the Society of Materials Science, Japan), **53** (2004) 734-739
- 6500  
Estimation Spalling Stress in Thermal Barrier Coatings Using Hard Synchrotron X-rays  
Kenji Suzuki, K. Tanaka, Y. Akiniwa  
JSME International Journal Series A, **47** (2004) 318-323
- 6539  
In-situ Synchrotron Measurement of Thermal Stress in Textured Copper Thin Films during Thermal Cycling  
Keisuke Tanaka, T. Ito, Y. Akiniwa, H. Ohta  
材料 (Journal of the Society of Materials Science, Japan), **53** (2004) 728-733
- 6917  
Relationship between Charge Stripe Order and Structural Phase Transitions in  $\text{La}_{1.875}\text{Ba}_{0.125-x}\text{Sr}_x\text{CuO}_4$   
Hiroyuki Kimura, Y. Noda, H. Goka, M. Fujita, K. Yamada, M. Mizumaki, N. Ikeda, H. Ohsumi  
Physical Review B, **70** (2004) 134512
- 7548  
Relaxor-like Behavior in -(BETS)<sub>2</sub>FeCl<sub>4</sub> Studied by SR X-Ray Diffraction  
Satoshi Komiyama, Y. Noda, M. Watanabe, E. Negishi, N. Toyota  
Journal of the Physical Society of Japan, **73** (2004) 2385-2388
- BL02B2**
- 5446  
Anisotropic Thermal Expansion of Layered MoO<sub>3</sub> Crystal

- Hiroshi Negishi, S. Negishi, Y. Kuroiwa, N. Sato, S. Aoyagi  
Physical Review B, **69** (2004) 064111
- 5502  
Structural Determination of  $\text{Li}_{1-y}\text{Ni}_{0.5}\text{Mn}_{0.5}\text{O}_2$  ( $y = 0.5$ ) Using a Combination of Rietveld Analysis and Maximum Entropy Method  
Hironori Kobayashi, Y. Arachi, H. Kageyama, K. Tatsumi  
Journal of Materials Chemistry, **14** (2004) 40-42
- 5645  
Time-Resolved Investigation of Photoinduced Structural Change in Co-Fe Cyanides  
Masaharu Kamiya, M. Hanawa, Y. Moritomo, Y. Isobe, J. Tateishi, K. Kato, A. Nakamura  
Physical Review B, **69** (2004) 052102
- 5689  
Pressure Effect on Charge-Ordering Transition of  $\text{YBaCo}_2\text{O}_5$   
Yutaka Moritomo, M. Hanawa, S. Xu, H. Ishikawa, Y. Ohishi, K. Kato, T. Honma, P. Keren, M. Karppinen, H. Yamauchi  
Physical Review B, **69** (2004) 134118
- 5723  
Structure of the  $\text{Al}_{65}\text{Rh}_{27}\text{Si}_8$  2/1-2/1-2/1 Approximant  
Tsunehiro Takeuchi, N. Koshikawa, E. Abe, K. Kato, U. Mizutani  
Journal of Non-Crystalline Solids, **334-335** (2004) 161-166
- 5807  
Chemical Composition and Crystal Structure of Superconducting Sodium Cobalt Oxide Bilayer-Hydrate  
Kazunori Takada, K. Fukuda, M. Osada, I. Nakai, F. Izumi, R. A. Dilanian, K. Kato, M. Takata, H. Sakurai, E. Takayama-Muromachi, T. Sasaki  
Journal of Materials Chemistry, **14** (2004) 1448-1453
- 5874  
Preparation of Polymer Nanohybrid via *in situ* Synthesis of Inorganic Nanofiber in Polymer Solution  
Kazuya Yamamoto, H. Otsuka, S. Wada, A. Takahara  
Transactions of the Materials Research Society of Japan, **29** (2004) 149-152
- 5892  
Crystallographic Studies on High-Speed Phase-Change Materials Used for Rewritable Optical Recording Disks  
Toshiyuki Matsunaga, N. Yamada  
Japanese Journal of Applied Physics, **43** (2004) 4702-4712
- 5893  
Structural Investigation of  $\text{GeSb}_2\text{Te}_4$  : A High-Speed Phase-Change Material  
Toshiyuki Matsunaga, N. Yamada  
Physical Review B, **69** (2004) 104111
- 5908  
X-ray Analysis of Excited-State Structures of the Diplatinum Complex Anions in Five Crystals with Different Cations  
Nobuhiro Yasuda, H. Uekusa, Y. Ohashi  
Bulletin of the Chemical Society of Japan, **77** (2004) 933-944
- 5924  
Compositional Dependence of X-Ray Absorption Spectra and Magnetic Circular Dichroism and Near-Edge Structure at Co *K* Edge in  $\text{La}_{1-x}\text{Sr}_x\text{CoO}_3$  ( $0 < x < 0.6$ )  
Takayasu Hanashima, S. Azuhata, K. Yamawaki, N. Shimizu, T. Mori, M. Tanaka, S. Sasaki  
Japanese Journal of Applied Physics, **43** (2004) 4171-4178
- 6046  
Azafullerene  $(\text{C}_{59}\text{N})_2$  Thin-Film Field-Effect Transistors  
Katsumi Tanigaki, R. Kumashiro, K. Kato, S. Aoyagi, S. Kimura, H. Ohashi, N. Tagmatarchis, H. Kato, H. Shinohara, T. Akasaka, M. Takata  
Applied Physics Letters, **84** (2004) 2154-2156
- 6054  
Recent Progress in Development of Single-Component Molecular Metals  
Akiko Kobayashi, E. Fujiwara, M. Sasa, W. Suzuki, Y. Fujishiro, E. Nishibori, M. Takata, M. Sakata, Y. Okano, H. Kobayashi  
Journal de Physique IV France, **114** (2004) 419-424
- 6157  
1-D Cobalt(II) Spin Transition Compound with Strong Interchain Interaction:  $[\text{Co}(\text{pyterpy})\text{Cl}_2] \cdot \text{X}$   
Shinya Hayami, K. Hashiguchi, G. Juhasz, M. Ohba, H. Okawa, Y. Maeda, K. Kato, K. Osaka, M. Takata, K. Inoue  
Inorganic Chemistry, **43** (2004) 4124-4126
- 6175  
Direct Observation of Bonding and Charge Ordering in  $(\text{EDO-TTF})_2\text{PF}_6$   
Shinobu Aoyagi, K. Kato, A. Ota, H. Yamochi, G. Saito, H. Suematsu, M. Sakata, M. Takata  
Angewandte Chemie International Edition, **43** (2004) 3670-3673

6185

Lattice Distortion and Magnetolattice Coupling in CuO  
Hiroshi Yamada, X. Zheng, Y. Soejima, M. Kawaminami  
Physical Review B, **69** (2004) 104104

6208

Anomalous Endohedral Structure of Gd@C<sub>82</sub> Metallofullerenes  
Eiji Nishibori, K. Iwata, M. Sakata, M. Takata, H. Tanaka, H.  
Kato, H. Shinohara  
Physical Review B, **69** (2004) 113412

6225

Low-glancing-angle X-ray Diffraction Study on the  
Relationship between Crystallinity and Properties of C<sub>60</sub> Field  
Effect Transistor  
Hirotaka Ohashi, K. Tanigaki, S. Kimura, R. Kumashiro, K.  
Kato, M. Takata  
Applied Physics Letters, **84** (2004) 520-522

6234

Structure Analysis of Zn-Mg-Ho Icosahedral Quasicrystal by  
Modified Rietveld Method using Ellipsoid and Sphere Windows  
Tsutomu Ishimasa, K. Oyamada, Y. Arichika, E. Nishibori, M.  
Takata, M. Sakata, K. Kato  
Journal of Non-Crystalline Solids, **334-335** (2004) 167-172

6237

Structural Analysis if Intercalation Compounds of Pentacene  
Takayoshi Ito, T. Mitani, T. Takenobu, Y. Iwasa  
Journal of Physics and Chemistry of Solids, **65** (2004) 609-613

6369

High-Pressure Structural Investigation of Ferromagnetic  
Nd<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>  
Yutaka Moritomo, S. Xu, H. Ishikawa, A. Nakamura, Y.  
Ohishi, K. Katou  
Physical Review B, **70** (2004) 104103

6600

Motion of Methanol Adsorbed in Porous Coordination Polymer  
with Paramagnetic Metal Ions  
Satoshi Horike, S. Kitagawa, R. Matsuda, R. Kitaura, T. Iijima,  
K. Endo, Y. Kubota, M. Takata  
Chemical Communications, **19** (2004) 2152-2153

6725

Observation of Orientational Disorder in the Hexagonal Stuffed  
Tridymite Sr<sub>0.864</sub>Eu<sub>0.136</sub>Al<sub>2</sub>O<sub>4</sub> by the Maximumu-Entropy

Method

Hiroshi Yamada, C. Xu, W. Shi  
Journal of Applied Crystallography, **37** (2004) 698-702

6741

Structures of Fe<sup>II</sup> Spin-Crossover Complexes from Synchrotron  
Powder-Diffraction Data  
Eva Dova, R. Peschar, M. Sakata, K. Kato, A. F. Stassen, H.  
Schenk, J. G. Haasnoot  
Acta Crystallographica Section B, **60** (2004) 528-538

6743

Drastic Lowering of the Order-Disorder Phase Transition  
Temperatures in Zr<sub>1-x</sub>M<sub>x</sub>W<sub>2</sub>O<sub>8-y</sub> (M=Sc, Y, In) Solid Solutions  
Yasuhisa Yamamura, N. Nakajima, T. Tsuji, A. Kojima, Y.  
Kuroiwa, A. Sawada, S. Aoyagi, H. Kasatani  
Physical Review B, **70** (2004) 104107

6765

Crystallographic Features of Rhenium Disilicide  
Katsushi Tanaka, H. Inui, T. Ohba, S. Tsutsui, M. Mizumaki  
Materials Research Society Symposia Proceedings, **793** (2004)  
305-310

6916

Distinctive Charge Density Distributions of Perovskite-Type  
Antiferroelectric Oxides PbZrO<sub>3</sub> and PbHfO<sub>3</sub> in Cubic Phase  
Yoshihiro Kuroiwa, H. Fujiwara, A. Sawada, S. Aoyagi, E.  
Nishibori, M. Sakata, M. Takata, H. Kawaji, T. Atake  
Japanese Journal of Applied Physics, **43** (2004) 6799-6802

7276

Structures of Stable and Metastable Ge<sub>2</sub>Sb<sub>2</sub>Te<sub>5</sub>, an Intermetallic  
Compound in GeTe-Sb<sub>2</sub>Te<sub>3</sub> Pseudobinary Systems  
Toshiyuki Matsunaga, N. Yamada, Y. Kubota  
Acta Crystallographica Section B, **60** (2004) 685-691

7281

Guest Shape Responsive Fitting of Porous Coordination  
Polymer with Shrinkable Framework  
Ryotaro Matsuda, S. Kitagawa, R. Kitaura, Y. Kubota, T.  
Kobayashi, S. Horike, M. Takata  
Journal of the American Chemical Society, **126** (2004) 14063-  
14070

7283

Rational Design and Crystal Structure Determination of a 3-D  
Metal-Organic Jungle-Gym-Like Open Framework

Ryo Kitaura, S. Kitagawa, R. Matsuda, Y. Kubota, M. Takata, F. Iwahori, T. Kobayashi Inorganic Chemistry, <b>43</b> (2004) 6522-6524	5467	Structural Studies of Expanded Fluid Metals Using Synchrotron Radiation Kozaburo Tamura, M. Inui, K. Matsuda, D. Ishikawa Transactions of the Materials Research Society of Japan, <b>29</b> (2004) 83-88
7714 Phase Transition Behaviour in the A-site Deficient Perovskite Oxide $\text{La}_{1/3}\text{NbO}_3$ Brendan Kennedy, H. Christopher, Y. Kubota, K. Kato Journal of Solid State Chemistry, <b>177</b> (2004) 4552-4556	5659 Viscosity of Liquid Sulfur under High Pressure Hidenori Terasaki, T. Kato, K. Funakoshi, A. Suzuki, S. Urakawa Journal of Physics: Condensed Matter, <b>16</b> (2004) 1707-1714	
7715 Structural Studies of Five Layer Aurivillius Oxides: $A_2\text{Bi}_4\text{Ti}_5\text{O}_{18}$ ( $A=\text{Ca}, \text{Sr}, \text{Ba}$ and $\text{Pb}$ ) Ismunandar, B. Kennedy, T. Kamiyama, A. Hoshikawa, Q. Zhou, Y. Kubota, K. Kato Journal of Solid State Chemistry, <b>177</b> (2004) 4188-4196	5733 <i>In situ</i> X-Ray Diffraction of Graphite-Diamond Transformation using Various Catalysts under High Pressures and High Temperatures Wataru Utsumi, T. Okada, T. Taniguchi, K. Funakoshi, T. Kikegawa, N. Hamaya, O. Shimomura Journal of Physics: Condensed Matter, <b>16</b> (2004) S1017-S1026	
<b>BL04B1</b>		
4484 Precise Determination of Phase Relations in Pyrolite across the 660km Seismic Discontinuity by <i>in-situ</i> X-Ray Diffraction and Quench Experiments Norimasa Nishiyama, T. Irifune, T. Inoue, J. Ando, K. Funakoshi Physics of the Earth and Planetary Interiors, <b>143-144</b> (2004) 185-199	5818 Olivine-Wadsleyite Transition in the System $(\text{Mg}, \text{Fe})_2\text{SiO}_4$ Tomoo Katsura, H. Yamada, A. Kubo, O. Nishikawa, T. Yoshino, Y. Aizawa, M. Song, J. M. Walter, E. Ito, T. Shinmei, K. Funakoshi, S. Yoshiki Journal of Geophysical Research, <b>109</b> (2004) B02209	
4786 Thermal Equation of State of $(\text{Mg}_{0.91}\text{Fe}_{0.09})_2\text{SiO}_4$ Ringwoodite Yu Nishihara, E. Takahashi, K. Matsukage, T. Iguchi, K. Nakayama, K. Funakoshi Physics of the Earth and Planetary Interiors, <b>143-144</b> (2004) 33-46	6360 Phase Relationships and Equations of State for FeS at High Pressures and Temperatures and Implications for the Internal Structure of Mars Satoru Urakawa, K. Someya, H. Terasaki, T. Katsura, S. Yokoshi, K. Funakoshi, W. Utsumi, Y. Katayama, Y. Sueda, T. Irifune Physics of the Earth and Planetary Interiors, <b>143-144</b> (2004) 469-479	
4846 Formation of Pure Polycrystalline Diamond by Direct Conversion of Graphite at High Pressure and High Temperature Tetsuo Irifune, A. Kurio, S. Sakamoto, T. Inoue, H. Sumiya, K. Funakoshi Physics of the Earth and Planetary Interiors, <b>143-144</b> (2004) 593-600	6425 Phase Transition of Zircon at High P-T Conditions Shigeaki Ono, K. Funakoshi, Y. Nakajima, Y. Tange, T. Katsura Contributions to Mineralogy and Petrology, <b>147</b> (2004) 505-509	
5012 A Large-Volume High-Pressure and High-Temperature Apparatus for <i>in situ</i> X-Ray Observation, ‘SPEED-Mk.II’ Tomoo Katsura, K. Funakoshi, A. Kubo, N. Nishiyama, Y. Tange, Y. Sueda, T. Kubo, W. Utsumi Physics of the Earth and Planetary Interiors, <b>143-144</b> (2004) 497-506	6857 The Temperature-Pressure-Volume Equation of State of $\text{Mg}_2\text{SiO}_4$ Masanori Matsui, T. Katsura Journal of Mineralogical and Petrological Sciences, <b>99</b> (2004) 72-75	

6879

A New Technique for Angle-Dispersive Powder Diffraction using an Energy-Dispersive Setup and Synchrotron Radiation  
Yanbin Wang, T. Uchida, R. Von Dreele, M. L. Rivers, N. Nishiyama, K. Funakoshi, A. Nozawa, H. Kaneko  
Journal of Applied Crystallography, **37** (2004) 947-956

7024

Transformations in the Intermediate-Range Structure of  $\text{SiO}_2$  Glass under High Pressure and Temperature  
Yasuhiro Inamura, Y. Katayama, W. Utsumi, K. Funakoshi  
Physical Review Letters, **93** (2004) 015501

7179

Water Transport into the Deep Mantle and Formation of a Hydrous Transition Zone  
Eiji Ohtani, K. Litasov, T. Hosoya, T. Kubo, T. Kondo  
Physics of the Earth and Planetary Interiors, **143-144** (2004) 255-269

7180

In situ X-ray Observation of Decomposition of Hydrous Aluminum Silicate  $\text{AlSiO}_3\text{OH}$  and Aluminum Oxide Hydroxide d-AlOOH at High Pressure and Temperature  
Asami Sano, E. Ohtani, T. Kubo, K. Funakoshi  
Journal of Physics and Chemistry of Solids, **65** (2004) 1547-1554

7183

Absence of Density Crossover between Basalt and Peridotite in the Cold Slabs Passing through 660 km Discontinuity  
Konstantin Litasov, E. Ohtani, A. Suzuki, T. Kawazoe  
Geophysical Research Letters, **31** (2004) L24067

7558

A New-High-Pressure Form of  $\text{KAlSi}_3\text{O}_8$  under Lower Mantle Conditions  
Yuichiro Sueda, T. Irifune, N. Nishiyama, R. P. Rapp, F. Tristan, T. Onozawa, T. Yagi, S. Merkel, N. Miyajima, K. Funakoshi  
Geophysical Research Letters, **31** (2004) L23612

7604

Experimentally Determined Postspinel Transformation Boundary in  $\text{Mg}_2\text{SiO}_4$  using MgO as an Internal Pressure Standard and Its Geophysical Implications  
Yingwei Fei, J. Van Orman, J. Li, W. Van Westrenen, C. Sanloup, W. Minarik, K. Hirose, T. Komabayashi, M. Walter, K. Funakoshi

Journal of Geophysical Research, **109** (2004) B02305

7607

A Critical Evaluation of Pressure Scales at High Temperatures by in-situ X-ray Diffraction Measurements  
Yingwei Fei, J. Li, K. Hirose, W. Minarik, J. Van Orman, C. Sanloup, W. VanWestrenen, T. Komabayashi, K. Funakoshi  
Physics of the Earth and Planetary Interiors, **143-144** (2004) 515-526

7736

Thermal Equation of State of  $(\text{Mg}_{0.91}\text{Fe}_{0.09})_2\text{SiO}_4$  Ringwoodite  
Yu Nishihara, E. Takahashi, K. N. Matsukage, T. Iguchi, K. Nakayama, K. Funakoshi  
Physics of the Earth and Planetary Interiors, **143-144** (2004) 33-46

## BL04B2

5636

Anionic Species  $(\text{FH})_x\text{F}^-$  in Room-Temperature Molten Fluorides  $(\text{CH}_3)_4\text{NF} \cdot m\text{HF}$   
Yoshio Shodai, S. Kohara, Y. Ohishi, M. Inaba, A. Tasaka  
The Journal of Physical Chemistry A, **108** (2004) 1127-1132

5707

Structure Refinement of i-Al-Pd-Re Quasicrystals by Synchrotron Radiation Data  
Akiji Yamamoto, H. Takakura, T. Ozeki, A. -P. Tsai, Y. Ohashi  
Journal of Non-Crystalline Solids, **334-335** (2004) 151-155

5829

Glass Formation at the Limit of Insufficient Network Formers  
Shinji Kohara, K. Suzuya, K. Takeuchi, C. Loong, M. Grimsditch, R. Weber, J. Tangeman, T. Key  
Science, **303** (2004) 1649-1652

5846

Microscopic Structure of Nanometer-Sized Silica Particles  
Takashi Uchino, S. Kohara, A. Aboshi, O. Yasuo, K. Aoki, M. Sakashita  
Physical Review B, **69** (2004) 155409

5859

Diversity in Packing Modes of Mesogenic Diphenylpyrimidines with Two Chiral Centres in Crystal Structures: the Role of Interactions between Pyrimidine Rings  
Kayako Hori, Y. Matsunaga, A. Yoshizawa, T. Kusumoto, T. Ozeki, A. Iida, H. Chiba

Liquid Crystals, **31** (2004) 759-766

6042

Glass Network Structure in Noble Metal Chalcohalide Glasses  
Takeshi Usuki, K. Nakajima, T. Furukawa, T. Nasu, M. Sakurai, S. Kohara

Solid State Ionics: Science and Technology of Ions in Motion,  
(2004) 835-842

6108

A Comparison of Volume Compressions of Silver and Gold up to 150 Gpa

Yuichi Akahama, H. Kawamura, A. K. Singh

Journal of Applied Physics, **95** (2004) 4767-4771

6112

Pressure-induced Buckling of Spin Ladder in  $\text{SrCu}_2\text{O}_3$   
Masaki Azuma, H. Yoshida, T. Saito, M. Takano, T. Yamada  
Journal of the American Chemical Society, **126** (2004) 8244-8246

6143

The Structure of Binary Zinc Phosphate Glasses  
Kentaro Suzuya, K. Ito, A. Kajinami, C. Loong  
Journal of Non-Crystalline Solids, **345-346** (2004) 80-87

6192

A High-Energy X-ray Imager with a [128 × 128] Matrix of  $\text{YAlO}_3:\text{Ce}$  Crystals for Synchrotron Radiation Applications  
Hidenori Toyokawa, K. Hirota, M. Itou, S. Kohara, Y. Sakurai, M. Suzuki  
Nuclear Instruments and Methods in Physics Research Section A, **525** (2004) 85-89

6720

Mg/Si Ratios of Aqueous Fluids Coexisting with Forsterite and Enstatite Based on the Phase Relations in the  $\text{Mg}_2\text{SiO}_4-\text{SiO}_2-\text{H}_2\text{O}$  System

Tatsuhiko Kawamoto, K. Matsukage, K. Mibe, K. Nishimura, M. Isshiki, N. Ishimatsu, S. Ono  
American Mineralogist, **89** (2004) 1433-1437

6721

Raman Spectroscopy of Cubic Boron Nitride under High Temperature and Pressure Conditions: A New Optical Pressure Marker

Tatsuhiko Kawamoto, K. Matsukage, T. Nagai, K. Nishimura, T. Mataki, S. Ochiai, T. Taniguchi

Review of Scientific Instruments, **75** (2004) 2451-2454

6842

Successive Phase Transitions in Crystalline State of Mesogenic Butyl 4-[2-(Perfluoroctyl)ethoxy]benzoate  
Minako Maeda, M. Nagasawa, M. Tachibana, H. Kawaji, T. Atake, A. Iida, T. Ozeki, K. Hori  
Chemistry Letters, **33** (2004) 1566-1567

7066

Structural Analysis for Crystalline and Amorphous  $\text{RFe}_2\text{D}_x$  ( $\text{R}$ : Ho, Tb) by X-ray/Neutron Diffraction and Reverse Monte Carlo Modeling  
Keiji Itoh, Y. Miyajima, K. Aoki, T. Fukunaga  
Journal of Alloys and Compounds, **376** (2004) 9-16

7112

The Effect of Carbon Chain Length of the Diphosphine Ligand on the Auophilic Interaction. Synthesis and X-ray Structural Study for a Series of Au(I) Compounds with  $\text{Ph}_2\text{P}-\text{R}-\text{PPh}_2$  and  $\text{S}-(\text{CH}_2)_n-\text{py}$  Ligands  
Satoru Onaka, M. Yaguchi, R. Yamauchi, T. Ozeki, M. Ito, T. Sunahara, Y. Sugiura, M. Shiotsuka, K. Nunokawa, M. Horibe, K. Okazaki, A. Iida, H. Chiba, K. Inoue, H. Imai, K. Sako  
Journal of Organometallic Chemistry, **690** (2004) 57-68

7113

Exploration on  $\text{Au}(\text{S}-4\text{-py})\text{PR}_3$  Complexes as a Viable Building Block for Constructing Hetero-Nuclear Supramolecules: Synthesis and X-ray Study on  $\text{M}(\text{acac}')_2[\text{Au}(\text{S}-4\text{-py})\text{PR}_3]_2(\text{ClO}_4)_x$  ( $\text{M}$  = Cr, Cu; acac' = acetylacetone, hexafluoro-acetylacetone;  $x$  = 0 or 1)  
Keiko Nunokawa, S. Onaka, Y. Mizuno, K. Okazaki, K. Inoue, T. Ozeki, T. Sunahara, M. Ito, M. Yaguchi, H. Imai, H. Chiba, T. Yosida

Journal of Organometallic Chemistry, **690** (2004) 48-56

7164

A Novel  $\text{Au}_{12}$  Supramolecule Composed of Two-, Three-, and Four-Coordinated Au(I) Centers Constructed on the  $\text{S}_3$  Scaffolding  
Keiko Nunokawa, S. Onaka, T. Sunahara, K. Okazaki, K. Inoue, H. Imai, T. Ozeki  
Chemistry Letters, **33** (2004) 1300-1301

## BL08W

5641

Change in Mn 3d Orbital State Related to a Metal-Insulator

Transition in a Bilayer Manganite Studied by Magnetic Compton Profile Measurment

Akihisa Koizumi, T. Nagao, Y. Kakutani, N. Sakai, K. Hirota, Y. Murakami

Physical Review B, **69** (2004) 060401(R)

5691

Direct Observation of the Multisheet Fermi Surface in the Strongly Correlated Transition Metal Compound ZrZn<sub>2</sub>

Zsuzsanna Major, S. B. Dugdale, R. J. Watts, G. Santi, M. A. Alam, S. M. Hayden, J. A. Duffy, J. W. Taylor, T. Jarlborg, E. Bruno, D. Benea, H. Ebert

Physical Review Letters, **92** (2004) 107003

6192

A High-Energy X-ray Imager with a [128 × 128] Matrix of YAlO<sub>3</sub>:Ce Crystals for Synchrotron Radiation Applications

Hidegori Toyokawa, K. Hirota, M. Itou, S. Kohara, Y. Sakurai, M. Suzuki

Nuclear Instruments and Methods in Physics Research Section A, **525** (2004) 85-89

6775

Ru-O Orbital Hybridization and Orbital Occupation in SrRuO<sub>3</sub> : A Magnetic Compton-Profile Study

Nozomu Hiraoka, M. Itou, A. Deb, Y. Sakurai, Y. Kakutani, A. Koizumi, N. Sakai, S. Uzuohara, S. Miyaki, H. Koizumi, K. Makoshi, N. Kikugawa, Y. Maeno

Physical Review B, **70** (2004) 054420

6906

A Cauchois-type X-ray Spectrometer for Momentum Density Studies on Heavy-Element Materials

Yoshiharu Sakurai, M. Itou

Journal of Physics and Chemistry of Solids, **65** (2004) 2061-2064

6908

Evidence of Negative Spin Polarization in Ferromagnetic Sr<sub>2</sub>FeMoO<sub>6</sub> as Observed in a Magnetic Compton Profile Study

Anniruddha Deb, N. Hiraoka, M. Ito, Y. Sakurai, A. Koizumi,

Y. Tomioka, Y. Tokura

Physical Review B, **70** (2004) 104411

6986

A Magnetic Compton Scattering Study of Double Perovskite Sr<sub>2</sub>FeMoO<sub>6</sub>

Yoshiharu Sakurai, A. Deb, M. Itou, N. Hiraoka, A. Koizumi, Y. Tomioka, Y. Tokura

Journal of Physics: Condensed Matter, **16** (2004) S5717-S5720

## BL09XU

5730

Study on Correlation between Minimum Irradiation Area and Microstructure in Micro X-ray Stress Measurement

Yoshihisa Sakaida

材料 (Journal of the Society of Materials Science, Japan), **53** (2004) 758-764

5950

Accelerated Decay of the 31-yr Isomer of Hf-178 Induced by Low-Energy Photons and Electrons

Carl Collins, N. Zoita, F. Davanloo, S. Emura, Y. Yoda, T. Uruga, B. Patterson, B. Schmitt, J. Pouvesle, I. Popescu, V. Kirischuk, N. Strilchuk

Laser Physics, **14** (2004) 154-165

6258

New Method to Characterize Mesoscopic Range and Very Small Strain with using Multi-Wave X-ray Diffraction

Wataru Yashiro, K. Sumitani, T. Takahashi, Y. Yoda, K. Miki  
Surface Science, **550** (2004) 93-105

6531

Measurement of Stress Distribution Near Notch and Fatigue Crack in Ultra-Fine Grained Steel by Synchrotron Radiation

Yoshiaki Akiniwa, H. Kimura, K. Tanaka

材料 (Journal of the Society of Materials Science, Japan), **53** (2004) 752-757

6706

Accelerated Emission from Isomeric Nuclei

Carl B. Collins, Nicolae C. Zoita, F. Davanloo, S. Emura, Y. Yoda, T. Uruga, V. I. Kirischuk, N. V. Strilchuk, J. Pouvesle, I. Popescu, B. Patterson, B. Schmitt

Radiation Physics and Chemistry, **71** (2004) 619-625

## BL10XU

5576

Stability of Magnesite and Its High-Pressure Form in the Lowermost Mantle

Maiko Isshiki, T. Iriune, K. Hirose, S. Ono, Y. Ohishi, T. Watanuki, E. Nishibori, M. Takata, M. Sakata

Nature, **427** (2004) 60-63

- 5689  
 Pressure Effects on the Charge-Ordering Transition of BaYCo<sub>2</sub>O<sub>5</sub>  
 Yutaka Moritomo, M. Hanawa, S. Xu, H. Ishikawa, Y. Ohishi, K. Kato, T. Honma, P. Karen, M. Karppinen, H. Yamauchi  
*Physical Review B*, **69** (2004) 134118
- 5856  
 Hydrogen Ordering in Rhenium Hydride: anti-CdI<sub>2</sub> Type Structure of ReH<sub>0.36</sub>  
 Haruki Kawamura, M. Harada, Y. Akahama, K. Takemura  
*Solid State Communications*, **130** (2004) 59-62
- 6108  
 A Comparison of Volume Compressions of Silver and Gold up to 150 Gpa  
 Yuichi Akahama, H. Kawamura, Anil K. Singh  
*Journal of Applied Physics*, **95** (2004) 4767-4771
- 6361  
 Post-Perovskite Phase Transition in MgSiO<sub>3</sub>  
 Motohiko Murakami, K. Hirose, K. Kawamura, N. Sata, Y. Ohishi  
*Science*, **304** (2004) 855-858
- 6362  
 Phase Transition of Al-bearing CaSiO<sub>3</sub> Perovskite: Implications for Sesimic Discontinuities in the Lower Mantle  
 Tsuyoshi Kurashina, K. Hirose, S. Ono, N. Sata, Y. Ohishi  
*Physics of the Earth and Planetary Interiors*, **145** (2004) 67-74
- 6369  
 High-Pressure Structural Investigation of Ferromagnetic Nd<sub>2</sub>Mo<sub>2</sub>O<sub>7</sub>  
 Yutaka Moritomo, S. Xu, H. Ishikawa, A. Nakamura, Y. Ohishi, K. Katou  
*Physical Review B*, **70** (2004) 104103
- 6483  
 High-Pressure Phase Transition of Hematite, Fe<sub>2</sub>O<sub>3</sub>  
 Shigeaki Ono, T. Kikegawa, Y. Ohishi  
*Journal of Physics and Chemistry of Solids*, **65** (2004) 1527-1530
- 6517  
 Theoretical and Experimental Evidence for a Post-Perovskite Phase of MgSiO<sub>3</sub> in Earth's D'' Layer  
 Artem Oganov, S. Ono  
*Nature*, **430** (2004) 445-448
- 6519  
 The Elasticity of the MgSiO<sub>3</sub> Post-Perovskite Phase in the Earth's Lowermost Mantle  
 Toshiaki Itaka, K. Hirose, K. Kawamura, M. Murakami  
*Nature*, **430** (2004) 442-445
- 6760  
 Phase Transition of Ca-Perovskite and Stability of Al-Bearing Mg-Perovskite in the Lower Mantle  
 Shigeaki Ono, Y. Ohishi, K. Mibe  
*American Mineralogist*, **89** (2004) 1480-1485
- 7030  
 Structural Study of FeSi<sub>2</sub> under Pressure  
 Kenichi Takarabe, Y. Mori, T. Ikai, H. Udon, I. Kikuma  
*Journal of Applied Physics*, **96** (2004) 4903-4908
- 7031  
 High-pressure X-ray Structural Study of BeO and ZnO to 200 Gpa  
 Yoshihisa Mori, N. Niiya, K. Ukegawa, T. Mizuno, K. Takarabe, A. L. Ruoff  
*Physica Status Solidi B*, **214** (2004) 3198-3202
- 7155  
 High-Pressure Study of Layered Nitride Superconductors  
 Yasujiro Taguchi, M. Hisakabe, Y. Ohishi, S. Yamanaka, Y. Iwasa  
*Physical Review B*, **70** (2004) 104506
- 7602  
 High Pressure and High Temperature Phase Transitions of FeO  
 Motohiko Murakami, K. Hirose, S. Ono, T. Tsuchiya, M. Isshiki, T. Watanuki  
*Physics of the Earth and Planetary Interiors*, **146** (2004) 273-282
- BL11XU (共用分)**
- 6654  
 Low-Energy Excitations in Brownmillerites and Related Oxides  
 Alexandre I. Rykov, K. Nomura, T. Mitsuya, M. Seto  
*Physica B*, **350** (2004) 287-304
- BL13XU**
- 4779  
 Evaluation of Internal Stresses in TiN Thin Films by Synchrotron Radiation  
 Takao Hanabusa, K. Kusaka, T. Matsue, M. Nishida, O. Sakata,

- T. Sato  
Vacuum, **74** (2004) 571-575
- 5079  
Structural Analysis of NiO Ultra-Thin Films Epitaxially Grown on Ultra-Smooth Sapphire Substrates by Synchrotron X-Ray Diffraction Measurements  
Osami Sakata, M. Yim, A. Matsuda, J. Liu, S. Sato, S. Akiba, A. Sasaki, M. Yoshimoto  
Applied Surface Science, **221** (2004) 450-454
- 5885  
Crystal Structure in the Near-Surface Region of Melt-Crystallized Polyethylene Films Investigated by Grazing Incidence X-ray Diffraction  
Hirohiko Yakabe, S. Sasaki, O. Sakata, A. Takahara, T. Kajiyama  
Transactions of the Materials Research Society of Japan, **29** (2004) 251-254
- 5997  
High-Energy X-ray Scattering in Grazing Incidence from Nanometer-Scale Oxide Wires  
Osami Sakata, M. Takata, H. Suematsu, A. Matsuda, S. Akiba, A. Sasaki, M. Yoshimoto  
Applied Physics Letters, **84** (2004) 4239-4241
- 6265  
Metal/Semiconducor Interfaces Studied by Transmitted X-ray Reflectivity  
Isao Takahashi, K. Inoue, A. Kitahara, H. Terauchi, O. Sakata  
Japanese Journal of Applied Physics, **43** (2004) 1561-1565
- 6272  
Evaluation of Internal Stresses in Single-, Double- and Multi-Layered TiN and TiAlN Thin Films by Synchrotron Radiation  
Takao Hanabusa, K. Kusaka, T. Matsue, M. Nishida, O. Sakata, T. Sato  
JSME International Journal Series A, **47** (2004) 312-317
- 6292  
High-Quality As-Grown MgB<sub>2</sub> Thin-Film Fabrication at a Low Temperature using an in-Plane-Lattice Near-Matched Epitaxial-Buffer Layer  
Osami Sakata, S. Kimura, M. Takata, S. Yata, T. Kato, K. Yamanaka, Y. Yamada, A. Matsushita, S. Kubo  
Journal of Applied Physics, **96** (2004) 3580-3582
- 6416  
Surface X-ray Diffraction in Transmission Geometry  
Hiroo Tajiri, O. Sakata, T. Takahashi  
Applied Surface Science, **234** (2004) 403-408
- 6430  
Residual Stress and Thermal Stress Observation in Thin Copper Films  
Takao Hanabusa, K. Kusaka, O. Sakata  
Thin Solid Films, **459** (2004) 245-248
- 6705  
Disordered Structure of Pt(111)-*p*(2 × 2) Induced by Synchrotron X-ray Beam Irradiation  
Masashi Nakamura, K. Sumitani, M. Ito, T. Takahashi, O. Sakata  
Surface Science, **563** (2004) 199-205
- 6712  
Structure Analysis of Cu(001)-c(4 × 4)-In by Surface X-ray Diffraction  
Shin-ichiro Hatta, W. J. Christopher, O. Sakata, T. Aruga, H. Okuyama  
Surface Science, **565** (2004) 144-150
- BL14B1 (共用分)**
- 5886  
Pressure-Induced Sharp Coordination Change in Liquid Germanate  
Osamu Ohtaka, H. Arima, H. Fukui, W. Utsumi, Y. Katayama, A. Yoshiasa  
Physical Review Letters, **92** (2004) 155506
- BL19B2**
- 6136  
Grazing Incidence X-ray Scattering to Characterize the Thin Amorphous SiOx Film on Silicon Substrate  
Ichiro Hirosawa, Y. Uehara, S. Masugu, U. Norimasa  
日本セラミックス協会学術論文誌 (Journal of the Ceramic Society of Japan), **112** (2004) S1476-S1478
- 6285  
Structure Analysis of Ferrite in Deformed Pearlitic Steel by Means of X-ray Diffraction Method with Synchrotron Radiation  
Akira Taniyama, T. Takayama, M. Arai, T. Hamada  
Scripta Materialia, **51** (2004) 53-58

- 6340  
Estimation of Spalling Stress in Thermal Barrier Coating using High Energy X-rays from Synchrotron  
Kenji Suzuki, K. Tanaka, Y. Akiniwa, M. Kawamura, K. Nishio, H. Okado  
日本機械学会論文集 A編 (Transactions of the Japan Society of Mechanical Engineers, Series A), **70** (2004) 724-739
- 6491  
Oxidization of Thermal Barrier Coatings and Spalling Stress Analyzed with Synchrotron X-Rays  
Kenji Suzuki, T. Kubo, K. Tanaka, Y. Akiniwa, H. Okado  
材料 (Journal of the Society of Materials Science, Japan), **53** (2004) 734-739
- 6500  
Estimation Spalling Stress in Thermal Barrier Coatings Using Hard Synchrotron X-rays  
Kenji Suzuki, K. Tanaka, Y. Akiniwa  
JSME International Journal Series A, **47** (2004) 318-323
- 6750  
Oxidation of Doped Europium in BaMgAl<sub>10</sub>O<sub>17</sub> by Annealing Studied by X-ray Absorption Fine-Structure Measurements  
Ichiro Hirosawa, T. Honma, K. Kato, N. Kijima, Y. Shimomura  
Journal of the Society for Information Display, **12** (2004) 269-273
- 6762  
Transparent Ferromagnetic Semiconductor Fe-Zn-O Heterogranular Films  
Tsutomu Shinagawa, M. Izaki, Y. Matsumura, K. Murase, Y. Awakura  
Electrochemical and Solid-State Letters, **7** (2004) G235-G237
- 6785  
Crystallization Behavior of Linear Low Density Polyethylene in Its Blend with a Rubber Polymer as Revealed by Synchrotron SAXS/WAXS/Hv-SALS Simultaneous Measurements  
Kyoko Hayashi, Y. Ejima, T. Shimizu, S. Kizaki, S. Hara, K. Yamamoto, S. Okamoto, S. Sakurai  
日本レオロジー学会誌 (Journal of the Society of Rheology, Japan), **32** (2004) 179-187
- 6870  
*In-situ* Observation of Growth Behavior of Fe-Zn Intermetallic Compounds at Initial Stage of Galvannealing Process  
Akira Taniyama, M. Arai, T. Takayama, M. Sato  
Materials Transactions, **45** (2004) 2326-2331
- 7202  
Structural Analysis by Synchrotron XRD of a Ag<sub>52</sub>Sn<sub>48</sub> Nanocomposite Electrode for Advanced Li-Ion Batteries  
Ewa Rönnebro, T. Sakai, J. Yin, M. Wada, S. Tanase, A. Kitano  
Journal of the Electrochemical Society, **151** (2004) A1738-A1744
- 7623  
X-ray Diffraction Study for Mg<sub>4</sub>Pd Crystalline and Amorphous Alloys Using Synchrotron Radiation  
Sumiaki Nakano, S. Yamaura, A. Kitano, M. Sato, S. Uchinashi, T. Hamada, N. Umesaki, H. Kimura, A. Inoue  
Materials Transactions, **45** (2004) 3232-3234
- BL19LXU (共用分)**
- 5961  
Resonant Inelastic X-Ray Scattering (RIXS) of SrCuO<sub>2</sub>  
Atsushi Higashiya, A. Shigemoto, S. Kasai, S. Imada, S. Suga, M. Sing, K. Changyoung, M. Yabashi, K. Tamasaku, T. Ishikawa  
Solid State Communications, **130** (2004) 7-11
- BL20B2**
- 5687  
Direct Observation of Stray Crystal Formation in Unidirectional Solidification of Sn-Bi Alloy by X-Ray Imaging  
Hideyuki Yasuda, I. Ohnaka, K. Kawasaki, A. Sugiyama, T. Ohmichi, J. Iwane, K. Umetani  
Journal of Crystal Growth, **262** (2004) 645-652
- 5814  
Synchrotron Radiation Microangiography for Observation of Vasodilatation using X-ray SATICON  
Keiji Umetani, K. Fukushima, K. Sugimura  
映像情報メディア学会誌 (The Journal of the Institute of Image Information and Television Engineers), **58** (2004) 344-351
- 5835  
Pattern Differences between Distributions of Microregional Myocardial Flows in Crystalloid- and Blood-Perfused Rat Hearts  
Takeshi Matsumoto, H. Tachibana, T. Asano, M. Takemoto, Y. Ogasawara, K. Umetani, F. Kajiyama  
American Journal of Physiology : Heart and Circulatory Physiology, **286** (2004) H1331-H1338
- 5869  
In vivo Real-Time Microangiography of the Liver in Mice using Synchrotron Radiation

- Shogo Kobayashi, M. Hori, K. Dono, H. Nagano, K. Umehita, S. Nakamori, M. Sakon, K. Osuga, K. Umetani, T. Murakami, H. Nakamura, M. Monden  
*Journal of Hepatology*, **40** (2004) 405-408
- 5911  
 Three-Dimensional Diffusion of Non-Sorbing Species in Porous Sandstone: Computer Simulation Based on X-Ray Microtomography using Synchrotron Radiation  
 Yoshito Nakashima, T. Nakano, K. Nakamura, K. Uesugi, A. Tsuchiyama, S. Ikeda  
*Journal of Contaminant Hydrology*, **74** (2004) 253-264
- 5951  
 Phase Retrieval using Coherent Imaging Systems with Linear Transfer Functions  
 David Paganin, T. Gureyev, K. Pavlov, R. A. Lewis, M. Kitchen  
*Optics Communications*, **234** (2004) 87-105
- 5965  
 Experimental Reproduction of Classic Barred Olivine Chondrules: Open-System Behavior of Chondrule Formation  
 Akira Tsuchiyama, Y. Osada, T. Nakano, K. Uesugi  
*Geochimica et Cosmochimica Acta*, **68** (2004) 653-672
- 5976  
 Nondestructive Three-Dimensional Element-Concentration Mapping of a Cs-doped Partially Molten Granite by X-ray Computed Tomography using Synchrotron Radiation  
 Susumu Ikeda, T. Nakano, A. Tsuchiyama, K. Uesugi, Y. Suzuki, K. Nakamura, Y. Nakashima, H. Yoshida  
*American Mineralogist*, **89** (2004) 1304-1313
- 5981  
 Development of a Portable Free-Air Ionization Chamber as an Absolute Intensity Monitor for High-Energy Synchrotron Radiation up to 150 keV  
 Nobuteru Nariyama, N. Kishi, S. Ohnishi  
*Nuclear Instruments and Methods in Physics Research Section A*, **524** (2004) 324-331
- 6037  
 A Large-Area CMOS Imager as an X-ray Detector for Synchrotron Radiation Experiments  
 Naoto Yagi, M. Yamamoto, K. Uesugi, K. Inoue  
*Journal of Synchrotron Radiation*, **11** (2004) 347-352
- 6060  
 Analysis of Three-Dimensional Microarchitecture and Degree of Mineralization in Bone Metastases from Prostate Cancer using Synchrotron Microcomputed Tomography  
 Teruki Sone, T. Tamada, Y. Jo, H. Miyoshi, M. Fukunaga  
*Bone*, **35** (2004) 432-438
- 6094  
 Quantitative Diffraction-Enhanced X-ray Imaging of Weak Objects  
 Yakov Nesterets, T. Gureyev, D. Paganin, K. Pavlov, S. Wilkins  
*Journal of Physics D: Applied Physics*, **37** (2004) 1262-1274
- 6121  
 Observation of Silicon front Surface Topographs of an Ultralarge-Scale-Integrated Water by Synchrotron X-ray Plane Wave  
 Yoshifumi Suzuki, Y. Tsukasaki, K. Kajiwara, S. Kawado, S. Iida, Y. Chikaura  
*Journal of Applied Physics*, **96** (2004) 6259-6261
- 6137  
 Characterization of SOI Wafers by Synchrotron X-ray Topography  
 Takayoshi Shimura, K. Fukuda, K. Yasutake, M. Umeno  
*The European Physical Journal - Applied Physics*, **27** (2004) 439-442
- 6440  
 Upgraded Hard X-ray Telescope with Multilayer Supermirror for the InFOC  $\mu$  S Balloon Experiment  
 Ryo Shibata, Y. Ogasaka, K. Tamura, A. Furuzawa, Y. Tawara, K. Yamashita, R. Takahashi, M. Sakashita, T. Miyazawa, K. Shimoda, C. Sakai, N. Yamada, M. Naitou, T. Futamura, P. J. Serlemitsos, Y. Soong, K. Chan, T. Okajima, J. Tueller, H. A. Krimm, S. D. Barthlemy, S. M. Owens, H. Kunieda, Y. Namba  
*Proceedings of SPIE*, **5488** (2004) 313-324
- 6666  
 Ultrahigh-Quality Silicon Carbide Single Crystals  
 Daisuke Nakamura, I. Gunjishima, S. Yamaguchi, T. Ito, A. Okamoto, H. Kondo, S. Onda, K. Takatori  
*Nature*, **430** (2004) 1009-1012
- 6694  
 Construction of X-ray Dark-Field Imaging with a View Size of 80 mm Square and First Visualization of Human Articular Cartilage at Femoral Head under a Nearly Clinical Condition

Masami Ando, H. Sugiyama, T. Kunisada, D. Shimao, K. Takeda, H. Hashizume, H. Inoue  
Japanese Journal of Applied Physics, **43** (2004) L1175-L1177

6751

Observation of Microvasculatures in Athymic Nude Rat Transplanted Tumor Using Synchrotron Radiation Microangiography System<sup>1</sup>  
Ryouji Tokiya, K. Umetani, S. Imai, T. Yamashita, J. Hiratsuka, Y. Imajo  
Academic Radiology, **11** (2004) 1039-1046

6819

On the Origin of Speckle in X-ray Phase Contrast Images of Lung Tissue  
Marcus J. Kitchen, D. Paganin, R. A. Lewis, N. Yagi, K. Uesugi, S. T. Mudie  
Physics in Medicine and Biology, **49** (2004) 4335-4348

6919

NeXT Hard X-ray Telescope  
Yasushi Ogasaka, K. Tamura, R. Shibata, A. Furuzawa, T. Okajima, K. Yamashita, Y. Tawara, H. Kunieda  
Proceedings of SPIE, **5488** (2004) 148-155

7104

Direct Observation of Hydride Formed in Pure Titanium by Refraction-Enhanced X-ray Imaging Method  
Kaoru Mizuno, H. Okamoto, K. Kajiwara, M. Kuga, Y. Furuya, K. Kawasaki  
Transactions of the Materials Research Society of Japan, **29** (2004) 3337-3340

## BL20XU

6318

Measurement of X-ray Coherence using Two-beam Interferometer with Prism Optics  
Yoshio Suzuki  
Review of Scientific Instruments, **75** (2004) 1026-1029

6656

Phase Retrieval with Two-Beam Off-Axis X-ray Holography  
Yoshiki Kohmura, T. Sakurai, T. Ishikawa, Y. Suzuki  
Journal of Applied Physics, **96** (2004) 1781-1784

6802

CCD-based X-ray Area Detector for Time-resolved Diffraction

Experiments

Naoto Yagi, K. Inoue, T. Oka

Journal of Synchrotron Radiation, **11** (2004) 456-461

7266

Novel Application of Sputtered-Sliced Concentric Multilayers to Various Optical Elements for Synchrotron Radiation High-Brilliance X-ray Beamlines at SPring-8  
Shigeharu Tamura, M. Yasumoto, N. Kamijo, Y. Suzuki, M. Awaji, A. Takeuchi, H. Takano, K. Uesugi  
Vacuum, **74** (2004) 741-746

## BL23SU (共用分)

6390

Oxidation State during Growth of Very Thin Oxide on Ti(0001) Surface  
Yuji Takakuwa, S. Ishizuka, A. Yoshigoe, Y. Teraoka, K. Moritani, S. Ogawa, Y. Mizuno, H. Tonda, T. Homma  
真空 (Journal of the Vacuum Society of Japan), **47** (2004) 457-461

6485

Tuning of Dissociative-Adsorption Processes on Cu(100) by Controlling the Kinetic Energy of the Impinging O<sub>2</sub> Molecule  
Michio Okada, K. Moritani, A. Yoshigoe, Y. Teraoka, H. Nakanishi, W. Dino, H. Kasai, T. Kasai  
Chemical Physics, **301** (2004) 315-320

## BL25SU

5722

Contribution of Electronic Structure to the Large Thermoelectric Power in Layered Cobalt Oxides  
Tsunehiro Takeuchi, T. Kondo, T. Takami, H. Takahashi, H. Ikuta, U. Mizutani, K. Soda, R. Funahashi, M. Shikano, M. Mikami, S. Tsuda, T. Yokoya, S. Shin, T. Muro  
Physical Review B, **69** (2004) 125410

5847

Experimental Evidence for the *p-d* Hybridization in the Cd-Ca Quasicrystal: Origin of the Pseudogap  
Ryuji Tamura, T. Takeuchi, C. Aoki, S. Takeuchi, T. Kisu, T. Yokoya, S. Shin  
Physical Review Letters, **92** (2004) 146402

6358

Interpretation of Difference between Bulk Magnetic Susceptibility and “Local Magnetic Susceptibility” Detected by

Core Excitation Magnetic Circular Dichroism Tsuneaki Miyahara, H. Shiozawa Journal of Electron Spectroscopy and Related Phenomena, <b>136</b> (2004) 117-123	6782 Bulk-Sensitive High-Resolution Photoemission Study of a Temperature-Induced Valence Transition System EuPd <sub>2</sub> Si <sub>2</sub> Kojiro Mimura, Y. Taguchi, S. Fukuda, A. Mitsuda, J. Sakurai, K. Ichikawa, O. Aita Journal of Electron Spectroscopy and Related Phenomena, <b>137-140</b> (2004) 529-533
6527 Stereoscopic Photographs of Atomic Arrangements in MoS <sub>2</sub> Single-Crystal FangZhun Guo, F. Matsui, M. Fujikado, T. Matsushita, H. Daimon Applied Surface Science, <b>237</b> (2004) 616-620	6783 Temperature Dependence of Eu 4f States in EuPd <sub>2</sub> Si <sub>2</sub> : Bulk-Sensitive High-Resolution Photoemission Study Kojiro Mimura, Y. Taguchi, S. Fukuda, A. Mitsuda, J. Sakurai, K. Ichikawa, O. Aita Physica B, <b>351</b> (2004) 292-294
6759 Induced Magnetic Polarization in Cu Layers of Gd/Cu Multilayers Studied by X-ray Magnetic Circular Dichroism Takuo Ohkochi, N. Hosoi, K. Mibu, H. Hashizume Journal of the Physical Society of Japan, <b>73</b> (2004) 2212-2218	6784 High-Resolution Resonant Photoemission Study of CeSi Kojiro Mimura, Y. Watanabe, H. Mizohata, K. Ichikawa, Y. Taguchi, O. Aita, A. Yamasaki, A. Sekiyama, S. Suga, T. Oguchi, S. Noguchi, O. Sakai, T. Muro Physica B, <b>351</b> (2004) 295-297
6776 High-Energy Bulk-Sensitive Angle-Resolved Photoemission Study of Strongly Correlated Systems Akira Sekiyama, S. Suga Journal of Electron Spectroscopy and Related Phenomena, <b>137-140</b> (2004) 681-685	6786 Electronic Structure of Cr <sub>1-x</sub> X (X=S, Te) Studied by Cr 2p Soft X-ray Magnetic Circular Dichroism Koichiro Yaji, A. Kimura, C. Hirai, M. Taniguchi, M. Koyama, H. Sato, K. Shimada, A. Tanaka, T. Muro, S. Imada, S. Suga Physical Review B, <b>70</b> (2004) 064402
6779 Technique for Bulk Fermiology by Photoemission Applied to Layered Ruthenates Akira Sekiyama, S. Kasai, M. Tsunekawa, Y. Ishida, M. Sing, A. Irizawa, A. Yamasaki, S. Imada, T. Muro, Y. Saitoh, Y. Onuki, T. Kimura, Y. Tokura, S. Suga Physical Review B, <b>70</b> (2004) 060506	6787 Soft X-ray Magnetic Circular Dichroism Study of Cr <sub>5</sub> S <sub>6</sub> Koichiro Yaji, M. Koyama, A. Kimura, C. Hirai, H. Sato, K. Shimada, A. Tanaka, M. Taniguchi Physica B, <b>351</b> (2004) 344-346
6780 Mutual Experimental and Theoretical Validation of Bulk Photoemission Spectra of Sr <sub>1-x</sub> Ca <sub>x</sub> VO <sub>3</sub> Akira Sekiyama, H. Fujiwara, S. Imada, S. Suga, H. Eisaki, S. Uchida, K. Takegahara, H. Harima, Y. Saitoh, I. Nekrasov, G. Keller, D. Kondakov, A. Kozhevnikov, T. Pruschke, K. Held, D. Vollhardt, V. Anisimov Physical Review Letters, <b>93</b> (2004) 156402	6788 Orbital Magnetic Moment of “half-metallic” Co <sub>2</sub> MnGe Kouji Miyamoto, A. Kimura, K. Iori, T. Xie, K. Sakamoto, T. Moko, S. Qiao, M. Taniguchi, K. Tsuchiya Physica B, <b>351</b> (2004) 347-350
6781 X-ray Angle-Resolved Photoemission Spectroscopy of CaB <sub>6</sub> Seigo Souma, T. Takahashi, H. Komatsu, T. Sato, H. Matsui, N. Kimura, H. Aoki, S. Kunii, J. Akimitsu Physical Review B, <b>70</b> (2004) 073104	6789 Soft X-ray Spectroscopy Study of Mn Nanoclusters on Si(111)-7 × 7 Surface Tian Xie, A. Kimura, S. Qiao, K. Iori, K. Miyamoto, M. Taniguchi, M. Pan, J. Jia, Q. Xue Physica B, <b>351</b> (2004) 351-354

- 6790 Oxygen Adsorption Effect on the Mn 2p XAS and XMCD Spectra of  $c(2 \times 2)$ CuMn/Cu(001) Two-Dimensional Surface Alloy  
Shunsuke Asanao, A. Kimura, T. Kambe, T. Xie, S. Qiao, T. Muro, S. Imada, S. Suga, M. Taniguchi  
Physica B, **351** (2004) 355-357
- 6791 Spin and Orbital Electronic States of Sm 4f Electrons in (Sm, Gd)Al<sub>2</sub>  
Shan Qiao, A. Kimura, H. Adachi, T. Kambe, K. Yoshikawa, K. Yaji, C. Hirai, H. Sato, Y. Takeda, H. Namatame, M. Taniguchi, A. Tanaka, T. Muro, S. Imada, S. Suga  
Physica B, **351** (2004) 333-337
- 6817 Direct Evidence of Ferromagnetism without Net Magnetization Observed by X-ray Magnetic Circular Dichroism  
Shan Qiao, A. Kimura, H. Adachi, K. Iori, K. Miyamoto, T. Xie, H. Namatame, M. Taniguchi, A. Tanaka, T. Muro, S. Imada, S. Suga  
Physical Review B, **70** (2004) 134418
- 6822 Magnetic Circular Dichroism at Fe and V L<sub>2,3</sub> Thresholds of Heusler-type Fe<sub>2-x</sub>V<sub>1+x</sub>Al  
Kazuo Soda, H. Murayama, S. Yagi, M. Kato, T. Takeuchi, U. Mizutani, S. Imada, S. Suga, Y. Saitoh, T. Muro, H. Sumi, Y. Nishino  
Physica B, **351** (2004) 338-340
- 6855 X-ray Magnetic Circular Dichroism at L<sub>23</sub> Edge of Co Nanoclusters on Si(111) Surface  
Tian Xie, A. Kimura, S. Qiao, T. Moko, T. Muro, M. Taniguchi, M. Pan, J. Jia, Q. Xue  
Journal of Physics: Condensed Matter, **16** (2004) S5783-S5786
- 6856 Element-Resolved Magnetic Moments of Heusler-Type Ferromagnetic Ternary Alloy Co<sub>2</sub>MnGe  
Kouji Miyamoto, A. Kimura, K. Iori, K. Sakamoto, T. Xie, T. Moko, S. Qiao, M. Taniguchi, K. Tsuchiya  
Journal of Physics: Condensed Matter, **16** (2004) S5797-S5800
- 6877 Measurement and Multiple-Scattering Calculation of Cu K edge X-ray Magnetic Circular Dichroism Spectra from an Exchange-Coupled Co/Cu Multilayer  
Shin-ichi Nagamatsu, H. Matsumoto, T. Fujikawa, K. Ishiji, H. Hashizume  
Physical Review B, **70** (2004) 174442
- 6924 Visualization of Graphite Atomic Arrangement by Stereo Atomscope  
Fumihiro Matsui, H. Daimon, F. Z. Guo, T. Matsushita  
Applied Physics Letters, **85** (2004) 3737-3739
- 6980 Soft-X-ray High-Resolution Photoemission Study on the Valence Transitions in YbInCu<sub>4</sub>  
Hitoshi Sato, K. Yoshikawa, K. Hiraoka, M. Arita, K. Fujimoto, K. Kojima, T. Muro, Y. Saitoh, A. Sekiyama, S. Suga, M. Taniguchi  
Physical Review B, **69** (2004) 165101
- 6989 Filling of the Mott-Hubbard Gap in the High Temperature Photoemission Spectrum of (V<sub>0.972</sub>Cr<sub>0.028</sub>)<sub>2</sub>O<sub>3</sub>  
Sung-Kwan Mo, J. W. Allen, H. Kim, A. Sekiyama, A. Yamasaki, S. Suga, J.-H. Park, J. D. Denlinger, P. Metcalf, K. Held  
Physical Review Letters, **93** (2004) 076404
- 6990 Distortion of V 3d Line Shape due to Auger Emission in Resonant Photoemission Spectra of (V<sub>1-x</sub>Cr<sub>x</sub>)<sub>2</sub>O<sub>3</sub> at the V 2p 3d Absorption Edge  
Sung-Kwan Mo, J. W. Allen, H. Kim, A. Sekiyama, A. Yamasaki, S. Suga, J. D. Denlinger, Y. Saitoh, T. Muro, P. Metcalf  
Physica B, **351** (2004) 235-239
- 7045 Soft X-ray Magnetic Circular Dichroism of Cr-doped GaN  
Hisao Makino, J. Kim, T. Nakamura, T. Muro, K. Kobayashi, T. Yao  
Current Applied Physics, **4** (2004) 615-617
- 7320 High-Energy Angle-Resolved Photoemission Spectroscopy Probing Bulk Correlated Electronic States in Quasi-One-Dimensional V<sub>6</sub>O<sub>13</sub> and SrCuO<sub>2</sub>  
Shigemasa Suga, A. Shigemoto, A. Sekiyama, S. Imada, A. Yamasaki, A. Irizawa, S. Kasai, Y. Saitoh, T. Muro, N. Tomita,

K. Nasu, H. Eisaki, Y. Ueda  
Physical Review B, **70** (2004) 155106

## BL27SU

5352

Nuclear Dynamics of Core-Excited and Ionized Small Polyatomic Molecules Probed by Multiple Coincidence Momentum Imaging Technique

Norio Saito, A. De Fanis, I. Koyano, K. Ueda  
Physica Scripta, **T110** (2004) 90-95

5365

Branching Ratios of Multiply Charged Ions Formed through Photoionization of Kr 3d, 3p and 3s Sub-Shells Using Coincidence Technique

Yusuke Tamenori, K. Okada, S. Tanimoto, T. Ibuki, S. Nagaoka, A. Fujii, Y. Haga, I. H. Suzuki  
Journal of Physics B: Atomic, Molecular and Optical Physics, **37** (2004) 117-129

5647

Probe of Bending Motion Following the  $1s^{-1}$  \* Excitation of  $\text{N}_2\text{O}$   
Masatake Machida, M. Lavallee, J. Randrianafisoa, G. Laurent, M. Nagoshi, K. Okada, I. Koyano, N. Saito  
The Journal of Chemical Physics, **120** (2004) 3635-3641

6110

Asymmetric Peaks of Photoelectrons and Auger Electrons Formed through Post-Collision Interaction Following Kr  $2p_{3/2}$  Hole Creation  
Isao Suzuki, A. Fujii, S. Nagaoka, M. Kosugi, K. Okada, T. Ibuki, S. Samori, Y. Tamenori, H. Ohashi  
Journal of Physics B: Atomic, Molecular and Optical Physics, **37** (2004) 1433-1441

6287

X-ray Photoelectron Spectroscopy Study on  $\text{SiO}_2/\text{Si}$  Interface Structures Formed by Three Kinds of Atomic Oxygen at 300  
M. Shoji, T. Shiraishi, K. Takahashi, H. Nohira, K. Azuma, Y. Nakata, Y. Takata, S. Shin, K. Kobayashi, T. Hattori  
Applied Physics Letters, **84** (2004) 3756-3758

6488

Intra-Molecular  $\text{H}_2^+$  Formation in the Core-Excited HCCH Probed by Multiple-Ion Coincidence Momentum Imaging

Norio Saito, M. Nagoshi, M. Machida, I. Koyano, A. De Fanis, K. Ueda  
Chemical Physics Letters, **393** (2004) 295-299

6520

Total Photoabsorption Cross-Sections of  $\text{CF}_3\text{SF}_5$  in the C, F and S K-shell Regions  
Toshio Ibuki, Y. Shimada, S. Nagaoka, A. Fujii, M. Hino, T. Kakiuchi, K. Okada, K. Tabayashi, T. Matsudo, Y. Yamana, I. H. Suzuki, Y. Tamenori  
Chemical Physics Letters, **392** (2004) 303-308

6528

Dynamical Symmetry Breaking under Core Excitation in Graphite: Polarization Correlation in Soft X-Ray Recombination Emission  
Yoshihisa Harada, T. Tokushima, Y. Takata, T. Takeuchi, Y. Kitajima, S. Tanaka, Y. Kayanuma, S. Shin  
Physical Review Letters, **93** (2004) 017401

6671

Observation of the Angle-Resolved Resonant Auger Emission from the  $[1s2p](^3, ^1P)3p^2 \ ^1P$  Doubly Excited  $2p-2h$  States of Ne  
Masaki Oura, Y. Tamenori, T. Hayaishi, Y. Kanai, H. Yoshii, K. Tsukamoto, F. Koike  
Physical Review A, **70** (2004) 022710

6833

Deformation, Nuclear Motion and Fragmentation of Core-Excited  $\text{CO}_2$  Probed by Multiple-Ion Coincidence Momentum Imaging  
Norio Saito, Y. Muramatsu, H. Chiba, K. Ueda, K. Kubozuka, I. Koyano, K. Okada, O. Jagutzki, A. Czasch, T. Weber, M. Hattass, H. Schmidt-Böcking, R. Moshammer, M. Lavollée, U. Becker  
Journal of Electron Spectroscopy and Related Phenomena, **141** (2004) 183-193

6903

Experimental and Theoretical Study of Resonant Auger Decay of Core-Excited  $\text{NO}_2$   
Maria Piancastelli, V. Caravetta, I. Hjelte, A. De Fanis, K. Okada, N. Saito, M. Kitajima, H. Tanaka, K. Ueda  
Chemical Physics Letters, **399** (2004) 426-432

7089

Doping-Dependent Changes in Nitrogen  $2p$  States in the Diluted Magnetic Semiconductor  $\text{Ga}_{1-x}\text{Cr}_x\text{N}$

Tomoyuki Takeuchi, Y. Harada, T. Tokushima, M. Taguchi, Y. Takata, A. Chainani, J. Kim, H. Makino, T. Yao, T. Yamamoto, T. Tsukamoto, S. Shin, K. Kobayashi Physical Review B, <b>70</b> (2004) 245323	Journal of Crystal Growth, <b>261</b> (2004) 557-565
7093 Symmetry- and Multiplet-Resolved N 1s Photoionization Cross Sections of the NO <sub>2</sub> Molecule Norio Saito, D. Toffoli, R. R. Lucchese, M. Nagoshi, A. De Fanis, Y. Tamenori, M. Oura, H. Yamaoka, M. Kitajima, H. Tanaka, U. Hergenhahn, K. Ueda Physical Review A, <b>70</b> (2004) 062724	6105 Orientation Dependence of Dynamic Recrystallization Behavior of Al Single Crystals Yasuhiro Miura, K. Ihara Materials Science Forum, <b>449-452</b> (2004) 31-36
5467 Structural Studies of Expanded Fluid Metals Using Synchrotron Radiation Kozaburo Tamura, M. Inui, K. Matsuda, D. Ishikawa Transactions of the Materials Research Society of Japan, <b>29</b> (2004) 83-88	6404 Determination of the Three-Dimensional Structure of Dislocations in Silicon by Synchrotron White X-ray Topography Combined with a Topo-Tomographic Technique Seiji Kawado, T. Taishi, S. Iida, Y. Suzuki, Y. Chikaura, K. Kajiwara Journal of Synchrotron Radiation, <b>11</b> (2004) 304-308
<b>BL28B2</b>	<b>BL29XU (共用分)</b>
5468 Molybdenum Cell for X-Ray Diffraction Measurements of Fluid Alkali Metals at High Temperatures and High Pressures Kazuhiro Matsuda, K. Tamura, M. Katoh, M. Inui Review of Scientific Instruments, <b>75</b> (2004) 709-712	6678 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, <b>11</b> (2004) 378-385
5814 Synchrotron Radiation Microangiography for Observation of Vasodilatation using X-ray SATICON Keiji Umetani, K. Fukushima, K. Sugimura 映像情報メディア学会誌 (The Journal of the Institute of Image Information and Television Engineers), <b>58</b> (2004) 344-351	<b>BL35XU</b>
5838 Energy-Dispersive XAFS Studies on the Spontaneous Dispersion of PdO and the Formation of Stable Pd Clusters in Zeolites Kazu Okumura, R. Yoshimoto, T. Uruga, H. Tanida, K. Kato, S. Yokota, M. Niwa The Journal of Physical Chemistry B, <b>108</b> (2004) 6250-6255	5617 Collective Dynamics in Dense Hg Vapour Daisuke Ishikawa, M. Inui, K. Matsuda, K. Tamura, A. Q. R. Baron, S. Tsutsui, Y. Tanaka, T. Ishikawa Journal of Physics: Condensed Matter, <b>16</b> (2004) L40-L50
5914 High-Quality Crystallization of Lysozyme by Magneto-Archimedes Levitation in a Superconducting Magnet Syuu Maki, Y. Oda, M. Ataka	6053 Softening of Cu-O Bond Stretching Phonons in Tetragonal HgBa <sub>2</sub> CuO <sub>4+</sub> Hiroshi Uchiyama, A. Q. R. Baron, S. Tsutsui, Y. Tanaka, W.-Z. Hu, A. Yamamoto, S. Tajima, Y. Endoh Physical Review Letters, <b>92</b> (2004) 197005
	6073 Kohn Anomaly in MgB <sub>2</sub> by Inelastic X-ray Scattering Alfred Q. R. Baron, H. Uchiyama, Y. Tanaka, S. Tsutsui, D. Ishikawa, S. Lee, R. Heid, K.-P. Bohnen, S. Tajima, T. Ishikawa Physical Review Letters, <b>92</b> (2004) 197004
	6442 Acoustic Phonon Dynamics in Liquid CCl <sub>4</sub>

Takashi Kamiyama, S. Hosokawa, A. Q. R. Baron, S. Tsutsui, K. Yoshida, W. Pilgrim, Y. Kiyanagi, T. Yamaguchi  
Journal of the Physical Society of Japan, **73** (2004) 1615-1618

6693

Fast Sound in Expanded Fluid Hg Accompanying the Metal-Nonmetal Transition  
Masanori Inui, D. Ishikawa, K. Matsuda, G. Tamura, S. Tsutsui, A. Q. R. Baron  
Physical Review Letters, **93** (2004) 097801

7207

Search for Orbitons in LaMnO<sub>3</sub>, YTiO<sub>3</sub> and KCuF<sub>3</sub> using High-Resolution Inelastic X-ray Scattering  
Yoshikazu Tanaka, A. Q. R. Baron, Y. Kim, K. J. Thomas, J. P. Hill, Z. Honda, F. Iga, S. Tsutsui, D. Ishikawa, C. S. Nelson  
New Journal of Physics, **6** (2004) 161

## BL37XU

5839

Properties of Individual Asian Dust Storm Particles Collected at Kosan, Korea during Ace-Asia  
Chang-Jin Ma, S. Tohno, M. Kasahara, S. Hayakawa  
Atmospheric Environment, **38** (2004) 1133-1143

6416

Surface X-ray Diffraction in Transmission Geometry  
Hiroo Tajiri, O. Sakata, T. Takahashi  
Applied Surface Science, **234** (2004) 403-408

6657

Determination of the Chemical Properties of Residues Retained in Individual Cloud Droplets by XRF Microprobe at SPring-8  
Chang-Jin Ma, S. Tohno, M. Kasahara, S. Hayakawa  
Nuclear Instruments and Methods in Physics Research Section B, **217** (2004) 657-665

6659

The Nature of Individual Solid Particles Retained in Size-Resolved Raindrops Fallen in Asian Dust Storm Event during ACE-Asia  
Chang-Jin Ma, S. Tohno, M. Kasahara, S. Hayakawa  
Atmospheric Environment, **38** (2004) 2951-2964

6660

Properties of the Size-Resolved and Individual Cloud Droplets Collected in the Western Japan during Asian Dust Storm Event

Chang-Jin Ma, S. Tohno, M. Kasahara, S. Hayakawa  
Atmospheric Environment, **38** (2004) 4519-4529

6804

X-ray Analysis of a Single Aerosol Particle with Combination of Scanning Electron Microscope and Synchrotron Radiation X-ray Microscope  
Masatoshi Toyoda, K. Kaibuchi, M. Nagasono, Y. Terada, T. Tanabe, S. Hayakawa, J. Kawai  
Spectrochimica Acta Part B, **59** (2004) 1311-1315

6882

Quadrupole Transition in the Dy L<sub>3</sub> Edge Observed by Lifetime-Broadening-Suppressed XANES Spectroscopy  
Hisashi Hayashi, R. Takeda, M. Kawata, Y. Udagawa, N. Kawamura, Y. Watanabe, S. Nanao  
Physical Review B, **70** (2004) 155113

7073

Distribution of Chemical Elements and Chemical States of Sulfur on Kosa Particles Fallen in Asian Industrialized Cities  
Teruo Tanabe, Y. Tanaka, D. Tanaka, Y. Taniguchi, M. Toyoda, J. Kawai, H. Ishii, C. Riu, Y. Yilixiati, S. Hayakawa, Y. Kitajima, Y. Terada  
分析化学 (Bunseki Kagaku), **53** (2004) 1411-1418

7247

Development and Application of Laboratory X-ray Fluorescence Holography Equipment  
Yukio Takahasi, K. Hayashi, E. Matsubara  
Powder Diffraction, **19** (2004) 77-80

7524

X-ray Fluorescence Holography Study on Si<sub>1-x</sub>Ge<sub>x</sub> Single Crystal  
Kouichi Hayashi, Y. Takahashi, I. Yonenaga, E. Matsubara  
Materials Transactions, **45** (2004) 1994-1997

## BL38B1

5890

Mutational and Structural Analysis of Cobalt-Containing Nitrile Hydratase on Substrate and Metal Binding  
Akimasa Miyanaga, S. Fushinobu, K. Ito, H. Shoun, T. Wakagi  
European Journal of Biochemistry, **271** (2004) 429-438

5920

Structural Insights into Substrate Specificity and Function of

Glucodextranase	6663
Masahiro Mizuno, T. Tonozuka, S. Suzuki, R. Uotsu-Tomita, S. Kamitori, A. Nishikawa, Y. Sakano	Structural Basis for Channelling Mechanism of a Fatty Acid - Oxidation Multienzyme Complex
The Journal of Biological Chemistry, <b>279</b> (2004) 10575-10583	Momoyo Ishikawa, D. Tsuchiya, T. Oyama, Y. Tsunaka, K. Morikawa
5981	The EMBO Journal, <b>23</b> (2004) 2745-2754
Development of a Portable Free-Air Ionization Chamber as an Absolute Intensity Monitor for High-Energy Synchrotron Radiation up to 150 keV	6753
Nobuteru Nariyama, N. Kishi, S. Ohnishi	Crystal Structures and Electron Micrographs of Fungal Volvatoxin A2
Nuclear Instruments and Methods in Physics Research Section A, <b>524</b> (2004) 324-331	Su-Chang Lin, Y. Lo, J. Lin, Y. Liaw
6037	Journal of Molecular Biology, <b>343</b> (2004) 477-491
A Large-Area CMOS Imager as an X-ray Detector for Synchrotron Radiation Experiments	6762
Naoto Yagi, M. Yamamoto, K. Uesugi, K. Inoue	Transparent Ferromagnetic Semiconductor Fe-Zn-O Heterogranular Films
Journal of Synchrotron Radiation, <b>11</b> (2004) 347-352	Tsutomu Shinagawa, M. Izaki, Y. Matsumura, K. Murase, Y. Awakura
6364	Electrochemical and Solid-State Letters, <b>7</b> (2004) G235-G237
Chitobiose Phosphorylase from <i>Vibrio proteolyticus</i> , a Member of Glycosyl Transferase Family 36, Has a Clan GH-L-like ( / ) <sub>6</sub> Barrel Fold	6838
Masafumi Hidaka, Y. Honda, M. Kitaoka, S. Nirasawa, K. Hayashi, H. Shoun, T. Wakagi, S. Fushinobu	Crystallographic Structures of Two Bisphosphonate: 1-Deoxyxylulose-5-Phosphate Reductoisomerase Complexes
Structure, <b>12</b> (2004) 937-947	Shunsuke Yajima, K. Hara, J. Sanders, F. Yin, K. Ohsawa, J. Wiesner, H. Jomaa, E. Oldfield
6365	Journal of the American Chemical Society, <b>126</b> (2004) 10824-10825
Expression, Purification, Crystallization and Preliminary X-ray Analysis of -L-Arabinofuranosidase B from <i>Aspergillus kawachii</i>	6849
Akimasa Miyanaga, T. Koseki, H. Matsuzawa, T. Wakagi, H. Shoun, S. Fushinobu	The Crystal Structure of Xanthine Oxidoreductase during Catalysis: Implications for Reaction Mechanism and Enzyme Inhibition
Acta Crystallographica Section D, <b>60</b> (2004) 1286-1288	Ken Okamoto, K. Matsumoto, B. Eger, E. Pai, R. Hille, T. Nishino
6473	Proceedings of the National Academy of Sciences of the United States of America, <b>101</b> (2004) 7931-7936
Crystal Structure of Unsaturated Glucuronyl Hydrolase, Responsible for the Degradation of Glycosaminoglycan, from <i>Bacillus</i> sp. GL1 at 1.8 Resolution	7070
Takafumi Itoh, S. Akao, W. Hashimoto, B. Mikami, K. Murata	Neutron Diffraction and X-ray Absorption Study of CaMn <sub>0.6</sub> Ru <sub>0.4</sub> O <sub>3</sub>
The Journal of Biological Chemistry, <b>279</b> (2004) 31804-31812	Kenji Yoshii, A. Nakamura, M. Mizumaki, H. Tanida, N. Kawamura, H. Abe, Y. Ishii, Y. Shimojo, Y. Morii
6599	Journal of Magnetism and Magnetic Materials, <b>272-276</b> (2004) E609-E611
Structure Analysis of PH1161 Protein, a Transcriptional Activator TenA Homologue from the Hyperthermophilic Archaeon <i>Pyrococcus horikoshii</i>	7142
Hiroshi Itou, M. Yao, N. Watanabe, I. Tanaka	Chemical Speciation of Trace Zinc in Ordinary Portland Cement Using X-ray Absorption Fine Structure Analysis
Acta Crystallographica Section D, <b>60</b> (2004) 1094-1100	

- Isao Tsuyumoto, H. Uchikawa  
Journal of the American Ceramic Society, **87** (2004) 2294-2296
- 7457  
The N-Terminal Domain of the Replication Initiator Protein RepE is a Dimerization Domain Forming a Stable Dimer  
Akira Nakamiura, H. Komori, G. Kobayashi, A. Kita, C. Wada, K. Miki  
Biochemical and Biophysical Research Communications, **315** (2004) 10-15
- 7570  
Crystallization and Preliminary X-ray Diffraction Studies of the Hyperthermophilic Archaeal Sulredoxin Having the Unique Rieske [2Fe-2S] Cluster Environment  
Takuro Uchiyama, A. Kounosu, T. Sato, N. Tanaka, T. Iwasaki, T. Kumasaki  
Acta Crystallographica Section D, **60** (2004) 1487-1489
- BL39XU**
- 5591  
Influence of Magnetocrystalline Anisotropy on Rare-Earth  $L_{2,3}$ -Edge X-Ray Magnetic Circular Dichroism Spectra  
Jesus Chaboy, H. Maruyama, N. Kawamura, M. Suzuki  
Physical Review B, **69** (2004) 014427
- 5695  
Measurement of Resonant X-ray Magnetic Scattering from Induced Cu Polarizations in Exchange-Coupled Co/Cu Multilayers  
Yuichi Hayasaki, K. Ishiji, H. Hashizume, N. Hosoi, K. Omote, M. Kurabayashi, G. Srajer, J. C. Lang, D. Haskel  
Journal of Physics: Condensed Matter, **16** (2004) 1915-1925
- 5727  
Temperature Dependence of the Ho  $L_{2,3}$ -edges XMCD Spectra in  $\text{Ho}_6\text{Fe}_{23}$   
Maria-Angels Laguna-Marco, J. Chaboy-Nalda, H. Maruyama  
Physica B, **345** (2004) 197-200
- 5839  
Properties of Individual Asian Dust Storm Particles Collected at Kosan, Korea during Ace-Asia  
Chang-Jin Ma, S. Tohno, M. Kasahara, S. Hayakawa  
Atmospheric Environment, **38** (2004) 1133-1143
- 5923  
X-Ray Magnetic Circular Dichroism and Structural Model for Co-Doped  $\text{TiO}_2$  (Anatase) Thin Film  
Norio Shimizu, S. Sasaki, T. Hanashima, K. Yamawaki, H. Udagawa, N. Kawamura, M. Suzuki, H. Maruyama, M. Murakami, Y. Matsumoto, H. Koinuma  
Journal of the Physical Society of Japan, **73** (2004) 800-803
- 5934  
Rare-Earth Orbital Contribution to the Fe  $K$ -edge X-ray Magnetic Circular Dichroism in Rare-Earth Transition Metal Intermetallic Compounds  
Jesus Chaboy, M. Laguna-Marco, M. Sanchez, H. Maruyama, N. Kawamura, M. Suzuki  
Physical Review B, **69** (2004) 134421
- 6281  
Lifetime-Broadening-Suppressed Polarized Cu  $K$  X-ray Absorption Near Edge Structure of  $\text{Nd}_{2-x}\text{Ce}_x\text{CuO}_4$  Measured by Resonant Inelastic X-ray Scattering Spectroscopy  
Hisashi Hayashi, R. Takeda, M. Kawata, Y. Udagawa, Y. Watanabe, T. Takano, S. Nanao, N. Kawamura, T. Uefuji, K. Yamada  
Journal of Electron Spectroscopy and Related Phenomena, **136** (2004) 199-204
- 6311  
XMCD Study of Electronic States in Rare-Earth Iron Garnet  
Hiroshi Maruyama, N. Kawamura  
Journal of Electron Spectroscopy and Related Phenomena, **136** (2004) 135-141
- 6657  
Determination of the Chemical Properties of Residues Retained in Individual Cloud Droplets by XRF Microprobe at SPring-8  
Chang-Jin Ma, S. Tohno, M. Kasahara, S. Hayakawa  
Nuclear Instruments and Methods in Physics Research Section B, **217** (2004) 657-665
- 6660  
Properties of the Size-Resolved and Individual Cloud Droplets Collected in the Western Japan during Asian Dust Storm Event  
Chang-Jin Ma, S. Tohno, M. Kasahara, S. Hayakawa  
Atmospheric Environment, **38** (2004) 4519-4529
- 6704  
Direct Observation of Ferromagnetic Spin Polarization in Gold

- Nanoparticles  
Yoshiyuki Yamamoto, T. Miura, M. Suzuki, N. Kawamura, H. Miyagawa, T. Nakamura, K. Kobayashi, T. Teranishi, H. Hori  
Physical Review Letters, **93** (2004) 116801
- 6759  
Induced Magnetic Polarization in Cu Layers of Gd/Cu Multilayers Studied by X-ray Magnetic Circular Dichroism  
Takuo Ohkochi, N. Hosoi, K. Mibu, H. Hashizume  
Journal of the Physical Society of Japan, **73** (2004) 2212-2218
- 6877  
Measurement and Multiple-Scattering Calculation of Cu *K*-edge X-ray Magnetic Circular Dichroism Spectra from an Exchange-Coupled Co/Cu Multilayer  
Shin-ichi Nagamatsu, H. Matsumoto, T. Fujikawa, K. Ishiji, H. Hashizume  
Physical Review B, **70** (2004) 174442
- 7070  
Neutron Diffraction and X-ray Absorption Study of CaMn<sub>0.6</sub>Ru<sub>0.4</sub>O<sub>3</sub>  
Kenji Yoshii, A. Nakamura, M. Mizumaki, H. Tanida, N. Kawamura, H. Abe, Y. Ishii, Y. Shimojo, Y. Morii  
Journal of Magnetism and Magnetic Materials, **272-276** (2004) E609-E611
- BL40B2**
- 5541  
Expression, Purification, Crystallization and Preliminary X-ray Studies of Geranylgeranyl Diphosphate Synthase from *Thermus thermophilus* HB8  
Kazuya Nishio, Y. Nodake, K. Hamada, K. Suto, N. Nakagawa, S. Kuramitsu, K. Miura  
Acta Crystallographica Section D, **60** (2004) 178-180
- 5567  
Substrate Recognition and Selectivity of Plant Glycerol-3-Phosphate Acyltransferases (GPATs) from *Cucurbita moscata* and *Spinacea oleracea*  
Taro Tamada, M. D. Feese, S. R. Ferri, Y. Kato, R. Yajima, T. Toguri, R. Kuroki  
Acta Crystallographica Section D, **60** (2004) 13-21
- 5618  
Self-Organization and Phase Behavior of Hydrogen-Bonded Mixtures of End-Functional Polymer with Surfactant  
Isamu Akiba, H. Masunaga, K. Sasaki, Y. Jeong, K. Sakurai, S. Hara, K. Yamamoto  
Macromolecules, **37** (2004) 1152-1155
- 5860  
Protein Splicing of Yeast VMA1-Derived Endonuclease via Thiazolidine Intermediates  
Ryuta Mizutani, Y. Anraku, Y. Satow  
Journal of Synchrotron Radiation, **11** (2004) 109-112
- 5888  
X-Ray Induced Reduction of the Crystal of High-Molecular Weight Cytochrome *c* Revealed by Microspectrophotometry  
Midori Satou, N. Shibata, Y. Morimoto, Y. Takayama, K. Ozawa, H. Akutsu, Y. Higuchi, N. Yasuoka  
Journal of Synchrotron Radiation, **11** (2004) 113-116
- 5903  
-Helix is a Likely Core Structure of Yeast Prion Sup35 Amyloid Fibers  
Aiko Kishimoto, K. Hasegawa, H. Suzuki, H. Taguchi, K. Namba, M. Yoshida  
Biochemical and Biophysical Research Communications, **315** (2004) 739-745
- 5926  
Hydrolysis of Third-Generation Cephalosporins by Class C -lactamases: Structures of a Transition-State Analog of Cefotaxime in Wild-Type and Extended-Spectrum Enzymes  
Michiyoshi Nukaga, S. Kumar, K. Nukaga, R. F. Pratt, J. R. Knox  
The Journal of Biological Chemistry, **279** (2004) 9344-9352
- 5937  
Structure of Human Translin at 2.2 Å Resolution  
Ikuko Sugiura, C. Sasaki, T. Hasegawa, T. Kohno, S. Sugio, H. Moriyama, M. Kasai, T. Matsuzaki  
Acta Crystallographica Section D, **60** (2004) 674-679
- 6026  
Molecular and Crystal Structures of Chitosan/HI Type I Salt Determined by X-ray Fiber Diffraction  
Amornrat Lertworasirikul, S. Yokoyama, K. Noguchi, K. Ogawa, K. Okuyama  
Carbohydrate Research, **339** (2004) 825-833

6126

Crystal Structures of Collagen Model Peptides with Pro-Hyp-Gly Repeating Sequence at 1.26 Resolution: Implications for Proline Ring Puckering

Kenji Okuyama, C. Hongo, R. Fukushima, G. Wu, H. Narita, K. Noguchi, Y. Tanaka, N. Nishino

Biopolymers, **76** (2004) 367-377

6144

Water-Mediated Interaction at a Protein-Protein Interface

Teikichi Ikura, Y. Urakubo, N. Ito

Chemical Physics, **307** (2004) 111-119

6176

Dynamic Heterogeneity in Interfacial Region of Microphase-Separated Polystyrene-*block*-poly(methyl acrylate) Studied by the ESR Spin-Label Technique

Yohei Miwa, K. Tanida, K. Yamamoto, S. Okamoto, M. Sakaguchi, M. Sakai, S. Makita, S. Sakurai, S. Shimada

Macromolecules, **37** (2004) 3707-3716

6270

Estimation of Interlamellar Water Molecules in Sphingomyelin Bilayer Systems Studied by DSC and X-ray Diffraction

M. Kodama, M. Abe, Y. Kawasaki, K. Hayashi, S. Ohira, H. Nozaki, C. Katagiri, K. Inoue, H. Takahashi

Thermochimica Acta, **416** (2004) 105-111

6317

Crystallization and Preliminary X-ray Diffraction Analysis of a Thermostable Endo-1,5- $\beta$ -L-Arabinanase from *Bacillus thermodenitrificans* TS-3

Asako Yamaguchi, T. Tada, T. Nakaniwa, T. Kitatani, M. Takao, T. Sakai, K. Nishimura

Acta Crystallographica Section D, **60** (2004) 1149-1151

6363

The First Crystal Structure of the Novel Class of Fructose-1,6-Bisphosphatase Present in Thermophilic Archaea

Hiroshi Nishimasu, S. Fushinobu, H. Shoun, T. Wakagi

Structure, **12** (2004) 949-959

6405

Gelation of Xyloglucan in Water/Alcohol Systems

Yoshiaki Yuguchi, T. Kumagai, M. Wu, T. Hirotsu, J. Hosokawa

Cellulose, **11** (2004) 203-208

6545

Hierarchical Map of Protein Unfolding and Refolding at Thermal Equilibrium Revealed by Wide-Angle X-ray Scattering

Mitsuhiro Hirai, M. Koizumi, T. Hayakawa, H. Hirai, H. Takahashi, S. Abe, H. Hirai, K. Miura, K. Inoue

Biochemistry, **43** (2004) 9036-9049

6663

Structural Basis for Channelling Mechanism of a Fatty Acid -Oxidation Multienzyme Complex

Momoyo Ishikawa, D. Tsuchiya, T. Oyama, Y. Tsunaka, K. Morikawa

The EMBO Journal, **23** (2004) 2745-2754

6682

Nanostructured Polymer Blend Formed from Poly(*N*-vinylpyrrolidone) and End-Functional Polystyrene

Isamu Akiba, H. Masunaga, K. Sasaki, K. Shikasho, K. Sakurai Polymer, **45** (2004) 5761-5764

6719

Structural and Enzymatic Properties of 1-Aminocyclopropane-1-Carboxylate Deaminase Homologue from *Pyrococcus horikoshii*

Aiko Fujino, T. Ose, M. Yao, T. Tokiwano, M. Honma, N. Watabnabe, I. Tanaka

Journal of Molecular Biology, **341** (2004) 999-1013

6850

Y-700 [1-[3-Cyano-4-(2,2-dimethylpropoxy)phenyl]-1*H*-pyrazole-4-carboxylic acid]: A Potent Xanthine Oxidoreductase Inhibitor with Hepatic Excretion

Atsushi Fukunari, K. Okamoto, T. Nishino, E. Pai, B. Eger, M. Kamezawa, I. Yamada, N. Kato

The Journal of Pharmacology And Experimental Therapeutics, **311** (2004) 519-528

6854

Structural Stability of Oligomeric Chaperonin 10: the Role of Two  $\beta$ -Strands at the N and C Termini in Structural Stabilization

Isao Sakane, M. Ikeda, C. Matsumoto, T. Higurashi, K. Inoue, K. Hongo, T. Mizobata, Y. Kawata

Journal of Molecular Biology, **344** (2004) 1123-1133

6874

Structural Evidence for Direct Hydride Transfer from NADH to Cytochrome P450nor

Rieko Oshima, S. Fushinobu, F. Su, L. Zhang, N. Takaya, H. Shoun

- Journal of Molecular Biology, **342** (2004) 207-217  
6875  
Crystal Structure of a Family 54 -L-Arabinofuranosidase Reveals a Novel Carbohydrate-binding Module That can Bind Arabinose  
Akimasa Miyanaga, T. Koseki, H. Matsuzawa, T. Wakagi, H. Shoun, S. Fushinobu  
The Journal of Biological Chemistry, **279** (2004) 44907-44914
- 6911  
Preparation and Characterization of Core-Shell Nanoparticles Hardened by Gamma-Ray  
Takayuki Narita, K. Terao, T. Dobashi, N. Nagasawa, F. Yoshii  
Colloids and Surfaces B: Biointerfaces, **38** (2004) 187-190
- 7084  
Light-Induced Structural Changes of LOV Domain-Containing Polypeptides from *Arabidopsis* Phototropin 1 and 2 Studied by Small-Angle X-ray Scattering  
Masayoshi Nakasako, T. Iwata, D. Matsuoka, S. Tokutomi  
Biochemistry, **43** (2004) 14881-14890
- 7461  
The Crystal Structure of an Oxidatively Stable Subtilisin-Like Alkaline Serine Protease, KP-43, with a C-Terminal -Barrel Domain  
Tsuyoshi Nonaka, M. Fujihashi, A. Kita, K. Saeki, S. Ito, H. Horikoshi, K. Miki  
The Journal of Biological Chemistry, **279** (2004) 47344-47351
- BL40XU**
- 5989  
Detection Limits of Trace Elements for Wavelength Dispersive Total X-Ray Fluorescence under High Flux Synchrotron Radiation  
Naoki 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
- 6028  
X-ray Diffraction from a Left Ventricular Wall of Rat Heart  
Naoto 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. Kajiyama  
Biophysical Journal, **86** (2004) 2286-2294
- 6037  
A Large-Area CMOS Imager as an X-ray Detector for Synchrotron Radiation Experiments  
Naoto Yagi, M. Yamamoto, K. Uesugi, K. Inoue  
Journal of Synchrotron Radiation, **11** (2004) 347-352
- 6275  
*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, D. O. Schwenke, H. Ishibashi-Ueda, R. Akiyama, H. Mori, K. Kangawa, H. Suga, N. Yagi  
Circulation, **109** (2004) 2983-2986
- 6319  
X-ray Imaging Microscopy using Fresnel Zone Plate Objective and Quasimonochromatic Undulator Radiation  
Yoshio Suzuki, A. Takeuchi, H. Takano, K. Uesugi, T. Oka, K. Inoue  
Review of Scientific Instruments, **75** (2004) 1155-1157
- 6446  
The Role of Pigment Cells in the Brain of Ascidian Larva  
Daisuke Sakurai, M. Goda, Y. Kohmura, T. Horie, H. Iwamoto, H. Ohtsuki, M. Tsuda  
The Journal of Comparative Neurology, **475** (2004) 70-82
- 6480  
Structural Transients of Contractile Proteins upon Sudden ATP Liberation in Skeletal Muscle Fibers  
Jun'ichi Wakayama, T. Tamura, N. Yagi, H. Iwamoto  
Biophysical Journal, **87** (2004) 430-441
- 6802  
CCD-based X-ray Area Detector for Time-resolved Diffraction Experiments  
Naoto Yagi, K. Inoue, T. Oka  
Journal of Synchrotron Radiation, **11** (2004) 456-461
- 7190  
Penetration of PBSU Spherulite into P(VDC-VC) Spherulite Observed with Microbeam- and Macrobeam-SAXS/WAXS Measurements  
Yoshinobu Nozue, S. Hirano, N. Kawasaki, S. Ueno, N. Yagi, T. Nishi, Y. Amemiya  
Polymer, **45** (2004) 8593-8601

**BL41XU**

5567

Substrate Recognition and Selectivity of Plant Glycerol-3-Phosphate Acyltransferases (GPATs) from *Cucurbita moscata* and *Spinacea oleracea*

Taro Tamada, M. D. Feese, S. R. Ferri, Y. Kato, R. Yajima, T. Toguri, R. Kuroki

Acta Crystallographica Section D, **60** (2004) 13-21

5734

Crystallization And Mad Data Collection of High-Molecular Weight Cytochrome C From *Desulfovibrio Vulgaris Miyazaki F*  
Naoki Shibata, K. Suto, E. Ichimura, K. Yoshimura, K. Muneo, S. Tomigami, Y. Morimoto, M. Ogata, T. Yagi, Y. Higuchi, N. Yasuoka

Protein and Peptide Letters, **11** (2004) 93-96

5910

Crystal Structure of Dcp1p and Its Functional Implications in mRNA Decapping

Meipei She, C. J. Decker, K. Sundaramurthy, Y. Liu, N. Chen, R. Parker, H. Song

Nature Structural and Molecular Biology, **11** (2004) 249-256

6020

Structure of the Receptor-Binding Domain of Human Thrombopoietin Determined by Complexation with a Neutralizing Antibody Fragment

Michael D. Feese, T. Tamada, Y. Kato, Y. Maeda, M. Hirose, Y. Matsukura, H. Shigematsu, T. Muto, A. Matsumoto, H. Watarai, K. Ogami, T. Tahara, T. Kato, H. Miyazaki, R. Kuroki  
Proceedings of the National Academy of Sciences of the United States of America, **101** (2004) 1816-1821

6036

Crystallization and Preliminary Crystallographic Analysis of the Circadian Clock Protein KaiB from the Thermophilic Cyanobacterium *Thermosynechococcus elongatus* BP-1

Ryo Iwase, K. Imada, F. Hayashi, T. Uzumaki, K. Namba, M. Ishiura

Acta Crystallographica Section D, **60** (2004) 727-729

6155

The Roles of Glu186 and Glu380 in the Catalytic Reaction of Soybean -Amylase

You-Na Kang, M. Adachi, S. Utsumi, B. Mikami

Journal of Molecular Biology, **339** (2004) 1129-1140

6296

Crystal Structure of *Human* p120 Homologue Protein PH1374 from *Pyrococcus Horikoshii*

Idumi Ishikawa, N. Sakai, T. Tamura, M. Yao, N. Watanabe, I. Tanaka

Proteins: Structure, Function, and Bioinformatics, **54** (2004) 814-816

6297

Flash-Cooling of Macromolecular Crystals in Capillary to Overcome Increased Mosaicity

Min Yao, Y. Yasutake, I. Tanaka

Acta Crystallographica Section D, **60** (2004) 39-45

6339

Crystal Structure of the Dioxygen-bound Heme Oxygenase from *Corynebacterium diphtheriae*

Masaki Unno, T. Matsui, G. C. Chu, M. Couture, T. Yoshida, D. L. Rousseau, J. S. Olson, M. Ikeda-Saito

The Journal of Biochemistry, **279** (2004) 21055-21061

6481

Structure and Function of a Hypothetical *Pseudomonas aeruginosa* Protein PA1167 Classified into Family PL-7

Masayuki Yamasaki, S. Moriwaki, O. Miyake, W. Hashimoto, K. Murata, B. Mikami

The Journal of Biological Chemistry, **279** (2004) 31863-31872

6521

Structural Basis for the Specificity, Catalysis, and Regulation of Human Uridine-Cytidine Kinase

Nobuo Suzuki, K. Koizumi, M. Fukushima, A. Matsuda, F. Inagaki

Structure, **12** (2004) 751-764

6597

Crystal Structure of the CP1 Domain from *Thermus thermophilus* Isoleucyl-tRNA Synthetase and its Complex with L-Valine

Ryuya Fukunaga, S. Fukai, R. Ishitani, O. Nureki, S. Yokoyama

The Journal of Biological Chemistry, **279** (2004) 8396-8402

6640

Structural and Biochemical Analyses of Hemimethylated DNA Binding by the SeqA Protein

Norie Fujikawa, H. Kurumizaka, O. Nureki, Y. Tanaka, M. Yamazoe, S. Hiraga, S. Yokoyama

Nucleic Acids Research, **32** (2004) 82-92

- 6641  
A Short Peptide Insertion Crucial for Angiostatic Activity of Human Tryptophanyl-tRNA Synthetase  
Yoshiaki Kise, S. Lee, S. Park, S. Fukai, T. Sengoku, R. Ishii, S. Yokoyama, S. Kim, O. Nureki  
Nature Structural and Molecular Biology, **11** (2004) 149-156
- 6649  
Deep Knot Structure for Construction of Active Site and Cofactor Binding Site of tRNA Modification Enzyme  
Osamu Nureki, K. Watanabe, S. Fukai, R. Ishii, Y. Endo, H. Hori, S. Yokoyama  
Structure, **12** (2004) 593-602
- 6701  
Crystal Structure of the Calcium Pump with a Bound ATP Analogue  
Chikashi Toyoshima, T. Mizutani  
Nature, **430** (2004) 529-535
- 6719  
Structural and Enzymatic Properties of 1-Aminocyclopropane-1-Carboxylate Deaminase Homologue from *Pyrococcus horikoshii*  
Aiko Fujino, T. Ose, M. Yao, T. Tokiwano, M. Honma, N. Watabnabe, I. Tanaka  
Journal of Molecular Biology, **341** (2004) 999-1013
- 6734  
Structural Implications for Heavy Metal-Induced Reversible Assembly and Aggregation of a Protein: the Case of *Pyrococcus horikoshii* CutA  
Yoshikazu Tanaka, K. Tsumoto, T. Nakanishi, Y. Yasutake, N. Sakai, M. Yao, I. Tanaka, I. Kumagai  
FEBS Letters, **556** (2004) 167-174
- 6809  
Crystal Structure of Aspartic Proteinase from *Irpeus lacteus* in Complex with Inhibitor Pepstatin  
Zui Fujimoto, Y. Fujii, S. Kaneko, H. Kobayashi, H. Mizuno  
Journal of Molecular Biology, **341** (2004) 1227-1235
- 6820  
Structure of the Bacterial Flagellar Hook and Implication for the Molecular Universal Joint Mechanism  
Fadel A. Samatey, H. Matsunami, K. Imada, S. Nagashima, T. R. Shaikh, D. Thomas, James Z. Chen, D. J. Derosier, A. Kitao, K. Namba  
Nature, **431** (2004) 1062-1068
- 6839  
Relation between tRNase Activity and the Structure of Colicin D According to X-ray Crystallography  
Shunsuke Yajima, K. Nakanishi, K. Takahashi, T. Ogawa, M. Hidaka, Y. Kezuka, T. Nonaka, K. Ohsawa, H. Masaki  
Biochemical and Biophysical Research Communications, **322** (2004) 966-973
- 6852  
Lumenal Gating Mechanism Revealed in Calcium Pump Crystal Structures with Phosphate Analogues  
Chikashi Toyoshima, H. Nomura, T. Tsuda  
Nature, **432** (2004) 361-368
- 6876  
Crystal Structure of the *Pyrococcus horikoshii* Isopropylmalate Isomerase Small Subunit Provides Insight into the Dual Substrate Specificity of the Enzyme  
Yoshiaki Yasutake, M. Yao, N. Sakai, T. Kiritu, I. Tanaka  
Journal of Molecular Biology, **344** (2004) 325-333
- 6901  
Crystal Structure of Heme Oxygenase-1 from Cyanobacterium *Synechocystis* sp. PCC 6803 in Complex with Heme  
Masakazu Sugishima, C. T. Migita, X. Zhang, T. Yoshida, K. Fukuyama  
European Journal of Biochemistry, **271** (2004) 4517-4525
- 6902  
Structure of Photoactive Yellow Protein (PYP) E46Q Mutant at 1.2 Å Resolution Suggests how Glu46 Controls the Spectroscopic and Kinetic Characteristics of PYP  
Masakazu Sugishima, N. Tanimoto, K. Soda, N. Hamada, F. Tokunaga, K. Fukuyama  
Acta Crystallographica Section D, **60** (2004) 2305-2309
- 6912  
Crystal Structure of -Glutamylcysteine Synthetase: Insights into the Mechanisms of Catalysis by a Key Enzyme for Glutathione Homeostasis  
Takao Hibi, H. Nii, T. Nakatsu, A. Kimura, H. Kato, J. Hiratake, J. Oda  
Proceedings of the National Academy of Sciences of the United States of America, **101** (2004) 15052-15057

7083

Water-Protein Interactions from High-Resolution Protein Crystallography

Masayoshi Nakasako

Philosophical Transactions of the Royal Society B: Biological Sciences, **359** (2004) 1191-1206

7457

The N-Terminal Domain of the Replication Initiator Protein RepE is a Dimerization Domain Forming a Stable Dimer

Akira Nakamura, H. Komori, G. Kobayashi, A. Kita, C. Wada, K. Miki

Biochemical and Biophysical Research Communications, **315** (2004) 10-15

7462

Multi-Wavelength Anomalous Diffraction Method for I and Xe Atoms using Ultra-High-Energy X-rays from SPring-8

Kazuki Takeda, H. Miyatake, S. Park, M. Kawamoto, N. Kamiya, K. Miki

Journal of Applied Crystallography, **37** (2004) 925-933

7463

Crystal Structure of the Co-Chaperonin Cpn10 from *Thermus thermophilus* HB8

Nobutaka Numoto, A. Kita, K. Miki

Proteins: Structure, Function, and Bioinformatics, **58** (2004) 498-500

7469

Structural Basis of Biopterin-induced Inhibition of GTP Cyclohydrolase I by GFRP, Its Feedback Regulatory Protein Nobuo Maita, K. Okada, K. Hatakeyama, T. Hakoshima

The Journal of Biological Chemistry, **279** (2004) 51534-51540

7574

Crystal Structures of the Group II Chaperonin from *Thermococcus* strain KS-1: Steric Hindrance by the Substituted Amino Acid, and Inter-subunit Rearrangement between Two Crystal Forms

Yasuhito Shomura, T. Yoshida, R. Iizuka, T. Maruyama, M. Yohda, K. Miki

Journal of Molecular Biology, **335** (2004) 1265-1278

## BL43IR

5387

Infrared Microspectroscopy Station at BL43IR of SPring-8

Yuka Ikemoto, T. Moriwaki, T. Hiroto, S. Kimura, K. Shinoda,

M. Matsunami, N. Nagai, T. Nanba, K. Kobayashi, H. Kimura

Infrared Physics and Technology, **45** (2004) 369-373

5498

Modification of Vibrational Selection Rules in the Photo-Induced Spin-Crossover Phase

Takeshi Tayagaki, K. Tanaka, H. Okamura

Physical Review B, **69** (2004) 064104

5500

Infrared Study of Spin Crossover Fe-Picolylamine Complex

Hidekazu Okamura, M. Matsubara, T. Tayagaki, K. Tanaka, Y. Ikemoto, H. Kimura, T. Moriwaki, T. Nanba

Journal of the Physical Society of Japan, **73** (2004) 1355-1361

5564

Dichroic Infrared Absorption of Dipole Centers in Cadmium Halide Crystals

Mitsushi Terakami, H. Nakagawa, K. Fukui, H. Okamura, T. Hiroto, Y. Ikemoto, T. Moriwaki, H. Kimura

Journal of Luminescence, **108** (2004) 75-79

5566

Polarized Infrared Absorption of Dipole Centers in Cadmium Halide and PbI<sub>2</sub> Crystals

Mitsushi Terakami, H. Nakagawa

Journal of the Physical Society of Japan, **73** (2004) 719-726

6261

Imaging Phase Separation Near the Mott Boundary of the Correlated Organic Superconductors -(BEDT-TTF)<sub>2</sub>X

Takahiko Sasaki, N. Yoneyama, N. Kobayashi, Y. Ikemoto, H. Kimura

Physical Review Letters, **92** (2004) 227001

## BL44B2 (共用分)

7653

Crystal Structures of CTP Synthetase Reveal ATP, UTP, and Glutamine Binding Sites

Masaru Goto, R. Omi, N. Nakagawa, I. Miyahara, K. Hirotsu

Structure, **12** (2004) 1413-1423

## **BL45XU (共用分)**

6038

Sarcomere-Length Dependence of Lattice Volume and Radial Mass Transfer of Myosin Cross-Bridges in Rat Papillary Muscle

Naoto Yagi, H. Okuyama, H. Toyota, J. Araki, J. Shimizu, G. Iribe, K. Nakamura, S. Mohri, K. Tsujioka, H. Suga, F. Kajiya  
*Pflugers Archiv: European Journal of Physiology*, **448** (2004) 153-160

6113

Order-Disorder Phase Transition of Polyelectrolyte Gel-Surfactant Complexes

Shigeo Sasaki, K. Shogo

*Macromolecules*, **37** (2004) 3809-3814

6501

Formation Processes of the Integrated Ordered Mesostructure of Silica at Liquid-Liquid Interface using Synchrotron Radiation X-rays

Motonari Adachi, Y. Murata, K. Sago, K. Nakagawa

*Langmuir*, **20** (2004) 5965-5968

6618

Comparison in Fractal Dimension between Those Obtained from Structure Factor and Viscoelasticity of Gel Networks of 1,3:2,4-bis-(*p*-Methylbenzylidene)-*D*-Sorbitol in Polystyrene Melt at Gel Point

Mikihiro Takenaka, T. Kobayashi, K. Saito, H. Tanaka, N. Iwase, T. Hashimoto, M. Takahashi

*The Journal of Chemical Physics*, **121** (2004) 3323-3328

6767

Shear-Induced Phase Separation in "Nonentangled" Oligomer Mixture

Mikihiro Takenaka, S. Nishitsuji, M. Miyazawa, T. Hashimoto

*The Journal of Chemical Physics*, **121** (2004) 7501-7504

6923

Organization of the Cores of the Mammalian Pyruvate Dehydrogenase Complex Formed by *E2* and *E2* Plus the *E3*-binding Protein and Their Capacities to Bind the *E1* and *E3* Components

Yasuaki Hiromasa, T. E. Roche, Y. Aso, T. Fujisawa

*The Journal of Biological Chemistry*, **279** (2004) 6921-6933

7079

Phase Behavior of Hydrogen-Bonded Polymer-Surfactant Mixtures in Selective Solvent

Isamu Akiba, H. Masunaga, Y. Jeong, K. Sasaki, K. Sakurai  
*Macromolecules*, **37** (2004) 10047-10051

7115

Elastic Relaxation of Collapsed Poly(alkylacrylamide) Gels and Their Complexes with Phenol

Shogo Koga, T. Kawashima, S. Sasaki

*The Journal of Physical Chemistry B*, **108** (2004) 10838-10844

## **BL46XU**

6729

In-situ Strain Measurements of Bi2223 Superconducting Filaments in Multifilamentary Ag-Sheathed Bi2223 Superconducting Tapes

Hiroshi Okuda, S. Ochiai, K. Morishita, D. Doko, M. Matsui, H. Fujimoto, M. Sato  
*Physica C*, **411** (2004) 114-119

6765

Crystallographic Features of Rhenium Disilicide

Katsushi Tanaka, H. Inui, T. Ohba, S. Tsutsui, M. Mizumaki  
*Materials Research Society Symposia Proceedings*, **793** (2004) 305-310

6917

Relationship between Charge Stripe Order and Structural Phase Transitions in  $\text{La}_{1.875}\text{Ba}_{0.125-x}\text{Sr}_x\text{CuO}_4$

Hiroyuki Kimura, Y. Noda, H. Goka, M. Fujita, K. Yamada, M. Mizumaki, N. Ikeda, H. Ohsumi  
*Physical Review B*, **70** (2004) 134512

## **BL47XU**

5686

Fabrication of Porous Aluminum with Deep Pores by Using Al-In Monotectic Solidification and Electrochemical Etching

Hideyuki Yasuda, I. Ohnaka, S. Fujimoto, A. Sugiyama, Y. Hayashi, M. Yamamoto, A. Tsuchiyama, T. Nakano, K. Uesugi, K. Kishino  
*Materials Letters*, **58** (2004) 911-915

5913

X-ray Diffraction Topography on a BaTiO<sub>3</sub> Crystal

Yasuhiro Yoneda, Y. Kohmura, Y. Suzuki, S. Hamazaki, M.

- Takashige  
 Journal of the Physical Society of Japan, **73** (2004) 1050-1053
- 6309  
 A Multi-Crystal Spectrometer with a Two-Dimensional Position-Sensitive Detector and Contour Maps of Resonant K Emission in Mn Compounds  
 Hisashi Hayashi, M. Kawata, R. Takeda, Y. Udagawa, Y. Watanabe, T. Takano, S. Nanao, N. Kawamura  
 Journal of Electron Spectroscopy and Related Phenomena, **136** (2004) 191-197
- 6389  
 Characteristics of a Miniature Parallel-Plate Free-Air Ionization Chamber for Measuring the Intensity of Synchrotron Radiation from an Undulator  
 Nobuteru Nariyama  
 Review of Scientific Instruments, **75** (2004) 2860-2862
- 6772  
 X-ray Topography on Domain-Controlled BaTiO<sub>3</sub> Crystals  
 Yasuhiro Yoneda, J. Mizuki, Y. Kohmura, Y. Suzuki, S. Hamazaki, M. Takashige  
 Japanese Journal of Applied Physics, **43** (2004) 6821-6824
- 6821  
 Hybridization of Cr 3d-N 2p-Ga 4s in the Wide Band-Gap Diluted Magnetic Semiconductor Ga<sub>1-x</sub>Cr<sub>x</sub>N  
 Jung-Jin Kim, H. Makino, K. Kobayashi, Y. Takata, T. Yamamoto, T. Hanada, M. Cho, E. Ikenaga, M. Yabashi, D. Miwa, Y. Nishino, K. Tamasaku, T. Ishikawa, S. Shin, T. Yao  
 Physical Review B, **70** (2004) 161315(R)
- 6881  
 Extended Spin-Polarized X-ray Absorption Near-Edge Spectra of MnO  
 Hisashi Hayashi, M. Kawata, Y. Udagawa, N. Kawamura, S. Nanao  
 Physical Review B, **70** (2004) 134427
- 6922  
 K Resonant X-ray Emission Spectroscopy for Fe, Fe<sub>2</sub>O<sub>3</sub> and Fe<sub>3</sub>O<sub>4</sub>  
 Hitoshi Yamaoka, M. Oura, M. Taguchi, T. Morikawa, K. Takahiro, A. Terai, K. Kawatsura, A. Vlaicu, Y. Ito, T. Mukoyama  
 Journal of the Physical Society of Japan, **73** (2004) 3182-3191
- 6932  
 Hard X-ray Photoemission Spectroscopy of Temperature-Induced Valence Transition in EuNi<sub>2</sub>(Si<sub>0.20</sub>Ge<sub>0.80</sub>)<sub>2</sub>  
 Kazuya Yamamoto, M. Taguchi, N. Kamakura, K. Horiba, Y. Takata, A. Chainani, S. Shin, E. Ikenaga, K. Mimura, M. Shiga, H. Wada, H. Namatame, M. Tamiguchi, M. Awaji, A. Takeuchi, Y. Nishino, D. Miwa, T. Ishikawa, K. Kobayashi  
 Journal of the Physical Society of Japan, **73** (2004) 2616-2619
- 7266  
 Novel Application of Sputtered-Sliced Concentric Multilayers to Various Optical Elements for Synchrotron Radiation High-Brilliance X-ray Beamlines at SPring-8  
 Shigeharu Tamura, M. Yasumoto, N. Kamijo, Y. Suzuki, M. Awaji, A. Takeuchi, H. Takano, K. Uesugi  
 Vacuum, **74** (2004) 741-746
- 7524  
 X-ray Fluorescence Holography Study on Si<sub>1-x</sub>Ge<sub>x</sub> Single Crystal  
 Kouichi Hayashi, Y. Takahashi, I. Yonenaga, E. Matsubara  
 Materials Transactions, **45** (2004) 1994-1997

## 専用ビームライン

### BL12B2

6753

Crystal Structures and Electron Micrographs of Fungal Volvatoxin A2

Su-Chang Lin, Y. Lo, J. Lin, Y. Liaw

Journal of Molecular Biology, **343** (2004) 477-491

7008

The Design and Performance of Beamline BL16XU at SPring-8

Yasuhiro 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

### BL15XU

6652

Application of X-ray Photoemission Electron Microscopy Developed at SPring-8 BL15XU

Hideyuki Yasufuku, H. Yoshikawa, M. Kimura, K. Ito, K. Tani, S. Fukushima

Surface and Interface Analysis, **36** (2004) 892-895

7317

Capturing Characteristic of Gaseous Mercury in Desulfurization Solutions Simulating the Limestone-Gypsum Process

Hiroyuki Akiho, M. Nunokawa, H. Shirai

日本エネルギー学会誌 (Journal of the Japan Institute of Energy), **83** (2004) 924-931

### BL24XU

6653

Monte-Carlo Simulation of Secondary Electron Emission by X-ray Irradiation - an Application of X-ray Absorption Near-Edge Structure (XANES)

Takeshi Iyasu, K. Tamura, R. Shimizu, Z. Zhang, T.

Toshikawa, H. Yoshikawa, S. Fukushima

Surface and Interface Analysis, **36** (2004) 1413-1416

5662

A Highly Potent Non-Nucleoside Adenosine Deaminase Inhibitor: Efficient Drug Discovery by Intentional Lead Hybridization

Tadashi Terasaka, T. Kinoshita, M. Kuno, I. Nakanishi

Journal of the American Chemical Society, **126** (2004) 34-35

### BL16B2

6136

Grazing Incidence X-ray Scattering to Characterize the Thin Amorphous SiOx Film on Silicon Substrate

Ichiro Hirosawa, Y. Uehara, M. Sato, N. Umesaki

日本セラミックス協会学術論文誌 (Journal of the Ceramic Society of Japan), **112** (2004) S1476-S1478

5925

Structural Insight into Nucleotide Recognition in Tau- Protein Kinase I/Glycogen Synthase Kinase 3

Masaaki Aoki, T. Yokota, I. Sugiura, C. Sasaki, T. Hasegawa, C. Okumura, K. Ishiguro, T. Kohno, S. Sugio, T. Matsuzaki

Acta Crystallographica Section D, **60** (2004) 439-446

### BL16XU

6811

Wavelength Dispersive Grazing Incidence X-ray Fluorescence of Multilayer Thin Films

Naoki Awaji

Spectrochimica Acta part B, **59** (2004) 1133-1139

5932

Crystal Structure of the Complex of Porcine Pancreatic Elastase with TEI-8362

Midori Takimoto-Kamimura, M. Koizumi, E. Muratani, K. Fujii

Journal of Synchrotron Radiation, **11** (2004) 101-104

6861

Submicron-Resolved X-ray Topography using Asymmetric-Reflection Magnifiers

Ryohei Tanuma, M. Ohsawa

Spectrochimica Acta Part B, **59** (2004) 1549-1555

5936

Structure of the Biotin Carboxylase Subunit of Pyruvate Carboxylase from *Aquifex Aeolicus* at 2.2 Resolution

Shin Kondo, Y. Nakajima, S. Sugio, Y. Jin, S. Sueda, H. Kondo

Acta Crystallographica Section D, **60** (2004) 486-492

5937

Structure of Human Translin at 2.2 Resolution

Ikuko Sugiura, C. Sasaki, T. Hasegawa, T. Kohno, S. Sugio, H. Moriyama, M. Kasai, T. Matsuzaki  
Acta Crystallographica Section D, **60** (2004) 674-679

5999  
High-Spatial-Resolution Phase Measurement by Micro-Interferometry Using a Hard X-Ray Imaging Microscope  
Takahisa Koyama, Y. Kagoshima, I. Wada, A. Saikubo, K. Shimose, K. Hayashi, Y. Tsusaka, J. Matsui  
Japanese Journal of Applied Physics, **43** (2004) L421-L423

6260  
Structure-Based Design and Synthesis of Non-Nucleoside, Potent, and Orally Bioavailable Adenosine Deaminase Inhibitors  
Tadashi Terasaka, T. Kinoshita, H. Okumura, K. Tsuji, T. Kato, I. Nakanishi, Y. Kato, M. Kuno, N. Seki, Y. Naoe, T. Inoue, K. Tanaka, K. Nakamura  
Journal of Medicinal Chemistry, **47** (2004) 2728-2731

6518  
Structure-Based Design, Synthesis, and Structure-Activity Relationship Studies of Novel Non-Nucleoside Adenosine Deaminase Inhibitors  
Tadashi Terasaka, T. Kinoshita, M. Kuno, N. Seki, K. Tanaka, I. Nakanishi  
Journal of Medicinal Chemistry, **47** (2004) 3730-3743

6634  
Free-Standing and Vertically Aligned InP Nanowires Grown by Metalorganic Vapor Phase Epitaxy  
Satyaban Bhunia, T. Kawamura, S. Fujikawa, K. Tokushima, Y. Watanabe  
Physica E, **21** (2004) 583-587

6694  
Construction of X-ray Dark-Field Imaging with a View Size of 80 mm Square and First Visualization of Human Articular Cartilage at Femoral Head under a Nearly Clinical Condition  
Masami Ando, H. Sugiyama, T. Kunisada, D. Shimao, K. Takeda, H. Hashizume, H. Inoue  
Japanese Journal of Applied Physics, **43** (2004) L1175-L1177

6835  
Scanning Differential-Phase-Contrast Hard X-Ray Microscopy with Wedge Absorber Detector  
Yasushi Kagoshima, K. Shimose, T. Koyama, I. Wada, A. Saikubo, K. Hayashi, Y. Tsusaka, J. Matsui

Japanese Journal of Applied Physics, **43** (2004) L1449-L1451

## BL32B2

5661  
Cloning, Expression, Purification, Crystallization and Preliminary X-Ray Analysis of Human Liver Glyceraldehyde-3-Phosphate Dehydrogenase  
Masaichi Warizaya, T. Kinoshita, A. Kato, H. Nakajima, T. Fujii  
Acta Crystallographica Section D, **60** (2004) 567-568

5708  
Structural basis for Allosteric Regulation of the Monomeric Allosteric Enzyme Human Glucokinase  
Kenji Kamata, M. Mitsuya, T. Nishimura, J. Eiki, Y. Nagata  
Structure, **12** (2004) 429-438

6661  
The Crystal Structure of Human Dipeptidyl Peptidase IV (DPPIV) Complex with Diprotin A  
Hajime Hiramatsu, A. Yamamoto, K. Kyono, Y. Higashiyama, C. Fukushima, H. Shima, S. Sugiyama, K. Inaka, R. Shimizu  
Biological Chemistry, **385** (2004) 561-564

6714  
Rational Approaches to Discovery of Orally Active and Brain-Penetrable Quinazolinone Inhibitors of Poly(ADP-ribose) polymerase  
Kouji Hattori, T. Kinoshita, Y. Kido, H. Kamijo, M. Ohkubo, A. Iwashita, K. Mihara, S. Yamasaki, N. Matsuoka, Y. Teramura, H. Miyake  
Journal of Medicinal Chemistry, **47** (2004) 4151-4154

7178  
Crystal Structure of Human ISG20, an Interferon-Induced Antiviral Ribonuclease  
Tatsuya Horio, M. Murai, T. Hamasaki  
FEBS Letters, **577** (2004) 111-116

## BL44XU

5488  
Complex Structures of Thermoactinomyces vulgaris R-47 - Amylase 1 with Malto-Oligosaccharides Demonstrate the Role of Domain N Acting as a Starch-Binding Domain  
Akemi Abe, T. Tonozuka, Y. Sakano, S. Kamitori  
Journal of Molecular Biology, **335** (2004) 811-822

- 6126  
Crystal Structures of Collagen Model Peptides with Pro-Hyp-Gly Repeating Sequence at 1.26 Resolution: Implications for Proline Ring Puckering  
Kenji Okuyama, C. Hongo, R. Fukushima, G. Wu, H. Narita, K. Noguchi, Y. Tanaka, N. Nishino  
*Biopolymers*, **76** (2004) 367-377
- 6139  
Crystallization and Preliminary Crystallographic Analysis of Rat Monoamine Oxidase A Complexed with Clorgyline  
Jichun Ma, F. Kubota, M. Yoshimura, E. Yamashita, A. Nakagawa, A. Ito, T. Tsukihara  
*Acta Crystallographica Section D*, **60** (2004) 317-319
- 6140  
Structure of Rat Monoamine Oxidase A and Its Specific Recognitions for Substrates and Inhibitors  
Jichun Ma, M. Yoshimura, E. Yamashita, A. Nakagawa, A. Ito, T. Tsukihara  
*Journal of Molecular Biology*, **338** (2004) 103-114
- 6141  
The Low-Spin Heme of Cytochrome *c* Oxidase as the Driving Element of the Proton-Pumping Process  
Tomitake Tsukihara, K. Shimokata, Y. Katayama, H. Shimada, K. Muramoto, H. Aoyama, M. Mochizuki, K. Shinzawa-Itoh, E. Yamashita, M. Yao, Y. Ishimura, S. Yoshikawa  
*Proceedings of the National Academy of Sciences of the United States of America*, **100** (2004) 15304-15309
- 6597  
Crystal Structure of the CP1 Domain from *Thermus thermophilus* Isoleucyl-tRNA Synthetase and its Complex with L-Valine  
Ryuya Fukunaga, S. Fukai, R. Ishitani, O. Nureki, S. Yokoyama  
*The Journal of Biological Chemistry*, **279** (2004) 8396-8402
- 7248  
Scaling of One-Shot Oscillation Images with a Reference Data Set  
Kunio Hirata, E. Yamashita, H. Aoyama, K. Muramoto, S. Yoshikawa, T. Tsukihara  
*Journal of Synchrotron Radiation*, **11** (2004) 60-63
- 7544  
Crystal Structure of the Membrane Fusion Protein, MexA, of the Multidrug Transporter in *Pseudomonas aeruginosa*  
Hiroyuki Akama, T. Matsuura, S. Kashiwagi, H. Yoneyama, S. Narita, T. Tsukihara, A. Nakagawa, T. Nakae  
*The Journal of Biological Chemistry*, **279** (2004) 25939-25942
- 7545  
Crystal Structure of the Drug Discharge Outer Membrane Protein, OprM, of *Pseudomonas aeruginosa*: Dual Modes of Membrane Anchoring and Occluded Cavity End  
Hiroyuki Akama, M. Kanemaki, M. Yoshimura, T. Tsukihara, T. Kashiwagi, H. Yoneyama, S. Narita, A. Nakagawa, T. Nakae  
*The Journal of Biological Chemistry*, **279** (2004) 52816-52819
- 7574  
Crystal Structures of the Group II Chaperonin from *Thermococcus* strain KS-1: Steric Hindrance by the Substituted Amino Acid, and Inter-subunit Rearrangement between Two Crystal Forms  
Yasuhiro Shomura, T. Yoshida, R. Iizuka, T. Maruyama, M. Yohda, K. Miki  
*Journal of Molecular Biology*, **335** (2004) 1265-1278

## 原研ビームライン **BL11XU**

6431

Development of Scanning Type Synchrotron Radiation Mössbauer Microscope Using Focused X-Ray  
Takaya Mitsui, Y. Kobayashi, M. Seto  
Japanese Journal of Applied Physics, **43** (2004) 389-393

6655

Enhancement of Incoherent Elastic Scattering with Magnetic Ordering in the Energy Spectra of Nuclear Resonant Scattering  
Makoto Seto, J. Matsuno, A. Fujimori, T. Mitsui, Y. Kobayashi, S. Kitao, R. Haruki, S. Kawasaki, M. Takano  
Journal of the Physical Society of Japan, **73** (2004) 1669-1672

7024

Transformations in the Intermediate-Range Structure of SiO<sub>2</sub> Glass under High Pressure and Temperature  
Yasuhiro Inamura, Y. Katayama, W. Utsumi, K. Funakoshi  
Physical Review Letters, **93** (2004) 015501

7150

Local Structure of Molten CdCl<sub>2</sub> Systems  
Yoshihiro Okamoto, H. Shiwaku, T. Yaita, S. Suzuki, K. Minato, H. Tanida  
Zeitschrift für Naturforschung, **59a** (2004) 819-824

7229

Macroscopic Separation of Dense Fluid Phase and Liquid Phase of Phosphorus  
Yoshinori Katayama, Y. Inamura, T. Mizutani, M. Yamakata, W. Utsumi, O. Shimomura  
Science, **306** (2004) 848-851

7285

Resonant Inelastic X-ray Scattering Study of the Hole-Doped Manganites La<sub>1-x</sub>Sr<sub>x</sub>MnO<sub>3</sub> (x=0.2, 0.4)  
Kenji Ishii, T. Inami, K. Ohwada, K. Kuzushita, J. Mizuki, Y. Murakami, S. Ishihara, Y. Endoh, S. Maekawa, K. Hirota, Y. Moritomo  
Physical Review B, **70** (2004) 224437

## **BL14B1**

5733

*In situ* X-Ray Diffraction of Graphite-Diamond Transformation using Various Catalysts under High Pressures and High

Temperatures

Wataru Utsumi, T. Okada, T. Taniguchi, K. Funakoshi, T. Kikegawa, N. Hamaya, O. Shimomura

Journal of Physics: Condensed Matter, **16** (2004) S1017-S1026

7024

Transformations in the Intermediate-Range Structure of SiO<sub>2</sub> Glass under High Pressure and Temperature  
Yasuhiro Inamura, Y. Katayama, W. Utsumi, K. Funakoshi  
Physical Review Letters, **93** (2004) 015501

7229

Macroscopic Separation of Dense Fluid Phase and Liquid Phase of Phosphorus  
Yoshinori Katayama, Y. Inamura, T. Mizutani, M. Yamakata, W. Utsumi, O. Shimomura  
Science, **306** (2004) 848-851

## **BL22XU**

6380

Application of a Portable Pulsed Magnet to Synchrotron Radiation Experiments  
Yasuhiro Matsuda, Y. Ueda, H. Nojiri, T. Takahashi, T. Inami, K. Oowada, Y. Murakami, T. Arima  
Physica B, **346-347** (2004) 519-523

## **BL23SU**

5557

A New Approach for Three-Dimensional Atomic-Image Reconstruction from a Single-Energy Photoelectron Hologram  
Tomohiro Matsushita, A. Agui, A. Yoshigoe  
Europhysics Letters, **65** (2004) 207-213

6553

Soft X-ray Magnetic Circular Dichroism Study of [Co/Pd] Multilayered Perpendicular Magnetic Films  
Akane Agui, M. Mizumaki, T. Matsushita, T. Asahi, J. Kawaji, J. Sayama, T. Osaka  
Journal of Applied Physics, **95** (2004) 7825-8731

6667

Photoemission Study of the Translational Energy Induced Oxidation Processes on Cu(111)  
Kousuke Moritani, M. Okada, S. Sato, S. Goto, T. Kasai, A. Yoshigoe, Y. Teraoka  
Journal of Vacuum Science & Technology A, **22** (2004) 1625-1630

6773		<b>理研ビームライン BL17SU</b>
Real-time Monitoring of Oxidation Processes on Si(001) Surface using O <sub>2</sub> Gas under 1000 K by Synchrotron Radiation Photoemission Spectroscopy	Akitaka Yoshigoe, K. Moritani, Y. Teraoka	Observation of the [1s2s]( <sup>3,1</sup> S) <i>n</i> ℓ <i>n'</i> ℓ' <sup>1</sup> P Inner-Shell Doubly Excited States of Ne by Photoion Yield Spectroscopy
Surface Science, <b>566-568</b> (2004) 1124-1129	Masaki Oura, H. Yamaoka, Y. Senba, H. Ohashi, F. Koike	Physical Review A, <b>70</b> (2004) 062502
6830		<b>BL19LXU</b>
Translational Energy Induced Reconstruction and Adsorption in the Oxidation Processes of Cu{111}	Kousuke Moritani, M. Okada, S. Sato, S. Goto, T. Kasai, A. Yoshigoe, Y. Teraoka	Analysis of the Mutual Coherence Function of X-Rays Using Dynamical Diffraction
Thin Solid Films, <b>464-465</b> (2004) 48-51	Hiroshi Yamazaki, T. Ishikawa	Journal of Applied Crystallography, <b>37</b> (2004) 48-51
6890		5585
Investigation of the Electronic Structure in Eu <sub>1-x</sub> Dy <sub>x</sub> TiO <sub>3</sub> by means of Soft X-ray Absorption Spectroscopy	Masaichiro Mizumaki, A. Agui, K. Yoshii, M. Nakazawa	Intensity Interferometry for the Study of X-Ray Coherence
Solid State Ionics, <b>172</b> (2004) 565-568	Makina Yabashi, K. Tamasaku, T. Ishikawa	Makina Yabashi, K. Tamasaku, T. Ishikawa
7064		Physical Review A, <b>69</b> (2004) 023813
Near-Edge X-ary Absorption Fine Structure of DNA Nucleobases Thin Film in the Nitrogen and Oxygen K-edge Region	Kentarou Fujii, K. Akamatsu, A. Yokoya	Studies of Unusual Magnetic and Electronic Properties of the Low-Carrier System CeP by Synchrotron X-rays
The Journal of Physical Chemistry B, <b>108</b> (2004) 8031-8035	Masafumi Kogi, K. Iwasa, K. Kuwahara, A. Hannan, D. Kawana, Y. Noda, T. Shobu, K. Katsumata, Y. Narumi, Y. Tabata	Physica B, <b>345</b> (2004) 55-58
7065		5848
Ion Desorption from DNA Components Irradiated with 0.5 keV Ultrasoft X-Ray Photons	Kentarou Fujii, K. Akamatsu, A. Yokoya	Synchrotron X-ray Diffraction Measurements in Applied Magnetic Fields
Radiation Research, <b>161</b> (2004) 435-441	Koichi Katsumata	Physica B, <b>345</b> (2004) 49-54
7067		5930
Decomposition of 2-deoxy-D-ribose by Irradiation with 0.6 keV Electrons and by 0.5 keV Ultrasoft X-rays	Kentarou Fujii, K. Akamatsu, A. Yokoya	Non-Resonant X-ray Bragg Diffraction by CeB <sub>6</sub>
International Journal of Radiation Biology, <b>80</b> (2004) 909-914	Yoshikazu Tanaka, U. Staub, Y. Narumi, K. Katsumata, V. Scagnoli, S. Shimomura, Y. Tabata, Y. Onuki	Physica B, <b>345</b> (2004) 78-81
7210		5931
Low-Energy Auger- and Photo-Electron Effects on the Degradation of Thymine by Ultrasoft X-Irradiation	Ken Akamatsu, K. Fujii, A. Yokoya	Synchrotron X-ray Diffraction Studies on Magnetic Materials in High Magnetic Fields
International Journal of Radiation Biology, <b>80</b> (2004) 849-853	Yasuo Narumi, K. Katsumata, Y. Tanaka, T. Nakamura, S. Shimomura, Y. Tabata, S. Kimura, M. Matsuda	Physica B, <b>346-347</b> (2004) 11-14
6102		

6803

The Coexistence of Magnetic Phases at the First-Order Phase Transition of a Metamagnet  $\text{FeCl}_2 \cdot 2\text{H}_2\text{O}$  Studied by X-ray Diffraction

Yasuo Narumi, K. Katsumata, T. Nakamura, Y. Tanaka, S. Shimomura, T. Ishikawa, M. Yabashi

Journal of Physics: Condensed Matter, **16** (2004) L57-L63

## BL26B1

6596

Crystal Structure of the GTP-Binding Protein Obg from *Thermus Thermophilus* HB8

Mutsuko Kukimoto-Niino, K. Murayama, M. Inoue, T. Terada, J. R. H. Tame, S. Kuramitsu, M. Shirouzu, S. Yokoyama

Journal of Molecular Biology, **337** (2004) 761-770

6662

Structural Basis of the Substrate-Specific Two-Step Catalysis of Long Chain Fatty Acyl-CoA Synthetase Dimer

Yuuko Hisanaga, H. Ago, N. Nakagawa, K. Hamada, K. Ida, M. Yamamoto, T. Hori, Y. Arii, M. Sugahara, S. Kuramitsu, S. Yokoyama, M. Miyano

The Journal of Biological Chemistry, **279** (2004) 31717-31726

7132

Crystallization and Preliminary X-ray Crystallographic Study of the Editing Domain of *Thermus thermophilus* Isoleucyl-tRNA Synthetase Complexed with Pre- and Post-Transfer Editing-Substrate Analogues

Ryuya Fukunaga, S. Yokoyama

Acta Crystallographica Section D, **60** (2004) 1900-1902

7133

Crystallization and Preliminary X-ray Crystallographic Study of Leucyl-tRNA Synthetase from the Archaeon *Pyrococcus horikoshii*

Ryuya Fukunaga, S. Yokoyama

Acta Crystallographica Section D, **60** (2004) 1916-1918

7405

Sample Management System for a Vast amount of Frozen Crystals at SPring-8

Gou Ueno, R. Hirose, K. Ida, T. Kumasaka, M. Yamamoto

Journal of Applied Crystallography, **37** (2004) 867-873

## BL26B2

6370

Structural Basis of Leukotriene B<sub>4</sub> 12-Hydroxydehydrogenase/15-Oxo-prostaglandin 13-Reductase Catalytic Mechanism and a Possible Src Homology 3 Domain Binding Loop

Tetsuya Hori, Y. Takehiko, H. Ago, M. Sugahara, G. Ueno, M. Yamamoto, T. Kumasaka, T. Shimizu, M. Miyano

The Journal of Biological Chemistry, **279** (2004) 22615-22623

7405

Sample Management System for a Vast amount of Frozen Crystals at SPring-8

Gou Ueno, R. Hirose, K. Ida, T. Kumasaka, M. Yamamoto

Journal of Applied Crystallography, **37** (2004) 867-873

7569

Crystallization and Preliminary X-ray Crystallographic Analysis of Chitinase F1 (ChiF1) from the Alkaliphilic *Nocardiopsis* sp. strain F96

Tsutomu Matsui, T. Kumasaka, K. Endo, T. Sato, S. Nakamura, N. Tanaka

Acta Crystallographica Section D, **60** (2004) 2016-2018

7570

Crystallization and Preliminary X-ray Diffraction Studies of the Hyperthermophilic Archaeal Sulredoxin Having the Unique Rieske [2Fe-2S] Cluster Environment

Takuro Uchiyama, A. Kounosu, T. Sato, N. Tanaka, T. Iwasaki, T. Kumasaka

Acta Crystallographica Section D, **60** (2004) 1487-1489

## BL29XU

5660

Intensity Interferometry for the Study of X-Ray Coherence

Makina Yabashi, K. Tamasaku, T. Ishikawa

Physical Review A, **69** (2004) 023813

6013

A Probe of Intrinsic Valence Band Electronic Structure: Hard X-ray Photoemission

Yasutaka Takata, K. Tamasaku, T. Tokushima, D. Miwa, S. Shin, T. Ishikawa, M. Yabashi, K. Kobayashi, J. Kim, T. Yao, T. Yamamoto, M. Arita, H. Namatame, M. Taniguchi

Applied Physics Letters, **84** (2004) 4310-4312

- 6447 Imaging of Fine Structure of Bone Sample with High Coherent X-ray Beam and High Spatial Resolution Detector  
Masatsugu Hirano, K. Yamasaki, R. Kitazawa, S. Kitazawa, H. Okada, T. Katafuchi, T. Sakurai, T. Kondoh, C. Ohbayashi, S. Maeda, K. Sugimura, S. Tamura  
Radiation Medicine, **22** (2004) 56-59
- 6678 An X-ray BBB Michelson Interferometer  
John P. Sutter, T. Ishikawa, U. Kuetgens, G. Materlik, Y. Nishino, A. Rostomyan, K. Tamasaku, M. Yabashi  
Journal of Synchrotron Radiation, **11** (2004) 378-385
- 6683 Intrinsic Valence Band Study of Molecular-Beam-Epitaxy-Grown GaAs and GaN by High-Resolution Hard-X-ray Photoemission Spectroscopy  
Keisuke Kobayashi, Y. Takata, T. Yamamoto, J. Kim, H. Makino, K. Tamasaku, M. Yabashi, T. Ishikawa, S. Shin, T. Yao  
Japanese Journal of Applied Physics, **43** (2004) L1029-L1031
- 6821 Hybridization of Cr 3d-N 2p-Ga 4s in the Wide Band-Gap Diluted Magnetic Semiconductor  $\text{Ga}_{1-x}\text{Cr}_x\text{N}$   
Jung-Jin Kim, H. Makino, K. Kobayashi, Y. Takata, T. Yamamoto, T. Hanada, M. Cho, E. Ikenaga, M. Yabashi, D. Miwa, Y. Nishino, K. Tamasaku, T. Ishikawa, S. Shin, T. Yao  
Physical Review B, **70** (2004) 161315(R)
- 6889 Bulk Electronic Structure of  $\text{Na}_{0.35}\text{CoO}_2 \cdot 1.3\text{H}_2\text{O}$   
Ashishi Chainani, T. Yokoya, Y. Takata, K. Tamasaku, M. Taguchi, T. Shimojima, N. Kamakura, K. Horiba, S. Tsuda, S. Shin, D. Miwa, Y. Nishino, T. Ishikawa, M. Yabashi, K. Kobayashi, H. Namatame, M. Taniguchi, K. Takada, T. Sasaki, H. Sakurai, E. Takayama-Muromachi  
Physical Review B, **69** (2004) R180508
- 6979 Valence Transition of  $\text{YbInCu}_4$  Observed in Hard X-Ray Photoemission Spectra  
Hitoshi Sato, K. Shimada, M. Arita, K. Hiraoka, K. Kojima, Y. Takeda, K. Yoshikawa, M. Sawada, M. Nakatake, H. Namatame, M. Taniguchi, Y. Takata, E. Ikenaga, S. Shin, K. Kobayashi, K. Tamasaku, Y. Nishino, D. Miwa, M. Yabashi, T. Ishikawa  
Physical Review Letters, **63** (2004) 246404
- 6981 Hard X-ray Photoemission Spectroscopy of  $\text{YbInCu}_4$   
Hitoshi Sato, K. Shimada, M. Arita, Y. Takeda, M. Sawada, M. Nakatake, K. Yoshikawa, H. Namatame, Y. Takata, K. Kobayashi, E. Ikenaga, S. Shin, M. Yabashi, D. Miwa, Y. Nishino, K. Tamasaku, T. Ishikawa, K. Hiraoka, K. Kojima, M. Taniguchi  
Physica B, **351** (2004) 298-300
- BL44B2**
- 5831 Chemical Rescue of a Site-Specific Mutant of Bacterial Copper Amine Oxidase for Generation of the Topa Quinone Cofactor  
Hideyuki Matsunami, T. Okajima, S. Hirota, H. Yamaguchi, H. Hori, S. Kuroda, K. Tanizawa  
Biochemistry, **43** (2004) 2178-2187
- 5984 Crystal Structure of a Zinc-Binding ATP Sulfurylase from *Thermus thermophilus* HB8  
Keiichi Fukuyama, M. Sugishima, Y. Taguchi  
Biochemistry, **43** (2004) 4111-4118
- 6595 Crystal Structure of the Conserved Hypothetical Protein TT1380 from *Thermus Thermophilus* HB8  
Takashi Wada, M. Shirouzu, T. Terada, Y. Kamewari, S. Park, J. Tame, S. Kuramitsu, S. Yokoyama  
Proteins: Structure, Function, Bioinformatics, **55** (2004) 778-780
- 6596 Crystal Structure of the GTP-Binding Protein Obg from *Thermus Thermophilus* HB8  
Mutsuko Kukimoto-Niino, K. Murayama, M. Inoue, T. Terada, J. R. H. Tame, S. Kuramitsu, M. Shirouzu, S. Yokoyama  
Journal of Molecular Biology, **337** (2004) 761-770
- 6639 Structural Basis for Octameric Ring Formation and DNA Interaction of the Human Homologous-Pairing Protein Dmc1  
Takashi Kinebuchi, W. Kagawa, R. Enomoto, K. Tanaka, K. Miyagawa, T. Shibata, H. Kurumizaka, S. Yokoyama  
Molecular Cell, **14** (2004) 363-374

- 6977  
 Structural Basis of Human Cytoglobin for Ligand Binding  
 Hiroshi Sugimoto, M. Makino, H. Sawai, N. Kawada, K. Yoshizato, Y. Shiro  
*Journal of Molecular Biology*, **339** (2004) 873-885
- 7456  
 Crystal Structure of Human Pirin: An Iron-Bonding Nuclear Protein and Transcription Cofactor  
 Hai Pang, M. Bartlam, Q. Zeng, H. Miyatake, T. Hisano, K. Miki, L. Wong, G. F. Gao, Z. Rao  
*The Journal of Biological Chemistry*, **279** (2004) 1491-1498
- 7457  
 The N-Terminal Domain of the Replication Initiator Protein RepE is a Dimerization Domain Forming a Stable Dimer  
 Akira Nakamiura, H. Komori, G. Kobayashi, A. Kita, C. Wada, K. Miki  
*Biochemical and Biophysical Research Communications*, **315** (2004) 10-15
- 7458  
 Crystallization and Preliminary X-ray Crystallographic Studies on the Small Form of Glucose-Inhibited Division Protein A from *Thermus thermophilus* HB8  
 Wakana Iwasaki, H. Miyatake, A. Ebihara, K. Miki  
*Acta Crystallographica Section D*, **60** (2004) 515-517
- 7460  
 DNA Apophotolyase from *Anacystis nidulans*: 1.8 Å Structure, 8-HDF Reconstitution and X-ray Induced FAD-Reduction  
 Remco Kort, H. Komori, S. Adachi, K. Miki, A. P. M. Eker  
*Acta Crystallographica Section D*, **60** (2004) 1205-1213
- 7461  
 The Crystal Structure of an Oxidatively Stable Subtilisin-Like Alkaline Serine Protease, KP-43, with a C-Terminal β-Barrel Domain  
 Tsuyoshi Nonaka, M. Fujihashi, A. Kita, K. Saeki, S. Ito, H. Horikoshi, K. Miki  
*The Journal of Biological Chemistry*, **279** (2004) 47344-47351
- 7574  
 Crystal Structures of the Group II Chaperonin from *Thermococcus* strain KS-1: Steric Hindrance by the Substituted Amino Acid, and Inter-subunit Rearrangement between Two Crystal Forms  
 Yasuhito Shomura, T. Yoshida, R. Iizuka, T. Maruyama, M. Yohda, K. Miki  
*Journal of Molecular Biology*, **335** (2004) 1265-1278
- 7651  
 Expression, Purification and Preliminary X-ray Characterization of Histidinol Phosphate Phosphatase  
 Rie Omi, M. Goto, N. Nakagawa, I. Miyahara, K. Hirotsu  
*Acta Crystallographica Section D*, **60** (2004) 574-576
- BL45XU**
- 6370  
 Structural Basis of Leukotriene B<sub>4</sub> 12-Hydroxydehydrogenase/15-Oxo-prostaglandin 13-Reductase Catalytic Mechanism and a Possible Src Homology 3 Domain Binding Loop  
 Tetsuya Hori, Y. Takehiko, H. Ago, M. Sugahara, G. Ueno, M. Yamamoto, T. Kumasaki, T. Shimizu, M. Miyano  
*The Journal of Biological Chemistry*, **279** (2004) 22615-22623
- 6550  
 Activation Mechanisms of Transcriptional Regulator CooA Revealed by Small-Angle X-ray Scattering  
 Shuji Akiyama, T. Fujisawa, K. Ishimori, I. Morishima, S. Aono  
*Journal of Molecular Biology*, **341** (2004) 651-668
- 6598  
 Crystal Structure of Elongation Factor P from *Thermus Thermophilus* HB8  
 Kyoko Hanawa-Suetsugu, S. Sekine, H. Sakai, C. Hori-Takemoto, T. Terada, S. Unzai, J. R. H. Tame, S. Kuramitsu, M. Shirouzu, S. Yokoyama  
*Proceedings of the National Academy of Sciences of the United States of America*, **101** (2004) 9595-9600
- 6642  
 Structural Basis for Transcription Regulation by Alarmone ppGpp  
 Irina Artsimovitch, V. Patlan, S. Sekine, M. Vassylyeva, T. Hosaka, K. Ochi, S. Yokoyama, V. Vassylyev  
*Cell*, **117** (2004) 299-310
- 6662  
 Structural Basis of the Substrate-Specific Two-Step Catalysis of Long Chain Fatty Acyl-CoA Synthetase Dimer  
 Yuuko Hisanaga, H. Ago, N. Nakagawa, K. Hamada, K. Ida, M. Yamamoto, T. Hori, Y. Arii, M. Sugahara, S. Kuramitsu, S. Yokoyama, M. Miyano  
*The Journal of Biological Chemistry*, **279** (2004) 31717-31726

- 6836 Radiation Damage to a Protein Solution, Detected by Synchrotron X-ray Small-Angle Scattering: Dose-Related Considerations and Suppression by Cryoprotectants Shigeo Kuwamoto, S. Akiyama, T. Fujisawa Journal of Synchrotron Radiation, **11** (2004) 462-468
- 6918 Conformations of Variably Linked Chimeric Proteins Evaluated by Synchrotron X-ray Small-Angle Scattering Ryoichi Arai, W. Wriggers, Y. Nishikawa, T. Nagamune, T. Fujisawa Proteins: Structure, Function, and Bioinformatics, **57** (2004) 829-838
- 7092 Collapse and Search Dynamics of Apomyoglobin Folding Revealed by Submillisecond Observations of  $\alpha$ -Helical Content and Compactness Takanori Uzawa, S. Akiyama, T. Kimura, S. Takahashi, K. Ishimori, I. Morishima, T. Fujisawa Proceedings of the National Academy of Sciences of the United States of America, **101** (2004) 1171-1176
- 7123 The Crystal Structures of the Ferric and Ferrous Forms of the Heme Complex of HmuO, a Heme Oxygenase of *Corynebacterium diphtheriae* Shoko Hirotsu, G. Chu, M. Unno, D. Lee, T. Yoshida, S. Park, Y. Shiro, M. Ikeda-Saito The Journal of Biological Chemistry, **279** (2004) 11937-11947
- 7458 Crystallization and Preliminary X-ray Crystallographic Studies on the Small Form of Glucose-Inhibited Division Protein A from *Thermus thermophilus* HB8 Wakana Iwasaki, H. Miyatake, A. Ebihara, K. Miki Acta Crystallographica Section D, **60** (2004) 515-517
- 7459 Structure of the C Subunit of V-type ATPase from *Thermus thermophilus* at 1.85 Å Resolution Nobutaka Numoto, A. Kita, K. Miki Acta Crystallographica Section D, **60** (2004) 810-815
- 7574 Crystal Structures of the Group II Chaperonin from *Thermococcus* strain KS-1: Steric Hindrance by the Substituted Amino Acid, and Inter-subunit Rearrangement between Two Crystal Forms Yasuhito Shomura, T. Yoshida, R. Iizuka, T. Maruyama, M. Yohda, K. Miki Journal of Molecular Biology, **335** (2004) 1265-1278

## 研究開発その他

### Accelerator

5590

Method for Stabilizing Beam Intensity and Energy in the SPring-8 Linac

Takao Asaka, Y. Kawashima, T. Takashima, T. Kobayashi, T. Ohshima, H. Hanaki

Nuclear Instruments and Methods in Physics Research Section A, **516** (2004) 249-269

6397

Pressure-Measurement Errors in a Cold-Cathode-Ionization Gauge Caused by an External-Electron Source

Hiroshi Saeki, T. Magome, Y. Shoji, T. Momose

Journal of Vacuum Science & Technology A, **22** (2004) 2212-2215

6453

HOM-Damped Re-Entrant Quasi-Half-Cell Cavity for the SPring-8 Storage Ring

Hiroyasu Ego

Nuclear Instruments and Methods in Physics Research Section A, **516** (2004) 270-280

6563

Three-Dimensional Simulation Code for SPring-8 RF Gun System

Akihiko Mizuno, T. Asaka, H. Dewa, T. Kobayashi, S. Suzuki,

T. Taniuchi, H. Tomizawa, K. Yanagida, H. Hanaki, M. Uesaka

Nuclear Instruments and Methods in Physics Research Section A, **528** (2004) 387-391

6711

Perturbative Formulation for Nonlinear Chromaticaly of Circular Accelerator

Masaru Takao, H. Tanaka, K. Soutome, J. Schimizu

Physical Review E, **70** (2004) 016501

6771

Hot-Cathode-Ionization-Gauge System with a Self-Compensating Circuit for Errors Caused by an External-Electron Source

Hiroshi Saeki, M. Tamotsu, T. Aoki, N. Gotoh, T. Momose

Review of Scientific Instruments, **75** (2004) 5152-5159

6845

Spectrographic Approach for the Diagnosis of rf Breakdown in

Accelerator rf Structures

Hiromitsu Tomizawa, T. Taniuchi, H. Hanaki, Y. Igarashi, S. Yamaguchi, A. Enomoto

Applied Surface Science, **235** (2004) 214-220

6862

DC Septum Magnets and Their Leakage Field Effects on an Electron Beam in the SPring-8 Storage Ring

Koji Tsumaki, T. Shimada, K. Kajimoto, H. Yonehara, N. Kumagai

IEEE Transactions on Applied Superconductivity, **14** (2004) 433-436

### Insertion Device

6103

Cryogenic Permanent Magnet Undulators

Toru Hara, T. Tanaka, H. Kitamura, T. Bizen, X. Maréchal, T. Seike, T. Kohda, Y. Matsuura

Physical Review Special Topics - Accelerators and Beams, **7** (2004) 050702

6755

Application of High-Temperature Superconducting Permanent Magnets to Synchrotron Radiation Sources

Takashi Tanaka, T. Hara, H. Kitamura, R. Tsuru, T. Bizen, X. Maréchal, T. Seike

Physical Review Special Topics- Accelerators and Beams, **7** (2004) 090704

### Instrumentation and Technique

5387

Infrared Microspectroscopy Station at BL43IR of SPring-8

Yuka Ikemoto, T. Moriwaki, T. Hiroto, S. Kimura, K. Shinoda, M. Matsunami, N. Nagai, T. Nanba, K. Kobayashi, H. Kimura

Infrared Physics and Technology, **45** (2004) 369-373

5660

Intensity Interferometry for the Study of X-Ray Coherence

Makina Yabashi, K. Tamasaku, T. Ishikawa

Physical Review A, **69** (2004) 023813

6037

A Large-Area CMOS Imager as an X-ray Detector for Synchrotron Radiation Experiments

Naoto Yagi, M. Yamamoto, K. Uesugi, K. Inoue

Journal of Synchrotron Radiation, **11** (2004) 347-352

6678

#### An X-ray BBB Michelson Interferometer

John P. Sutter, T. Ishikawa, U. Kuetgens, G. Materlik, Y.

Nishino, A. Rostomyan, K. Tamasaku, M. Yabashi

Journal of Synchrotron Radiation, **11** (2004) 378-385

7008

#### The Design and Performance of Beamline BL16XU at SPring-8

Yasuharu 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

## Staff Activity (Out of SPring-8)

6086

Thymol: a Classical Small-Molecule Compound that has a Dual Effect (Potentiating and Inhibitory) on Myosin

Takumi Tamura, H. Iwamoto

Biochemical and Biophysical Research Communications, **318** (2004) 786-791

7209

Nano-Cluster Formation in Halogen Etching on Cl/Si(111)-7 × 7

Ken-ichi Shudo, T. Kirimura, N. Kaneko, M. Takahashi, Y.

Tanaka, T. Ishikawa, M. Tanaka, H. Nakagawa, S. Asakura

Surface Science, **566-568** (2004) 425-429

7219

Surface Modification of Cl-Adsorbed Si(111)-7 × 7 by the Irradiation of Infrared Pulsed Laser

Tomoyuki Kirimura, T. Shirao, K. Shudo, Y. Tanaka, T. Ishikawa, M. Tanaka

Surface Science, **566-568** (2004) 1137-1142

## Optics

5585

Analysis of the Mutual Coherence Function of X-Rays Using Dynamical Diffraction

Hiroshi Yamazaki, T. Ishikawa

Journal of Applied Crystallography, **37** (2004) 48-51

5660

Intensity Interferometry for the Study of X-Ray Coherence

Makina Yabashi, K. Tamasaku, T. Ishikawa

Physical Review A, **69** (2004) 023813

6656

Phase Retrieval with Two-Beam Off-Axis X-ray Holography

Yoshiki Kohmura, T. Sakurai, T. Ishikawa, Y. Suzuki

Journal of Applied Physics, **96** (2004) 1781-1784

## Theory

5557

A New Approach for Three-Dimensional Atomic-Image Reconstruction from a Single-Energy Photoelectron Hologram

Tomohiro Matsushita, A. Agui, A. Yoshigoe

Europhysics Letters, **65** (2004) 207-213

6810

Resolution Limit of Refractive Lens and Fresnel Lens in X-ray Region

Yoshio Suzuki

Japanese Journal of Applied Physics, **43** (2004) 7311-7314