

4. Publication List

1A

D.-H.Im, K.Kimura, F.Hayasaka, T.Tanaka, M.Noguchi, A.Kobayashi, S.Shoda, K.Miyazaki, T.Wakagi and S.Fushinobu

Crystal Structures of Glycoside Hydrolase Family 51 α -L-Arabinofuranosidase from *Thermotoga maritima*
Biosci. Biotechnol. Biochem., **76** (2012) 423.

E.H.Lee, Y.W.Cho and K.Y.Hwang
Crystal Structure of LeuD from *Methanococcus jannaschii*
Biochem. Biophys. Res. Commun., **419** (2012) 160.

S.Kikuchi, K.Hara, T.Shimizu, M.Sato and H.Hashimoto
Structural Basis of Recruitment of DNA Polymerase ζ by Interaction between REV1 and REV7 Proteins
J. Biol. Chem., **287** (2012) 33847.

U.Ohto, K.Fukase, K.Miyake and T.Shimizu
Structural Basis of Species-Specific Endotoxin Sensing by Innate Immune Receptor TLR4/MD-2
Proc. Natl. Acad. Sci. USA, **109** (2012) 7421.

B.G.Han, K.H.Kim, S.J.Lee, K.C.Jeong, J.W.Cho, K.H.Noh, T.W.Kim, S.J.Kim, H.J.Yoon, S.W.Suh, S.Lee and B.I.Lee
Helical Repeat Structure of Apoptosis Inhibitor 5 Reveals Protein-Protein Interaction Modules
J. Biol. Chem., **287** (2012) 10727.

S.Kikuchi, K.Hara, T.Shimizu, M.Sato and H.Hashimoto
Crystallization and X-Ray Diffraction Analysis of the Ternary Complex of the C-Terminal Domain of Human REV1 in Complex with REV7 Bound to a REV3 Fragment Involved in Translesion DNA Synthesis
Acta Cryst. F, **68** (2012) 962.

H.Matsumura, E.Mizohata, H.Ishida, A.Kogami, T.Ueno, A.Makino, T.Inoue, A.Yokota, T.Mae and Y.Kai
Crystal Structure of Rice Rubisco and Implications for Activation Induced by Positive Effectors NADPH and 6-Phosphogluconate
J. Mol. Biol., **422** (2012) 75.

H.Matsumura, N.Kusaka, T.Nakamura, N.Tanaka, K.Sagegami, K.Uegaki, T.Inoue and Y.Mukai
Crystal Structure of the N-Terminal Domain of the Yeast General Corepressor Tup1p and Its Functional Implications
J. Biol. Chem., **287** (2012) 26528.

S.Sugiyama, M.Maruyama, G.Sazaki, M.Hirose, H.Adachi, K.Takano, S.Murakami, T.Inoue, Y.Mori and H. Matsumura
Growth of Protein Crystals in Hydrogels Prevents Osmotic Shock
J. Am. Chem. Soc., **134** (2012) 5786.

A.R.Han, H.S.Kim, G.Y.Cho, H.S.Ki, H-Y.Kim and K.Y.Hwang

Crystallization and Preliminary X-Ray Crystallographic Analysis of the Methionine Sulfoxide Reductase A Domain of MsrAB from *Haemophilus Influenzae*
Acta Cryst. F, **68** (2012) 557.

M.Englert, S.Xia, C.Okada, A.Nakamura, V.Tanavde, M.Yao, S.H.Eom, W.H.Konigsberg D.Soll and J.Wang
Structural and Mechanistic Insights into Guanylylation of RNA-Splicing Ligase RtcB Joining RNA between 3'-Terminal Phosphate and 5'-OH
Proc. Natl. Acad. Sci. USA, **38** (2012) 15235.

Y.Ashikawa, Z.Fujimoto, Y.Usami, K.Inoue, H.Noguchi, H.Yamane and H.Nojiri
Structural Insight into the Substrate- and Dioxygen-Binding Manner in the Catalytic Cycle of Rieske Nonheme Iron Oxygenase System, Carbazole 1,9a-Dioxygenase
BMC Struct. Biol., **12** (2012) 15.

M.Unno, K.Kizawa, M.Ishihara and H.Takahara
Crystallization and Preliminary X-Ray Crystallographic Analysis of Human Peptidylarginine Deiminase Type III
Acta Cryst. F, **68** (2012) 668.

H Ru, LX Zhao, W Ding, LY Jiao, N Shaw, WG Liang, LG Zhang, LW Hung, N Matsugaki, S Wakatsuki and ZJ Liu
S-SAD Phasing Study of Death Receptor 6 and Its Solution Conformation Revealed by SAXS
Acta Cryst. D, **68** (2012) 521.

M.Fujihashi, M.Hiraki, G.Ueno, S.Baba, H.Murakami, M.Suzuki, N.Watanabe, I.Tanaka, A.Nakagawa, S.Wakatsuki, M.Yamamoto and K.Miki
Crystal Sample Pins and a Storage Cassette System Compatible with the Protein Crystallography Beamlines at both the Photon Factory and SPring-8
J. Appl. Cryst., **45** (2012) 1156.

T.Hayashi, M.Senda, H.Morohashi, H.Higashi, M.Horio, Y.Kashiba, L.Nagase, D.Sasaya, T.Shimizu, N.Venugopalan, H.Kumeta, N.Noda, F.Inagaki, T.Senda and M.Hatakeyama
Tertiary Structure-Function Analysis Reveals the Pathogenic Signaling Potentiation Mechanism of *Helicobacter pylori* Oncogenic Effector CagA
Cell Host & Microbe, **12** (2012) 20.

Former 1B

T.Aree and H.-B.Bürgi
Dynamics and Thermodynamics of Crystalline Polymorphs: α -Glycine, Analysis of Variable-Temperature Atomic Displacement Parameters
J. Phys. Chem. A, **116** (2012) 8092.

T.Kambe, X.He, Y.Takahashi, Y.Yamanari, K.Teranishi, H.Mitamura, S.Shibasaki, K.Tomita, R.Eguchi, H.Goto, Y.Takabayashi, T.Kato, A.Fujiwara, T.Kariyado, H.Aoki and Y.Kubozono
Synthesis and Physical Properties of Metal-Doped Picene Solids
Phys. Rev. B, **86** (2012) 214507.

R.I.Thomson, C.M.Pask, G.O.Lloyd, M.Mito and J.M.Rawson
Pressure-Induced Enhancement of Magnetic-Ordering Temperature in an Organic Radical to 70 K: A Magneto-structural Correlation
Chem. Eur. J., **18** (2012) 8629.

2A

T.Miyamoto, T.Wada, H.Niimi, S.Suzuki, M.Kato, M.Kudo and K.Asakura
A New Collinear-Type Energy-Filtered X-Ray Photoemission Electron Microscope Equipped with a Multi-Pole Aberration-Corrected Air-Core Coil Wien Filter
Jpn. J. Appl. Phys., **51** (2012) 046701.

2C

A.Chikamatsu, T.Matsuyama, Y.Hirose, H.Kumigashira, M.Oshima and T.Hasegawa
Investigation of Electronic States of Infinite-Layer SrFeO₂ Epitaxial Thin Films by X-Ray Photoemission and Absorption Spectroscopies
J. Elec. Spec. Relat. Phenom., **184** (2012) 547.

Y.Ishiwata, T.Shiraishi, N.Ito, S.Suehiro, T.Kida, H.Ishii, Y.Tezuka, Y.Inagaki, T.Kawae, H.Oosato, E.Watanabe, D.Tsuya, M.Nantoh and K.Ishibashi
Metal-Insulator Transition Sustained by Cr-Doping in V₂O₃ Nanocrystals
Appl. Phys. Lett., **100** (2012) 043103.

M.Minohara, K.Horiba, H.Kumigashira, E.Ikenaga and M.Oshima
Potential Profiling in Depth for Perovskite Oxide Heterojunctions using Photoemission Spectroscopy
Phys. Rev. B, **16** (2012) 165108.

S.Toyoda, H.Kumigashira, M.Oshima, H.Sugaya and H.Morita
Determining Factor of Effective Work Function in Metal/bi-Layer High-*k* Gate Stack Structure Studied by Photoemission Spectroscopy
Appl. Phys. Lett., **100** (2012) 112906.

J.Adachi
Development and Use of Novel Soft X-Ray Spectroscopic Methods for Gaseous Molecules
Mol. Sci., **6** (2012) A0048. (*in Japanese*).

Y.Ishiwata, S.Suehiro, T.Kida, H.Ishii, Y.Tezuka, H.Oosato, E.Watanabe, D.Tsuya, Y.Inagaki, T.Kawae, M.Nantoh and K.Ishibashi
Spontaneous Uniaxial Strain and Disappearance of the Metal-Insulator Transition in Monodisperse V₂O₃ Nanocrystals
Phys. Rev. B, **86** (2012) 035449.

T.Okumura, T.Inoue, Y.Tasaki, E.Sakai, H.Kumigashira and T.Higuchi
Electronic Structure of SrTi_{0.99}Sc_{0.01}O₃ Thin Film Studied by High-Resolution Soft-X-Ray Spectroscopy
J. Phys. Soc. Jpn., **81** (2012) 094705.

S.Aizaki, T.Yoshida, K.Yoshimatsu, M.Takizawa, M.Minohara, S.Ideta, A.Fujimori, K.Gupta, P.Mahadevan, K.Horiba, H.Kumigashira and M.Oshima
Self-Energy on the Low- to High-Energy Electronic Structure of Correlated Metal SrVO₃
Phys. Rev. Lett., **109** (2012) 056401.

J.Adachi, M.Kazama, T.Teramoto, N.Miyauchi, T.Mizuno, M.Yamazaki, T.Fujikawa and A.Yagishita
C 1s Photoelectron Angular Distributions from Fixed-in-Space CO Molecules in the High-Energy Continuum \geq 50 eV
J. Phys. B, **45** (2012) 194007.

E.B.Guedes, M.Abbate, K.Ishigami, A.Fujimori, K.Yoshimatsu, H.Kumigashira, M.Oshima, F.C.Vicentin, P.T.Fonseca and R.J.O.Mossaneck
Core Level and Valence Band Spectroscopy of SrRuO₃: Electron Correlation and Covalence Effects
Phys. Rev. B, **86** (2012) 235127.

S.Toyoda, T.Shinohara, H.Kumigashira, M.Oshima and Y.Kato
Significant Increase in Conduction Band Discontinuity Due to Solid Phase Epitaxy of Al₂O₃ Gate Insulator Films on GaN Semiconductor
Appl. Phys. Lett., **101** (2012) 231607.

T.Mizuno, J.Adachi, N.Miyauchi, M.Kazama, M.Stener, P.Decleva and A.Yagishita
Recoil Frame Photoelectron Angular Distributions of BF₃: A Sensitive Probe of the Shape Resonance in the F 1s Continuum
J. Chem. Phys., **136** (2012) 074305.

M.Stener, P.Decleva, J.Adachi, N.Miyauchi, M.Yamazaki and A.Yagishita
Recoil Frame Photoelectron Angular Distributions in Core O 1s Ionization of H₂CO
J. Phys. B, **45** (2012) 194004.

M.Kazama, H.Shinotsuka, T.Fujikawa, M.Stener, P.Decleva, J.Adachi, T.Mizuno and A.Yagishita
Multiple-Scattering Calculations for 1s Photoelectron Angular Distributions from Single Oriented Molecules in the Energy Region above 50eV
J. Elec. Spec. Relat. Phenom., **185** (2012) 535.

Y.Kozuka, H.Seki, T.C.Fujita, S.Chakraverty,
K.Yoshimatsu, H.Kumigashira, M.Oshima,
M.S.Bahramy, R.Arita and M.Kawasaki
Epitaxially Stabilized EuMoO₃: A New Itinerant
Ferromagnet
Chem. Mater., **24** (2012) 3746.

3A

H.Wadati, J.Okamoto, M.Garganourakis, V.Scagnoli,
U.Staub, Y.Yamasaki, H.Nakao, Y.Murakami,
M.Mochizuki, M.Nakamura, M.Kawasaki and Y.Tokura
Origin of the Large Polarization in Multiferroic
YMnO₃ Thin Films Revealed by Soft- and Hard-X-Ray
Diffraction
Phys. Rev. Lett., **108** (2012) 047203.

D.Bizen, H.Nakao, K.Iwasa, Y.Murakami, T.Osakabe,
J.Fujioka, T.Yasue, S.Miyasaka and Y.Tokura
Magnetic Phase Diagrams of YVO₃ and TbVO₃ under
High Pressure
J. Phys. Soc. Jpn., **81** (2012) 024715.

T.Matsumura, T.Yonemura, K.Kunimori, M.Sera, F.Iga,
T.Nagao and J.Igarashi
Antiferroquadrupole Order and Magnetic Field Induced
Octupole in CeB₆
Phys. Rev. B, **85** (2012) 174417.

M.Uchida, Y.Yamasaki, Y.Kaneko, K.Ishizaka,
J.Okamoto, H.Nakao, Y.Murakami and Y.Tokura
Pseudogap-Related Charge Dynamics in the Layered
Nickelate R_{2-x}Sr_xNiO₄ ($x \sim 1$)
Phys. Rev. B, **86** (2012) 165126.

3B

T.Hasegawa, S.Munakata, S.Imanishi, Y.Kakefuda,
K.Edamoto and K.Ozawa
Oxidation of Ultra-Thin Ti Films on Mo(100): Soft X-
Ray Photoelectron Spectroscopy Study
Surf. Sci., **606** (2012) 414.

K.Ozawa
Metallization of Oxide Semiconductor Surfaces by
Chemical Modification
Chemical Industry, **63** (2012) 207. (*in Japanese*).

S.Imanishi, S.Munakata, Y.Kakefuda, K.Edamoto and
K.Ozawa
Characterization of Ni₂P(10-10): Soft X-Ray
Photoelectron Spectroscopy Study
e-J. Surf. Sci. Nanotech., **10** (2012) 45.

M.EMORI, M.Sugita, K.Ozawa and H.Sakama
Electronic Structure of Epitaxial Anatase TiO₂ Films:
Angle-Resolved Photoelectron Spectroscopy Study
Phys. Rev. B, **85** (2012) 035129.

K.Edamoto, T.Hasegawa, S.Munakata, Y.Kakefuda and
K. Ozawa
Electronic Structure of the Ultra-Thin TiO₂ Film on
Ag(100): Resonant Photoemission Spectroscopy Study
e-J. Surf. Sci. Nanotech., **10** (2012) 286.

S.Wang, T.Sakurai, R.Kuroda and K.Akimoto
Energy Band Bending Induced Charge Accumulation at
Fullerene/Bathocuproine Heterojunction Interface
Appl. Phys. Lett., **100** (2012) 243301.

T.Odagiri, M.Nakano, T.Tanabe, Y.Kumagai,
I.H.Suzuki, M.Kitajima and N.Kouchi
Three-Body Neutral Dissociations of a Multiply Excited
Water Molecule around the Double Ionization Potential
J. Phys. B, **45** (2012) 215204.

T.Osawa, K.Kawajiri, N.Suzuki, T.Nagata, Y.Azuma
and F.Koike
Photoion-Yield Study of the 3p-3d Giant Resonance
Excitation Region of Isolated Cr, Mn and Fe Atoms
J. Phys. B, **45** (2012) 225204.

S.Wang, T.Sakurai, R.Kuroda and K.Akimoto
Energy Level Alignment of C₆₀/Ca Interface with
Bathocuproine as an Interlayer Studied by Ultraviolet
Photoelectron Spectroscopy
Jpn. J. Appl. Phys., **51** (2012) 10NE32.

T.Isao
Electronic Resonance and Photoemission Study of
Nitrogen Doped TiO₂ Rutile (110) Single Crystals
Appl. Surf. Sci., **259** (2012) 320.

3C

M.Ito, R.Nagayasu, T.Tadenuma, K.Suzuki, A.Sato,
H.Adachi, Y.Sakurai and Y.Onuki
A Study of Spin and Orbital Magnetic Form Factors of
CeRh₃B₂ by X-ray Magnetic Diffraction
Key Engineering Materials, **497** (2012) 3.

4A

Y.Shinohara, K.Yamazoe, T.Sakurai, S.Kimata,
T.Maruyama and Y.Amemiya
Effect of Structural Inhomogeneity on Mechanical
Behavior of Injection Molded Polypropylene Investigated
with Microbeam X-Ray Scattering
Macromolecules, **45** (2012) 1398.

Y.Sumino, H.Kitahata, Y.Shinohara, N.L.Yamada and
H.Seto
Formation of a Multiscale Aggregate Structure through
Spontaneous Blebbing of an Interface
Langmuir, **28** (2012) 3378.

S.Mitsunobu, F.Shiraishi, H.Makita, B.N.Orcutt,
S.Kikuchi, B.B.Jorgensen and Y.Takahashi
Bacteriogenic Fe(III) (oxyhydr)oxides Characterized
by Synchrotron Microprobe Coupled with Spatially-
Resolved Phylogenetic Analysis
Environ. Sci. Technol., **64** (2012) 3304.

C.Muramatsu, M.Sakata and S.Mitsunobu
Immobilization of arsenic(V) during the Transformation
of Ferrihydrite: A Direct Speciation Study using
Synchrotron-Based XAFS Spectroscopy
Chem. Lett., **41** (2012) 270.

W.Satake, P.C.Buchanan, T.Mikouchi and M.Miyamoto
Redox States of Some HED Meteorites as Inferred from
Micro-XANES Analyses of Plagioclase
43rd Lunar and Planetary Science Conference, **XLIII**
(2012) 1725.

T.Mikouchi, M.Zolensky, W.Satake and L.Le
The Valence of Iron in CM Chondrite Serpentine as
Measured by Synchrotron XANES
43rd Lunar and Planetary Science Conference, **XLIII**
(2012) 1496.

A.Ito, T.Inoue, K.Takehara, Y.Taki and K.Shinohara
Mapping of Ca and Cysteic Acid, an Oxidation Product
of Cystine, in Human Hair at Submicron Resolution
Ad. X-Ray Chem. Anal. Jpn., **43** (2012) 161. (*in
Japanese*).

J.Watanabe, Y.Tani, N.Miyata, H.Seyama, S.Mitsunobu
and H.Naitoh
Concurrent Sorption of As(V) and Mn(II) during
Biogenic Manganese Oxide Formation
Chemical Geology, **306-307** (2012) 123.

Y.Nozone, S.Seno, T.Nagamatsu, S.Hosoda, Y.Shinohara,
Y.Amemiya, E.B.Berda, G.Rojas, K.B.Wagener
Cross Nucleation in Polyethylene with Precisely Spaced
Ethyl Branches
ACS Macro Lett., **1** (2012) 772.

A.Iida and Y.Takanishi
Synchrotron X-Ray Microbeam Characterization of
Smectic A Liquid Crystals under Electric Field
Adv. X-ray Anal., **55** (2012) 73.

S.Asaoka, Y.Takahashi, Y.Araki and M.Tanimizu
Comparison of Antimony and Arsenic Behavior in an
Ichinokawa River Water-Sediment System
Chemical Geology, **334** (2012) 1.

Y.Yokoyama, K.Tanaka and Y.Takahashi
Differences in the Immobilization of Arsenite and
Arsenate into Calcite
Geochim. Cosmochim. Acta, **91** (2012) 202.

Y.Nagai, Y.Kawabata and T.Kato
Microscopic Investigation on Morphologies of Bilayer Gel
Structure in the Mixed Polyoxyethylene-Type Nonionic
Surfactant Systems
J. Phys. Chem. B, **116** (2012) 12558.

M.Lei, X.-M.Wan, Z.-C.Huang, T.-B.Chen, X.-W.Li and
Y.-R.Liu
First Evidence on Different Transportation Modes of
Arsenic and Phosphorus in Arsenic Hyperaccumulator
Pteris vittata
Environ. Pollut., **161** (2012) 1.

K.Okamoto, T.Noma, A.Komoto, W.Kubo,
M.Takahashi, A.Iida and H.Miyata
X-Ray Waveguide Mode in Resonance with a Periodic
Structure
Phys. Rev. Lett., **109** (2012) 233907.

P.Wassell, A.Okamura, N.W.G.Young, G.Bonwick,
C.Smith, K.Sato and S Ueno
Synchrotron Radiation Macrobeam and Microbeam X-
Ray Diffraction Studies of Interfacial Crystallization of
Fats in Water-in-Oil Emulsions
Langmuir, **28** (2012) 5539.

4B2

Y.Yang, M.Hirayama, M.Yonemura and R.Kanno
Synthesis, Crystal Structure and Electrode
Characteristics of LiMnPO₄(OH) Cathode for Lithium
Batteries
J. Solid State Chem., **187** (2012) 124.

Y.-C.Chen, M.Yashima, T.Ohta, K.Ohoyama and
S.Yamamoto
Crystal Structure, Oxygen Deficiency, and Oxygen
Diffusion Path of Perovskite-Type Lanthanum Cobaltites
La_{0.4}Ba_{0.6}CoO_{3-δ} and La_{0.6}Sr_{0.4}CoO_{3-δ}
J. Phys. Chem. C, **116** (2012) 5246.

K.Fujii, H.Uekusa, N.Itoda, E.Yonemochi and K.Terada
Mechanism of Dehydration-Hydration Processes of
Lisinopril Dihydrate Investigated by ab Initio Powder X-
Ray Diffraction Analysis
Crystal Growth and Design, **12** (2012) 6165.

J.M.Clark, S.Nishimura, A.Yamada and M.S.Islam
High-Voltage Pyrophosphate Cathode: Insights into
Local Structure and Lithium-Diffusion Pathways
Angew. Chem. Int. Ed., **124** (2012) 13326.

K.Kakimoto, T.Hotta and I.Kagomiya
Fine Structural Analysis and Phase Transition Behavior
for Li-Modified Na_{0.5}K_{0.5}NbO₃ Lead-Free Piezoelectric
Ceramics
Ceramics International, **38** (2012) S319.

K.Kakimoto, R.Kaneko and I.Kagomiya
Grain-Size-Controlled (Li,Na,K)NbO₃ Ceramics using
Powder Source Classified by Centrifugal Separator
Jpn. J. Appl. Phys., **51** (2012) 09LD06.

M.Yashima, H.Yamada, S.Nuansaeng and T.Ishihara
Role of Ga³⁺ and Cu²⁺ in the High Interstitial Oxide-Ion
Diffusivity of Pr₂NiO₄-Based Oxides: Design Concept of
Interstitial Ion Conductors through the Higher-Valence
d¹⁰ Dopant and Jahn-Teller Effect
Chem. Mater., **24** (2012) 4100.

M.Tamaru, P.Barpanda, Y.Yamada, S.Nishimura and
A.Yamada
Observation of the Highest Mn³⁺/Mn²⁺ Redox Potential
of 4.45 V in a Li₂MnP₂O₇ Pyrophosphate Cathode
J. Mater. Chem., **22** (2012) 24526.

4C

H.Wadati, J.Okamoto, M.Garganourakis, V.Scagnoli, U.Staub, Y.Yamasaki, H.Nakao, Y.Murakami, M.Mochizuki, M.Nakamura, M.Kawasaki and Y.Tokura
Origin of the Large Polarization in Multiferroic YMnO_3 Thin Films Revealed by Soft- and Hard-X-Ray Diffraction
Phys. Rev. Lett., **108** (2012) 047203.

D.Bizen, H.Nakao, K.Iwasa, Y.Murakami, T.Osakabe, J.Fujioka, T.Yasue, S.Miyasaka and Y.Tokura
Magnetic Phase Diagrams of YVO_3 and TbVO_3 under High Pressure
J. Phys. Soc. Jpn., **81** (2012) 024715.

K.Ohwada, T.Yamauchi, Y.Fujii and Y.Ueda
Two-Dimensional Charge Fluctuation in $\beta\text{-Na}_{0.33}\text{V}_2\text{O}_5$
Phys. Rev. B, **85** (2012) 134102.

M.Nakamura, R.Imai, N.Hoshi and O.Sakata
Interfacial Structure of Co Porphyrins on Au(111) Electrode: Interaction of Porphyrin Molecules with Substrate
Surf. Sci., **606** (2012) 1560.

H.Sakuma, H.Nakao, Y.Yamasaki and K.Kawamura
Structure of Electrical Double Layer at Mica/KI Solution Interface
J. Appl. Sol. Chem. Model., **1** (2012) 1.

H.Sakuma
A Mechanism and Stability of Water Lubrication between Mineral Surfaces: The Physics of Creeping Faults
J. Jpn. Soc. Synchrotron Rad. Res., **25** (2012) 213. (*in Japanese*).

T.Honda, Y.Ishiguro, H.Nakamura, Y.Wakabayashi and T.Kimura
Structure and Magnetic Phase Diagrams of Multiferroic Mn_2GeO_4
J. Phys. Soc. Jpn., **81** (2012) 103703.

M.Shibata, N.Hayashi, T.Sakurai, A.Kurokawa, H.Fukumitsu, T.Masuda, K.Uosaki and T.Kondo
Electrochemical Layer-by-Layer Deposition of Pseudomorphic Pt Layers on Au(111) Electrode Surface Confirmed by Electrochemical and In Situ Resonance Surface X-Ray Scattering Measurements
J. Phys. Chem. C, **116** (2012) 26464.

K.Takubo, T.Kanzaki, Y.Yamasaki, H.Nakao, Y.Murakami, T.Oguchi and T.Katsufuji
Orbital States of V Trimers in $\text{BaV}_{10}\text{O}_{15}$ Detected by Resonant X-Ray Scattering
Phys. Rev. B, **86** (2012) 085141.

M.Uchida, Y.Yamasaki, Y.Kaneko, K.Ishizaka, J.Okamoto, H.Nakao, Y.Murakami and Y.Tokura
Pseudogap-Related Charge Dynamics in the Layered Nickelate $\text{R}_{2-x}\text{Sr}_x\text{NiO}_4$ ($x \sim 1$)
Phys. Rev. B, **86** (2012) 165126.

5A

T.Tsuda, T.Suzuki and S.Kojima
Crystallization and Preliminary X-Ray Diffraction Analysis of *Bacillus subtilis* YwfE, an L-Amino-Acid Ligase
Acta Cryst. F, **68** (2012) 203.

J.Kondo
A Structural Basis for the Antibiotic Resistance Conferred by an A1408G Mutation in 16S rRNA and for the Antiprotozoal Activity of Aminoglycosides
Angew. Chem. Int. Ed., **51** (2012) 465.

S.Okazaki, R.Kato, Y.Uchida, T.Taguchi, H.Arai and S.Wakatsuki
Structural Basis of the Strict Phospholipid Binding Specificity of the Pleckstrin Homology Domain of Human Evectin-2
Acta Cryst. D, **68** (2012) 117.

A.Rohaim, M.Kawasaki, R.Kato, I.Dikic and S.Wakatsuki
Structure of a Compact Conformation of Linear Diubiquitin
Acta Cryst. D, **68** (2012) 102.

N.Kuwabara, T.Oyama, D.Tomioka, M.Ohashi, J.Yanagisawa, T.Shimizu and H.Miyachi
Peroxisome Proliferator-Activatedreceptors (PPARs) Have Multiple Binding Points That Accommodate Ligands Invarious Conformations: Phenypropanoic Acid-Type PPAR Ligands Bind to PPAR Indifferent Conformations, Depending on the Subtype
J. Med. Chem., **55** (2012) 893.

O.Tsuruta, H.Yokoyama and S.Fujii
A New Crystal Lattice Structure of *Helicobacter pylori* Neutrophil-Activating Protein (HP-NAP)
Acta Cryst. F, **68** (2012) 134.

D.-H.Im, K.Kimura, F.Hayasaka, T.Tanaka, M.Noguchi, A.Kobayashi, S.Shoda, K.Miyazaki, T.Wakagi and S.Fushinobu
Crystal Structures of Glycoside Hydrolase Family 51 α -L-Arabinofuranosidase from *Thermotoga maritima*
Biosci. Biotechnol. Biochem., **76** (2012) 423.

J.Wachino, Y.Yamaguchi, S.Mori, Y.Yamagata, Y.Arakawa and K.Shibayama
Crystallization and Preliminary X-Ray Analysis of the Subclass B3 Metallo- β -Lactamase SMB-1 that Confers Carbapenem Resistance
Acta Cryst. F, **68** (2012) 343.

K.Hanaya, M.Suetsugu, S.Saijo, I.Yamato and S.Aoki
Potent Inhibition of dinuclear zinc(II) Peptidase, an Aminopeptidase from *Aeromonas proteolytica*, by 8-Quinololinol Derivatives: Inhibitor Design Based on Zn^{2+} Fluorophores, Kinetic, and X-Ray Crystallographic Study
J. Biol. Inorg. Chem., **17** (2012) 517.

- H.Nojiri
Structural and Molecular Genetic Analyses of the Bacterial Carbazole Degradation System
Biosci. Biotechnol. Biochem., **76** (2012) 1.
- K.Yoneda, H.Sakuraba, T.Araki and T.Ohshima
Crystal Structure of Binary and Ternary Complexes of Archaeal UDP-Galactose 4-Epimerase-like L-Threonine Dehydrogenase from *Thermoplasma volcanium*
J. Biol. Chem., **287** (2012) 12966.
- S.Nakano, M.Sugihara, R.Yamada, K.Katayanagi and S.Tate
Structural Implication for the Impaired Binding of W150A Mutant LOX-1 to Oxidized Low Density Lipoprotein, OxLDL
Biochim. Biophys. Acta, **1824** (2012) 739.
- Z.Zhang, L.Chen, L.Gao, K.Lin, L.Zhu, Y.Lu, X.Shi, Y.Gao, J.Zhou, P.Xu, J.Zhang and G.Wu
Structural Basis for the Recognition of Asef by Adenomatous Polyposis Coli
Cell Res., **22** (2012) 372.
- Q.Cao, X.-J.Wang, C.-W.Liu, D.-F.Liu, L.-F.Li, Y.-Q.Gao and X.-D.Su
Inhibitory Mechanism of Caspase-6 Phosphorylation Revealed by Crystal Structures, Molecular Dynamics (MD) Simulations and Biochemical Assays
J. Biol. Chem., **287** (2012) 15371.
- M.Nagae, S.Re, E.Mihara, T.Nogi, Y.Sugita and J.Takagi
Crystal Structure of $\alpha 5\beta 1$ Integrin Ectodomain: Atomic Details of the Fibronectin Receptor
J. Cell Biol., **197** (2012) 131.
- R.Kawakami, T.Satomura, H.Sakuraba and T.Ohshima
L-Proline Dehydrogenases in Hyperthermophilic Archaea: Distribution, Function, Structure, and Application
Appl. Microbiol. Biotech., **93** (2012) 83.
- T.Satomura, A.Hiraki, T.Kawai, R.Kawakami, T.Ohshima and H.Sakuraba
Expression, Purification, Crystallization and Preliminary X-Ray Diffraction Analysis of a Galactose 1-Phosphate Uridyltransferase from the Hyperthermophilic Archaeon *Pyrobaculum Aerophilum*
Acta Cryst. F, **68** (2012) 330.
- D.Pan and Y.Matsuura
Structures of the Pleckstrin Homology Domain of *Saccharomyces cerevisiae* Avo1 and its human orthologue Sin1, an Essential Subunit of TOR Complex 2
Acta Cryst. F, **68** (2012) 386.
- T.Nagae, C.Kato and N.Watanabe
Structural Analysis of 3-Isopropylmalate Dehydrogenase from the Obligate Piezophile *Shewanella Benthica* DB21MT-2 and the Nonpiezophile *Shewanella Oneidensis* MR-1
Acta Cryst. F, **68** (2012) 265.
- M.Oda, M.Takahashi, H.Tsuge, M.Nagahama and J.Sakurai
Role of Side-Edge Site of Sphingomyelinase from *Bacillus Cereus*
Biochem. Biophys. Res. Commun., **422** (2012) 128.
- R.Arai, N.Kobayashi, A.Kimura, T.Sato, K.Matsuo, A.F.Wang, J.M.Platt, L.H.Bradley and M.H.Hecht
Domain-Swapped Dimeric Structure of a Stable and Functional *De Novo* Four-Helix Bundle Protein, WA20
J. Phys. Chem. B, **116** (2012) 6789.
- T.Matsumoto, T.Kinoshita, H.Matsuzaka, R.Nakai, Y.Kirii, K.Yokota and T.Tada
Crystal Structure of Non-Phosphorylated MAP2K6 in a Putative Auto-Inhibition State
J. Biochem., **151** (2012) 541.
- H.Sakurama, S.Fushinobu, M.Hidaka, E.Yoshida, Y.Honda, H.Ashida, M.Kitaoaka, H.Kumagai, K.Yamamoto and T.Katayama
1,3-1,4- α -L-Fucosynthase that Specifically Introduces Lewis a/x Antigens into Type-1/2 Chains
J. Biol. Chem., **287** (2012) 16709.
- H.Shoun, S.Fushinobu, L.Jiang, S.-W.Kim and T.Wakagi
Fungal Denitrification and Nitric Oxide Reductase Cytochrome P450nor
Phil. Trans. R. Soc. B, **367** (2012) 1186.
- T.Wakagi
A Special Enzyme Acting in a Primordial Metabolism; Discovery of One-Enzyme with Two Reactions
Kagaku, **67** (2012) 72. (*in Japanese*).
- H.Nishimasu, S.Fushinobu and T.Wakagi
Molecular Mechanism by which One Enzyme Catalyzes Two Reactions
J. Cryst. Soc. Jpn., **54** (2012) 113. (*in Japanese*).
- T.-O.Kim, D.-W.Im, H.Y.Jung, S.J.Kwon and Y.-S.Heo
Purification, Crystallization and Preliminary X-Ray Diffraction Analysis of Enoyl-Acyl Carrier Protein Reductase (FabK) from *Streptococcus mutans* Strain UA159
Acta Cryst. F, **68** (2012) 292.
- M.M.Islam, M.A.Khan and Y.Kuroda
Analysis of Amino Acid Contributions to Protein Solubility using Short Peptide Tags Fused to a Simplified BPTI Variant
Biochim. Biophys. Acta, **1824** (2012) 1144.
- X.Zhang, J.Zhang, G.Guo, X.Mao, Y.Hu and Q.Zou
Crystal Structure of a Flavin-dependent Thymidylate Synthase from *Helicobacter pylori* strain 26695
Protein & Peptide Letters, **19** (2012) 1225.
- U.Ohto, K.Fukase, K.Miyake and T.Shimizu
Structural Basis of Species-Specific Endotoxin Sensing by Innate Immune Receptor TLR4/MD-2
Proc. Natl. Acad. Sci. USA, **109** (2012) 7421.

- B.G.Han, K.C.Jeong, J.W.Cho, B.C.Jeong, H.K.Song, J.Y.Lee, D.H.Shin, S.Lee and B.I.Lee
Crystal Structure of *Pyrococcus Furiosus* PF2050, a Member of the DUF2666 Protein Family
FEBS Lett., **586** (2012) 1384.
- N.Suzuki, Y.-M.Kim, Z.Fujimoto, M.Momma, M.Okuyama, H.Mori, K.Funane and A.Kimura
Structural Elucidation of Dextran Degradation Mechanism by *Streptococcus mutans* Dextranase Belonging to Glycoside Hydrolase Family 66
J. Biol. Chem., **287** (2012) 19916.
- M.Michikawa, H.Ichinose, M.Momma, P.Biely, S.Jongkees, M.Yoshida, T.Kotake, Y.Tsumuraya, S.Withers, Z.Fujimoto and S.Kaneko
Structural and Biochemical Characterization of Glycoside Hydrolase family 79 β -Glucuronidase from *Acidobacterium capsulatum*
J. Biol. Chem., **287** (2012) 14069.
- H.Sakuraba, T.Satomura, R.Kawakami, K.Kim, Y.Hara, K.Yoneda and T.Ohshima
Crystal Structure of Novel Dye-Linked L-Proline Dehydrogenase from Hyperthermophilic Archaeon *Aeropyrum Pernix*
J. Biol. Chem., **287** (2012) 20070.
- S.Matsumoto, M.Igura, J.Nyirenda, M.Matsumoto, S.Yuzawa, N.Noda, F.Inagaki and D.Kohda
Crystal Structure of the C-Terminal Globular Domain of Oligosaccharyltransferase from *Archaeoglobus Fulgidus* at 1.75 Å Resolution
Biochemistry, **51** (2012) 4157.
- M.Nishikiori, S.Sugiyama, H.Xiang, M.Niiyama, K.Ishibashi, T.Inoue, M.Ishikawa, H.Matsumura and E.Katoh.
Crystal Structure of the Superfamily 1 Helicase from Tomato Mosaic Virus
J. Virology, **86** (2012) 7565.
- H.Kondo, Y.Hanada, H.Sugimoto, T.Hoshino, C.P.Garnham, P.L.Davies and S.Tsuda
Ice-Binding Site of Snow Mold Fungus Antifreeze Protein Deviates from Structural Regularity and High Conservation
Proc. Natl. Acad. Sci. USA, **109** (2012) 9360.
- Q.Tang, P.Gao, Y.-P.Liu, A.Gao, X.-M.An, S.Liu, X.-X.Yan and D.-C.Liang
RecOR Complex Including RecR N-N Dimer and RecO Monomer Displays a High Affinity for ssDNA
Nucleic Acids Res., **40** (2012) 11115.
- T.Shirouzono, M.Chirifu, C.Nakamura, Y.Yamagata and S.Ikemizu
Preparation, Crystallization and Preliminary X-Ray Diffraction Studies of the Glycosylated Form of Human Interleukin-23
Acta Cryst. F, **68** (2012) 432.
- A.Nakamura, M.Fujihashi, R.Aono, T.Sato, Y.Nishiba, S.Yoshida, A.Yano, H.Atomi, T.Imanaka and K.Miki
Dynamic, Ligand-Dependent Conformational Change Triggers Reaction of Ribose-1,5-Bisphosphate Isomerase from *Thermococcus Kodakarensis* KOD1
J. Biol. Chem., **287** (2012) 20784.
- H.Makyio, M.Ohgi, T.Takei, S.Takahashi, H.Takatsu, Y.Katoh, A.Hanai, T.Ueda, Y.Kanaho, Y.Xie, H.W.Shin, H.Kamikubo, M.Kataoka, M.Kawasaki, R.Kato, S.Wakatsuki and K.Nakayama
Structural Basis for Arf6-MKLP1 Complex Formation on the Flemming Body Responsible for Cytokinesis
EMBO J., **31** (2012) 2590.
- N.N.Noda, T.Kobayashi, W.Adachi, Y.Fujioka, Y.Ohsumi and F.Inagaki
Structure of the Novel C-Terminal Domain of Vacuolar Protein Sorting 30/Autophagy-Related Protein 6 and Its Specific Role in Autophagy
J. Biol. Chem., **287** (2012) 16256.
- N.N.Noda
Structure of Atg7 Alone and Its Atg8-Bound Forms
J. Cryst. Soc. Jpn., **54** (2012) 166.
- T.Nishioka, Y.Yasutake, Y.Nishiya and T.Tamura
Structure-Guided Mutagenesis for the Improvement of Substrate Specificity of *Bacillus Megaterium* Glucose 1-Dehydrogenase IV
FEBS J., **279** (2012) 3264.
- H.Nakano, A.Hosokawa, R.Tagawa, K.Inaka, K.Ohta, T.Nakatsu, H.Kato and K.Watanabe
Crystallization and Preliminary X-Ray Crystallographic Analysis of Pz Peptidase B from *Geobacillus Collagenovorans* MO-1
Acta Cryst. F, **68** (2012) 757.
- H.Sakuraba, T.Kawai, K.Yoneda and T.Ohshima
Structure of a UDP-Glucose Dehydrogenase from the Hyperthermophilic Archaeon *Pyrobaculum Islandicum*
Acta Cryst. F, **68** (2012) 1003.
- Y.Kezuka, Y.Yoshida and T.Nonaka
Structural Insights into Catalysis by β C-S lyase from *Streptococcus Anginosus*
Proteins, **80** (2012) 2447.
- K.Yoneda
Structural and Functional Analyses of Novel NAD(P) Dependent Amino Acid Dehydrogenases from Archaea vitamins (Japan), **86** (2012) 74. (*in Japanese*).
- Y.Shoyama, T.Tamada, K.Kurihara, A.Takeuchi, F.Taura, S.Arai, M.Blaber, Y.Shoyama, S.Morimoto and R.Kuroki
Structure and Function of Δ 1-Tetrahydrocannabinolic Acid (THCA) Synthase, the Enzyme Controlling the Psychoactivity of *Cannabis sativa*
J. Mol. Biol., **423** (2012) 96.

- M.Momma and Z.Fujimoto
Interdomain Disulfide Bridge in the Rice Granule Bound Starch Synthase I Catalytic Domain as Elucidated by X-Ray Structure Analysis
Biosci. Biotechnol. Biochem., **76** (2012) 1591.
- W.-Y.Jeng, N.-C.Wang, C.-T.Lin, W.-J.Chang, C.-I.Liu and A.H.-J.Wang
High-Resolution Structures of *Neotermes Koshunensis* β -Glucosidase Mutants Provide Insights into the Catalytic Mechanism and the Synthesis of Glucoconjugates
Acta Cryst. D, **68** (2012) 829.
- S.J.Lee, S.-J.Lee, S.K.Lee, H.-J.Yoon, H.H.Lee, K.K.Kim, B.J.Lee, B.I.Lee and S.W.Suh
Structures of *Staphylococcus aureus* Peptide Deformylase in Complex with Two Classes of New Inhibitors
Acta Cryst. D, **68** (2012) 784.
- H.Yoshida, S.Yamashita, M.Teraoka, A.Itoh, S.Nakakita, N.Nishi and S.Kamitori
X-Ray Structure of a Protease-Resistant Mutant Form of Human Galectin-8 with Two Carbohydrate Recognition Domains
FEBS J., **279** (2012) 3937.
- K.Nakamura, Z.Man, Y.Xie, A.Hanai, H.Makyio, M.Kawasaki, R.Kato, H.-W.Shin, K.Nakayama and S.Wakatsuki
Structural Basis for Membrane Binding Specificity of the Bin/Amphiphysin/Rvs (BAR) Domain of Arfaptin-2 Determined by Arl1 GTPase
J. Biol. Chem., **287** (2012) 25478.
- K.Suzuki, N.Ohbayashi, J.Jiang, X.Zhang, M.M.Hoque, M.Tsunoda, K.Murayama, H.Tanaka and A.Takenaka
Crystallographic Study of the Interaction of the Anti-HIV Lectin Actinohivin with α (1-2)mannobiose Moiety of gp120 HMTG
Acta Cryst. F, **68** (2012) 1060.
- M.M.Hoque, K.Suzuki, M.Tsunoda, J.Jiang, F.Zhang, A.Takahashi, N.Ohbayashi, X.Zhang, H.Tanaka, S.Omura and A.Takenaka
Structural Insights into the Specific Anti-HIV Property of Actinohivin: Structure of its Complex with the α (1-2)mannobiose Moiety of gp120
Acta Cryst. D, **68** (2012) 1671.
- M.Koyama and Y.Matsuura
Mechanistic Insights from the Recent Structures of the CRM1 Nuclear Export Complex and its Disassembly Intermediate
Biophysics, **8** (2012) 145.
- Y.Kezuka, N.Abe, Y.Yoshida and T.Nonaka
Purification, Crystallization and Preliminary X-Ray Analysis of Two Hydrogen Sulfide-Producing Enzymes from *Fusobacterium nucleatum*
Acta Cryst. F, **68** (2012) 1507.
- T.Matsui, J.Yamane, N.Mogi, H.Yamaguchi, H.Takemoto, M.Yao and I.Tanaka
Structural Reorganization of the Bacterial Cell -Division Protein FtsZ from *Staphylococcus aureus*
Acta Cryst. D, **68** (2012) 1175.
- Y.Itoh, S.Sekine and S.Yokoyama
Crystallization and Preliminary X-Ray Crystallographic Analysis of *Aquifex aeolicus* SelA, a Bacterial Selenocysteine Synthase
Acta Cryst. F, **68** (2012) 1128.
- Y.Itoh, S.Sekine and S.Yokoyama
Crystallization and Preliminary X-Ray Crystallographic Analysis of Bacterial tRNA^{Sec} in Complex with Seryl-tRNA Synthetase
Acta Cryst. F, **68** (2012) 678.
- P.Zhang, A.Reichardt, H.Liang, R.Aliyari, D.Cheng, Y.Wang, F.Xu, G.Cheng and Y.Liu
Single Amino Acid Substitutions Confer the Antiviral Activity of the TRAF3 Adaptor Protein onto TRAF5
Science Signaling, **5** (2012) 1.
- F.Hou, T.Miyakawa, D.Takeshita, M.Kataoka, A.Uzura, K.Nagata, S.Shimizu and M.Tanokura
Expression, Purification, Crystallization and X-Ray Analysis of 3-Quinuclidinone Reductase from *Agrobacterium tumefaciens*.
Acta Cryst. F, **68** (2012) 1237.
- L.Guo, M.Okai, T.Mase, F.L.Imai, T.Miyakawa, K.Nagata, H.Yamanaka, H.Fujii, M.Hibi, J.Ogawa and M.Tanokura
Expression, Purification, Crystallization and Preliminary X-Ray Analysis of 4-Hydroxy-3-Methyl-2-Keto-Pentanoate Aldolase, (asHPAL) from *Arthrobacter simplex* Strain AKU 626
Acta Cryst. F, **68** (2012) 958.
- Z.Yang, H.Liang, Q.Zhou, Y.Li, H.Chen, W.Ye, D.Chen, J.Fleming, H.Shu and Y.Liu
Crystal Structure of ISG54 Reveals a Novel RNA Binding Structure and Potential Functional Mechanisms
Cell Res., **9** (2012) 1328.
- M.Yamaguchi, K.Matoba, R.Sawada, Y.Fujioka, H.Nakatogawa, H.Yamamoto, Y.Kobashigawa, H.Hoshida, R.Akada, Y.Ohsumi, N.N.Noda and F.Inagaki
Noncanonical Recognition and UBL Loading of Distinct E2s by Autophagy-Essential Atg7
Nature Structural Molecular Biology, **19** (2012) 1250.
- Y.Ashikawa, Z.Fujimoto, Y.Usami, K.Inoue, H.Noguchi, H.Yamane and H.Nojiri
Structural Insight into the Substrate- and Dioxygen-Binding Manner in the Catalytic Cycle of Rieske Nonheme Iron Oxygenase System, Carbazole 1,9a-Dioxygenase
BMC Struct. Biol., **12** (2012) 15.

- M.Unno, K.Kizawa, M.Ishihara and H.Takahara
Crystallization and Preliminary X-Ray Crystallographic Analysis of Human Peptidylarginine Deiminase Type III
Acta Cryst. F, **68** (2012) 668.
- K.Arita, S.Isogai, T.Oda, M.Unoki, K.Sugita, N.Sekiyama, K.Kuwata, R.Hamamoto, H.Tochio, M.Sato, M.Ariyoshi and M.Shirakawa
Recognition of Modification Status on a Histone H3 Tail by Linked Histone Reader Modules of the Epigenetic Regulator UHRF1
Proc. Natl. Acad. Sci. USA, **109** (2012) 12950.
- K.Kubota, A.Yamagata, Y.Sato, S.Goto-Ito and S.Fukai
Get1 Stabilizes an Open Dimer Conformation of Get3 ATPase by Binding Two Distinct Interfaces
J. Mol. Biol., **422** (2012) 366.
- N.Yoshimoto, Y.Sakamaki, M.Haeta, A.Kato, Y.Inaba, T.Itoh, M.Nakabayashi, N.Ito and K.Yamamoto
Butyl Pocket Formation in the Vitamin D Receptor Strongly Affects the Agonistic or Antagonistic behavior of Ligands
J. Med. Chem., **55** (2012) 4373.
- Y.Sato, A.Yamagata, S.Goto-Ito, K.Kubota, R.Miyamoto, S Nakada and S.Fukai
Molecular Basis of Lys-63-linked Polyubiquitination Inhibition by the Interaction between Human Deubiquitinating Enzyme OTUB1 and Ubiquitin-Conjugating Enzyme UBC13
J. Biol. Chem., **287** (2012) 25860.
- T.Kubota, A.Kumagai, H.Ito, S.Furukawa, Y.Someya, N.Takeda, K.Ishii, T.Wakita, H.Narimatsu and H.Shirato
Structural Basis for the Recognition of Lewis Antigens by Genogroup I Norovirus
J. Virol., **86** (2012) 11138.
- F.Akita, A.Higashiura, T.Shimizu, Y.Pu, M.Suzuki, T.Uehara-Ichiki, T.Sasaya, S.Kanamamaru, F Arisaka, T.Tsukihara, A.Nakagawa and T.Omura
Crystallographic Analysis Reveals Octamerization of Viroplasm Matrix Protein P9-1 of *Rice Black Streaked Dwarf Virus*
J. Virology, **86** (2012) 746.
- R.Arai, S.Fukui, N.Kobayashi and J.Sekiguchi
Solution Structure of IseA, an Inhibitor Protein of DL-Endopeptidases from *Bacillus Subtilis*, Reveals a Novel Fold with a Characteristic Inhibitory Loop
J. Biol. Chem., **287** (2012) 44736.
- Y.-H.Huang, X.-Y.Liu, X.-X.Du, Z.-F.Jiang and X.-D.Su
The Structural Basis for the Sensing and Binding of Cyclic di-GMP by STING
Nature Structural Molecular Biology, **19** (2012) 728.
- X.-X.Fan, Y.-F.Zhou, X.Liu, L.-F.Li and X.-D.Su
Ellman's Reagent in Promoting Crystallization and Structure Determination of *Anabaena CcbP*
Acta Cryst. F, **68** (2012) 1409.
- H.Tanaka, N.Miyazaki, K.Matoba, T.Nogi, K.Iwakasaki and J.Takagi
Higher-Order Architecture of Cell Adhesion Mediated by Polymorphic Synaptic Adhesion Molecules Neurexin and Neuroligin
Cell Reports, **2** (2012) 101.
- M.Fujihashi, M.Hiraki, G.Ueno, S.Baba, H.Murakami, M.Suzuki, N.Watanabe, I.Tanaka, A.Nakagawa, S.Wakatsuki, M.Yamamoto and K.Miki
Crystal Sample Pins and a Storage Cassette System Compatible with the Protein Crystallography Beamlines at both the Photon Factory and SPring-8
J. Appl. Cryst., **45** (2012) 1156.
- Y.W.Park, H.K.Yeo and J.Y.Lee
Crystallization and Preliminary X-Ray Diffraction Analysis of a Fatty-Acid Metabolism Regulatory Protein, FadR, from *Bacillus halodurans*
Acta Cryst. F, **68** (2012) 975.
- T.Miyafusa, J.M.M.Caaveiro, Y.Tanaka and K.Tsumoto
Crystal Structure of the Enzyme CapF of *Staphylococcus aureus* Reveals a Unique Architecture Composed of Two Functional Domains
Biochem. J., **443** (2012) 671.
- A.Matsuura, J.Y.Yoon, H.J.Yoon, H.H.Lee and S.W.Suh
Crystal Structure of Pyridoxal Biosynthesis Lyase PdxS from *Pyrococcus Horikoshii*
Mol. Cells, **34** (2012) 407.
- K.H.Kim, D.R.An, J.Song, J.Y.Yoon, H.S.Kim, H.J.Yoon, H.N.Im, J.Kim, D.J.Kim, S.J.Lee, K-H.Kim, H-M.Lee, H-J.Kim, E-K.Jo, J.Y.Lee and S.W.Suh
Mycobacterium Tuberculosis Eis Protein Initiates Suppression of Host Immune Responses by Acetylation of DUSP16/MKP-7
Proc. Natl. Acad. Sci. USA, **109** (2012) 7729.
- S.Watanabe, D.Sasaki, T.Tominaga and K.Miki
Structural Basis of [NiFe] Hydrogenase Maturation by Hyp Proteins
Biol. Chem., **393** (2012) 1089.
- K.Ito, R.Murakami, M.Mochizuki, H.Qi, Y.Shimizu, K.Miura, T.Ueda and T.Uchiumi
Structural Basis for the Substrate Recognition and Catalysis of Peptidyl-tRNA Hydrolase
Nucl. Acids Res., **40** (2012) 10521.
- T.Hayashi, M.Senda, H.Morohashi, H.Higashi, M.Horio, Y.Kashiba, L.Nagase, D.Sasaya, T.Shimizu, N.Venugopalan, H.Kumeta, N.Noda, F.Inagaki, T.Senda and M.Hatakeyama
Tertiary Structure-Function Analysis Reveals the Pathogenic Signaling Potentiation Mechanism of *Helicobacter pylori* Oncogenic Effector CagA
Cell Host & Microbe, **12** (2012) 20.

6A

T.Shinkai, M.Ito, K.Sugiyama, K.Ito and H.Yokoyama
Ordered and Foam Structures of Semifluorinated Block
Copolymers in Supercritical Carbon Dioxide
Soft Matter, **8** (2012) 5811.

Y.Zhao, G.Matsuba and H.Ito
Shear-Induced Crystallization and Rheological Behavior
of Syndiotactic Polystyrene
Journal of Materials Research, **27** (2012) 1372.

Y.Tozuka, K.Higashi, T.Morita, M.Nishikawa,
H.Uchiyama, J.Zhang, K.Moribe, K.Nishikawa,
H.Takeuchi and K.Yamamoto
Transglycosylated Rutin-Specific Non-Surface-Active
Nanostructure Affects Absorption Enhancement of
Flurbiprofen
European Journal of Pharmaceutics and
Biopharmaceutics, **82** (2012) 120.

T.Morita, M.Ushio, K.Kanoh, E.Tanaka and
K.Nishikawa
Small-Angle X-Ray Scattering Measurements of
Ionic Liquids Pressurized with Carbon Dioxide using
Titanium Sample Holder: 1-Butyl-3-methylimidazolium
Bis(trifluoromethylsulfonyl) Amide Mixtures up to
22MPa
Jpn. J. Appl. Phys., **51** (2012) 076703.

Y.Takenaka, Y.Kawabata, H.Kitahata and T.Ohzo
Control of the Long-Axis Length of Gold Nanorods
through Temperature Variation
Chem. Lett., **41** (2012) 1173.

S.Takemori and M.Kimura
Structure and Function of Skeletal Muscle and
Locomotive Systems: Involvement of Water-State
Transitions
J Physical Fitness Sports Med., **1** (2012) 95.

K.Nishikawa and T.Morita
Solution Chemistry Based on the Concept of
Fluctuations
Mol. Sci., **6** (2012) A0054. (*in Japanese*).

A.Noro, K.Higuchi, Y.Sageshima and Y.Matsushita
Preparation and Morphology of Hybrids Composed of a
Block Copolymer and Semiconductor Nanoparticles via
Hydrogen Bonding
Macromolecules, **45** (2012) 8013.

Y.Sageshima, S.Arai, A.Noro and Y.Matsushita
Fabrication and Modification of Ordered Nanoporous
Structures from Nanophase-Separated Block
Copolymer/Metal Salt Hybrids
Langmuir, **28** (2012) 17524.

R.Hori, D.Furukawa, K.Yamamoto and S.Kutsumizu
Light-Driven Phase Transition in a Cubic Phase-
Forming Binary System Composed of 4'-*n*-Docosyloxy-
3'-nitrobiphenyl-4-carboxylic Acid and an Azobenzene
Derivative
Chem. Eur. J., **18** (2012) 7346.

Former 6A

D.-H.Im, K.Kimura, F.Hayasaka, T.Tanaka, M.Noguchi,
A.Kobayashi, S.Shoda, K.Miyazaki, T.Wakagi and
S.Fushinobu
Crystal Structures of Glycoside Hydrolase Family 51 α -
L-Arabinofuranosidase from *Thermotoga maritima*
Biosci. Biotechnol. Biochem., **76** (2012) 423.

H.Nojiri
Structural and Molecular Genetic Analyses of the
Bacterial Carbazole Degradation System
Biosci. Biotechnol. Biochem., **76** (2012) 1.

S.Arai, Y.Yonezawa, N.Okazaki, F.Matsumoto,
T.Tamada, H.Tokunaga, M.Ishibashi, M.Blaber,
M.Tokunaga and R.Kuroki
A Structural Mechanism for Dimeric to Tetrameric
Oligomer Conversion in *Halomonas* sp. Nucleoside
Diphosphate Kinase
Protein Science, **21** (2012) 498.

R.Arai, N.Kobayashi, A.Kimura, T.Sato, K.Matsuo,
A.F.Wang, J.M.Platt, L.H.Bradley and M.H.Hecht
Domain-Swapped Dimeric Structure of a Stable and
Functional *De Novo* Four-Helix Bundle Protein, WA20
J. Phys. Chem. B, **116** (2012) 6789.

L.Wang, K.Zhang, L.Wu, S.Liu, H.Zhang, Q.Zhou,
L.Tong, F.Sun and Z.Fan
Structural Insights into the Substrate Specificity of
Human Granzyme H: The Functional Roles of a Novel
RKR Motif
The Journal of Immunology, **188** (2012) 765.

H.Shoun, S.Fushinobu, L.Jiang, S.-W.Kim and T.Wakagi
Fungal Denitrification and Nitric Oxide Reductase
Cytochrome P450nor
Phil. Trans. R. Soc. B, **367** (2012) 1186.

T.Wakagi
A Special Enzyme Acting in a Primordial Metabolism;
Discovery of One-Enzyme with Two Reactions
Kagaku, **67** (2012) 72. (*in Japanese*).

H.Nishimasu, S.Fushinobu and T.Wakagi
Molecular Mechanism by which One Enzyme Catalyzes
Two Reactions
J. Cryst. Soc. Jpn., **54** (2012) 113. (*in Japanese*).

T.Tonozuka, A.Tamaki, G.Yokoi, T.Miyazaki,
M.Ichikawa, A.Nishikawa, Y.Ohta, Y.Hidaka,
K.Katayama, Y.Hatada, T.Ito and K.Fujita
Crystal Structure of a Lactosucrose-Producing Enzyme,
Arthrobacter sp. K-1 β -Fructofuranosidase
Enzyme and Microbial Technology, **51** (2012) 359.

H.Yokoyama, O.Tsuruta, N.Akao and S.Fujii
Crystal Structure of *Helicobacter Pylori* Neutrophil-Activating Protein with a Di-Nuclear Ferroxidase Center in a Zinc or Cadmium-Bound Form
Biochem. Biophys. Res. Commun., **422** (2012) 745.

M.Zha, C.Zhong, Y.Ou, L.Han, J.Wang and J.Ding
Crystal Structures of Human CaMKI α Reveal Insights into the Regulation Mechanism of CaMKI
PLoS One, **7** (2012) e44828.

N.Yoshimoto, Y.Sakamaki, M.Haeta, A.Kato, Y.Inaba, T.Itoh, M.Nakabayashi, N.Ito and K.Yamamoto
Butyl Pocket Formation in the Vitamin D Receptor Strongly Affects the Agonistic or Antagonistic behavior of Ligands
J. Med. Chem., **55** (2012) 4373.

R.Arai, S.Fukui, N.Kobayashi and J.Sekiguchi
Solution Structure of IseA, an Inhibitor Protein of DL-Endopeptidases from *Bacillus Subtilis*, Reveals a Novel Fold with a Characteristic Inhibitory Loop
J. Biol. Chem., **287** (2012) 44736.

N.Okazaki, M.Adachi, T.Tamada, K.Kurihara, T.Ooga, N.Kamiya, S.Kuramitsu and R.Kuroki
Crystallization and Preliminary Neutron Diffraction Studies of ADP-ribose Pyrophosphatase-I from *Thermus thermophilus* HB8
Acta Cryst. F, **68** (2012) 49.

6C

K.Hayashi, N.Happo, S.Hosokawa, W.Hu and T.Matsushita
X-Ray Fluorescence Holography
J. Phys.: Condens. Matter, **24** (2012) 093201.

H.Ishibashi and Y.Kitadai
Structural and Magnetic Properties in Spinel Type Fe_{1-x}Zn_xV₂O₄
J. Phys.: Conf. Ser., **391** (2012) 012092.

M.Okube, T.Yasue and S.Sasaki
Residual-Density Mapping and Site-Selective Determination of Anomalous Scattering Factors to Examine the Origin of the Fe K Pre-Edge Peak of Magnetite
J. Synchrotron Rad., **19** (2012) 759.

Y.Ebina, K.Akatsuka, K.Fukuda and T.Sasaki
Synthesis and In-situ X-Ray Diffraction Characterization of Two-dimensional Perovskite-type Oxide Colloids with a Controlled Molecular Thickness
Chem. Mater., **24** (2012) 4201.

7A

J.Okabayashi, K.Nomura, S.Kono and Y.Yamada
Magnetization Enhancement in Room-Temperature Ferromagnetic Fe-Mn Co-Doped SnO₂
Jpn. J. Appl. Phys., **51** (2012) 023003.

M.Sakamaki and K.Amemiya
In Situ Observation of Magnetic Anisotropy Energy of Alternately Layered FeNi Thin Films
e-J. Surf. Sci. Nanotech., **10** (2012) 97.

T.Maruyama, Y.Ishiguro, S.Naritsuka, W.Norimatsu, M.Kusunoki, K.Amemiya, H.Ishii and T.Ohta
Near-Edge X-Ray Absorption Fine Structure Study of Vertically Aligned Carbon Nanotubes Grown by the Surface Decomposition of SiC
Jpn. J. Appl. Phys., **51** (2012) 055102.

S.Tsunegi, Y.Sakuraba, K.Amemiya, M.Sakamaki, E.Ozawa, A.Sakuma, K.Takanashi and Y.Ando
Observation of Magnetic Moments at the Interface Region in Magnetic Tunnel Junctions using Depth-resolved X-Ray Magnetic Circular Dichroism
Phys. Rev. B, **85** (2012) 180408(R).

K.Amemiya
Sub-nm Resolution Depth Profiling of the Chemical State and Magnetic Structure of Thin Films by a Depth-Resolved X-Ray Absorption Spectroscopy Technique
Phys. Chem. Chem. Phys., **14** (2012) 10477.

O.Endo, M.Nakamura, R.Sumii and K.Amemiya
1D Hydrogen Bond Chain on Pt(211) Stepped Surface Observed by O K-NEXAFS Spectroscopy
J. Phys. Chem. C, **116** (2012) 13980.

K.Amemiya and M.Sakamaki
XAFS and XMCD Spectra at the Surface and Interface of Ultrathin Films Observed by the Depth-Resolved XAFS/XMCD Technique
e-J. Surf. Sci. Nanotech., **10** (2012) 521.

K.Amemiya
Recent Developments of the Wavelength-Dispersive XAFS Technique in the Soft X-Ray Region
Houshakou, **25** (2012) 269. (*in Japanese*).

J.Okabayashi, S.Kono, Y.Yamada and K.Nomura
Magnetic and Electronic Properties of Fe and Ni Codoped SnO₂
J. Appl. Phys., **112** (2012) 073917.

S.Kono, K.Nomura, Y.Yamada and J.Okabayashi
Magnetic and Mössbauer Studies of Fe and Co Co-Doped SnO₂
Hyperfine Interact., **205** (2012) 105.

Y.Nanba, D.Asakura, M.Okubo, Y.Mizuno, T.Kudo, H.S.Zhou, K.Amemiya, J.-H.Guo and K.Okada
Configuration-Interaction Full-Multiplet Calculation to Analyze the Electronic Structure of a Cyano-Bridged Coordination Polymer Electrode
J. Phys. Chem. C, **116** (2012) 24896.

7C

K.Nakagawa, T.Okayama, Y.Tanimoto, K.Sotowa, S.Sugiyama, T.Moriga, S.Takenaka and M.Kishida
Preparation of Carbon-Supported Pt Catalysts Covered with Microporous Silica Layers using Organosilanes: Sintering Resistance and Superior Catalytic Performance for Cyclohexane Dehydrogenation
Appl. Catal. A, **419-420** (2012) 13.

Y.Yoshida, Y.Mitani, T.Itoi and Y.Izumi
Preferential Oxidation of Carbon Monoxide in Hydrogen using Zinc Oxide Photocatalysts Promoted and Tuned by Adsorbed Copper Ions
J. Catal., **287** (2012) 190.

K.K.Bando, T.Wada, T.Miyamoto, K.Miyazaki, S.Takakusagi, Y.Koike, Y.Inada, M.Nomura, A.Yamaguchi, T.Gott, S.Ted Oyama and K.Asakura
Combined in situ QXAFS and FTIR Analysis of a Ni Phosphide Catalyst under Hydrodesulfurization Conditions
J. Catal., **286** (2012) 165.

M.Morikawa, N.Ahmed, Y.Ogura and Y.Izumi
Polymer Electrolyte Fuel Cell Supplied with Carbon Dioxide. Can Be the Reductant Water Instead of Hydrogen?
Appl. Catal. B, **117** (2012) 317.

M.Harada, Y.Tasaki, H.Qua and T.Okada
Hydration of Ions and Salt Crystallization in Liquid Phase Coexistent with Ice at Temperature Below Eutectic Point
RSC Adv., **2** (2012) 461.

N.Furuta, S.Nishimura, P.Barpana and A.Yamada
 $\text{Fe}^{3+}/\text{Fe}^{2+}$ Redox Couple Approaching 4 V in $\text{Li}_{2-x}(\text{Fe}_{1-y}\text{Mn}_y)\text{P}_2\text{O}_7$ Pyrophosphate Cathode
Chem. Mater., **24** (2012) 1055.

K.Asakura
Polarization-Dependent Total Reflection Fluorescence Extended X-Ray Absorption Fine Structure and its Application to Supported Catalysis
RCS Catalysis Book Series, **24** (2012) 281.

T.Ohkubo, Y.Takehara and Y.Kuroda
Water-Initiated Ordering Around a Copper Ion of Copper Acetate Confined in Slit-Shaped Carbon Micropores
Micropor. Mesopor. Mater., **154** (2012) 82.

N.Naveed, M.Morikawa and Y.Izumi
Photocatalytic Conversion of Carbon Dioxide into Methanol using Optimized Layered Double Hydroxide Catalysts
Catal. Today, **185** (2012) 263.

M.J.Hossain, H.Tsunoyama, M.Yamauchi, N.Ichikuni and T.Tsukuda
High-Yield Synthesis of PVP-Stabilized Small Pt Clusters by Microfluidic Method
Catalysis Today, **183** (2012) 101.

S.T.Oyama, H.Zhao, H.J.Freund, K.Asakura, R.Wlodarczyk and M.Sierka
Unprecedented Selectivity to the Direct Desulfurization (DDS) Pathway in a Highly Active FeNi Bimetallic Phosphide Catalyst
J. Catal., **285** (2012) 1-5.

Y.Moritomo, M.Takachi, Y.Kurihara and T.Matsuda
Thin Film Electrodes of Prussian Blue Analogues with Rapid Li^+ Intercalation
Appl. Phys. Express, **5** (2012) 041801.

T.Matsuda and Y.Moritomo
Two-Electron Reaction without Structural Phase Transition in Nanoporous Cathode Material
J. Nanotechnology, **2012** (2012) 568147.

T.Shishido, K.Shimamura, K.Teramura and T.Tanaka
Role of CO_2 in Dehydrogenation of Propane over Cr-Based Catalysts
Catal. Today, **185** (2012) 151.

P.Maity, T.Wakabayashi, N.Ichikuni, H.Tsunoyama, S.Xie, M.Yamauchi and T.Tsukuda
Selective Synthesis of Organogold Magic Clusters $\text{Au}_{54}(\text{CCPh})_{26}$
Chem. Comm., **48** (2012) 6085.

B.Sarkar, P.Prajapati, R.Tiwari, R.Tiwari, S Ghosh, S.S.Acharyya, C.Pendem, R.K.Singha, L.N.S.Konathala, J.Kumar, T.Sasaki and R.Bal
Room Temperature Selective Oxidation of Cyclohexane over Cu-Nanoclusters Supported on Nanocrystalline Cr_2O_3
Green Chemistry, **14** (2012) 2600.

C.Zhang, F.Liu, Y.Zhai, H.Ariga, N.Yi, Y.Liu, K.Asakura, M.Flytzani-Stephanopoulos and H.He
Alkali-Metal-Promoted Pt/ TiO_2 Opens a More Efficient Pathway to Formaldehyde Oxidation at Ambient Temperatures
Angew. Chem. Int. Ed., **51** (2012) 9628.

T.Wada, K.K.Bando, S.T.Oyama, T.Miyamoto, S.Takakusagi and K.Asakura
Operando Observation of Ni_2P Structural Changes during Catalytic Reaction: Effect of H_2S Pretreatment
Chem. Lett., **41** (2012) 1238.

H.Kobayashi, Y.Takenaka, Y.Arachi, H.Nitani, T.Okumura, M.Shikano, H.Kageyama and K.Tatsumi
Study on Li De-Intercalation/Intercalation Mechanism for a High Capacity Layered $\text{Li}_{1.20}\text{Ni}_{0.17}\text{Co}_{0.10}\text{Mn}_{0.53}\text{O}_2$ Material
Solid State Ionics, **225** (2012) 580.

K.Kakimoto, T.Hotta and I.Kagomiya
Fine Structural Analysis and Phase Transition Behavior
for Li-Modified $\text{Na}_{0.5}\text{K}_{0.5}\text{NbO}_3$ Lead-Free Piezoelectric
Ceramics
Ceramics International, **38** (2012) S319.

K.Kakimoto, R.Kaneko and I.Kagomiya
Grain-Size-Controlled (Li,Na,K) NbO_3 Ceramics using
Powder Source Classified by Centrifugal Separator
Jpn. J. Appl. Phys., **51** (2012) 09LD06.

C.Pendem, P.Gupta, N.Chaudhary, S.Singh, J.Kumar,
T.Sasaki, A.Datta and R.Bal
Aqueous Phase Reforming of Glycerol to 1,2-Propanediol
over Pt-Nanoparticles Supported on Hydrotalcite in the
Absence of Hydrogen
Green Chemistry, **14** (2012) 3107.

K.Layek, M.L.Kantam, M.Shirai, D.Nishio-Hamane,
T.Sasaki and H.Maheswaran
Gold Nanoparticles Stabilized on Nanocrystalline
Magnesium Oxide as an Active Catalyst for Reduction of
Nitroarenes in Aqueous Medium at Room Temperature
Green Chemistry, **14** (2012) 3164.

S.Ganorkar, K.R.Priolkar, P.R.Sarode, A.Banerjee,
R.Rawat and S.Emura
Influence of Local Structure on Magnetic Properties of
Layered Cobaltites $\text{PrBaCo}_2\text{O}_{5+\delta}$, $\delta \approx 0.5$
J. Phys.: Condens. Matter, **24** (2012) 476003.

N.Nakajima, M.Oki, Y.Isohama, H.Maruyama,
Y.Tezuka, K.Ishiji, T.Iwazumi and K.Okada
Enhancement of Dielectric Constant of BaTiO_3
Nanoparticles Studied by Resonant X-Ray Emission
Spectroscopy
Phys. Rev. B, **86** (2012) 224114.

K.Mori, K.Watanabe, Y.Terai, Y.Fujiwara and
H.Yamashita
Hybrid Mesoporous-Silica Materials Functionalized
by Pt^{II} Complexes: Correlation between Spatial
Distribution of the Active Center, Photoluminescence
Emission, and Photocatalytic Activity
Chem. Eur. J., **18** (2012) 11371.

K.Fuku, S.Takakura, T.Kamegawa, K.Mori and
H.Yamashita
Preparation of Size-Controlled Copper Nanoparticles
Supported Catalyst using Rapid and Uniform Heating
Under Microwave Irradiation
Chem. Lett., **41** (2012) 614.

K.Fuku, T.Sakano, T.Kamegawa, K.Mori and
H.Yamashita
Enhanced Hydrogenation Activity of Nano-sized Pd-Ni
Bimetal Particles on Ti-containing Mesoporous Silica
Prepared by Photo-Assisted Deposition Method
J. Mater. Chem., **22** (2012) 16243.

S.Okada, S.Ikurumi, T.Kamegawa, K.Mori and
H.Yamashita
Structural Design of $\text{Pd/SiO}_2\text{@Ti}$ -Containing
Mesoporous Silica Core-Shell Catalyst for Efficient
One-Pot Oxidation using in Situ Produced H_2O_2
J. Phys. Chem. C, **116** (2012) 14360.

K.Fuku, T.Kamegawa, K.Mori and H.Yamashita
Highly Dispersed Platinum Nanoparticles on TiO_2
Prepared by using the Microwave-Assisted Deposition
Method: An Efficient Photocatalyst for the Formations
of H_2 and N_2 from Aqueous NH_3
Chem. Asian J., **7** (2012) 1366.

Y.Imai, H.H.Li, H.Takumi, H.Tanida, I.Watanabe,
T.Takiue, H.Matsubara and M.Aratono
Study on the Distribution of Binary Mixed Counterions
in Surfactant Adsorbed Films by Total Reflection XAFS
Measurements
J. Colloid Interface Sci., **388** (2012) 219.

E.Ohtomi, N.Ikeda, Y.Tokiwa, I.Watanabe, H.Tanida,
T.Takiue, M.Aratono and H.Matsubara
Thin-Thick Transition of Foam Film Driven by Phase
Transition of Surfactant-Alkane Mixed Adsorbed Film
Chem. Lett., **41** (2012) 1300.

T.Kamegawa, Y.Shimizu and H.Yamashita
Superhydrophobic Surfaces with Photocatalytic Self-
Cleaning Properties by Nanocomposite Coating of TiO_2
and Polytetrafluoroethylene
Adv. Mater., **24** (2012) 3697.

Y.Kuwahara, D.Y.Kang, J.R.Copeland, P.Bollini,
C.Sievers, T.Kamegawa, H.Yamashita and C.W.Jones
Enhanced CO_2 Adsorption over Polymeric Amines
Supported on Heteroatom-Incorporated SBA-15 Silica:
Impact of Heteroatom Type and Loading on Sorbent
Structure and Adsorption Performance
Chem. Eur. J., **18** (2012) 16649.

J.Kugai, R.Kitagawa, S.Seino, T.Nakagawa, Y.Ohkubo,
H.Nitani, H.Daimon and T.A.Yamamoto
 CeO_2 -Supported Pt-Cu Alloy Nanoparticles Synthesized
by Radiolytic Process for Highly Selective CO Oxidation
Int. J. Hydrogen Energy, **37** (2012) 4787.

N.Ichikuni, O.Tsuchida, J.Naganuma, T.Hara,
H.Tsunoyama, T.Tsukuda and S.Shimazu
Preparation and Catalysis of Supported NiO Nanocluster
for Oxidative Coupling of Thiophenol
Trans. Mater. Res. Soc. Jpn., **37** (2012) 177.

8A

T.Kawamoto, T.Mori, A.Nakao, Y.Murakami and
J.A.Schlueter
 T_c of 11 K Identified for the Third Polymorph of the
(BEDT-TTF) $_2\text{Ag}(\text{CF}_3)_4$ (TCE) Organic Superconductor
J. Phys. Soc. Jpn., **81** (2012) 023705.

R.Kumai, S.Horiuchi, J.Fujioka and Y.Tokura
Ferroelectricity and Pressure-Induced Phenomena
Driven by Neutral Ionic Valence Instability of Acid-Base
Supramolecules
J. Am. Chem. Soc., **134** (2012) 1036.

Y.Moritomo, M.Takachi, Y.Kurihara and T.Matsuda
Thin Film Electrodes of Prussian Blue Analogues with
Rapid Li⁺ Intercalation
Appl. Phys. Express, **5** (2012) 041801.

T.Matsuda and Y.Moritomo
Two-Electron Reaction without Structural Phase
Transition in Nanoporous Cathode Material
J. Nanotechnology, **2012** (2012) 568147.

K.Kobayashi, S.Horiuchi, R.Kumai, F.Kagawa,
Y.Murakami and Y.Tokura
Electronic Ferroelectricity in a Molecular Crystal with
Large Polarization Directing Antiparallel to Ionic
Displacement
Phys. Rev. Lett., **108** (2012) 237601.

T.Kakiuchi, N.Fujita, K.Mase and M.Tanaka
Study of Local Valence Electronic States of SiO₂
Ultrathin Films Grown on Si(111) by using Auger
Photoelectron Coincidence Spectroscopy: Upward Shift
of Valence-Band Maximum Depending on the Interface
Structure
J. Phys. Soc. Jpn., **81** (2012) 074706.

Y.Moritomo, XH.Zhu, M.Takachi and T.Matsuda
Fast Discharge Process of Thin Film Electrode of
Prussian Blue Analogue
Jpn. J. Appl. Phys., **51** (2012) 107301.

S.Ishibashi, S.Horiuchi, R.Kumai and K.Terakura
First-Principles Calculations of Spontaneous Polarization
for TTF-QBrCl₃
Phys. Status Solidi B, **249** (2012) 1008.

K.Hemmi, R.Fukuta, E.Uykur, S.Miyasaka, S.Tajima,
A.Nakao, H.Nakao, R.Kumai and Y.Murakami
Cr- and Mo-Doping Effects on Structural and Orbital
Order Phase Transition in Spinel-Type MnV₂O₄
J. Phys. Soc. Jpn., **81** (2012) SB030.

A.Takemori, S.Saijo, S.Suzuki, S.Miyasaka, S.Tajima,
A.Nakao, H.Nakao, R.Kumai and Y.Murakami
Correlation between T_c and Transport Properties in
PrFeP_{1-x}As_xO_{0.9}F_{0.1}
J. Phys. Soc. Jpn., **81** (2012) SB043.

S.Horiuchi, F.Kagawa, K.Hatahara, K.Kobayashi,
R.Kumai, Y.Murakami and Y.Tokura
Above-Room-Temperature Ferroelectricity and
Antiferroelectricity in Benzimidazoles
Nature Communications, **3** (2012) 1308.

T.Honda, Y.Ishiguro, H.Nakamura, Y.Wakabayashi and
T.Kimura
Structure and Magnetic Phase Diagrams of Multiferroic
Mn₂GeO₄
J. Phys. Soc. Jpn., **81** (2012) 103703.

N.Hoshino, F.Iijima, G.N.Newton, N.Yoshida, T.Shiga,
H.Nojiri, A.Nakao, R.Kumai, Y.Murakami and H.Oshio
Three-Way Switching in a Cyanide-Bridged [CoFe] Chain
Nature Chemistry, **4** (2012) 921.

M.Takachi, Y.Kurihara and Y.Moritomo
Channel Size Dependence of Li⁺ Insertion/Extraction in
Nanoporous Hexacyanoferrates
J. Mater. Sci. Eng., **2** (2012) 452.

8B

A.Nakao, Y.Yamaki, H.Nakao, Y.Murakami,
K.Hasegawa, M.Isobe and Y.Ueda
Observation of Structural Change in the Novel
Ferromagnetic Metal-Insulator Transition of K₂Cr₈O₁₆
J. Phys. Soc. Jpn., **81** (2012) 054710.

M.Mito, M.Ogawa, H.Deguchi, M.Yamashita and
H.Miyasaka
Effects of Pressure on Two-Dimensional Networked
Single-Molecule Magnets Exhibiting AC-Field-
Switchable Magnetic Properties
J. Phys. Soc. Jpn., **81** (2012) 064716.

I.Do, K.Goshome, E.Miyazaki and K.Takimiya
A Soluble α -Dithienotetrathiafulvalene Derivative for
Organic Field-Effect Transistors
Chem. Lett., **41** (2012) 435.

N.Ishimatsu, T.Shichijo, Y.Matsushima, H.Maruyama,
Y.Matsuura, T.Tsumuraya, T.Shishidou, T.Oguchi,
N.Kawamura, M.Mizumaki, T.Matsuoka and
K.Takemura
Hydrogen-Induced Modification of the Electronic
Structure and Magnetic States in Fe, Co, and Ni
Monohydrides
Phys. Rev. B, **86** (2012) 104430.

M.Ikawa, T.Yamada, H.Matsui, H.Minemawari,
J.Tsutsumi, Y.Horii, M.Chikamatsu, R.Azumi, R.Kumai
and T.Hasegawa
Simple Push Coating of Polymer Thin-Film Transistors
Nature Communications, **3** (2012) 1176.

S.Horiuchi, F.Kagawa, K.Hatahara, K.Kobayashi,
R.Kumai, Y.Murakami and Y.Tokura
Above-Room-Temperature Ferroelectricity and
Antiferroelectricity in Benzimidazoles
Nature Communications, **3** (2012) 1308.

T.Honda, Y.Ishiguro, H.Nakamura, Y.Wakabayashi and
T.Kimura
Structure and Magnetic Phase Diagrams of Multiferroic
Mn₂GeO₄
J. Phys. Soc. Jpn., **81** (2012) 103703.

J.Tsutsumi, H.Matsui, T.Yamada, R.Kumai and T.Hasegawa

Generation and Diffusion of Photocarriers in Molecular Donor-Acceptor Systems: Dependence on Charge-Transfer Gap Energy

J. Phys. Chem. C, **116** (2012) 23957.

H.Kurihara, X.Lu, Y.Iiduka, H.Nikawa, M.Hachiya, N.Mizorogi, Z.Slanina, T.Tsuchiya, S.Nagase and T.Akasaka

X-Ray Structures of $\text{Sc}_2\text{C}_2@C_{2n}$ ($n = 40, 41, 42$): In-Depth Understanding of the Core-Shell Interplay in Carbide Cluster Metallofullerenes

Inorg. Chem., **51** (2012) 746.

M.Mito, T.Imakyurei, H.Deguchi, K.Matsumoto, T.Tajiri, H.Hara, T.Ozaki, H.Takeya and Y.Takano

Uniaxial Strain Effects on Cuprate Superconductor $\text{YBa}_2\text{Cu}_4\text{O}_8$

J. Phys. Soc. Jpn., **81** (2012) 113709.

R.I.Thomson, C.M.Pask, G.O.Lloyd, M.Mito and J.M.Rawson

Pressure-Induced Enhancement of Magnetic-Ordering Temperature in an Organic Radical to 70 K: A Magneto-structural Correlation

Chem. Eur. J., **18** (2012) 8629.

T.Tajiri, S.Hohdai, K.Hamamoto, H.Deguchi, M.Mito and A.Kohno

Magnetic Properties of $\text{La}_{2-x}\text{Sr}_x\text{CuO}_4$ Nanoparticles in Mesoporous Silica

J. Phys: Conf. Ser., **400** (2012) 032095.

A.Kobayashi, Y.Fukuzawa, H.-C.Chang and M.Kato

Vapor-Controlled Linkage Isomerization of a Vapochromic Bis(thiocyanato)platinum(II) Complex: New External Stimuli To Control Isomerization Behavior

Inorg. Chem., **51** (2012) 7508.

A.Kobayashi, H.Hara, T.Yonemura, H.-C.Chang and M.Kato

Systematic Structural Control of Multichromic Platinum(II)-Diimine Complexes Ranging from Ionic Solid to Coordination Polymer

Dalton Trans., **41** (2012) 1878.

9A

K.Shimizu, T.Oda, Y.Sakamoto, Y.Kamiya, H.Yoshida and A.Satsuma

Quantitative Determination of Average Rhodium Oxidation State by a Simple XANES Analysis

Appl. Catal. B, **111** (2012) 509.

Y.Yoshida, Y.Mitani, T.Itoi and Y.Izumi

Preferential Oxidation of Carbon Monoxide in Hydrogen using Zinc Oxide Photocatalysts Promoted and Tuned by Adsorbed Copper Ions

J. Catal., **287** (2012) 190.

M.Morikawa, N.Ahmed, Y.Ogura and Y.Izumi

Polymer Electrolyte Fuel Cell Supplied with Carbon Dioxide. Can Be the Reductant Water Instead of Hydrogen?

Appl. Catal. B, **117** (2012) 317.

K.Asakura

Polarization-Dependent Total Reflection Fluorescence Extended X-Ray Absorption Fine Structure and its Application to Supported Catalysis

RCS Catalysis Book Series, **24** (2012) 281.

S.Emura, M.-T.Siti-Nooraya, D.Krishnamurthy and H.Asahi

An Approach to Temperature - Insensitive Band Gap - The InGaGdN Case

Phys. Status. Solidi B, **249** (2012) 489.

K.Shimizu, Y.Kamiya, K.Osaki, H.Yoshida and A.Satsuma

The Average Pd Oxidation State in Pd/SiO₂ Quantified by L₃-Edge XANES Analysis and its Effects on Catalytic Activity for CO Oxidation

Catal. Sci. Technol., **2** (2012) 767.

N.Naveed, M.Morikawa and Y.Izumi

Photocatalytic Conversion of Carbon Dioxide into Methanol using Optimized Layered Double Hydroxide Catalysts

Catal. Today, **185** (2012) 263.

T.Itai, D.Hayase, Y.Hyobu, S.H.Hirata M.Kumagai and S.Tanabe

Hypoxia-Induced Exposure of Isaza Fish to Manganese and Arsenic in the Bottom of Lake Biwa, Japan: Experimental and Geochemical Verification

Environmental Science & Technology, **46** (2012) 5789.

S.T.Oyama, H.Zhao, H.J.Freund, K.Asakura, R.Wlodarczyk and M.Sierka

Unprecedented Selectivity to the Direct Desulfurization (DDS) Pathway in a Highly Active FeNi Bimetallic Phosphide Catalyst

J. Catal., **285** (2012) 1-5.

S.Furukawa, D.Tsukio, T.Shishido, K.Teramura and T.Tanaka

Correlation between the Oxidation State of Copper and the Photocatalytic Activity of Cu/Nb₂O₅

J. Phys. Chem. C, **116** (2012) 12181.

T.Takeguchi, T.Yamanaka, K.Asakura, E.N.Muhamad, K.Uosaki and W.Ueda

Evidence of Nonelectrochemical Shift Reaction on a CO-Tolerant High-Entropy State Pt-Ru Anode Catalyst for Reliable and Efficient Residential Fuel Cell Systems

J. Am. Chem. Soc., **134** (2012) 14508.

M.Tada, S.Zhang, S.Malwadkar, N.Ishiguro, J.Soga, Y.Nagai, K.Tezuka, H.Imoto, S.Otsuka-Yao-Matsuo, S.Ohkoshi and Y.Iwasawa
The Active Phase of Nickel/Ordered Ce₂Zr₂O_x Catalysts with a Discontinuity (x = 7-8) in Methane Steam Reforming
Angew. Chem. Int. Ed., **51** (2012) 9361.

T.Wada, K.K.Bando, S.T.Oyama, T.Miyamoto, S.Takakusagi and K.Asakura
Operando Observation of Ni₂P Structural Changes during Catalytic Reaction: Effect of H₂S Pretreatment
Chem. Lett., **41** (2012) 1238.

S.Asaoka, Y.Takahashi, Y.Araki and M.Tanimizu
Comparison of Antimony and Arsenic Behavior in an Ichinokawa River Water-Sediment System
Chemical Geology, **334** (2012) 1.

Y.Takahashi, K.Kondo, A.Miyaji, M.Umeo, T.Honma and S.Asaoka
Recovery and Separation of Rare Earth Elements using Columns Loaded with DNA-Filter Hybrid
Analytical Sciences, **28** (2012) 985.

H.Qin, Y.Yokoyama, Q.Fan, H.Iwatani, K.Tanaka, A.Sakaguchi, Y.Kanai, J.Zhu, Y.Onda and Y.Takahashi
Investigation of Cesium Adsorption on Soil and Sediment Samples from Fukushima Prefecture by Sequential Extraction and EXAFS Technique
Analytical Sciences, **46** (2012) 297.

Y.Yokoyama, K.Tanaka and Y.Takahashi
Differences in the Immobilization of Arsenite and Arsenate into Calcite
Geochim. Cosmochim. Acta, **91** (2012) 202.

K.Ito, K.Yoshida, S.Kittaka and T.Yamaguchi
Pore Size Dependent Behavior of Hydrated Ag⁺ Ions Confined in Mesoporous MCM-41 Materials under Synchrotron X-Ray Irradiation
Anal. Sci., **28** (2012) 639.

K.Fuku, T.Sakano, T.Kamegawa, K.Mori and H.Yamashita
Enhanced Hydrogenation Activity of Nano-sized Pd-Ni Bimetal Particles on Ti-containing Mesoporous Silica Prepared by Photo-Assisted Deposition Method
J. Mater. Chem., **22** (2012) 16243.

F.Gao, S.Yamazoe, T.Maeda, and T.Wada
Structural Study of Cu-Deficient Cu_{2(1-x)}ZnSnSe₄ Solar Cell Materials by X-Ray Diffraction and X-ray Absorption Fine Structure
Jpn. J. Appl. Phys., **51** (2012) 10NC28.

S.Yamashita, M.Katayama and Y.Inada
Redox Reactions of Nickel Species Supported on Silica
Memoirs of the SR Center Ritsumeikan University, **14** (2012) 3.

M.Okube, S.Sasaki, A.Yoshiasa, L.Wnag, T.Nakatani, H.Hongu, K.Murai, A.Nakatsuka and R.Miyawaki
Local Structure of Zn in Cretaceous-Tertiary Boundary Clays from Stevns Klint
J. Mineralogical and Petrological Sci., **107** (2012) 192.

A.Koide, T.Fujikawa, D.Abe, and S.Emura
Multiple Scattering Approach to GaN:Gd Gd L₃-Edge XANES
e-J. Surf. Sci. Nanotech, **10** (2012) 661.

Y.Ogawa, D.Ishiyama, N.Shikazono, K.Iwane, M.Kajiwara and N.Tsuchiya
The Role of Hydrous Ferric Oxide Precipitation in the Fractionation of Arsenic, Gallium, and Indium during the Neutralization of Acidic Hot Spring Water by River Water in the Tama River Watershed, Japan
Geochim. Cosmochim. Acta, **86** (2012) 367.

9C

K.Nakagawa, T.Okayama, Y.Tanimoto, K.Sotowa, S.Sugiyama, T.Moriga, S.Takenaka and M.Kishida
Preparation of Carbon-Supported Pt Catalysts Covered with Microporous Silica Layers using Organosilanes: Sintering Resistance and Superior Catalytic Performance for Cyclohexane Dehydrogenation
Appl. Catal. A, **419-420** (2012) 13.

M.Harada and Y.Kamigaito
Nucleation and Aggregative Growth Process of Platinum Nanoparticles Studied by in Situ Quick XAFS Spectroscopy
Langmuir, **28** (2012) 2415.

Y.Yoshida, Y.Mitani, T.Itoi and Y.Izumi
Preferential Oxidation of Carbon Monoxide in Hydrogen using Zinc Oxide Photocatalysts Promoted and Tuned by Adsorbed Copper Ions
J. Catal., **287** (2012) 190.

T.Wada, K.K.Bando, T.Miyamoto, S.Takakusagi, S.T.Oyama and K.Asakura
Operando QEXAFS Studies of Ni₂P during Thiophene Hydrodesulfurization: Direct Observation of Ni-S Bond Formation under Reaction Conditions
J. Synchrotron Rad., **19** (2012) 205.

K.K.Bando, T.Wada, T.Miyamoto, K.Miyazaki, S.Takakusagi, Y.Koike, Y.Inada, M.Nomura, A.Yamaguchi, T.Gott, S.Ted Oyama and K.Asakura
Combined in situ QXAFS and FTIR Analysis of a Ni Phosphide Catalyst under Hydrodesulfurization Conditions
J. Catal., **286** (2012) 165.

M.Morikawa, N.Ahmed, Y.Ogura and Y.Izumi
Polymer Electrolyte Fuel Cell Supplied with Carbon Dioxide. Can Be the Reductant Water Instead of Hydrogen?
Appl. Catal. B, **117** (2012) 317.

- S.Kimura, T.Mashino, T.Hiroki, D.Shigeoka, N.Sakai, L.Zhu and Y.Ichyanagi
Effect of Heat Treatment on Jahn-Teller Distortion and Magnetization in Cu Ferrite Nanoparticles
Thermochimica Acta, **532** (2012) 119.
- H.Takahashi, K.Shimada, Y.Yamamoto and H.Uehara
Reconstruction of Calorimetric Curves from X-Ray Diffraction Data during the Melting-Recrystallization Process of Polymers: Simultaneous Calorimetry/Xray Diffraction Measurements of Isotactic Poly(1-butene) in Form III
J. Macromol. Sci. Phys. B, **51** (2012) 338.
- T.Ohkubo, Y.Takehara and Y.Kuroda
Water-Initiated Ordering Around a Copper Ion of Copper Acetate Confined in Slit-Shaped Carbon Micropores
Micropor. Mesopor. Mater., **154** (2012) 82.
- M.Tanaka, A.Itadani, Y.Kuroda and M.Iwamoto
Effect of Pore Size and Nickel Content of Ni-MCM-41 on Catalytic Activity for Ethene Dimerization and Local Structures of Nickel Ions
J. Phys. Chem. C, **116** (2012) 5664.
- N.Naveed, M.Morikawa and Y.Izumi
Photocatalytic Conversion of Carbon Dioxide into Methanol using Optimized Layered Double Hydroxide Catalysts
Catal. Today, **185** (2012) 263.
- T.Itai, D.Hayase, Y.Hyobu, S.H.Hirata M.Kumagai and S.Tanabe
Hypoxia-Induced Exposure of Isaza Fish to Manganese and Arsenic in the Bottom of Lake Biwa, Japan: Experimental and Geochemical Verification
Environmental Science & Technology, **46** (2012) 5789.
- K.Yamamoto and Y.Miwa
Determination of Glass Transition Temperature at Specific Sites in Polymers by Microwave Power Saturation in Electron Spin Resonance
kobunshi Ronbunshu, **69** (2012) 366. (*in Japanese*).
- H.Takahashi and K.Jojiki
Effect of Heavy Water on Nonlamellar Structures of Phospholipid and Monoolein Molecular Assemblies
Chem. Lett., **41** (2012) 1101.
- T.Shishido, K.Shimamura, K.Teramura and T.Tanaka
Role of CO₂ in Dehydrogenation of Propane over Cr-Based Catalysts
Catal. Today, **185** (2012) 151.
- B.Sarkar, P.Prajapati, R.Tiwari, R.Tiwari, S Ghosh, S.S.Acharyya, C.Pendem, R.K.Singha, L.N.S.Konathala, J.Kumar, T.Sasaki and R.Bal
Room Temperature Selective Oxidation of Cyclohexane over Cu-Nanoclusters Supported on Nanocrystalline Cr₂O₃
Green Chemistry, **14** (2012) 2600.
- M.Shibukawa, M.Harada, T.Okada, Y.Ogiyama, T.Shimasaki, Y.Kondo, A.Inoue and S.Saito
X-Ray Absorption Fine Structure Spectroscopy Studies of Thermal Effects on Ion-exchange Equilibria
RSC Adv., **2** (2012) 8985.
- T.Wada, K.K.Bando, S.T.Oyama, T.Miyamoto, S.Takakusagi and K.Asakura
Operando Observation of Ni₂P Structural Changes during Catalytic Reaction: Effect of H₂S Pretreatment
Chem. Lett., **41** (2012) 1238.
- A.Yamaguchi, N.Hiyoshi, O.Sato and M.Shirai
Gasification of Organosolv-Lignin over Charcoal Supported Noble Metal Salt Catalysts in Supercritical Water
Topics in Catal., **55** (2012) 889.
- C.Pendem, P.Gupta, N.Chaudhary, S.Singh, J.Kumar, T.Sasaki, A.Datta and R.Bal
Aqueous Phase Reforming of Glycerol to 1,2-Propanediol over Pt-Nanoparticles Supported on Hydrotalcite in the Absence of Hydrogen
Green Chemistry, **14** (2012) 3107.
- K.Layek, M.L.Kantam, M.Shirai, D.Nishio-Hamane, T.Sasaki and H.Maheswaran
Gold Nanoparticles Stabilized on Nanocrystalline Magnesium Oxide as an Active Catalyst for Reduction of Nitroarenes in Aqueous Medium at Room Temperature
Green Chemistry, **14** (2012) 3164.
- Y.Nagai, Y.Kawabata and T.Kato
Microscopic Investigation on Morphologies of Bilayer Gel Structure in the Mixed Polyoxyethylene-Type Nonionic Surfactant Systems
J. Phys. Chem. B, **116** (2012) 12558.
- S.Muratsugu, Z.Weng, H.Nakai, K.Isobe, Y.Kushida, T.Sasaki and M.Tada
Surface-Assisted Transfer Hydrogenation Catalysis on a γ -Al₂O₃-Supported Ir Dimer
Phys. Chem. Chem. Phys., **14** (2012) 16023.
- S.Zhang, S Muratsugu, N.Ishiguro, S.Ohkoshi and M.Tada
Perovskite NaCeTi₂O₆-Supported Ni Catalysts for CH₄ Steam Reforming
ChemCatChem, **4** (2012) 1783.
- R.Akiyama, N.Matsuki, H.Nomura, H.Yoshida, T.Yoshida and S.Kobayashi
Nontoxic, Nonvolatile, and Highly Efficient Osmium Catalysts for Asymmetric Dihydroxylation of Alkenes and Application to one Mol-Scale Synthesis of an Anticancer Drug, Camptothecin Intermediate
RSC Adv., **2** (2012) 7456.
- M.Tamaru, P.Barpanda, Y.Yamada, S.Nishimura and A.Yamada
Observation of the Highest Mn³⁺/Mn²⁺ Redox Potential of 4.45 V in a Li₂MnP₂O₇ Pyrophosphate Cathode
J. Mater. Chem., **22** (2012) 24526.

10A

H.C Moon, D.Bae and J.K.Kim
Self-Assembly of Poly(3-Dodecylthiophene)-*block*-Poly(Methyl Methacrylate) Copolymers Driven by Competition between Microphase Separation and Crystallization
Macromolecules, **45** (2012) 5201.

T.Yokoyama
Path Integral Effective Classical Potential Method Applied to Anharmonicity and Quantum Effects in Thermal Expansion of Invar Alloy
e-J. Surf. Sci. Nanotech., **10** (2012) 486.

A.Oda, H.Torigoe, A.Itadani, T.Ohkubo, T.Yumura, H.Kobayashi and Y.Kuroda
Unprecedented Reversible Redox Process in the ZnMFI-H₂ System Involving Formation of Stable Atomic Zn⁰
Angew. Chem. Int. Ed., **51** (2012) 7719.

Y.Nishina, H.Hashimoto, N.Kimura, N.Miyata, T.Fujii, B.Ohtani and J.Takada
Biogenic Manganese Oxide: Effective New Catalyst for Direct Bromination of Hydrocarbons
RSC Adv., **2** (2012) 6420.

H.Okudera, A.Yoshiasa, K.Murai, M.Okube, T.Takeda and S.Kikkawa
Local Structure of Magnetite and Maghemite and Chemical Shift in Fe K-Edge XANES
J. Mineralogical and Petrological Sci., **107** (2012) 127.

M.Okube, S.Sasaki, A.Yoshiasa, L.Wnag, T.Nakatani, H.Hongu, K.Murai, A.Nakatsuka and R.Miyawaki
Local Structure of Zn in Cretaceous-Tertiary Boundary Clays from Stevns Klint
J. Mineralogical and Petrological Sci., **107** (2012) 192.

N.Sakai, L.Zhu, A.Kurokawa, H.Takeuchi, S.Yano, T.Yanoh, N.Wada, S.Taira, Y.Hosokai, Y.Machida, H.Saito and Y.Ichianagi
Synthesis of Gd₂O₃ Nanoparticle for MRI Contrast Agents
J. Phys.: Conf. Ser., **352** (2012) 012008.

T.Miyasaka, A.Kurokawa, H.Takeuchi, S.Yano, T.Yanoh, K.Onuma, T.Kondo, K.Miike and Y.Ichianagi
Magnetic Properties and X-Ray Absorption Fine-Structure Spectra of CoMn₂O₄ Nanoparticles
e-J. Surf. Sci. Nanotech., **10** (2012) 643.

A.Itadani, H.Torigoe, T.Yumura, T.Ohkubo, H.Kobayashi and Y.Kuroda
Dual-Copper Catalytic Site Formed in CuMFI Zeolite Makes Effective Activation of Ethane Possible Even at Room Temperature
J. Phys. Chem. C, **116** (2012) 10680.

R.Hori, D.Furukawa, K.Yamamoto and S.Kutsumizu
Light-Driven Phase Transition in a Cubic Phase-Forming Binary System Composed of 4'-*n*-Docosyloxy-3'-nitrophenyl-4-carboxylic Acid and an Azobenzene Derivative
Chem. Eur. J., **18** (2012) 7346.

M.Okube, T.Yasue and S.Sasaki
Residual-Density Mapping and Site-Selective Determination of Anomalous Scattering Factors to Examine the Origin of the Fe K Pre-Edge Peak of Magnetite
J. Synchrotron Rad., **19** (2012) 759.

H.Okudera, A.Yoshiasa, K.Murai, M.Okube, T.Takeda and S.Kikkawa
Local Structure of Magnetite and Maghemite and Chemical Shift in Fe K-Edge XANES
J. Mineralogical and Petrological Sci., **107** (2012) 127.

10C

K.Kubota, K.Wakamatsu, N.Nameki and Y.Toyama
Inhibition of Protein Aggregation: SAXS Study on the Role of the α C Region of Fibrinogen in the Fibrin Polymerization
Key Materials Engineering, **497** (2012) 41.

K.Terao, R.Kanenaga, T.Sato, K.Mizuno and H.P.Bächinger
Complex Formation of Collagen Model Peptides with Polyelectrolytes and Stabilization of the Triple Helical Structure
Macromolecules, **45** (2012) 392.

S. Nakagawa, K. Kadena, T. Ishizone, S. Nojima, T. Shimizu, K. Yamaguchi and S. Nakahama
Crystallization Behavior and Crystal Orientation of Poly(ϵ -caprolactone) Homopolymers Confined in Nanocylinders : Effects of Nanocylinder Dimension
Macromolecules, **45** (2012) 1892.

Y.Zhao, G.Matsuba and H.Ito
Shear-Induced Crystallization and Rheological Behavior of Syndiotactic Polystyrene
Journal of Materials Research, **27** (2012) 1372.

F.Arai, H.Takeshita, M.Dobashi, K.Takenaka, M.Miya and T.Shiomi
Effects of Liquid-Liquid Phase Separation on Crystallization of Poly(Ethylene Glycol) in Blends with Isotactic Poly(Methyl Methacrylate)
Polymer, **50** (2012) 851.

S.Fujii, D.Mitsumasu, Y.Isono and W.Richtering
Shear-Induced Onion Formation of Polymer-Grafted Lamellar Phase
Soft Matter, **8** (2012) 5381.

M.Hirai, Y.Hagiwara, K.Takeuchi, R.Kimura, T.Onai, R.K.Hirai, N.Ohta and M.Sugiyama
Thermal Unfolding and Refolding of Protein under Osmotic Pressure Clarified by Wide-Angle X-Ray Scattering
Thermochimica Acta, **532** (2012) 15.

H.Takeno, A.Maehara, M.Kuchiishi, K.Yoshiba, H.Takeshita, S.Kondo, T.Dobashi, M.Takenaka and H.Hasegawa
Structural and Thermal Properties of Unpurified and Purified 12-Hydroxystearic Acid Solutions
Sen'i Gakkaishi, **68** (2012) 248.

Y.Watanabe and Y.Inoko
An Assessment Study on Two-Dimensional X-Ray Scattering Data for Protein Solutions
Rep. Nat'l Food Res. Inst., **76** (2012) 39. (*in Japanese*).

K.Terao, F.Maeda, K.Oyamada, T.Ochiai, S.Kitamura and T.Sato
Side-Chain-Dependent Helical Conformation of Amylose Alkylcarbamates: Amylose Tris(ethylcarbamate) and Amylose Tris(*n*-hexylcarbamate)
J. Phys. Chem. B, **116** (2012) 12714.

L.Huang, G.Kiyofuji, J.Matsumoto, Y.Fukagawa, C.Gong and S.Nojima
Isothermal Crystallization of Poly(β -propiolactone) Blocks Starting from Lamellar Microdomain Structures of Double Crystalline Poly(β -propiolactone)-*block*-Polyethylene Copolymers
Polymer, **53** (2012) 5856.

K.Tamada, H.Yamamura, K.Terao and T.Sato
Conformation of Single-Stranded DNA in Aqueous Solution
Kobunshi Ronbunshu, **69** (2012) 399. (*in Japanese*).

H.Makyio, M.Ohgi, T.Takei, S.Takahashi, H.Takatsu, Y.Katoh, A.Hanai, T.Ueda, Y.Kanaho, Y.Xie, HW.Shin, H.Kamikubo, M.Kataoka, M.Kawasaki, R.Kato, S.Wakatsuki and K.Nakayama
Structural Basis for Arf6-MKLP1 Complex Formation on the Flemming Body Responsible for Cytokinesis
EMBO J., **31** (2012) 2590.

M.Koga, K.Sato, R.Ishige, T.Ishii, S.Kang, K.Sakajiri, J.Watanabe and M.Tokita
Well-Ordered Lamellar Microphase-Separated Morphology of an ABA Triblock Copolymer Containing a Main-Chain Liquid Crystalline Polyester as the Middle Segment 2: Influence of the Amorphous Segment Molecular Weight
Macromolecules, **45** (2012) 9391.

A.Narumi, Y.Ohashi, D.Togashi, Y.Saito, Y.Jinbo, Y.Izumi, K.Matsuda, T.Kakuchi and S.Kawaguchi
Star Polymer with Crosslinked Core and Water-Soluble Poly(*N*-hydroxyethylacrylamide)-Arms: Synthesis by Arm-First Method using ATRP and Characterizations by SEC-MALS and SAXS Measurement in Water
J. Polym. Sci. Part-A. Polym. Chem., **50** (2012) 3546.

K.Terao, N.Asano, S.Kitamura and T.Sato
Rigid Cyclic Polymer in Solution: Cycloamylose Tris(phenylcarbamate) in 1,4-Dioxane and 2-Ethoxyethanol
ACS Macro Lett., **1** (2012) 1291.

Z.Gai, Y.Kitagawa, Y.Tanaka, N.Shimizu, K.Komoda, I.Tanaka and M.Yao
The Binding Mechanism of eIF2 β with its Partner Proteins, eIF5 and eIF2B ϵ
Biochem. Biophys. Res. Commun., **423** (2012) 515.

H.C.Moon, J.G.Kim and J.K.Kim
Isomeric Effects on the Phase Behavior of Polystyrene-*block*-Poly(Pentyl Methacrylate) Copolymers
Macromolecules, **45** (2012) 3639.

Y.Sageshima, S.Arai, A.Noro and Y.Matsushita
Fabrication and Modification of Ordered Nanoporous Structures from Nanophase-Separated Block Copolymer/Metal Salt Hybrids
Langmuir, **28** (2012) 17524.

E.Otsuka, S.Komiya, S.Sasaki, J.Xing, Y.Bando, Y.Hirashima, M.Sugiyama and A.Suzuki
Effects of Preparation Temperature on Swelling and Mechanical Properties of PVA Cast Gels
Soft Matter, **8** (2012) 8129.

Y.Koide, H.Ikake, Y.Muroga and S.Shimizu
Effect of the Cast-Solvent on the Morphology of Cast Films Formed with a Mixture of Stereoisomeric Poly(Lactic Acids)
Polymer J., **2012** (2012) 1.

S.Kudo, J.M.M.Caaveiro, T.Miyafusa, S.Goda, K.Ishii, T.Matsuura, Y.Sudou, T.Kodama, T.Hamakubo and K.Tsumoto
Structural and Thermodynamic Characterization of the Self-Adhesive Properties of Human P-Cadherin
Mol. Biosyst., **8** (2012) 2050.

K.Okoshi
Liquid Crystal Phases Observed in Rigid-Rod Polymers
Ekisho, **16** (2012) 172. (*in Japanese*).

K.Okoshi, M.Fujiki and J.Watanabe
Asymmetrically Tilted Alignment of Rigid-Rod Helical Polysilanes on a Rubbed Polyimide Surface
Langmuir, **28** (2012) 4811.

H.Nakatani, S.Goda, H.Unno, T.Nagai, T.Yoshimura, and H.Hemmi
Substrate-Induced Change in the Quaternary Structure of Type 2 Isopentenyl Diphosphate Isomerase from *Sulfolobus shibatae*
J. Bacteriol., **194** (2012) 3216.

11A

M.Ukibe, S.Shiki, Y.Kitajima and M.Ohkubo
Soft X-Ray Detection Performance of Superconducting Tunnel Junction Arrays with Asymmetric Tunnel Junction Layer Structure
Jpn. J. Appl. Phys., **51** (2012) 010115.

K.Kawai, T.Kohmura, S.Ikeda, K.Kaneko, T.watanabe, H.Tsunemi, K.Hayashida, N.Anabuki, H.Nakajima, S.Ueda, T.G.Tsuru, T.Dotani, M.Ozaki, K.Matsuta, T.Fujinaga, S.Kitamoto, H.Murakami, J.Hiraga, K.Mori and ASTRO-H SXI Team
Optical, UV and Soft X-Ray Transmission of Optical Blocking Layer for the X-Ray CCD
AIP Conf. Proc., **1427** (2012) 255.

K.Amemiya
Sub-nm Resolution Depth Profiling of the Chemical State and Magnetic Structure of Thin Films by a Depth-Resolved X-Ray Absorption Spectroscopy Technique
Phys. Chem. Chem. Phys., **14** (2012) 10477.

K.Amemiya and M.Sakamaki
XAFS and XMCD Spectra at the Surface and Interface of Ultrathin Films Observed by the Depth-Resolved XAFS/XMCD Technique
e-J. Surf. Sci. Nanotech., **10** (2012) 521.

M.Ohkubo, S.Shiki, M.Ukibe, N.Matsubayashi, Y.Kitajima and S.Nagamachi
X-Ray Absorption Near Edge Spectroscopy with a Superconducting Detector for Nitrogen Dopants in SiC
Scientific Reports, **2** (2012) 831.

T.Okajima, K.Hara, M.Yamamoto and K.Seki
NEXAFS Spectroscopic Study of Surface Modification on Poly(Butylene Terephthalate) Induced by UV Irradiation
Internal J. Polymer Anal. Charact., **17** (2012) 218.

T.Okajima, K.Hara, M.Yamamoto and K.Seki
Near Edge X-Ray Absorption Fine Structure Spectroscopic and Infrared Reflection Absorption Spectroscopic Studies of Surface Modification of Poly(Butylene Terephthalate) Induced by UV Irradiation
Polymer, **53** (2012) 2956.

S.Ikeda, T.Kohmura, K.Kawai, K.Kaneko, T.Watanabe, H.Tsunemi, K.Hayashida, N.Anabuki, H.Nakajima, S.Ueda, T.G.Tsuru, T.Dotani, M.Ozaki, K.Matsuta, T.Fujinaga, S.Kitamoto, H.Murakami, J.Hiraga, K.Mori, ASTRO-H SXI Team
Soft X-Ray Response of the X-Ray CCD Camera Directly Coated with Optical Blocking Layer
AIP Conf. Proc., **1427** (2012) 253.

S.Shiki, N.Zen, N.Matsubayashi, M.Koike, M.Ukibe, Y.Kitajima, S.Nagamachi and M.Ohkubo
Analysis of Wide-Gap Semiconductors with Superconducting XAFS Apparatus
Progress in Superconductivity, **14** (2012) 99.

11B

H.Okuda, K.Takeshita, S.Ochiai, Y.Kitajima, S.Sakurai and H.Ogawa
Contrast Matching of an Si Substrate with Polymer Films by Anomalous Dispersion at the Si K Absorption Edge
J. Appl. Cryst., **45** (2012) 119.

T.Miyamoto, T.Wada, H.Niimi, S.Suzuki, M.Kato, M.Kudo and K.Asakura
A New Collinear-Type Energy-Filtered X-Ray Photoemission Electron Microscope Equipped with a Multi-Pole Aberration-Corrected Air-Core Coil Wien Filter
Jpn. J. Appl. Phys., **51** (2012) 046701.

T.Tanaka, M.Kato, T.Kurosawa, Y.Morishita, N.Saito, I.H.Suzuki, M.Krumrey and F.Scholze
First Comparison of Spectral Responsivity in the Soft X-Ray Region
Metrologia, **49** (2012) 501.

A.Ito, T.Inoue, K.Takehara, Y.Taki and K.Shinohara
Mapping of Ca and Cysteic Acid, an Oxidation Product of Cystine, in Human Hair at Submicron Resolution
Ad. X-Ray Chem. Anal. Jpn., **43** (2012) 161. (*in Japanese*).

T.Imazono, M.Koike, M.Koeda, T.Nagano, H.Sasai, Y.Oue, Z.Yonezawa, S.Kuramoto, M.Terauchi, H.Takahashi, N.Handa and T.Murano
A Multilayer Grating with a Novel Layer Structure for a Flat-Field Spectrograph Attached to Transmission Electron Microscopes in Energy Region of 2-4 keV
AIP Conf. Proc., **1437** (2012) 24.

R.Takahashi, R.Okazaki, Y.Yasui, I.Terasaki, T.Sudayama, H.Nakao, Y.Yamasaki, J.Okamoto, Y.Murakami and Y.Kitajima
High-Temperature Thermoelectric Properties of the Double-Perovskite Ruthenium Oxide ($\text{Sr}_{1-x}\text{La}_x$)₂ErRuO₆
J. Appl. Phys., **112** (2012) 073714.

S.Sugita, A.Furuzawa, K.Ishibashi, K.Tamura, T.Okajima, Y.Maeda, T.Sato, K.Ichihara, K.Tomikawa, R.Iizuka, T.Awaya and K.Okada
Measurement of Reflectivity of X-Ray Mirror for Soft X-Ray Telescope Onboard ASTRO-H
SPIE proc., **8443** (2012) 844358.

11D

K.Ozawa
Metallization of Oxide Semiconductor Surfaces by Chemical Modification
Chemical Industry, **63** (2012) 207. (*in Japanese*).

S.Arae, T.Yamazaki, K.Yanase, K.Ochi, A.Ishii, M.Okusawa, K.Mase and M.Tanaka
Simple Low-Outgassing Atomic Hydrogen Source
J. Vac. Soc. Jpn., **55** (2012) 403.

12C

M.Harada and Y.Kamigaito
Nucleation and Aggregative Growth Process of Platinum Nanoparticles Studied by in Situ Quick XAFS Spectroscopy
Langmuir, **28** (2012) 2415.

T.Masuda, H.Fukumitsu, S.Takakusagi, W.-J.Chun, T.Kondo, K.Asakura and K.Uosaki
Molecular Catalysts Confined on and Within Molecular Layers Formed on a Si(111) Surface with Direct Si-C Bonds
Adv. Mater., **24** (2012) 268.

Y.Yoshida, Y.Mitani, T.Itoi and Y.Izumi
Preferential Oxidation of Carbon Monoxide in Hydrogen using Zinc Oxide Photocatalysts Promoted and Tuned by Adsorbed Copper Ions
J. Catal., **287** (2012) 190.

T.Wada, K.K.Bando, T.Miyamoto, S.Takakusagi, S.T.Oyama and K.Asakura
Operando QEXAFS Studies of Ni₂P during Thiophene Hydrodesulfurization: Direct Observation of Ni-S Bond Formation under Reaction Conditions
J. Synchrotron Rad., **19** (2012) 205.

K.K.Bando, T.Wada, T.Miyamoto, K.Miyazaki, S.Takakusagi, Y.Koike, Y.Inada, M.Nomura, A.Yamaguchi, T.Gott, S.Ted Oyama and K.Asakura
Combined in situ QXAFS and FTIR Analysis of a Ni Phosphide Catalyst under Hydrodesulfurization Conditions
J. Catal., **286** (2012) 165.

T.Kamegawa, M.Saito, T.Sakai, M.Matsuoka and M.Anpo
Characterization of Phenylene-Bridged Hybrid Mesoporous Materials Incorporating Arenetricarbonyl Complexes and their Catalytic Activities
Catalysis Today, **181** (2012) 14.

M.Morikawa, N.Ahmed, Y.Ogura and Y.Izumi
Polymer Electrolyte Fuel Cell Supplied with Carbon Dioxide. Can Be the Reductant Water Instead of Hydrogen?
Appl. Catal. B, **117** (2012) 317.

M.Harada, Y.Tasaki, H.Qua and T.Okada
Hydration of Ions and Salt Crystallization in Liquid Phase Coexistent with Ice at Temperature Below Eutectic Point
RSC Adv., **2** (2012) 461.

Y.Zong, K.Fujita, H.Akamatsu, S.Nakashima, S.Murai and K.Tanaka
Local Structure of Amorphous EuO-TiO₂ Thin Films Probed by X-Ray Absorption Fine Structure
J. Am. Ceram. Soc., **95** (2012) 716.

K.Asakura
Polarization-Dependent Total Reflection Fluorescence Extended X-Ray Absorption Fine Structure and its Application to Supported Catalysis
RCS Catalysis Book Series, **24** (2012) 281.

N.Naveed, M.Morikawa and Y.Izumi
Photocatalytic Conversion of Carbon Dioxide into Methanol using Optimized Layered Double Hydroxide Catalysts
Catal. Today, **185** (2012) 263.

L.Zhu, N.Sakai, A.Kurokawa, H.Takeuchi, S.Yano, T.Yanoh, N.Wada, S.Taira, Y.Hosokai, Y.Machida, H.Saito and Y.Ichihyanagi
Synthesis of Multiferroic DyFeO₃ Nanoparticle and Study of their Magnetic Properties
J. Phys. Conf. Ser., **352** (2012) 012021.

J.Watanabe, Y.Tani, N.Miyata, H.Seyama, S.Mitsunobu and H.Naitoh
Concurrent Sorption of As(V) and Mn(II) during Biogenic Manganese Oxide Formation
Chemical Geology, **306-307** (2012) 123.

S.T.Oyama, H.Zhao, H.J.Freund, K.Asakura, R.Wlodarczyk and M.Sierka
Unprecedented Selectivity to the Direct Desulfurization (DDS) Pathway in a Highly Active FeNi Bimetallic Phosphide Catalyst
J. Catal., **285** (2012) 1-5.

N.Yabuuchi, M.Kajiyama, J.Iwatate, H.Nishikawa, S.Hitomi, R.Okuyama, R.Usui, Y.Yamada and S.Komaba
P2-Type Na_x[Fe_{1/2}Mn_{1/2}]O₂ made from Earth-Abundant Elements for Rechargeable Na Batteries
Nature Materials, **11** (2012) 512.

S.Komaba, N.Yabuuchi, T.Nakayama, A.Ogata, T.Ishikawa and I.Nakai
Study on the Reversible Electrode Reaction of Na_{1-x}Ni_{0.5}Mn_{0.5}O₂ for a Rechargeable Sodium-Ion Battery
Inorganic Chem., **51** (2012) 6211.

S.Furukawa, D.Tsukio, T.Shishido, K.Teramura and T.Tanaka
Correlation between the Oxidation State of Copper and the Photocatalytic Activity of Cu/Nb₂O₅
J. Phys. Chem. C, **116** (2012) 12181.

M.Sakamaki, K.Amemiya, M.O.Liedke, J.Fassbender, P.Mazalski, I.Sveklo and A.Maziewski
Perpendicular Magnetic Anisotropy in a Pt/Co/Pt Ultrathin Film Arising from a Lattice Distortion Induced by Ion Irradiation
Phys. Rev. B, **86** (2012) 024418.

T.Takeguchi, T.Yamanaka, K.Asakura, E.N.Muhamad, K.Uosaki and W.Ueda
Evidence of Nonelectrochemical Shift Reaction on a CO-Tolerant High-Entropy State Pt-Ru Anode Catalyst for Reliable and Efficient Residential Fuel Cell Systems
J. Am. Chem. Soc., **134** (2012) 14508.

- C.Zhang, F.Liu, Y.Zhai, H.Ariga, N.Yi, Y.Liu, K.Asakura, M.Flytzani-Stephanopoulos and H.He Alkali-Metal-Promoted Pt/TiO₂ Opens a More Efficient Pathway to Formaldehyde Oxidation at Ambient Temperatures
Angew. Chem. Int. Ed., **51** (2012) 9628.
- M.Shibukawa, M.Harada, T.Okada, Y.Ogiyama, T.Shimasaki, Y.Kondo, A.Inoue and S.Saito X-Ray Absorption Fine Structure Spectroscopy Studies of Thermal Effects on Ion-exchange Equilibria
RSC Adv., **2** (2012) 8985.
- M.Tada, S.Zhang, S.Malwadkar, N.Ishiguro, J.Soga, Y.Nagai, K.Tezuka, H.Imoto, S.Otsuka-Yao-Matsuo, S.Ohkoshi and Y.Iwasawa The Active Phase of Nickel/Ordered Ce₂Zr₂O_x Catalysts with a Discontinuity (x = 7-8) in Methane Steam Reforming
Angew. Chem. Int. Ed., **51** (2012) 9361.
- T.Wada, K.K.Bando, S.T.Oyama, T.Miyamoto, S.Takakusagi and K.Asakura Operando Observation of Ni₂P Structural Changes during Catalytic Reaction: Effect of H₂S Pretreatment
Chem. Lett., **41** (2012) 1238.
- S.Asaoka, Y.Takahashi, Y.Araki and M.Tanimizu Comparison of Antimony and Arsenic Behavior in an Ichinokawa River Water-Sediment System
Chemical Geology, **334** (2012) 1.
- Y.Takahashi, K.Kondo, A.Miyaji, M.Umeo, T.Honma and S.Asaoka Recovery and Separation of Rare Earth Elements using Columns Loaded with DNA-Filter Hybrid
Analytical Sciences, **28** (2012) 985.
- H.Qin, Y.Yokoyama, Q.Fan, H.Iwatani, K.Tanaka, A.Sakaguchi, Y.Kanai, J.Zhu, Y.Onda and Y.Takahashi Investigation of Cesium Adsorption on Soil and Sediment Samples from Fukushima Prefecture by Sequential Extraction and EXAFS Technique
Analytical Sciences, **46** (2012) 297.
- Y.Yokoyama, K.Tanaka and Y.Takahashi Differences in the Immobilization of Arsenite and Arsenate into Calcite
Geochim. Cosmochim. Acta, **91** (2012) 202.
- A.Ohta, H.Kagi, H.Tsuno, M.Nomura and T.Okai Speciation Study of Cr(VI/III) Reacting with Humic Substances and Determination of Local Structure of Cr Binding Humic Substances using XAFS Spectroscopy
Geochemical Journal, **46** (2012) 409.
- K.Kakimoto, T.Hotta and I.Kagomiya Fine Structural Analysis and Phase Transition Behavior for Li-Modified Na_{0.5}K_{0.5}NbO₃ Lead-Free Piezoelectric Ceramics
Ceramics International, **38** (2012) S319.
- K.Kakimoto, R.Kaneko and I.Kagomiya Grain-Size-Controlled (Li,Na,K)NbO₃ Ceramics using Powder Source Classified by Centrifugal Separator
Jpn. J. Appl. Phys., **51** (2012) 09LD06.
- Q.Yu, K.Sasaki, K.Tanaka, T.Ohnuki and T.Hirajima Structural Factors of Biogenic Birnessite Produced by Fungus *Paraconiothyrium* sp. WL-2 Strain Affecting Sorption of Co²⁺
Chemical Geology, **310-311** (2012) 106.
- K.Ito, K.Yoshida, S.Kittaka and T.Yamaguchi Pore Size Dependent Behavior of Hydrated Ag⁺ Ions Confined in Mesoporous MCM-41 Materials under Synchrotron X-Ray Irradiation
Anal. Sci., **28** (2012) 639.
- Z.Pan, F.Hu, S.He, Q.Liu, Z.Sun, T.Yao, Y.Xie, H.Oyanagi, Z.Xie, Y.Jiang, W.Yan and S.Wei Co Cluster Formation Induced by Cu Codoping in Co:ZnO Semiconductor Thin Films
J. Phys. Chem. C, **116** (2012) 4855.
- S.Muratsugu, Z.Weng, H.Nakai, K.Isobe, Y.Kushida, T.Sasaki and M.Tada Surface-Assisted Transfer Hydrogenation Catalysis on a γ -Al₂O₃-Supported Ir Dimer
Phys. Chem. Chem. Phys., **14** (2012) 16023.
- S.Zhang, S Muratsugu, N.Ishiguro, S.Ohkoshi and M.Tada Perovskite NaCeTi₂O₆-Supported Ni Catalysts for CH₄ Steam Reforming
ChemCatChem, **4** (2012) 1783.
- S.Yamashita, M.Katayama and Y.Inada Redox Reactions of Nickel Species Supported on Silica
Memoirs of the SR Center Ritsumeikan University, **14** (2012) 3.
- V.Mah and F.Jalilehvand Lead(II) Complex Formation with Glutathione
Inorg. Chem., **51** (2012) 6285.
- Y.Sotome, W.S.K Bong and I.Nakai Characterization of Black/Brown Pigments on Iron Age Pottery Excavated from Central Anatolia using X-Ray Analyses
Advances in X-Ray Chemical Analysis, **43** (2012) 331. (*in Japanese*).

Md.Z.Hossain, J.E.Johns, K.H.Bevan, H.J.Karmel, Y.T.Liang, S.Yoshimoto, K.Mukai, T.Koitaya, J.Yoshinobu, M.Kawai, A.M.Lear, L.L.Kesmodel, S.L.Tait and M.C.Hersam

Chemically Homogeneous and Thermally Reversible Oxidation of Epitaxial Graphene
Nature Chemistry, **4** (2012) 305.

H.Nakazawa, S.Miura, R.Kamata, S.Okuno, Y.Enta, M.Suemitsu, and T.Abe

Characteristics of Silicon/Nitrogen-Incorporated Diamond-Like Carbon Films Prepared by Plasma-Enhanced Chemical Vapor Deposition
Jpn. J. Appl. Phys., **51** (2012) 015603.

T.Koitaya, S.Shimizu, K.Mukai, S.Yoshimoto and J.Yoshinobu

Kinetic and Geometric Isotope Effects Originating from Different Adsorption Potential Energy Surfaces: Cyclohexane on Rh(111)
J. Chem. Phys., **136** (2012) 214705.

R.Toyoshima, M.Yoshida, Y.Monya, Y.Kousa, K.Suzuki, H.Abe, B.S.Mun, K.Mase, K.Amemiya and H.Kondoh

In Situ Ambient Pressure XPS Study of CO Oxidation Reaction on Pd(111) Surfaces
J. Phys. Chem. C, **116** (2012) 18691.

R.Toyoshima, M.Yoshida, Y.Monya, K.Suzuki, B.S.Mun, K.Amemiya, K.Mase and H.Kondoh

Active Surface Oxygen for Catalytic CO Oxidation on Pd(100) Proceeding under Near Ambient Pressure Conditions
J. Phys. Chem. Lett., **3** (2012) 3182.

S.Wang, T.Sakurai, R.Kuroda and K.Akimoto

Energy Band Bending Induced Charge Accumulation at Fullerene/Bathocuproine Heterojunction Interface
Appl. Phys. Lett., **100** (2012) 243301.

S.Kawasaki, K.Nakatsuji, J.Yoshinobu, F.Komori, R.Takahashi, M.Lippmaa, K.Mase and A.Kudo

Epitaxial Rh-Doped SrTiO₃ Thin Film Photocathode for Water Splitting under Visible Light Irradiation
Appl. Phys. Lett., **101** (2012) 033910.

A.Toyoshima, T.Kikuchi, H.Tanaka, J.Adachi, K.Mase and K.Amemiya

In Situ Removal of Carbon Contamination from Optics in a Vacuum Ultraviolet and Soft X-Ray Undulator Beamline using Oxygen Activated by Zeroth-Order Synchrotron Radiation
J. Synchrotron Rad., **19** (2012) 722.

T.Kikuchi, K.Mase and F.Watanabe

Construction of Simple Non-Evaporable Getter Assemblies using St 707 Strips or St 172 Modules
J. Vac. Soc. Jpn., **55** (2012) 21.

A.Sano-Furukawa, T.Yagi, T.Okada, H.Gotou and T.Kikegawa

Compression Behaviors of Distorted Rutile-Type Hydrated Phases, MOOH (M = Ga, In, Cr) and CrOOD
Phys. Chem. Minerals, **39** (2012) 375.

S.Wang, T.Sakurai, R.Kuroda and K.Akimoto

Energy Level Alignment of C₆₀/Ca Interface with Bathocuproine as an Interlayer Studied by Ultraviolet Photoelectron Spectroscopy
Jpn. J. Appl. Phys., **51** (2012) 10NE32.

Y.Nakayama, Y.Uragami, S.Machida, K.R.Koswattage, D.Yoshimura, H.Setoyama, T.Okajima, K.Mase and H.Ishii

Full Picture of Valence Band Structure of Rubrene Single Crystals Probed by Angle-Resolved and Excitation-Energy-Dependent Photoelectron Spectroscopy
Appl. Phys. Express, **5** (2012) 111601.

T.Isao

Electronic Resonance and Photoemission Study of Nitrogen Doped TiO₂ Rutile (110) Single Crystals
Appl. Surf. Sci., **259** (2012) 320.

Former 13C

T.Omiya, H.Yokohara and M.Shimomura

Well-Oriented Pyrazine Lines and Arrays on Si(001) Formed by Thermal Activation of Substrate
J. Phys. Chem. C, **116** (2012) 9980.

14A

M.Koshimizu, K.Onodera, F.Nishikido, R.Haruki, K.Shibuya, S.Kishimoto and K.Asai

X-Ray Detection Capability of a BaCl₂ Single Crystal Scintillator
J. Appl. Phys., **111** (2012) 024906.

K.Asakura

Polarization-Dependent Total Reflection Fluorescence Extended X-Ray Absorption Fine Structure and its Application to Supported Catalysis
RCS Catalysis Book Series, **24** (2012) 281.

S.Kishimoto, F.Nishikido, R.Haruki, K.Shibuya and M.Koshimizu

Fast Scintillation Detectors for High-Energy X-Ray Region
Hyperfine Interact., **204** (2012) 101.

S.Kishimoto

X-Ray Detection with an Avalanche Photodiode and its Application
HOSHASEN, **38** (2012) 13. (*in Japanese*).

S.Kishimoto, S.Shimazaki, M.Ikeno, M.Saito, T.Taniguchi and M.Tanaka

A Frontend ASIC for a Silicon Avalanche Photodiode Linear Array Detector for Synchrotron X-Ray Experiments
2011 IEEE Nuclear Science Symposium Conference Record, (2012) 1674.

D.Yonetoku, T.Murakami, S.Gunji, T.Mihara, K.Toma, Y.Morihara, T.Takahashi, Y.Wakashima, H.Yonemochi, T.Sakashita and N.Toukairin
Magnetic Structures in Gamma-Ray Burst Jets Probed by Gamma-Ray Polarization
The Astrophysical J. Lett., **758** (2012) 1.

T.Miyoshi, Y.Arai, Y.Fujita, K.Hara, R.Ichimiya, Y.Ikegami, Y.Ikemoto, H.Kasai, H.Katsurayama, T.Kohriki, M.Okihara, Y.Ono, Y.Onuki, K.Shinsho, A.Takeda, K.Tauchi, T.Tsuboyama and Y.Unno
Recent Progress of Pixel Detector R&D based on SOI Technology
Phys. Procedia, **37** (2012) 1039.

14B

K.Mizuno, T.Kanai, K.Hirano and H.Okamoto
Determination of Hydrogen Diffusivity Depending on the Hydride Concentration in Titanium-Hydride by means of the Diffraction-Enhanced X-Ray Imaging Method
Trans. Mat. Res. Soc. Jpn., **37** (2012) 319.

T.Miyoshi, Y.Arai, Y.Fujita, K.Hara, R.Ichimiya, Y.Ikegami, Y.Ikemoto, H.Kasai, H.Katsurayama, T.Kohriki, M.Okihara, Y.Ono, Y.Onuki, K.Shinsho, A.Takeda, K.Tauchi, T.Tsuboyama and Y.Unno
Recent Progress of Pixel Detector R&D based on SOI Technology
Phys. Procedia, **37** (2012) 1039.

H.Okamoto
Potential of the X-Ray Phase-Contrast Imaging
MII online, **29** (2012) 43. (*in Japanese*).

14C

S.-J.Seo, N.Sunaguchi, T.Yuasa, Q.Huo, M.Ando, G.-H.Choi, H.-T.Kim, K.-H.Kim, E.-J.Jeong, W.-S.Chang and J.-K.Kim
Visualization of Microvascular Proliferation as a Tumor Infiltration Structure in Rat Glioma Specimens using the Diffraction-Enhanced Imaging in-Plane CT Technique
Phys. Med. Biol., **57** (2012) 1251.

S.Takeya, K.Honda, Y.Gotoh, A.Yoneyama, K.Ueda, A.Miyamoto, T.Hondoh, A.Hori, D.Sun, R.Ohmura, K.Hyodo and T.Takeda
Diffraction-Enhanced X-Ray Imaging under Low-Temperature Conditions: Non-Destructive Observations of Clathrate Gas Hydrates
J. Synchrotron Rad., **19** (2012) 1038.

S.Takeya, A.Yoneyama, K.Ueda, H.Mimachi, M.Takahashi, K.Sano, K.Hyodo, T.Takeda and Y.Gotoh
Anomalously Preserved Clathrate Hydrate of Natural Gas in Pellet Form at 253 K
J. Phys. Chem. C, **116** (2012) 13842.

A.Momose, W.Yashiro, M.P.Olbinado and S.Harasse
X-Ray Phase Imaging: From Static Observation to Dynamic Observation
AIP Conf. Proc., **1466** (2012) 67.

S.Kibayashi, S.Harasse, W.Yashiro and A.Momose
High-Speed X-Ray Phase Tomography with Talbot Interferometer and Fringe Scanning Method
AIP Conf. Proc., **1466** (2012) 261.

M.P.Olbinado, S.Harasse, W.Yashiro and A.Momose
X-Ray Talbot-Lau Interferometer for High-Speed Phase Imaging and Tomography using White Synchrotron Radiation
AIP Conf. Proc., **1466** (2012) 266.

T.Miyoshi, Y.Arai, Y.Fujita, K.Hara, R.Ichimiya, Y.Ikegami, Y.Ikemoto, H.Kasai, H.Katsurayama, T.Kohriki, M.Okihara, Y.Ono, Y.Onuki, K.Shinsho, A.Takeda, K.Tauchi, T.Tsuboyama and Y.Unno
Recent Progress of Pixel Detector R&D based on SOI Technology
Phys. Procedia, **37** (2012) 1039.

K.Sasaki, S.Matsushita, F.Sato, C.Tokunaga, K.Hyodo and Y.Sakakibara
Cardiac Sympathetic Activity Assessed by Heart Rate Variability Indicates Myocardial Ischemia on Cold Exposure in Diabetes.
J. Jpn. College of Angiology, **52** (2012) 295. (*in Japanese*).

15A

H.Okuda, K.Takeshita, S.Ochiai, Y.Kitajima, S.Sakurai and H.Ogawa
Contrast Matching of an Si Substrate with Polymer Films by Anomalous Dispersion at the Si K Absorption Edge
J. Appl. Cryst., **45** (2012) 119.

S.Miisako, S.Kutsumizu and K.Sakajiri
A Partially Crosslinked Bicontinuous Cubic Phase Exhibiting A Temperature Range of More Than 100 °C
Chem. Comm., **48** (2012) 2225.

Y.Takenaka, H.Kitahata, N.L.Yamada, H.Seto and M.Hara
Gelation Effect on the Synthesis of High-Aspect-Ratio Gold Nanorods
J. Nanosci. Nanotechnol., **12** (2012) 714.

L.S.K.Dessanayake, D.Kodali, S.Ueno and K.Sato
Crystallization Kinetics of Organogels Prepared by Rice Bran Wax and Vegetable Oils
J. Oleo Sci., **61** (2012) 1.

Y.Sugimoto, M.Shioya, K.Yamamoto and S.Sakurai
Relationship between Axial Compression Strength and Longitudinal Microvoid Size for PAN-Based Carbon Fibers
Carbon, **50** (2012) 2860.

T.Shinkai, M.Ito, K.Sugiyama, K.Ito and H.Yokoyama
Ordered and Foam Structures of Semifluorinated Block Copolymers in Supercritical Carbon Dioxide
Soft Matter, **8** (2012) 5811.

S.Nagano, Y.Koizuka, T.Murase, M.Sano, Y.Shinohara, Y.Amemiya and T.Seki

Synergy Effect on Morphology Switching: Real-Time Observation of Photo-Orientation of Microphase Separation in a Block Copolymer
Angew. Chem. Int. Ed., **51** (2012) 5884.

Y.Zhao, G.Matsuba and H.Ito

Shear-Induced Crystallization and Rheological Behavior of Syndiotactic Polystyrene
Journal of Materials Research, **27** (2012) 1372.

H.Takeno, A.Maehara, M.Kuchiishi, K.Yoshihara, H.Takehita, S.Kondo, T.Dobashi, M.Takenaka and H.Hasegawa

Structural and Thermal Properties of Unpurified and Purified 12-Hydroxystearic Acid Solutions
Sen'i Gakkaishi, **68** (2012) 248.

Y.Tozuka, K.Higashi, T.Morita, M.Nishikawa, H.Uchiyama, J.Zhang, K.Moribe, K.Nishikawa, H.Takeuchi and K.Yamamoto

Transglycosylated Rutin-Specific Non-Surface-Active Nanostructure Affects Absorption Enhancement of Flurbiprofen
European Journal of Pharmaceutics and Biopharmaceutics, **82** (2012) 120.

H.Takahashi and K.Jojiki

Effect of Heavy Water on Nonlamellar Structures of Phospholipid and Monoolein Molecular Assemblies
Chem. Lett., **41** (2012) 1101.

Y.Nozone, S.Seno, T.Nagamatsu, S.Hosoda, Y.Shinohara, Y.Amemiya, E.B.Berda, G.Rojas, K.B.Wagener

Cross Nucleation in Polyethylene with Precisely Spaced Ethyl Branches
ACS Macro Lett., **1** (2012) 772.

M.Hishida and K.Tanaka

Transition of the Hydration State of a Surfactant Accompanying Structural Transitions of Self-Assembled Aggregates
J. Phys.: Condens. Matter, **24** (2012) 284113.

H.Takeno, A.Maehara, D.Yamaguchi and S.Koizumi
A Structural Study of an Organogel Investigated by Small-Angle Neutron Scattering and Synchrotron Small-Angle X-Ray Scattering
J. Phys. Chem. B, **116** (2012) 7739.

T.Morita, H.Murai, S.Kase and K.Nishikawa
Small-Angle X-Ray Scattering Study on the Fluctuations of Supercritical Aqueous Solution of *N*-Pentane along the Critical Isotherm of Water
Chem. Phys. Lett., **543** (2012) 68.

T.Morita, M.Ushio, K.Kanoh, E.Tanaka and K.Nishikawa

Small-Angle X-Ray Scattering Measurements of Ionic Liquids Pressurized with Carbon Dioxide using Titanium Sample Holder: 1-Butyl-3-methylimidazolium Bis(trifluoromethylsulfonyl) Amide Mixtures up to 22MPa
Jpn. J. Appl. Phys., **51** (2012) 076703.

N.Katina, A.Timchenko, H.Kihara, V.Balobanov, V.Vasiliev, I.Kashparov and V.Bychkova
Kinetics of Mutant Apomyoglobin Association
Macromol. Symp., **317/318** (2012) 215.

S.Takemori and M.Kimura

Structure and Function of Skeletal Muscle and Locomotive Systems: Involvement of Water-State Transitions
J Physical Fitness Sports Med., **1** (2012) 95.

M.Yoshino, H.Takahashi, T.Takagi, T.Baba, K.Morita, H.Amii, T.Kanamori and M.Sonoyama

Effect of Partial Fluorination in the Myristoyl Groups on Thermal and Interfacial Properties of Dimyristoylphosphatidylcholine
Chem. Lett., **41** (2012) 1495.

K.Oshima, Y.Sugimoto, T.C.Irving and K.Wakabayashi
Head-Head Interactions of Resting Myosin Crossbridges in Intact Frog Skeletal Muscles, Revealed by Synchrotron X-Ray Fiber Diffraction
PLoS One, **7** (2012) e52421.

Y.Nagai, Y.Kawabata and T.Kato

Microscopic Investigation on Morphologies of Bilayer Gel Structure in the Mixed Polyoxyethylene-Type Nonionic Surfactant Systems
J. Phys. Chem. B, **116** (2012) 12558.

K.Nishikawa and T.Morita

Solution Chemistry Based on the Concept of Fluctuations
Mol. Sci., **6** (2012) A0054. (*in Japanese*).

A.Noro, K.Higuchi, Y.Sageshima and Y.Matsushita
Preparation and Morphology of Hybrids Composed of a Block Copolymer and Semiconductor Nanoparticles via Hydrogen Bonding
Macromolecules, **45** (2012) 8013.

15B1

K.Wako, K.Kimura, Y.Yamamoto, T.Sawaura, M.Shen, M.Tachibana and K.Kojima
Digital Topography with an X-Ray CCD Camera for Characterizing Perfection in Protein Crystals
J. Appl. Cryst., **45** (2012) 1009.

M.Terabe, H.Okamoto and K.Koshida
Iterative Estimation of Coherent-Scattering Profiles from Given Positions by Use of a Single-Direction Beam
Radiol Phys Technol, **5** (2012) 237.

T.Nakano , D.Terada , Y.Kashiwa , M.Toyonaga , J.Nakamura and K.Abe
Observation of Domain Structures Near the α -INC- β Phase Boundary in Quartz using X-Ray Topography
Ferroelectrics, **441** (2012) 351.

15C

Y.Kato, H.Umezawa, S.Shikata and T.Teraji
Local Stress Distribution of Dislocations in Homoepitaxial Chemical Vapor Deposited Single-Crystal Diamond
Diamond & Related Materials, **23** (2012) 109.

K.Mizuno and H.Okamoto
Characterization of Semiconductor Thin Films by Grazing Incident X-Ray Topography
J. Cryst. Soc. Jpn., **54** (2012) 24. (*in Japanese*).

H.Yamaguchi and H.Matsuhata
Dislocation Analysis in SiC by Means of X-Ray Topography using Collimated Beam
J. Cryst. Soc. Jpn., **54** (2012) 18. (*in Japanese*).

H.Yamaguchi and H.Matsuhata
Threading Dislocations in 4H-SiC Observed by Double-Crystal X-Ray Topography
Materials Science Forum, **725** (2012) 7.

Y.Kato, H.Umezawa, H.Yamaguchi and S.Shikata
Structural Analysis of Dislocations in Type-IIa Single-Crystal Diamond
Diamond and Related Materials, **29** (2012) 37.

Y.Kato, H.Umezawa, H.Yamaguchi and S.Shikata
X-Ray Topography Used to Observe Dislocations in Epitaxially Grown Diamond Film
Jpn. J. Appl. Phys., **51** (2012) 090103.

Y.Yamamoto, S.Harada, K.Seki, A.Horio, T.Mitsuhashi and T.Ujihara
High-Efficiency Conversion of Threading Screw Dislocations in 4H-SiC by Solution Growth
Appl. Phys. Express, **5** (2012) 115501.

T.Ujihara, S.Kozawa, K.Seki, Alexander, Y.Yamamoto and S.Harada
Conversion Mechanism of Threading Screw Dislocation during SiC Solution Growth
Mater. Sci. Forum, **717-720** (2012) 351.

T.Shimura, D.Shimokawa, T.Matsumiya, N.Morimoto, A.Ogura, S.Iida, T.Hosoi and H.Watanabe
Synchrotron X-Ray Topography of Supercritical-Thickness Strained Silicon-on-Insulator Wafers for Crystalline Quality Evaluation and Electrical Characterization using Back-Gate Transistors
Current Appl. Phys., **12** (2012) S69.

T.Shimura, T.Matsumiya, N.Morimoto, T.Hosoi, K.Kajiwara, J.Chen, T.Sekiguchi and H.Watanabe
Analysis of Lattice Distortion in Multicrystalline Silicon for Photovoltaic Cells by Synchrotron White X-Ray Microbeam Diffraction
Mater. Sci. Forum, **725** (2012) 153.

H.Okamoto
Potential of the X-Ray Phase-Contrast Imaging
MII online, **29** (2012) 43. (*in Japanese*).

16A

M.Nakano, Y.Hikosaka, P.Lablanquie, F.Penent, S.-M.Huttula, I.H.Suzuki, K.Soejima, N.Kouchi and K.Ito
Auger Decay of Ar 2p Satellite States Studied with a Multielectron Coincidence Method
Phys. Rev. A, **85** (2012) 043405.

M.Sakamaki and K.Amemiya
In Situ Observation of Magnetic Anisotropy Energy of Alternately Layered FeNi Thin Films
e-J. Surf. Sci. Nanotech., **10** (2012) 97.

S.Tsunegi, Y.Sakuraba, K.Amemiya, M.Sakamaki, E.Ozawa, A.Sakuma, K.Takanashi and Y.Ando
Observation of Magnetic Moments at the Interface Region in Magnetic Tunnel Junctions using Depth-resolved X-Ray Magnetic Circular Dichroism
Phys. Rev. B, **85** (2012) 180408(R).

K.Amemiya, M.Sakamaki, S.Nakamoto, M.Yoshida, K.Suzuki, H.Kondoh, T.Koide, K.Ito, K.Tsuchiya, K.Harada, H.Sasaki, T.Aoto, T.Shioya, T.Obina, S.Yamamoto and Y.Kobayashi
Molecular Orientation Change during Adsorption of NO and N₂O on Ir(111) Observed by Real-Time Wavelength-Dispersive X-Ray Absorption Spectroscopy with Polarization Switching
Appl. Phys. Lett., **101** (2012) 161601.

K.Amemiya
Sub-nm Resolution Depth Profiling of the Chemical State and Magnetic Structure of Thin Films by a Depth-Resolved X-Ray Absorption Spectroscopy Technique
Phys. Chem. Chem. Phys., **14** (2012) 10477.

M.Sakamaki, K.Amemiya, M.O.Liedke, J.Fassbender, P.Mazalski, I.Sveklo and A.Maziewski
Perpendicular Magnetic Anisotropy in a Pt/Co/Pt Ultrathin Film Arising from a Lattice Distortion Induced by Ion Irradiation
Phys. Rev. B, **86** (2012) 024418.

K.Amemiya and M.Sakamaki
XAFS and XMCD Spectra at the Surface and Interface of Ultrathin Films Observed by the Depth-Resolved XAFS/XMCD Technique
e-J. Surf. Sci. Nanotech., **10** (2012) 521.

K.Amemiya

Recent Developments of the Wavelength-Dispersive XAFS Technique in the Soft X-Ray Region
Houshakou, **25** (2012) 269. (*in Japanese*).

V.R.Singh, V.K.Verma, K.Ishigami, G.Shibata, T.Kadono, A.Fujimori, D.Asakura, T.Koide, Y.Miura, M.Shirai, G.-f.Li, T.Taira and M.Yamamoto
Effects of Off-Stoichiometry on the Spin Polarization at the $\text{Co}_2\text{Mn}_\beta\text{Ge}_{0.38}/\text{MgO}$ Interfaces: X-Ray magnetic Circular Dichroism Study
Phys. Rev. B, **86** (2012) 144412.

M.Tashiro, M.nakano, M.Ehara, F.Penent, L.Andric, J.Palaudoux, K.Ito, Y.Hikosaka, N.Kouchi and P.Lablanquie
Auger Decay of Molecular Double Core-Hole and its Satellite States: Comparison of Experiment and Calculation
J. Chem. Phys., **137** (2012) 224306.

Y.Hikosaka, K.Yamamoto, M.Nakano, T.Odagiri, K.Soejima, I.H.Suzuki, P.Lablanquie, F.Penent and K.Ito
Formation of Slow Electrons in the Auger Decay of Core-Ionized Water Molecules
J. Chem. Phys., **137** (2012) 191101.

P.Lablanquie, S.Sheinerman, L.Andric, J.Palaudoux, Y.Hikosaka, K.Ito and F.Penent
Post Collision Interaction Probed by Multi-Electron Coincidences: Application to the Ar 2s Inner-Shell Photoionization
J. Elec. Spec. Relat. Phenom., **185** (2012) 198.

M.Uchida, Y.Yamasaki, Y.Kaneko, K.Ishizaka, J.Okamoto, H.Nakao, Y.Murakami and Y.Tokura
Pseudogap-Related Charge Dynamics in the Layered Nickelate $\text{R}_{2-x}\text{Sr}_x\text{NiO}_4$ ($x \sim 1$)
Phys. Rev. B, **86** (2012) 165126.

T.Kataoka, Y.Yamazaki, V.R.Singh, Y.Sakamoto, K.Ishigami, V.K.Verma, A.Fujimori, F.-H.Chang, H.-J.Lin, D.J.Huang, C.T.Chen, D.Asakura, T.Koide, A.Tanaka, D.Karmakar, S.K.Mandal, T.K.Nath and I.Dagupta
X-Ray Absorption Spectroscopy and X-Ray Magnetic Circular Dichroism Studies of Transition-Metal-Codoped ZnO Nano-Particles
e-J. Surf. Sci. Nanotech., **10** (2012) 594.

17A

T.Tsuda, T.Suzuki and S.Kojima
Crystallization and Preliminary X-Ray Diffraction Analysis of *Bacillus subtilis* Ywfe, an L-Amino-Acid Ligase
Acta Cryst. F, **68** (2012) 203.

J.Kondo

A Structural Basis for the Antibiotic Resistance Conferred by an A1408G Mutation in 16S rRNA and for the Antiprotozoal Activity of Aminoglycosides
Angew. Chem. Int. Ed., **51** (2012) 465.

S.Nakano, M.Takahashi, A.Sakamoto, H.Morikawa and K.Katayanagi
Structure-Function Relationship of Assimilatory Nitrite Reductases from the Leaf and Root of Tobacco Based on the High Resolution Structure
Protein Science, **21** (2012) 383.

N.Kuwabara, T.Oyama, D.Tomioka, M.Ohashi, J.Yanagisawa, T.Shimizu and H.Miyachi
Peroxisome Proliferator-Activatedreceptors (PPARs) Have Multiple Binding Points That Accommodate Ligands Invarious Conformations: Phenylpropanoic Acid-Type PPAR Ligands Bind to PPAR Indifferent Conformations, Depending on the Subtype
J. Med. Chem., **55** (2012) 893.

D.Takeshita and K.Tomita
Molecular Basis for RNA Polymerization by $Q\beta$ Replicase
Nature Structural Molecular Biology, **19** (2012) 229.

D.-H.Im, K.Kimura, F.Hayasaka, T.Tanaka, M.Noguchi, A.Kobayashi, S.Shoda, K.Miyazaki, T.Wakagi and S.Fushinobu
Crystal Structures of Glycoside Hydrolase Family 51 α -L-Arabinofuranosidase from *Thermotoga maritima*
Biosci. Biotechnol. Biochem., **76** (2012) 423.

S.Chen, Y.Xu, K.Zhang, X.Wang, J.Sun, G.Gao and Y.Liu
Structure of N-Terminal Domain of ZAP Indicates How a Zinc-Finger Protein Recognizes Complex RNA
Nature Structural Molecular Biology, **19** (2012) 430.

H.Nojiri
Structural and Molecular Genetic Analyses of the Bacterial Carbazole Degradation System
Biosci. Biotechnol. Biochem., **76** (2012) 1.

K.Yoneda, H.Sakuraba, T.Araki and T.Ohshima
Crystal Structure of Binary and Ternary Complexes of Archaeal UDP-Galactose 4-Epimerase-like L-Threonine Dehydrogenase from *Thermoplasma volcanium*
J. Biol. Chem., **287** (2012) 12966.

S.Nakano, M.Sugihara, R.Yamada, K.Katayanagi and S.Tate
Structural Implication for the Impaired Binding of W150A Mutant LOX-1 to Oxidized Low Density Lipoprotein, OxLDL
Biochim. Biophys. Acta, **1824** (2012) 739.

J.Bunzen, J.Iwasa, P.Bonakdarzadeh, E.Numata, K.Rissanen, S.Sato and M.Fujita
Self-Assembly of $\text{M}_{24}\text{L}_{48}$ Polyhedra Based on Empirical Prediction
Angew. Chem. Int. Ed., **51** (2012) 3161.

- Z.Zhang, L.Chen, L.Gao, K.Lin, L.Zhu, Y.Lu, X.Shi, Y.Gao, J.Zhou, P.Xu, J.Zhang and G.Wu
Structural Basis for the Recognition of Asef by Adenomatous Polyposis Coli
Cell Res., **22** (2012) 372.
- K.-T.Wang, B.Desmolaize, J.Nan, X.-W.Zhang, L.-F.Li, S.Douthwaite and X.-D.Su
Structure of the Bifunctional Methyltransferase YcbY (RlmKL) That Adds the M⁷G2069 and M²G2445 Modifications in *Escherichia Coli* 23S rRNA
Nucleic Acids Res., **40** (2012) 5138.
- N.Kuwabara, Y.Murayama, H.Hashimoto, Y.Kokabu, M.Ikeguchi, M.Sato, K.Mayanagi, Y.Tsutsui, H.Iwasaki and T.Shimizu
Mechanistic Insights into the Activation of Rad51-Mediated Strand Exchange from the Structure of a Recombination Activator, the Swi5-Sfr1 Complex
Structure, **20** (2012) 440.
- M.Nagae, S.Re, E.Mihara, T.Nogi, Y.Sugita and J.Takagi
Crystal Structure of $\alpha 5\beta 1$ Integrin Ectodomain: Atomic Details of the Fibronectin Receptor
J. Cell Biol., **197** (2012) 131.
- A.Nakamura, J.Ohtsuka, K.Miyazono, A.Yamamura, K.Kubota, R.Hirose, N.Hirota, M.Ataka, Y.Sawano and M.Tanokura
Improvement in Quality of Protein Crystals Grown in a High Magnetic Field Gradient
Crystal Growth and Design, **12** (2012) 1141.
- S.Nakano, M.Takahashi, A.Sakamoto, H.Morikawa and K.Katayanagi
The Reductive Reaction Mechanism of Tobacco Nitrite Reductase Derived from a Combination of Crystal Structures and Ultraviolet-Visible Microspectroscopy
Proteins, **80** (2012) 2035.
- J.S.Park, W.C.Lee, K.J.Yeo, K.S.Ryu, M.Kumarasiri, D.Hesek, M.Lee, S.Mobashery, J.H.Song, S.I.Kim, J.C.Lee, C.Cheong, Y.H.Jeon and H.Y.Kim
Mechanism of Anchoring of OmpA Protein to the Cell Wall Peptidoglycan of the Gram-Negative Bacterial Outer Membrane
FASEB J., **26** (2012) 219.
- L.Wang, K.Zhang, L.Wu, S.Liu, H.Zhang, Q.Zhou, L.Tong, F.Sun and Z.Fan
Structural Insights into the Substrate Specificity of Human Granzyme H: The Functional Roles of a Novel RKR Motif
The Journal of Immunology, **188** (2012) 765.
- X.Wang, L.Wang, X.Wang, F.Sun and C.Wang
Structural Insights into the Peroxidase Activity and Inactivation of Human Peroxiredoxin 4
Biochem. J., **441** (2012) 113.
- H.Sakurama, S.Fushinobu, M.Hidaka, E.Yoshida, Y.Honda, H.Ashida, M.Kitaoka, H.Kumagai, K.Yamamoto and T.Katayama
1,3-1,4- α -L-Fucosynthase that Specifically Introduces Lewis a/x Antigens into Type-1/2 Chains
J. Biol. Chem., **287** (2012) 16709.
- H.Shoun, S.Fushinobu, L.Jiang, S.-W.Kim and T.Wakagi
Fungal Denitrification and Nitric Oxide Reductase Cytochrome P450nor
Phil. Trans. R. Soc. B, **367** (2012) 1186.
- T.Wakagi
A Special Enzyme Acting in a Primordial Metabolism; Discovery of One-Enzyme with Two Reactions
Kagaku, **67** (2012) 72. (*in Japanese*).
- H.Nishimasu, S.Fushinobu and T.Wakagi
Molecular Mechanism by which One Enzyme Catalyzes Two Reactions
J. Cryst. Soc. Jpn., **54** (2012) 113. (*in Japanese*).
- M.M.Islam, M.A.Khan and Y.Kuroda
Analysis of Amino Acid Contributions to Protein Solubility using Short Peptide Tags Fused to a Simplified BPTI Variant
Biochim. Biophys. Acta, **1824** (2012) 1144.
- K.Yu, Z.Ming, Y.Li, C.Chen, Z.Bao, Z.Ren, B.Liu, W.Tao, Z.Rao and Z.Lou
Purification, Crystallization and Preliminary X-Ray Analysis of Nonstructural Protein 2 (nsp2) from Avian Infectious Bronchitis Virus
Acta Cryst. F, **68** (2012) 716.
- M.Gao, D.Li, Y.Hu, Y.Zhang, Q.Zou and D.-C.Wang
Crystal Structure of TNF- α -Inducing Protein from *Helicobacter Pylori* in Active Form Reveals the Intrinsic Molecular Flexibility for Unique DNA-Binding
PLoS One, **7** (2012) e41871.
- J.Ding, W.Wang, H.Feng, Y.Zhang and D.-C.Wang
Structural Insights into the *Pseudomonas aeruginosa* Type VI Virulence Effector Tse1 Bacteriolysis and Self-protection Mechanisms
J. Biol. Chem., **287** (2012) 26911.
- S.Kikuchi, K.Hara, T.Shimizu, M.Sato and H.Hashimoto
Structural Basis of Recruitment of DNA Polymerase ζ by Interaction between REV1 and REV7 Proteins
J. Biol. Chem., **287** (2012) 33847.
- U.Ohto, K.Fukase, K.Miyake and T.Shimizu
Structural Basis of Species-Specific Endotoxin Sensing by Innate Immune Receptor TLR4/MD-2
Proc. Natl. Acad. Sci. USA, **109** (2012) 7421.
- N.Suzuki, Y.-M.Kim, Z.Fujimoto, M.Momma, M.Okuyama, H.Mori, K.Funane and A.Kimura
Structural Elucidation of Dextran Degradation Mechanism by *Streptococcus mutans* Dextranase Belonging to Glycoside Hydrolase Family 66
J. Biol. Chem., **287** (2012) 19916.

- X.Wang, W.Peng, J.Ren, Z.Hu, J.Xu, Z.Lou, X.Li, W.Yin, X.Shen, C.Porta, T.S.Walter, G.Evans, D.Axford, R.Owen, D.J.Rowlands, J.Wang, D.I.Stuart, E.E.Fry and Z.Rao
A Sensor-Adaptor Mechanism for Enterovirus Uncoating from Structures of EV71
Nature Structural Molecular Biology, **19** (2012) 424.
- M.Nishikiori, S.Sugiyama, H.Xiang, M.Niiyama, K.Ishibashi, T.Inoue, M.Ishikawa, H.Matsumura and E.Katoh.
Crystal Structure of the Superfamily 1 Helicase from Tomato Mosaic Virus
J. Virology, **86** (2012) 7565.
- H.Kondo, Y.Hanada, H.Sugimoto, T.Hoshino, C.P.Garnham, P.L.Davies and S.Tsuda
Ice-Binding Site of Snow Mold Fungus Antifreeze Protein Deviates from Structural Regularity and High Conservation
Proc. Natl. Acad. Sci. USA, **109** (2012) 9360.
- Q.Tang, P.Gao, Y.-P.Liu, A.Gao, X.-M.An, S.Liu, X.-X.Yan and D.-C.Liang
RecOR Complex Including RecR N-N Dimer and RecO Monomer Displays a High Affinity for ssDNA
Nucleic Acids Res., **40** (2012) 11115.
- A.Nakamura, M.Fujihashi, R.Aono, T.Sato, Y.Nishiba, S.Yoshida, A.Yano, H.Atomi, T.Imanaka and K.Miki
Dynamic, Ligand-Dependent Conformational Change Triggers Reaction of Ribose-1,5-Bisphosphate Isomerase from *Thermococcus Kodakarensis* KOD1
J. Biol. Chem., **287** (2012) 20784.
- M.Fukumoto, D.Kudou, S.Murano, T.Shiba, D.Sato, T.Tamura, S.Harada and K.Inagaki
The Role of Amino Acid Residues in the Active Site of L-Methionine γ -lyase from *Pseudomonas putida*
Biosci. Biotechnol. Biochem., **76** (2012) 1275.
- D.Fujita, K.Suzuki, S.Sato, M.Yagi-Utsumi, Y.Yamaguchi, N.Mizuno, T.Kumasaka, M.Takata, M.Noda, S.Uchiyama, K.Kato and M.Fujita
Protein Encapsulation within Synthetic Molecular Hosts
Nature Communications, **3** (2012) 1093.
- H.Matsumura, E.Mizohata, H.Ishida, A.Kogami, T.Ueno, A.Makino, T.Inoue, A.Yokota, T.Mae and Y.Kai
Crystal Structure of Rice Rubisco and Implications for Activation Induced by Positive Effectors NADPH and 6-Phosphogluconate
J. Mol. Biol., **422** (2012) 75.
- H.Matsumura, N.Kusaka, T.Nakamura, N.Tanaka, K.Sagegami, K.Uegaki, T.Inoue and Y.Mukai
Crystal Structure of the N-Terminal Domain of the Yeast General Corepressor Tup1p and Its Functional Implications
J. Biol. Chem., **287** (2012) 26528.
- S.Sugiyama, M.Maruyama, G.Sazaki, M.Hirose, H.Adachi, K.Takano, S.Murakami, T.Inoue, Y.Mori and H. Matsumura
Growth of Protein Crystals in Hydrogels Prevents Osmotic Shock
J. Am. Chem. Soc., **134** (2012) 5786.
- K.Suzuki, N.Ohbayashi, J.Jiang, X.Zhang, M.M.Hoque, M.Tsunoda, K.Murayama, H.Tanaka and A.Takenaka
Crystallographic Study of the Interaction of the Anti-HIV Lectin Actinohivin with $\alpha(1-2)$ mannobiose Moiety of gp120 HMTG
Acta Cryst. F, **68** (2012) 1060.
- M.M.Hoque, K.Suzuki, M.Tsunoda, J.Jiang, F.Zhang, A.Takahashi, N.Ohbayashi, X.Zhang, H.Tanaka, S.Omura and A.Takenaka
Structural Insights into the Specific Anti-HIV Property of Actinohivin: Structure of its Complex with the $\alpha(1-2)$ mannobiose Moiety of gp120
Acta Cryst. D, **68** (2012) 1671.
- M.Koyama and Y.Matsuura
Mechanistic Insights from the Recent Structures of the CRM1 Nuclear Export Complex and its Disassembly Intermediate
Biophysics, **8** (2012) 145.
- K.Miyazono, N.Tabei, S.Morita, Y.Ohnishi, S.Horinouchi and M.Tanokura
Substrate Recognition Mechanism and Substrate-Dependent Conformational Changes of an ROK Family Glucokinase from *Streptomyces Griseus*
J. Bacteriol., **194** (2012) 607.
- D.Sen, N.H.Heo and K.Seff
Using InCl Vapor to Ion Exchange Indium into Zeolite Na-X. Single Crystal Structure of $-\text{In}_{34}\text{Na}_{50}-[\text{Si}_{100}\text{Al}_{92}\text{O}_{384}]\text{-FAU}$ Containing In_5^{7+} and In^+
J. Phys. Chem. C, **116** (2012) 14445.
- T.Matsui, J.Yamane, N.Mogi, H.Yamaguchi, H.Takemoto, M.Yao and I.Tanaka
Structural Reorganization of the Bacterial Cell-Division Protein FtsZ from *Staphylococcus aureus*
Acta Cryst. D, **68** (2012) 1175.
- Y.Itoh, S.Sekine and S.Yokoyama
Crystallization and Preliminary X-Ray Crystallographic Analysis of *Aquifex aeolicus* SelA, a Bacterial Selenocysteine Synthase
Acta Cryst. F, **68** (2012) 1128.
- Y.Itoh, S.Sekine and S.Yokoyama
Crystallization and Preliminary X-Ray Crystallographic Analysis of Bacterial tRNA^{Sec} in Complex with Seryl-tRNA Synthetase
Acta Cryst. F, **68** (2012) 678.

- Y.Hirano, Y.Kimura, H.Suzuki, K.Miki and Z.-Y.Wang
Structure Analysis and Comparative Characterization of the Cytochrome *c'* and Flavocytochrome *c* from Thermophilic Purple Photosynthetic Bacterium *Thermochromatium tepidum*
Biochemistry, **51** (2012) 6556.
- J.Han, H.J.Kim, S.-C.Lee, S.Hong, K.Park, Y.H.Jeon, D.Kim, H.-K.Cheong and H.-S.Kim
Structure-Based Rational Design of a Toll-like Receptor 4 (TLR4) Decoy Receptor with High Binding Affinity for a Target Protein
PLoS One, **7** (2012) e30929.
- H.M.Qin, T.Miyakawa, A.Nakamura, Y.L.Xue, T.Kawashima, T.Kasahara, M.Hibi, J.Ogawa and M.Tanokura
Expression, Purification, Crystallization and Preliminary X-Ray Analysis of a Novel N-Substituted Branched-Chain L-Amino-Acid Dioxygenase from *Burkholderia ambifaria* AMMD
Acta Cryst. F, **68** (2012) 1067.
- D.Takeshita, S.Yamashita and K.Tomita
Mechanism for Template-Independent Terminal Adenylation Activity of Q β Replicase Structure, **20** (2012) 1661.
- S.-S.Cha, Y.J.An, C.-S.Jeong, M.-K.Kim, S.-G.Lee, K.-H.Lee and B.-H.Oh
Experimental Phasing using Zinc Anomalous Scattering
Acta Cryst. D, **68** (2012) 1253.
- M.Unno, K.Kizawa, M.Ishihara and H.Takahara
Crystallization and Preliminary X-Ray Crystallographic Analysis of Human Peptidylarginine Deiminase Type III
Acta Cryst. F, **68** (2012) 668.
- K.Arita, S.Isogai, T.Oda, M.Unoki, K.Sugita, N.Sekiyama, K.Kuwata, R.Hamamoto, H.Tochio, M.Sato, M.Ariyoshi and M.Shirakawa
Recognition of Modification Status on a Histone H3 Tail by Linked Histone Reader Modules of the Epigenetic Regulator UHRF1
Proc. Natl. Acad. Sci. USA, **109** (2012) 12950.
- N.Maita, H.Taniguchi and H.Sakuraba
Crystallization, X-Ray Diffraction Analysis and SIRAS Phasing of Human α -L-Iduronidase
Acta Cryst. F, **68** (2012) 1363.
- L.Yan, Y.Ma Y, D.Liu, X.Wei, Y.Sun, X.Chen, H.Zhao, J.Zhou, Z.Wang, W.Shui and Z.Lou
Structural Basis for the Impact of Phosphorylation on the Activation of Plant Receptor-Like Kinase BAK1
Cell Res., **22** (2012) 1304.
- K.Kubota, A.Yamagata, Y.Sato, S.Goto-Ito and S.Fukai
Get1 Stabilizes an Open Dimer Conformation of Get3 ATPase by Binding Two Distinct Interfaces
J. Mol. Biol., **422** (2012) 366.
- J.Gao, Y.Ma, Y.Sun, H.Zhao, D.Hong, L.Yan and Z.Lou
Crystallization and Preliminary Crystallographic Analysis of *Arabidopsis thaliana* BRI1-Associated Kinase 1 (BAK1) Cytoplasmic Domain
Acta Cryst. F, **68** (2012) 340.
- J.Park, M.I.Kim, Y.D.Park, I.Shin, J.Cha, C.H.Kim and S.Rhee
Structural and Functional Basis for Substrate Specificity and Catalysis of Levan Fructotransferase
J. Biol. Chem., **287** (2012) 31233.
- Y.Sato, A.Yamagata, S.Goto-Ito, K.Kubota, R.Miyamoto, S Nakada and S.Fukai
Molecular Basis of Lys-63-linked Polyubiquitination Inhibition by the Interaction between Human Deubiquitinating Enzyme OTUB1 and Ubiquitin-Conjugating Enzyme UBC13
J. Biol. Chem., **287** (2012) 25860.
- T.Ohnuma, T.Numata, T.Osawa, H.Inanaga, Y.Okazaki, S.Shinya, K.Kondo, T.Fukuda and T.Fukamizo
Crystal Structure and Chitin Oligosaccharide-Binding Mode of a 'Loopful' Family GH19 Chitinase from Rye, *Secale Cereale*, *Seeds*
FEBS J., **279** (2012) 3639.
- Y.Guo, W.Wang, W.Ji, M.Deng, Y.Sun, H.Zhou, C.Yang, F.Deng, H.Wang, Z.Hu, Z.Lou and Z.Rao
Crimean-Congo Hemorrhagic Fever Virus Nucleoprotein Reveals Endonuclease Activity in Bunyaviruses
Proc. Natl. Acad. Sci. USA, **109** (2012) 5046.
- H Ru, LX Zhao, W Ding, LY Jiao, N Shaw, WG Liang, LG Zhang, LW Hung, N Matsugaki, S Wakatsuki and ZJ Liu
S-SAD Phasing Study of Death Receptor 6 and Its Solution Conformation Revealed by SAXS
Acta Cryst. D, **68** (2012) 521.
- R.Arai, S.Fukai, N.Kobayashi and J.Sekiguchi
Solution Structure of IseA, an Inhibitor Protein of DL-Endopeptidases from *Bacillus Subtilis*, Reveals a Novel Fold with a Characteristic Inhibitory Loop
J. Biol. Chem., **287** (2012) 44736.
- Y.-H.Huang, X.-Y.Liu, X.-X.Du, Z.-F.Jiang and X.-D.Su
The Structural Basis for the Sensing and Binding of Cyclic di-GMP by STING
Nature Structural Molecular Biology, **19** (2012) 728.
- H.Tanaka, N.Miyazaki, K.Matoba, T.Nogi, K.Iwakasaki and J.Takagi
Higher-Order Architecture of Cell Adhesion Mediated by Polymorphic Synaptic Adhesion Molecules Neurexin and Neuroligin
Cell Reports, **2** (2012) 101.

M.Fujihashi, M.Hiraki, G.Ueno, S.Baba, H.Murakami, M.Suzuki, N.Watanabe, I.Tanaka, A.Nakagawa, S.Wakatsuki, M.Yamamoto and K.Miki
Crystal Sample Pins and a Storage Cassette System Compatible with the Protein Crystallography Beamlines at both the Photon Factory and SPring-8
J. Appl. Cryst., **45** (2012) 1156.

B.-G.Lee, M.K.Kim, B.-W.Kim, S.W.Suh and H.K.Song
Structures of the Ribosome-Inactivating Protein from Barley Seeds Reveal a Unique Activation Mechanism
Acta Cryst. D, **68** (2012) 1488.

T.Miyafusa, J.M.M.Caaveiro, Y.Tanaka and K.Tsumoto
Crystal Structure of the Enzyme CapF of *Staphylococcus aureus* Reveals a Unique Architecture Composed of Two Functional Domains
Biochem. J., **443** (2012) 671.

K.H.Kim, D.R.An, J.Song, J.Y.Yoon, H.S.Kim, H.J.Yoon, H.N.Im, J.Kim, D.J.Kim, S.J.Lee, K-H.Kim, H-M.Lee, H-J.Kim, E-K.Jo, J.Y.Lee and S.W.Suh
Mycobacterium Tuberculosis Eis Protein Initiates Suppression of Host Immune Responses by Acetylation of DUSP16/MKP-7
Proc. Natl. Acad. Sci. USA, **109** (2012) 7729.

H.Yoshida, A.Yoshihara, M.Teraoka, S.Yamashita, K.Izumori and S.Kamitori
Structure of L-Rhamnose Isomerase in Complex with L-Rhamnopyranose Demonstrates the Sugar-Ring Opening Mechanism and the Role of a Substrate Sub-Binding Site
FEBS Open Bio, **3** (2012) 35.

S.Hoshino, T.Maki and I.Hayashi
Crystallization and Preliminary X-Ray Data Analysis of the pXO1 Plasmid-Partitioning Factor TubZ from *Bacillus cereus*
Acta Cryst. F, **68** (2012) 1550.

S.Watanabe, D.Sasaki, T.Tominaga and K.Miki
Structural Basis of [NiFe] Hydrogenase Maturation by Hyp Proteins
Biol. Chem., **393** (2012) 1089.

S.Watanabe, R.Matsumi, H.Atomi, T.Imanaka and K.Miki
Crystal Structures of the HypCD Complex and the HypCDE Ternary Complex: Transient Intermediate Complexes during [NiFe] Hydrogenase Maturation
Structure, **20** (2012) 2124.

B.Ku, K.-H.Lee, W.S.Park, C.-S.Yang, J.Ge, S.-G.Lee, S.-S.Cha, F.Shao, W.D.Heo, J.U.Jung and B.-H.Oh
VipD of *Legionella pneumophila* Targets Activated Rab5 and Rab22 to Interfere with Endosomal Trafficking in Macrophages
PLoS Pathogens, **8** (2012) e1003082.

K.Ito, R.Murakami, M.Mochizuki, H.Qi, Y.Shimizu, K.Miura, T.Ueda and T.Uchiumi
Structural Basis for the Substrate Recognition and Catalysis of Peptidyl-tRNA Hydrolase
Nucl. Acids Res., **40** (2012) 10521.

M.Bai, X.Pang, J.Lou, Q.Zhou, K.Zhang, J.Ma, J.Li, F.Sun and V.W.Hsu
Mechanistic Insights into Regulated Cargo Binding by ACAP1 Protein
J. Biol. Chem., **287** (2012) 28675.

X.Wang, L.Wang, X.Wang, F.Sun and C.-C.Wang
Structural Insights into the Peroxidase Activity and Inactivation of Human Peroxiredoxin 4
Biochem. J., **441** (2012) 113.

Y.Takashima, E.Mizohata, K.Tokuoka, S.R.Krungkrai, Y.Kusakari, S.Konishi, A.Satoh, H.Matsumura, J.Krungkrai, T.Horii and T.Inoue
Crystallization and Preliminary X-Ray Diffraction Analysis of Orotate Phosphoribosyltransferase from the Human Malaria Parasite *Plasmodium falciparum*
Acta Cryst. F, **68** (2012) 244.

T.Hayashi, M.Senda, H.Morohashi, H.Higashi, M.Horio, Y.Kashiba, L.Nagase, D.Sasaya, T.Shimizu, N.Venugopalan, H.Kumeta, N.Noda, F.Inagaki, T.Senda and M.Hatakeyama
Tertiary Structure-Function Analysis Reveals the Pathogenic Signaling Potentiation Mechanism of *Helicobacter pylori* Oncogenic Effector CagA
Cell Host & Microbe, **12** (2012) 20.

18A

K.Yaji, S.Hatta, T.Aruga and H.Okuyama
Structural and Electronic Properties of the Pb/Ge(111)- $\beta(\sqrt{3}\times\sqrt{3})R30^\circ$ Surface Studied by Photoelectron Spectroscopy and First-Principles Calculations
Phys. Rev. B, **86** (2012) 235317.

A.Fleurence, R.Friedlein, T.Ozaki, H.Kawai, Y.Wang and Y.Yamada-Takamura
Experimental Evidence for Epitaxial Silicene on Diboride Thin Films
Phys. Rev. Lett., **108** (2012) 245501.

18B

B.Saha, P.Chakraborty, H.Gnaser, M.Sharma and M.K.Sanyal
Exact Compositional Analysis of SiGe Alloys by Matrix Effect Compensated MCs SIMS
Appl. Phys. A, **108** (2012) 671.

Former 18B

H.Shoun, S.Fushinobu, L.Jiang, S.-W.Kim and T.Wakagi
Fungal Denitrification and Nitric Oxide Reductase Cytochrome P450nor
Phil. Trans. R. Soc. B, **367** (2012) 1186.

H.-S.Youn, M.-K.Kim, G.B.Kang, T.G.Kim, J.Y.An, J.-G.Lee, K.R.Park, Y.L, S.Fukuoka and S.H.Eom
Crystallization and Preliminary X-Ray Crystallographic Analysis of Quinolate Phosphoribosyltransferase from Porcine Kidney in Complex with Nicotinate Mononucleotide.
Acta Cryst. F, **68** (2012) 1488.

18C

S.Nakano
Effect of Helium Quasi-Hydrostatic Pressure on High-Pressure Behavior of Some Materials with Nano Spaced The Review of High Pressure Science & Technology, **22** (2012) 26. (*in Japanese*).

A.Shinozaki, H.Hirai, H.Kagi, T.Kondo, T.Okada, D.Nishio-Hamane, S.Machida, T.Irifune, T.Kikegawa and T.Yagi
Reaction of Forsterite with Hydrogen Molecules at High Pressure and Temperature
Phys. Chem. Minerals, **39** (2012) 123.

Y.Ishii, K.Okamura, T.Matsushita and S.Kawasaki
Origin of High Power Performance of Mesoporous Carbon-TiO₂(B) Nanocomposite Electrodes: An *In Situ* Synchrotron X-Ray Diffraction Study of TiO₂(B) Electrode upon Lithium Insertion
Mater. Express, **2** (2012) 23.

A.Al-zubaidi, T.Inoue, T.Matsushita, Y.Ishii, T.Hashimoto and S.Kawasaki
Cyclic Voltammogram Profile of Single-Walled Carbon Nanotube Electric Double-Layer Capacitor Electrode Reveals Dumbbell Shape
J. Phys. Chem. C, **116** (2012) 7681.

K.Matsui, K.Yamamoto, T.Kawaai, Y.Kawamura, J.Hayashi, K.Takeda and C.Sekine
Structural Instability of Unfilled Skutterudite Compounds MX₃ (M = Co, Rh, and Ir; X = As and Sb) under High Pressure
J. Phys. Soc. Jpn., **81** (2012) 104604.

D.Y.Tan, W.S.Xiao, W.Zhou, M.Chen, W.G.Zhou, X.D.Li, Y.C.Li and J.Liu
High Pressure X-Ray Diffraction Study on BaWO₄-II
High Pressure Res., **32** (2012) 262.

D.Y.Tan, W.S.Xiao, W.Zhou, M.Chen, X.L.Xiong and M.S.Song
First-Order Character of the Displacive Structural Transition in BaWO₄
Chin. Phys. B, **21** (2012) 086201.

H.Yamawaki, H.Fujihisa, Y.Gotoh and S.Nakano
Formation of LiBH₄ Hydrate with Dihydrogen Bonding
J. Alloys and Compounds, **541** (2012) 111.

H.Hirai, S.Kagawa, T.Tanaka, T.Matsuoka, T.Yagi, Y.Ohishi, S.Nakano, Y.Yamamoto and T.Irifune
Structural Changes of Filled Ice Ic Hydrogen Hydrate under Low Temperatures and High Pressures from 5 to 50 GPa
J. Chem. Phys., **137** (2012) 074505.

19A

K.Yaji, S.Hatta, T.Aruga and H.Okuyama
Structural and Electronic Properties of the Pb/Ge(111)-β(√3×√3)R30° Surface Studied by Photoelectron Spectroscopy and First-Principles Calculations
Phys. Rev. B, **86** (2012) 235317.

20A

K.Kawai, T.Kohmura, S.Ikeda, K.Kaneko, T.watanabe, H.Tsunemi, K.Hayashida, N.Anabuki, H.Nakajima, S.Ueda, T.G.Tsuru, T.Dotani, M.Ozaki, K.Matsuta, T.Fujinaga, S.Kitamoto, H.Murakami, J.Hiraga, K.Mori and ASTRO-H SXI Team
Optical, UV and Soft X-Ray Transmission of Optical Blocking Layer for the X-Ray CCD
AIP Conf. Proc., **1427** (2012) 255.

M.Kitajima, M.Kurokawa, T.Kishino, K.Toyoshima, T.Odagiri, H.Kato, K.Anzai, M.Hoshino, H.Tanaka and K.Ito
Ultra-Low-Energy Electron Scattering Cross Section Measurements of Ar, Kr and Xe Employing the Threshold Photoelectron Source
Eur. Phys. J. D, **66** (2012) 130.

S.Ikeda, T.Kohmura, K.Kawai, K.Kaneko, T.Watanabe, H.Tsunemi, K.Hayashida, N.Anabuki, H.Nakajima, S.Ueda, T.G.Tsuru, T.Dotani, M.Ozaki, K.Matsuta, T.Fujinaga, S.Kitamoto, H.Murakami, J.Hiraga, K.Mori, ASTRO-H SXI Team
Soft X-Ray Response of the X-Ray CCD Camera Directly Coated with Optical Blocking Layer
AIP Conf. Proc., **1427** (2012) 253.

20B

D.J.Sprouster and M.C.Ridgway
Ion Beam Formation and Modification of Cobalt Nanoparticles
Applied Science, **2** (2012) 396.

C.C.Scarborough, S.Sproules, C.J.Doonan, K.S.Hagen, T.Weyhermuller and K.Wieghardt
Scrutinizing Low-Spin Cr(II) Complexes
Inorg. Chem., **51** (2012) 6969.

Q.Zhou, P.Blanchard, B.J.Kennedy, E.Reynolds, Z.Zhang, W.Miiller, J.B.Aitken, M.Avdeev, L-Y.Jang and J.A.Kimpton
Synthesis, Structural and Magnetic Studies of the Double Perovskites Ba₂CeMO₆ (M= Ta, Nb)
Am. Chem. Soc., **24** (2012) 2978.

S.G.Johnston, E.D.Burton, A.F.Keene, B.Planer-Friedrich, A.Voegelin, M.G.Blackford and G.R.Lumpkin
Arsenic Mobilization and Iron Transformations during Sulfidization of As(V)-Bearing Jarosite
Chem. Geology, **334** (2012) 9.

R.He, R.K.Hocking and T.Tsuzuki
Local Structure and Photocatalytic Property of Sol-Gel Synthesized ZnO Doped with Transition Metal Oxides
J. Mater. Sci., **47** (2012) 3150.

C.T.Chantler, N.A.Rae, M.T.Islam, S.P.Best, J.Yeo, L.F.Smale, J.Hester, N.Mohammadi and F.Wang
Stereochemical Analysis of Ferrocene and the Uncertainty of Fluorescence XAFS Data
J. Synchrotron Rad., **19** (2012) 145.

W.Liu, S.Borg, B.Etschmann, Y.Mei and J.Brugger
An XAS Study of Speciation and Thermodynamic Properties of Aqueous Zinc Bromide Complexes at 25-150 C°
Chemical Geology, **298** (2012) 57.

E.Donner, C.G.Ryan, D.L.Howard, B.Zarcinas, K.G.Scheckel, S.P.McGrath, M.D.Jonge, D.Paterson, R.Naidu and E.Lombi
A Multi-Technique Investigation of Copper and Zinc Distribution, Speciation and Potential Bioavailability in Biosolids
Environmental Pollution, **166** (2012) 57.

27A

Y.Baba, A.Narita, T.Sekiguchi, I.Shimoyama, N.Hirao, S.Entani and S.Sakai
Structure Determination of Self-Assembled Monolayer on Oxide Surface by Soft-X-Ray Standing Wave
e-J. Surf. Sci. Nanotech., **10** (2012) 69.

A.Narita, Y.Baba, T.Sekiguchia, I.Shimoyama, N.Hirao and T.Yaita
Anchoring of Alkyl Chain Molecules on Oxide Surface using Silicon Alkoxide
Appl. Surf. Sci., **258** (2012) 2034.

A.Narita, Y.Baba, T.Sekiguchi, I.Shimoyama, N.Hirao and T.Yaita
Immobilization of Alkyl Chain Molecules on Oxide Surface using Phosphonic Acid as an Anchor
e-J. Surf. Sci. Nanotech., **10** (2012) 367.

M.A.Mannan, Y.Baba, T.Sekiguchi, I.Shimoyama, N.Hirao, M.Nagano and H.Noguchi
Orientation of One-Dimensional Silicon Polymer Films Studied by X-Ray Absorption Spectroscopy
J. Nanomaterials, **2012** (2012) 528256.

S.Ishiyama, Y.Baba, R.Fujii, M.Nakamura and Y.Imahori
Synthesis of Lithium Nitride for Neutron Production Target of BNCT by *in situ* Lithium Deposition and Ion Implantation
Nucl. Instrum. Meth. Phys. Res. B, **293** (2012) 42.

S.Ishiyama, Y.Baba, R.Fujii, M.Nakamura and Y.Imahori
In-situ Vacuum Deposition Technique of Lithium on Neutron Production Target for BNCT
Nucl. Instrum. Meth. Phys. Res. B, **288** (2012) 18.

27B

C.Suzuki, T.Nishi, M.Nakada, M.Akabori, M.Hirata and Y.Kaji
Core-Hole Effect on XANES and Electronic Structure of Minor Actinide Dioxides with Fluorite Structure
J. Phys. Chem. Solids, **73** (2012) 209.

M.Tomita, K.Kobayashi and M.Maeda
Microbeam Studies of Soft X-Ray Induced Bystander Cell Killing using Microbeam X-Ray Cell Irradiation System at CRIEPI
J. Radiat. Res., **53** (2012) 482.

H.Okamura, A.Ikeda-Ohno, T.Saito, N.Aoyagi, H.Naganawa, N.Hirayama, S.Umetani, H.Imura and K.Shimojo
Specific Cooperative Effect of a Macrocyclic Receptor for Metal Ion Transfer into an Ionic Liquid
Anal. Chem., **84** (2012) 9332.

28A

T.Arakane, T.Sato, S.Souma, K.Kosaka, K.Nakayama, M.Komatsu, T.Takahashi, Z.Ren, K.Segawa and Y.Ando
Tunable Dirac Cone in the Topological Insulator $\text{Bi}_{2-x}\text{Sb}_x\text{Te}_{3-y}\text{Se}_y$
Nature Communications, **3** (2012) 636.

S.Souma, K.Eto, M.Nomura, K.Nakayama, T.Sato, T.Takahashi, K.Segawa and Y.Ando
Topological Surface States in Lead-Based Ternary Telluride $\text{Pb}(\text{Bi}_{1-x}\text{Sb}_x)_2\text{Te}_4$
Phys. Rev. Lett., **108** (2012) 116801.

K.Nakayama, E.Ieki, Y.Tanaka, T.Sato, T.Takahashi, T.Kuroda, H.Mizoguchi, S.W.Kim and H.Hosono
Angle-Resolved Photoemission Spectroscopy of Co-Based Boride Superconductor $\text{LaCo}_{1.73}\text{Fe}_{0.27}\text{B}_2$
Phys. Rev. B, **86** (2012) 014503.

S.Aizaki, T.Yoshida, K.Yoshimatsu, M.Takizawa, M.Minohara, S.Ideta, A.Fujimori, K.Gupta, P.Mahadevan, K.Horiba, H.Kumigashira and M.Oshima
Self-Energy on the Low- to High-Energy Electronic Structure of Correlated Metal SrVO_3
Phys. Rev. Lett., **109** (2012) 056401.

Y.Tanaka, Z.Ren, T.Sato, K.Nakayama, S.Souma, T.Takahashi, K.Segawa and Y.Ando
Experimental Realization of a Topological Crystalline Insulator in SnTe
Nature Physics, **8** (2012) 800.

K.Nakayama, K.Eto, Y.Tanaka, T.Sato, S.Souma, T.Takahashi, K.Segawa and Y.Ando
 Manipulation of Topological States and the Bulk Band Gap using Natural Heterostructures of a Topological Insulator
 Phys. Rev. Lett., **109** (2012) 236804.

28B

T.Osawa, K.Kawajiri, N.Suzuki, T.Nagata, Y.Azuma and F.Koike
 Photoion-Yield Study of the 3p-3d Giant Resonance Excitation Region of Isolated Cr, Mn and Fe Atoms
 J. Phys. B, **45** (2012) 225204.

G.Purohit, P.Singh, V.Patidar, Y.Azuma, and K.K.Sud
 Effects of Target Polarization and Postcollision Interaction on the Electron-Impact Single Ionization of Ne(2p), Ar(3p), and Na(3s) Atoms
 Phys. Rev. A, **85** (2012) 022714.

NE1A

S.Nakano
 Effect of Helium Quasi-Hydrostatic Pressure on High-Pressure Behavior of Some Materials with Nano Spaced The Review of High Pressure Science & Technology, **22** (2012) 26. (*in Japanese*).

A.K.Arora, T.Sato, T.Okada and T.Yagi
 High-Pressure Amorphous Phase of Vanadium Pentaoxide
 Phys. Rev. B, **85** (2012) 094113.

A.Sano-Furukawa, T.Yagi, T.Okada, H.Gotou and T.Kikegawa
 Compression Behaviors of Distorted Rutile-Type Hydrous Phases, MOOH (M = Ga, In, Cr) and CrOOD
 Phys. Chem. Minerals, **39** (2012) 375.

D.Y.Tan, W.S.Xiao, W.Zhou, M.Chen, W.G.Zhou, X.D.Li, Y.C.Li and J.Liu
 High Pressure X-Ray Diffraction Study on BaWO₄-II
 High Pressure Res., **32** (2012) 262.

H.Yusa, Y.Shirako, M.Akaogi, H.Kojitani, N.Hirao, Y.Ohishi and T.Kikegawa
 Perovskite-to-Postperovskite Transitions in NaNiF₃ and NaCoF₃ and Disproportionation of NaCoF₃ Postperovskite under High Pressure and High Temperature
 Inorg. Chem., **51** (2012) 6659.

NE3A

T.Tsuda, T.Suzuki and S.Kojima
 Crystallization and Preliminary X-Ray Diffraction Analysis of *Bacillus subtilis* Ywfe, an L-Amino-Acid Ligase
 Acta Cryst. F, **68** (2012) 203.

O.Tsuruta, H.Yokoyama and S.Fujii
 A New Crystal Lattice Structure of *Helicobacter pylori* Neutrophil-Activating Protein (HP-NAP)
 Acta Cryst. F, **68** (2012) 134.

D.-H.Im, K.Kimura, F.Hayasaka, T.Tanaka, M.Noguchi, A.Kobayashi, S.Shoda, K.Miyazaki, T.Wakagi and S.Fushinobu
 Crystal Structures of Glycoside Hydrolase Family 51 α -L-Arabinofuranosidase from *Thermotoga maritima*
 Biosci. Biotechnol. Biochem., **76** (2012) 423.

Z.Hou, I.Nakanishi, T.Kinoshita, Y.Takei, M.Yasue, R.Misu, Y.Suzuki, S.Nakamura, T.Kure, H.Ohno, K.Murata, K.Kitaura, A.Hirasawa, G.Tsujimoto, S.Oishi and N.Fujii
 Structure-Based Design of Novel Potent Protein Kinase CK2 (CK2) Inhibitors with Phenyl-Azole Scaffolds
 J. Med. Chem., **55** (2012) 2899.

K.Hanaya, M.Suetsugu, S.Saijo, I.Yamato and S.Aoki
 Potent Inhibition of dinuclear zinc(II) Peptidase, an Aminopeptidase from *Aeromonas proteolytica*, by 8-Quinololinol Derivatives: Inhibitor Design Based on Zn²⁺ Fluorophores, Kinetic, and X-Ray Crystallographic Study
 J. Biol. Inorg. Chem., **17** (2012) 517.

K.Yoneda, H.Sakuraba, T.Araki and T.Ohshima
 Crystal Structure of Binary and Ternary Complexes of Archaeal UDP-Galactose 4-Epimerase-like L-Threonine Dehydrogenase from *Thermoplasma volcanium*
 J. Biol. Chem., **287** (2012) 12966.

Q.-F.Sun, S.Sato and M.Fujita
 An M₁₈L₂₄ Stellated Cuboctahedron through Post-Stellation of an M₁₂L₂₄ Core
 Nature Chem., **4** (2012) 330.

T.Nagae, C.Kato and N.Watanabe
 Structural Analysis of 3-Isopropylmalate Dehydrogenase from the Obligate Piezophile *Shewanella Benthica* DB21MT-2 and the Nonpiezophile *Shewanella Oneidensis* MR-1
 Acta Cryst. F, **68** (2012) 265.

J.Wang, M.Xu, K.Zhu, L.Li and X.Liu
 The N-Terminus of FILIA Forms an Atypical KH Domain with a Unique Extension Involved in Interaction with RNA
 PLoS ONE, **7** (2012) e30209.

X.Zhang, W.Wu and Z.Chen
 Crystallization and Preliminary X-Ray Diffraction Studies of the Abscisic Acid Receptor PYL3 and its Complex with Pyrabactin
 Acta Cryst. F, **68** (2012) 479.

L.Wang, K.Zhang, L.Wu, S.Liu, H.Zhang, Q.Zhou, L.Tong, F.Sun and Z.Fan

Structural Insights into the Substrate Specificity of Human Granzyme H: The Functional Roles of a Novel RKR Motif

The Journal of Immunology, **188** (2012) 765.

H.Sakurama, S.Fushinobu, M.Hidaka, E.Yoshida, Y.Honda, H.Ashida, M.Kitaoka, H.Kumagai, K.Yamamoto and T.Katayama

1,3-1,4- α -L-Fucosynthase that Specifically Introduces Lewis a/x Antigens into Type-1/2 Chains

J. Biol. Chem., **287** (2012) 16709.

T.Wakagi

A Special Enzyme Acting in a Primordial Metabolism; Discovery of One-Enzyme with Two Reactions

Kagaku, **67** (2012) 72. (*in Japanese*).

H.Nishimasu, S.Fushinobu and T.Wakagi

Molecular Mechanism by which One Enzyme Catalyzes Two Reactions

J. Cryst. Soc. Jpn., **54** (2012) 113. (*in Japanese*).

X.Zhang, Q.Zhang, Q.Xin, L.Yu, Z.Wang, W.Wu, L.Jiang, G.Wang, W.Tian, Z.Deng, Y.Wang, Z.Liu, J. Long, Z.Gong and Z.Chen

Complex Structures of the Abscisic Acid Receptor PYL3/RCAR13 Reveal a Unique Regulatory Mechanism Structure, **20** (2012) 780.

T.Mase, H.Yabuki, M.Okai, J.Ohtsuka, F.L.Imai, Y.Nagata and M.Tanokura

Crystallization and Preliminary X-Ray Analysis of Haloalkanedehalogenase DatA from *Agrobacterium tumefaciens* C58

Acta Cryst. F, **68** (2012) 652.

U.Ohto, K.Fukase, K.Miyake and T.Shimizu

Structural Basis of Species-Specific Endotoxin Sensing by Innate Immune Receptor TLR4/MD-2

Proc. Natl. Acad. Sci. USA, **109** (2012) 7421.

T.Nakaniwa, H.Fukada, T.Inoue, M.Gouda, R.Nakai, Y.Kirii, M.Adachi, T.Tamada, S.Segawa, R.Kuroki, T.Tada and T.Kinoshita

Seven Cysteine-Deficient Mutants Depict the Interplay between Thermal and Chemical Stabilities of Individual Cysteine Residues in Mitogen-Activated Protein Kinase c-Jun N-Terminal Kinase 1

Biochemistry, **51** (2012) 8410.

N.Suzuki, Y.-M.Kim, Z.Fujimoto, M.Momma, M.Okuyama, H.Mori, K.Funane and A.Kimura

Structural Elucidation of Dextran Degradation Mechanism by *Streptococcus mutans* Dextranase Belonging to Glycoside Hydrolase Family 66

J. Biol. Chem., **287** (2012) 19916.

M.Michikawa, H.Ichinose, M.Momma, P.Biely, S.Jongkees, M.Yoshida, T.Kotake, Y.Tsumuraya, S.Withers, Z.Fujimoto and S.Kaneko

Structural and Biochemical Characterization of Glycoside Hydrolase family 79 β -Glucuronidase from *Acidobacterium capsulatum*

J. Biol. Chem., **287** (2012) 14069.

T.Matsumoto, T.Kinoshita, Y.Kirii, T.Tada and A.Yamano

Crystal and Solution Structures Disclose a Putative Transient State of Mitogen-Activated Protein Kinase Kinase 4

Biochem. Biophys. Res. Commun., **425** (2012) 195.

T.Nishioka, Y.Yasutake, Y.Nishiya and T.Tamura

Structure-Guided Mutagenesis for the Improvement of Substrate Specificity of *Bacillus Megaterium* Glucose 1-Dehydrogenase IV

FEBS J., **279** (2012) 3264.

S.Nakano, M.Takahashi, A.Sakamoto, H.Morikawa and K.Katayanagi

X-Ray Crystal Structure of a Mutant Assimilatory Nitrite Reductase That Shows Sulfite Reductase-Like Activity

Chemistry and Biodiversity, **9** (2012) 1989.

D.Fujita, K.Suzuki, S.Sato, M.Yagi-Utsumi, Y.Yamaguchi, N.Mizuno, T.Kumasaka, M.Takata, M.Noda, S.Uchiyama, K.Kato and M.Fujita

Protein Encapsulation within Synthetic Molecular Hosts Nature Communications, **3** (2012) 1093.

M.D.Yao, K.Miyazono, J.Ohtsuka, S.Hirano, K.Nagata, S.Horinouchi, Y.Ohnishi and M.Tanokura

Purification, Crystallization and Preliminary X-Ray Analysis of the DNA-Binding Domain of AdpA, the Central Transcription Factor in the A-Factor Regulatory Cascade in the Filamentous Bacterium *Streptomyces griseus*, in Complex with a Duplex DNA

Acta Cryst. F, **68** (2012) 946.

S.Yamashita, H.Yoshida, N.Uchiyama, Y.Nakakita, S.Nakakita, T.Tonozuka, K.Oguma, A.Nishikawa and S.Kamitori

Carbohydrate Recognition Mechanism of HA70 from *Clostridium Botulinum* Deduced from X-Ray Structures in Complexes with Sialylated Oligosaccharides

FEBS Lett., **586** (2012) 2404.

H.Yoshida, S.Yamashita, M.Teraoka, A.Itoh, S.Nakakita, N.Nishi and S.Kamitori

X-Ray Structure of a Protease-Resistant Mutant Form of Human Galectin-8 with Two Carbohydrate Recognition Domains

FEBS J., **279** (2012) 3937.

- K.Suzuki, N.Ohbayashi, J.Jiang, X.Zhang, M.M.Hoque, M.Tsunoda, K.Murayama, H.Tanaka and A.Takenaka
Crystallographic Study of the Interaction of the Anti-HIV Lectin Actinohivin with $\alpha(1-2)$ mannobiose Moiety of gp120 HMTG
Acta Cryst. F, **68** (2012) 1060.
- M.M.Hoque, K.Suzuki, M.Tsunoda, J.Jiang, F.Zhang, A.Takahashi, N.Ohbayashi, X.Zhang, H.Tanaka, S.Omura and A.Takenaka
Structural Insights into the Specific Anti-HIV Property of Actinohivin: Structure of its Complex with the $\alpha(1-2)$ mannobiose Moiety of gp120
Acta Cryst. D, **68** (2012) 1671.
- K.Yoneda, Y.Fukuda, T.Shibata, T.Araki, T.Nikki, H.Sakuraba and T.Ohshima
Expression, Purification, Crystallization and Preliminary X-Ray Analysis of NAD(P)H-Dependent Carbonyl Reductase Specifically Expressed in Thyroidectomized Chicken Fatty Liver
Acta Cryst. F, **68** (2012) 1568.
- Y.Itoh, S.Sekine and S.Yokoyama
Crystallization and Preliminary X-Ray Crystallographic Analysis of *Aquifex aeolicus* SelA, a Bacterial Selenocysteine Synthase
Acta Cryst. F, **68** (2012) 1128.
- Y.Itoh, S.Sekine and S.Yokoyama
Crystallization and Preliminary X-Ray Crystallographic Analysis of Bacterial tRNA^{Sec} in Complex with Seryl-tRNA Synthetase
Acta Cryst. F, **68** (2012) 678.
- M.Yamaguchi, K.Matoba, R.Sawada, Y.Fujioka, H.Nakatogawa, H.Yamamoto, Y.Kobashigawa, H.Hoshida, R.Akada, Y.Ohsumi, N.N.Noda and F.Inagaki
Noncanonical Recognition and UBL Loading of Distinct E2s by Autophagy-Essential Atg7
Nature Structural Molecular Biology, **19** (2012) 1250.
- Y.Ashikawa, Z.Fujimoto, Y.Usami, K.Inoue, H.Noguchi, H.Yamane and H.Nojiri
Structural Insight into the Substrate- and Dioxygen-Binding Manner in the Catalytic Cycle of Rieske Nonheme Iron Oxygenase System, Carbazole 1,9a-Dioxygenase
BMC Struct. Biol., **12** (2012) 15.
- Z.Liu, Z.Chen and W.Wu
Crystallization and Preliminary X-Ray Studies of Ferric Uptake Regulator from *Magnetospirillum gryphiswaldense*
Acta Cryst. F, **68** (2012) 902.
- T.Kubota, A.Kumagai, H.Ito, S.Furukawa, Y.Someya, N.Takeda, K.Ishii, T.Wakita, H.Narimatsu and H.Shirato
Structural Basis for the Recognition of Lewis Antigens by Genogroup I Norovirus
J. Virol., **86** (2012) 11138.
- R.Arai, S.Fukui, N.Kobayashi and J.Sekiguchi
Solution Structure of IseA, an Inhibitor Protein of DL-Endopeptidases from *Bacillus Subtilis*, Reveals a Novel Fold with a Characteristic Inhibitory Loop
J. Biol. Chem., **287** (2012) 44736.
- Y.Xu, A.Moeller, S.-Y.Jun, M.Le, B.-Y.Yoon, J.-S.Kim, K.Lee and N.-C.Ha
Assembly and Channel Opening of Outer Membrane Protein in Tripartite Drug Efflux Pumps of Gram-negative Bacteria
J. Biol. Chem., **287** (2012) 11740.
- M.Fujihashi, M.Hiraki, G.Ueno, S.Baba, H.Murakami, M.Suzuki, N.Watanabe, I.Tanaka, A.Nakagawa, S.Wakatsuki, M.Yamamoto and K.Miki
Crystal Sample Pins and a Storage Cassette System Compatible with the Protein Crystallography Beamlines at both the Photon Factory and SPring-8
J. Appl. Cryst., **45** (2012) 1156.
- T.Miyafusa, J.M.M.Caaveiro, Y.Tanaka and K.Tsumoto
Crystal Structure of the Enzyme CapF of *Staphylococcus aureus* Reveals a Unique Architecture Composed of Two Functional Domains
Biochem. J., **443** (2012) 671.
- T.Tominaga, S.Watanabe, R.Matsumi, H.Atomi, T.Imanaka and K.Miki
Structure of the [NiFe]-Hydrogenase Maturation Protein HypF from *Thermococcus kodakaraensis* KOD1
Acta Cryst. F, **68** (2012) 1153.
- H.Yoshida, A.Yoshihara, M.Teraoka, S.Yamashita, K.Izumori and S.Kamitori
Structure of L-Rhamnose Isomerase in Complex with L-Rhamnopyranose Demonstrates the Sugar-Ring Opening Mechanism and the Role of a Substrate Sub-Binding Site
FEBS Open Bio, **3** (2012) 35.
- S.Watanabe, D.Sasaki, T.Tominaga and K.Miki
Structural Basis of [NiFe] Hydrogenase Maturation by Hyp Proteins
Biol. Chem., **393** (2012) 1089.
- T.Hayashi, M.Senda, H.Morohashi, H.Higashi, M.Horio, Y.Kashiba, L.Nagase, D.Sasaya, T.Shimizu, N.Venugopalan, H.Kumeta, N.Noda, F.Inagaki, T.Senda and M.Hatakeyama
Tertiary Structure-Function Analysis Reveals the Pathogenic Signaling Potentiation Mechanism of *Helicobacter pylori* Oncogenic Effector CagA
Cell Host & Microbe, **12** (2012) 20.

NE5C

- M.Imai
Structural Phase Transitions of Zintl-Phase Silicide BaSi₂ and Formation of Si Clathrate Ba₈Si₄₆ at High Pressures and High Temperatures
Rev. High Pressure Sci. Tech., **22** (2012) 17. (*in Japanese*).

K.Matsui, K.Yamamoto, T.Kawaai, Y.Kawamura, J.Hayashi, K.Takeda and C.Sekine
Structural Instability of Unfilled Skutterudite Compounds MX_3 ($M = \text{Co, Rh, and Ir}$; $X = \text{As and Sb}$) under High Pressure
J. Phys. Soc. Jpn., **81** (2012) 104604.

O.Ohtaka, K.Funakoshi and M.Shimono
HIP Production of Diamond-SiC Composite and its Application to High-Pressure in situ X-Ray Experiments
J. Soc. Mater. Sci. Jpn., **61** (2012) 407. (*in Japanese*).

NE7A

T.Ohuchi, Y.Nishihara, T.Kawazoe, D.Spengler, R.Shiraishi, A.Suzuki, T.Kikegawa, E.Ohtani
Superplasticity in Hydrous Melt-Bearing Dunite: Implications for Shear Localization in Earth's Upper Mantle
Earth and Planetary Science Letters, **335-336** (2012) 59.

T.Miyoshi, Y.Arai, Y.Fujita, K.Hara, R.Ichimiya, Y.Ikegami, Y.Ikemoto, H.Kasai, H.Katsurayama, T.Kohriki, M.Okihara, Y.Ono, Y.Onuki, K.Shinsho, A.Takeda, K.Tauchi, T.Tsuboyama and Y.Unno
Recent Progress of Pixel Detector R&D based on SOI Technology
Phys. Procedia, **37** (2012) 1039.

K.Sasaki, S.Matsushita, F.Sato, C.Tokunaga, K.Hyodo and Y.Sakakibara
Cardiac Sympathetic Activity Assessed by Heart Rate Variability Indicates Myocardial Ischemia on Cold Exposure in Diabetes.
J. Jpn. College of Angiology, **52** (2012) 295. (*in Japanese*).

O.Ohtaka, K.Funakoshi and M.Shimono
HIP Production of Diamond-SiC Composite and its Application to High-Pressure in situ X-Ray Experiments
J. Soc. Mater. Sci. Jpn., **61** (2012) 407. (*in Japanese*).

NW2A

Y.Ohgo, S.Neya, D.Hashizume, T.Ozeki and M.Nakamura
Unusual Electronic Structure of Bis-Isocyanide Complexes of Iron(III) Porphyrinoids
Dalton Trans., **41** (2012) 3126.

J.L.Her, Y.H.Matsuda, M.Nakano, Y.Niwa and Y.Inada
Magnetic Field-Induced Spin-Crossover Transition in $[\text{Mn}^{\text{III}}(\text{taa})]$ Studied by X-Ray Absorption Spectroscopy
J. Appl. Phys., **111** (2012) 053921.

Y.Yakiyama, A.Ueda, Y.Morita and M.Kawano
Crystal Surface Mediated Structure Transformation of a Kinetic Framework Composed of Multi-Interactive Ligand TPHAP and Co(II)
Chem. Comm., **48** (2012) 10651.

M.Saito and T.Ozeki
Crystallization of a Keplerate-Type Polyoxometalate into a Superposed Kagome-Lattice with Huge Channels
Dalton Trans., **41** (2012) 9846.

T.Shishido, K.Shimamura, K.Teramura and T.Tanaka
Role of CO_2 in Dehydrogenation of Propane over Cr-Based Catalysts
Catal. Today, **185** (2012) 151.

T.Shirasawa, E.Arakawa, W.Voegeli, T.Takahashi and T.Matsushita
Development of a Quick Method for Crystal Truncation Rod Scattering Profile Measurement by using a Simultaneous Multi-Wavelength Dispersive Mode
J. Jpn. Soc. Synchrotron Rad. Res., **25** (2012) 229. (*in Japanese*).

K.Sumiwaka, M.Katayama and Y.Inada
Development of 2-Dimensional Imaging XAFS System at BL-4
Memoirs of the SR Center Ritsumeikan University, **14** (2012) 11.

M.Katayama, K.Sumiwaka, K.Hayashi, K.Ozutsumi, T.Ohta and Y.Inada
Development of a Two-Dimensional Imaging System of X-Ray Absorption Fine Structure
J. Synchrotron Rad., **19** (2012) 717.

Y.Kim, S.Das, S.Bhattacharya, S.Hong, M.G.Kim, M.Yoon, S.Natarajan and K.Kim
Metal-Ion Metathesis in Metal-Organic Frameworks: A Synthetic Route to New Metal-Organic Frameworks
Chem. Eur. J., **18** (2012) 16642.

A.Kobayashi, H.Hara, T.Yonemura, H.-C.Chang and M.Kato
Systematic Structural Control of Multichromic Platinum(II)-Diimine Complexes Ranging from Ionic Solid to Coordination Polymer
Dalton Trans., **41** (2012) 1878.

NW10A

K.Shimura and H.Yoshida
Effect of Doped Zinc Species on the Photocatalytic Activity of Gallium Oxide for Hydrogen Production
Phys. Chem. Chem. Phys., **14** (2012) 2678.

T.Wada, K.K.Bando, T.Miyamoto, S.Takakusagi, S.T.Oyama and K.Asakura
Operando QEXAFS Studies of Ni_2P during Thiophene Hydrodesulfurization: Direct Observation of Ni-S Bond Formation under Reaction Conditions
J. Synchrotron Rad., **19** (2012) 205.

- K.K.Bando, T.Wada, T.Miyamoto, K.Miyazaki, S.Takakusagi, Y.Koike, Y.Inada, M.Nomura, A.Yamaguchi, T.Gott, S.Ted Oyama and K.Asakura
Combined in situ QXAFS and FTIR Analysis of a Ni Phosphide Catalyst under Hydrodesulfurization Conditions
J. Catal., **286** (2012) 165.
- H.Wang, S.Hamanaka, Y.Nishimoto, S.Irle, T.Yokoyama, H.Yoshikawa and K.Awaga
In Operando X-Ray Absorption Fine Structure Studies of Polyoxometalate Molecular Cluster Batteries: Polyoxometalates as Electron Sponges
J. Am. Chem. Soc., **134** (2012) 4918.
- T.Ohkubo, Y.Takehara and Y.Kuroda
Water-Initiated Ordering Around a Copper Ion of Copper Acetate Confined in Slit-Shaped Carbon Micropores
Micropor. Mesopor. Mater., **154** (2012) 82.
- H.Kobayashi, H.Ohta and A.Fukuoka
Conversion of Lignocellulose into Renewable Chemicals by Heterogeneous Catalysis
Catal. Sci. Technol., **2** (2012) 869.
- Y.Yang, Z.Weng, S.Muratsugu, N.Ishiguro, S.Ohkoshi and M.Tada
Preparation and Catalytic Performances of a Molecularly Imprinted Ru-Complex Catalyst with an NH₂ Binding Site on a SiO₂ Surface
Chem. Eur. J., **18** (2012) 1142.
- N.Maity, C.Wattanakit, S.Muratsugu, N.Ishiguro, Y.Yang, S.Ohkoshi and M.Tada
Sulfoxidation on a SiO₂-supported Ru Complex using O₂/Aldehyde System
Dalton Trans., **41** (2012) 4558.
- V.Srihari, V.Sridharan, M.Nomura, V.S.Sastry and C.S.Sundar
Local Structural Studies of the Cubic Cd_{1-x}Ca_xO System through Cd K-Edge Extended X-Ray Absorption Spectroscopic Studies
J. Synchrotron Rad., **19** (2012) 541.
- Y.Kubouchi, S.Hayakawa, H.Namatame and T.Hirokawa
Direct Observation of Fractional Change of Niobium Ionic Species in a Solution by Means of X-Ray Absorption Fine Structure Spectroscopy
X-Ray Spectrom., **41** (2012) 259.
- H.Wang, N.Kawasaki, T.Yokoyama, H.Yoshikawa and K.Awaga
Molecular Cluster Batteries of Nano-Hybrid Materials between Keggin POMs and SWNTs
J.Chem.Soc., Dalton Trans., **41** (2012) 9863.
- Y.Okamoto, M.Nakada, M.Akabori, H.Shiwaku, S.Komamine, T.Fukui, E.Ochi, H.Nitani and M.Nomura
Synchrotron Radiation-Based X-Ray Imaging Study of Ruthenium in Simulated High-Level Waste Glass
Transactions of the Atomic Energy Society of Japan, **11** (2012) 127. (*in Japanese*).
- T.Takeguchi, T.Yamanaka, K.Asakura, E.N.Muhamad, K.Uosaki and W.Ueda
Evidence of Nonelectrochemical Shift Reaction on a CO-Tolerant High-Entropy State Pt-Ru Anode Catalyst for Reliable and Efficient Residential Fuel Cell Systems
J. Am. Chem. Soc., **134** (2012) 14508.
- M.Shibukawa, M.Harada, T.Okada, Y.Ogiyama, T.Shimasaki, Y.Kondo, A.Inoue and S.Saito
X-Ray Absorption Fine Structure Spectroscopy Studies of Thermal Effects on Ion-exchange Equilibria
RSC Adv., **2** (2012) 8985.
- T.Wada, K.K.Bando, S.T.Oyama, T.Miyamoto, S.Takakusagi and K.Asakura
Operando Observation of Ni₂P Structural Changes during Catalytic Reaction: Effect of H₂S Pretreatment
Chem. Lett., **41** (2012) 1238.
- A.Yamaguchi, N.Hiyoshi, O.Sato and M.Shirai
Gasification of Organosolv-Lignin over Charcoal Supported Noble Metal Salt Catalysts in Supercritical Water
Topics in Catal., **55** (2012) 889.
- K.Ikeue, S.Hinokuma, K.Watanabe, T.Minekishi, T.Sato, Y.Nakahara and M.Machida
Structure and Catalytic Properties of Pd/10Al₂O₃·2B₂O₃. Effect of Preparation Routes and Additives
Bull. Chem. Soc. Jpn., **85** (2012) 468.
- K.Ito, K.Yoshida, S.Kittaka and T.Yamaguchi
Pore Size Dependent Behavior of Hydrated Ag⁺ Ions Confined in Mesoporous MCM-41 Materials under Synchrotron X-Ray Irradiation
Anal. Sci., **28** (2012) 639.
- K.Shimura, H.Kawai, T.Yoshida and H.Yoshida
Bifunctional Rhodium Cocatalysts for Photocatalytic Steam Reforming of Methane over Alkaline Titanate
ACS Catal., **2** (2012) 2126.
- F.Gao, S.Yamazoe, T.Maeda, and T.Wada
Structural Study of Cu-Deficient Cu_{2(1-x)}ZnSnSe₄ Solar Cell Materials by X-Ray Diffraction and X-ray Absorption Fine Structure
Jpn. J. Appl. Phys., **51** (2012) 10NC28.
- A.Oda, H.Torigoe, A.Itadani, T.Ohkubo, T.Yumura, H.Kobayashi and Y.Kuroda
Unprecedented Reversible Redox Process in the ZnMFI-H₂ System Involving Formation of Stable Atomic Zn⁰
Angew. Chem. Int. Ed., **51** (2012) 7719.

J.Kugai, R.Kitagawa, S.Seino, T.Nakagawa, Y.Ohkubo, H.Nitani, H.Daimon and T.A.Yamamoto
CeO₂-Supported Pt-Cu Alloy Nanoparticles Synthesized by Radiolytic Process for Highly Selective CO Oxidation
Int. J. Hydrogen Energy, **37** (2012) 4787.

S.Kageyama, A.Murakami, S.Ichikawa, S.Seino, T.Nakagawa, H.Daimon, Y.Ohkubo, J.Kugai and T.A.Yamamoto
Enhanced Electrochemical Stability of PtRuAu/C Catalyst Synthesized by Radiolytic Process
J. Mater. Res., **27** (2012) 1037.

J.Kugai, T.Moriya, S.Seino, T.Nakagawa, Y.Ohkubo, H.Nitani, Y.Mizukoshi and T.A.Yamamoto
Effect of Support for Pt-Cu Bimetallic Catalysts Synthesized by Electron Beam Irradiation Method on Preferential CO Oxidation
Appl. Catal. B, **126** (2012) 306.

H.Kitagawa, N.Ichikuni, S.Xie, T.Tsukuda, T.Hara and S.Shimazu
Size Control of Ni Nanocluster by the Carbon Chain Length of Secondary Alkoxide
e-J. Surf. Sci. Nanotech., **10** (2012) 648.

A.Itadani, H.Torigoe, T.Yumura, T.Ohkubo, H.Kobayashi and Y.Kuroda
Dual-Copper Catalytic Site Formed in CuMFI Zeolite Makes Effective Activation of Ethane Possible Even at Room Temperature
J. Phys. Chem. C, **116** (2012) 10680.

NW12A

T.Tsuda, T.Suzuki and S.Kojima
Crystallization and Preliminary X-Ray Diffraction Analysis of *Bacillus subtilis* YwfE, an L-Amino-Acid Ligase
Acta Cryst. F, **68** (2012) 203.

S.Nakano, M.Takahashi, A.Sakamoto, H.Morikawa and K.Katayanagi
Structure-Function Relationship of Assimilatory Nitrite Reductases from the Leaf and Root of Tobacco Based on the High Resolution Structure
Protein Science, **21** (2012) 383.

U.Ohto, K.Usui, T.Ochi, K.Yuki, Y.Satow and T.Shimizu
Crystal Structure of Human β -Galactosidase Structural Basis of GM₁ Gangliosidosis and Morquio B Diseases
J. Biol. Chem., **287** (2012) 1801.

K.Usui, U.Ohto, T.Ochi, T.Shimizu and Y.Satow
Expression, Purification, Crystallization and Preliminary X-Ray Crystallographic Analysis of Human β -Galactosidase
Acta Cryst. F, **68** (2012) 73.

D.-H.Im, K.Kimura, F.Hayasaka, T.Tanaka, M.Noguchi, A.Kobayashi, S.Shoda, K.Miyazaki, T.Wakagi and S.Fushinobu
Crystal Structures of Glycoside Hydrolase Family 51 α -L-Arabinofuranosidase from *Thermotoga maritima*
Biosci. Biotechnol. Biochem., **76** (2012) 423.

Y.-L.Xue, T.Miyakawa, Y.Sawano and M.Tanokura
Crystallization and Preliminary X-Ray Crystallographic Analysis of Dioscorin from *Dioscorea japonica*
Acta Cryst. F, **68** (2012) 193.

K.Hanaya, M.Suetsugu, S.Saijo, I.Yamato and S.Aoki
Potent Inhibition of dinuclear zinc(II) Peptidase, an Aminopeptidase from *Aeromonas proteolytica*, by 8-Quinololinol Derivatives: Inhibitor Design Based on Zn²⁺ Fluorophores, Kinetic, and X-Ray Crystallographic Study
J. Biol. Inorg. Chem., **17** (2012) 517.

H.Nojiri
Structural and Molecular Genetic Analyses of the Bacterial Carbazole Degradation System
Biosci. Biotechnol. Biochem., **76** (2012) 1.

K.Yoneda, H.Sakuraba, T.Araki and T.Ohshima
Crystal Structure of Binary and Ternary Complexes of Archaeal UDP-Galactose 4-Epimerase-like L-Threonine Dehydrogenase from *Thermoplasma volcanium*
J. Biol. Chem., **287** (2012) 12966.

N.Kuwabara, Y.Murayama, H.Hashimoto, Y.Kokabu, M.Ikeguchi, M.Sato, K.Mayanagi, Y.Tsutsui, H.Iwasaki and T.Shimizu
Mechanistic Insights into the Activation of Rad51-Mediated Strand Exchange from the Structure of a Recombination Activator, the Swi5-Sfr1 Complex
Structure, **20** (2012) 440.

M.Nagae, S.Re, E.Mihara, T.Nogi, Y.Sugita and J.Takagi
Crystal Structure of $\alpha 5 \beta 1$ Integrin Ectodomain: Atomic Details of the Fibronectin Receptor
J. Cell Biol., **197** (2012) 131.

A.Nakamura, J.Ohtsuka, K.Miyazono, A.Yamamura, K.Kubota, R.Hirose, N.Hirota, M.Ataka, Y.Sawano and M.Tanokura
Improvement in Quality of Protein Crystals Grown in a High Magnetic Field Gradient
Crystal Growth and Design, **12** (2012) 1141.

T.Nagae, T.Kawamura, L.M.G.Chavas, K.Niwa, M.Hasegawa, C.Kato and N.Watanabe
High-Pressure-Induced Water Penetration into 3-Isopropylmalate Dehydrogenase
Acta Cryst. D, **68** (2012) 300.

J.Wang, M.Xu, K.Zhu, L.Li and X.Liu
The N-Terminus of FILIA Forms an Atypical KH Domain with a Unique Extension Involved in Interaction with RNA
PLoS ONE, **7** (2012) e30209.

- M.Oda, M.Takahashi, H.Tsuge, M.Nagahama and J.Sakurai
Role of Side-Edge Site of Sphingomyelinase from *Bacillus Cereus*
Biochem. Biophys. Res. Commun., **422** (2012) 128.
- R.Arai, N.Kobayashi, A.Kimura, T.Sato, K.Matsuo, A.F.Wang, J.M.Platt, L.H.Bradley and M.H.Hecht
Domain-Swapped Dimeric Structure of a Stable and Functional *De Novo* Four-Helix Bundle Protein, WA20
J. Phys. Chem. B, **116** (2012) 6789.
- X.Zhang, W.Wu and Z.Chen
Crystallization and Preliminary X-Ray Diffraction Studies of the Abscisic Acid Receptor PYL3 and its Complex with Pyrabactin
Acta Cryst. F, **68** (2012) 479.
- H.Sakurama, S.Fushinobu, M.Hidaka, E.Yoshida, Y.Honda, H.Ashida, M.Kitaoka, H.Kumagai, K.Yamamoto and T.Katayama
1,3-1,4- α -L-Fucosynthase that Specifically Introduces Lewis a/x Antigens into Type-1/2 Chains
J. Biol. Chem., **287** (2012) 16709.
- H.Shoun, S.Fushinobu, L.Jiang, S.-W.Kim and T.Wakagi
Fungal Denitrification and Nitric Oxide Reductase Cytochrome P450nor
Phil. Trans. R. Soc. B, **367** (2012) 1186.
- T.Wakagi
A Special Enzyme Acting in a Primordial Metabolism; Discovery of One-Enzyme with Two Reactions
Kagaku, **67** (2012) 72. (*in Japanese*).
- H.Nishimasu, S.Fushinobu and T.Wakagi
Molecular Mechanism by which One Enzyme Catalyzes Two Reactions
J. Cryst. Soc. Jpn., **54** (2012) 113. (*in Japanese*).
- H.Yokoyama, N.Takizawa, D.Kobayashi, I.Matsui and S.Fujii
Crystal Structure of a Membrane Stomatin-Specific Protease in Complex with a Substrate Peptide
Biochemistry, **51** (2012) 3872.
- X.Zhang, Q.Zhang, Q.Xin, L.Yu, Z.Wang, W.Wu, L.Jiang, G.Wang, W.Tian, Z.Deng, Y.Wang, Z.Liu, J.Long, Z.Gong and Z.Chen
Complex Structures of the Abscisic Acid Receptor PYL3/RCAR13 Reveal a Unique Regulatory Mechanism Structure, **20** (2012) 780.
- L.M.G.Chavas, N.Matsugaki, Y.Yamada, M.Hiraki, N.Igarashi, M.Suzuki and S.Wakatsuki
Beamline AR-NW12A: High-Throughput Beamline for Macromolecular Crystallography at the Photon Factory
J. Synchrotron Rad., **19** (2012) 450.
- M.Tamura, T.Miyazaki, Y.Tanaka, M.Yoshida, A.Nishikawa and T.Tonozuka
Comparison of the Structural Changes in Two Cellobiohydrolases, CcCel6A and CcCel6C, from *Coprinopsis cinerea* - a Tweezer-Like Motion in the Structure of CcCel6C
FEBS J., **279** (2012) 1871.
- K.Miyazono, T.Koura, K.Kubota, T.Yoshida, Y.Fujita, K.Yamaguchi-Shinozaki and M.Tanokura
Purification, Crystallization and Preliminary X-Ray Analysis of OsAREB8 from rice, a member of the AREB/ABF family of bZIP transcription factor, in complex with its cognate DNA
Acta Cryst. F, **68** (2012) 491.
- M.Qian, Q.Huang, G.Wu, L.Lai, Y.Tang, J.Pei and M.Kusunoki
Crystal Structure Analysis of a Recombinant Predicted Acetamidase/Formamidase from the Thermophile *Thermoanaerobacter Tengcongensis*
Protein J., **31** (2012) 166.
- M.Gao, D.Li, Y.Hu, Y.Zhang, Q.Zou and D.-C.Wang
Crystal Structure of TNF- α -Inducing Protein from *Helicobacter Pylori* in Active Form Reveals the Intrinsic Molecular Flexibility for Unique DNA-Binding
PLoS One, **7** (2012) e41871.
- X.Wang, J.Ding and D.Wang
Crystallization and Preliminary X-Ray Analysis of the C-Terminal Domain of CCM2, Part of a Novel Adaptor Protein Involved in Cerebral Cavernous Malformations
Acta Cryst. F, **68** (2012) 683.
- T.Tonozuka, A.Tamaki, G.Yokoi, T.Miyazaki, M.Ichikawa, A.Nishikawa, Y.Ohta, Y.Hidaka, K.Katayama, Y.Hatada, T.Ito and K.Fujita
Crystal Structure of a Lactosucrose-Producing Enzyme, *Arthrobacter* sp. K-1 β -Fructofuranosidase
Enzyme and Microbial Technology, **51** (2012) 359.
- U.Ohto, K.Fukase, K.Miyake and T.Shimizu
Structural Basis of Species-Specific Endotoxin Sensing by Innate Immune Receptor TLR4/MD-2
Proc. Natl. Acad. Sci. USA, **109** (2012) 7421.
- B.G.Han, K.C.Jeong, J.W.Cho, B.C.Jeong, H.K.Song, J.Y.Lee, D.H.Shin, S.Lee and B.I.Lee
Crystal Structure of *Pyrococcus Furius* PF2050, a Member of the DUF2666 Protein Family
FEBS Lett., **586** (2012) 1384.
- N.Suzuki, Y.-M.Kim, Z.Fujimoto, M.Momma, M.Okuyama, H.Mori, K.Funane and A.Kimura
Structural Elucidation of Dextran Degradation Mechanism by *Streptococcus mutans* Dextranase Belonging to Glycoside Hydrolase Family 66
J. Biol. Chem., **287** (2012) 19916.

- H.Sakuraba, T.Satomura, R.Kawakami, K.Kim, Y.Hara, K.Yoneda and T.Ohshima
Crystal Structure of Novel Dye-Linked L-Proline Dehydrogenase from Hyperthermophilic Archaeon *Aeropyrum Pernix*
J. Biol. Chem., **287** (2012) 20070.
- H.Yokoyama, O.Tsuruta, N.Akao and S.Fujii
Crystal Structure of *Helicobacter Pylori* Neutrophil-Activating Protein with a Di-Nuclear Ferroxidase Center in a Zinc or Cadmium-Bound Form
Biochem. Biophys. Res. Commun., **422** (2012) 745.
- Y.Koo, D.Jung and E.Bae
Crystal Structure of *Streptococcus pyogenes* Csn2 Reveals Calcium-Dependent Conformational Changes in Its Tertiary and Quaternary Structure
PLoS One, **7** (2012) e33401.
- H.Kondo, Y.Hanada, H.Sugimoto, T.Hoshino, C.P.Garnham, P.L.Davies and S.Tsuda
Ice-Binding Site of Snow Mold Fungus Antifreeze Protein Deviates from Structural Regularity and High Conservation
Proc. Natl. Acad. Sci. USA, **109** (2012) 9360.
- Q.Tang, P.Gao, Y.-P.Liu, A.Gao, X.-M.An, S.Liu, X.-X.Yan and D.-C.Liang
RecOR Complex Including RecR N-N Dimer and RecO Monomer Displays a High Affinity for ssDNA
Nucleic Acids Res., **40** (2012) 11115.
- T.Shirouazono, M.Chirifu, C.Nakamura, Y.Yamagata and S.Ikemizu
Preparation, Crystallization and Preliminary X-Ray Diffraction Studies of the Glycosylated Form of Human Interleukin-23
Acta Cryst. F, **68** (2012) 432.
- A.Nakamura, M.Fujihashi, R.Aono, T.Sato, Y.Nishiba, S.Yoshida, A.Yano, H.Atomi, T.Imanaka and K.Miki
Dynamic, Ligand-Dependent Conformational Change Triggers Reaction of Ribose-1,5-Bisphosphate Isomerase from *Thermococcus Kodakarensis* KOD1
J. Biol. Chem., **287** (2012) 20784.
- H.Makyio, M.Ohgi, T.Takei, S.Takahashi, H.Takatsu, Y.Katoh, A.Hanai, T.Ueda, Y.Kanaho, Y.Xie, H.W.Shin, H.Kamikubo, M.Kataoka, M.Kawasaki, R.Kato, S.Wakatsuki and K.Nakayama
Structural Basis for Arf6-MKLP1 Complex Formation on the Flemming Body Responsible for Cytokinesis
EMBO J., **31** (2012) 2590.
- Y.Watanabe, T.Kobayashi, H.Yamamoto, H.Hoshida, R.Akada, F.Inagaki, Y.Ohsumi and N.N.Noda
Structure-Based Analyses Reveal Distinct Binding Sites for Atg2 and Phosphoinositides in Atg18
J. Biol. Chem., **287** (2012) 31681.
- T.Nishioka, Y.Yasutake, Y.Nishiya and T.Tamura
Structure-Guided Mutagenesis for the Improvement of Substrate Specificity of *Bacillus Megaterium* Glucose 1-Dehydrogenase IV
FEBS J., **279** (2012) 3264.
- H.Nakano, A.Hosokawa, R.Tagawa, K.Inaka, K.Ohta, T.Nakatsu, H.Kato and K.Watanabe
Crystallization and Preliminary X-Ray Crystallographic Analysis of Pz Peptidase B from *Geobacillus Collagenovorans* MO-1
Acta Cryst. F, **68** (2012) 757.
- Y.Zhao, T.Wakamatsu, K.Doi, H.Sakuraba and T.Ohshima
A Psychrophilic Leucine Dehydrogenase from *Sporosarcina Psychrophila*: Purification, Characterization, Gene Sequencing and Crystal Structure Analysis
J. Mol. Catal. B, **83** (2012) 65.
- H.Shimizu, A.Osanai, K.Sakamoto, D.K.Inaoka, T.Shiba, S.Harada and K.Kita
Crystal Structure of Mitochondrial Quinol-Fumarate Reductase from the Parasitic Nematode *Ascaris Suum*
J. Biochem., **151** (2012) 589.
- S.Hoshino and I.Hayashi
Filament Formation of FtsZ/Tubulin-Like Protein TubZ from the *Bacillus cereus* pXO1 Plasmid
J. Biol. Chem., **287** (2012) 32103.
- Y.Kezuka, Y.Yoshida and T.Nonaka
Structural Insights into Catalysis by β C-S lyase from *Streptococcus Anginosus*
Proteins, **80** (2012) 2447.
- S.Nakano, M.Takahashi, A.Sakamoto, H.Morikawa and K.Katayanagi
X-Ray Crystal Structure of a Mutant Assimilatory Nitrite Reductase That Shows Sulfite Reductase-Like Activity
Chemistry and Biodiversity, **9** (2012) 1989.
- S.Inoue-Ito, S.Yajima, S.Fushinobu, S.Nakamura, T.Ogawa, M.Hidaka and H.Masaki
Identification of the Catalytic Residues of Sequence-Specific and Histidine-Free Ribonuclease Colicin E5
J. Biochem., **152** (2012) 365.
- K.Yoneda
Structural and Functional Analyses of Novel NAD(P) Dependent Amino Acid Dehydrogenases from Archaea vitamins (Japan), **86** (2012) 74. (*in Japanese*).
- J.Kondo, M.Koganei and T.Kasahara
Crystal Structure and Specific Binding Mode of Sisomicin to the Bacterial Ribosomal Decoding Site
ACS Med. Chem. Lett., **3** (2012) 741.

- Y.Shoyama, T.Tamada, K.Kurihara, A.Takeuchi, F.Taura, S.Arai, M.Blaber, Y.Shoyama, S.Morimoto and R.Kuroki
Structure and Function of Δ 1-Tetrahydrocannabinolic Acid (THCA) Synthase, the Enzyme Controlling the Psychoactivity of *Cannabis sativa*
J. Mol. Biol., **423** (2012) 96.
- M.Momma and Z.Fujimoto
Interdomain Disulfide Bridge in the Rice Granule Bound Starch Synthase I Catalytic Domain as Elucidated by X-Ray Structure Analysis
Biosci. Biotechnol. Biochem., **76** (2012) 1591.
- S.Yamashita, H.Yoshida, N.Uchiyama, Y.Nakakita, S.Nakakita, T.Tonozuka, K.Oguma, A.Nishikawa and S.Kamitori
Carbohydrate Recognition Mechanism of HA70 from *Clostridium Botulinum* Deduced from X-Ray Structures in Complexes with Sialylated Oligosaccharides
FEBS Lett., **586** (2012) 2404.
- H.Yoshida, S.Yamashita, M.Teraoka, A.Itoh, S.Nakakita, N.Nishi and S.Kamitori
X-Ray Structure of a Protease-Resistant Mutant Form of Human Galectin-8 with Two Carbohydrate Recognition Domains
FEBS J., **279** (2012) 3937.
- K.Nakamura, Z.Man, Y.Xie, A.Hanai, H.Makyio, M.Kawasaki, R.Kato, H-W.Shin, K.Nakayama and S.Wakatsuki
Structural Basis for Membrane Binding Specificity of the Bin/Amphiphysin/Rvs (BAR) Domain of Arfaptin-2 Determined by Arl1 GTPase
J. Biol. Chem., **287** (2012) 25478.
- K.Suzuki, N.Ohbayashi, J.Jiang, X.Zhang, M.M.Hoque, M.Tsunoda, K.Murayama, H.Tanaka and A.Takenaka
Crystallographic Study of the Interaction of the Anti-HIV Lectin Actinohivin with α (1-2)mannobiose Moiety of gp120 HMTG
Acta Cryst. F, **68** (2012) 1060.
- M.M.Hoque, K.Suzuki, M.Tsunoda, J.Jiang, F.Zhang, A.Takahashi, N.Ohbayashi, X.Zhang, H.Tanaka, S.Omura and A.Takenaka
Structural Insights into the Specific Anti-HIV Property of Actinohivin: Structure of its Complex with the α (1-2)mannobiose Moiety of gp120
Acta Cryst. D, **68** (2012) 1671.
- Y.Suwa, J.Ohtsuka, T.Miyakawa, F.L.Imai, M.Okai, Y.Sawano, Y.Yasohara, M.Kataoka, S.Shimizu and M.Tanokura
Expression, Purification, Crystallization, and Preliminary X-Ray Analysis of Carbonyl Reductase S1 from *Candida Magnoliae*
Acta Cryst. F, **68** (2012) 540.
- Y.Itoh, S.Sekine and S.Yokoyama
Crystallization and Preliminary X-Ray Crystallographic Analysis of *Aquifex aeolicus* SelA, a Bacterial Selenocysteine Synthase
Acta Cryst. F, **68** (2012) 1128.
- Y.Itoh, S.Sekine and S.Yokoyama
Crystallization and Preliminary X-Ray Crystallographic Analysis of Bacterial tRNA^{Sec} in Complex with Seryl-tRNA Synthetase
Acta Cryst. F, **68** (2012) 678.
- Y.Hirano, Y.Kimura, H.Suzuki, K.Miki and Z.-Y.Wang
Structure Analysis and Comparative Characterization of the Cytochrome *c'* and Flavocytochrome *c* from Thermophilic Purple Photosynthetic Bacterium *Thermochromatium tepidum*
Biochemistry, **51** (2012) 6556.
- R.Nomoto, T.Tezuka, K.Miyazono, M.Tanokura, S.Horinouchi and Y.Ohnishi
Purification, Crystallization and Preliminary X-Ray Analysis of SGR6054, a *Streptomyces* Homologue of the Mycobacterial Integration Host Factor mIHF
Acta Cryst. F, **68** (2012) 1085.
- M.Yamaguchi, K.Matoba, R.Sawada, Y.Fujioka, H.Nakatogawa, H.Yamamoto, Y.Kobashigawa, H.Hoshida, R.Akada, Y.Ohsumi, N.N.Noda and F.Inagaki
Noncanonical Recognition and UBL Loading of Distinct E2s by Autophagy-Essential Atg7
Nature Structural Molecular Biology, **19** (2012) 1250.
- K.Murayama, M.Kato-Murayama, T.Hosaka, A.Sotokawauchi, S.Yokoyama, K.Arima and M.Shirouzu
Crystal Structure of Cucumisin, a Subtilisin-Like Endoprotease from *Cucumis melo* L
J. Mol. Biol., **423** (2012) 386.
- Y.Ashikawa, Z.Fujimoto, Y.Usami, K.Inoue, H.Noguchi, H.Yamane and H.Nojiri
Structural Insight into the Substrate- and Dioxygen-Binding Manner in the Catalytic Cycle of Rieske Nonheme Iron Oxygenase System, Carbazole 1,9a-Dioxygenase
BMC Struct. Biol., **12** (2012) 15.
- T.Y.Jung, D.Li, J.T.Park, S.M.Yoon, P.L.Tran, B.H.Oh, S.Janecek, S.G.Park, E.J.Woo and K.H.Park
Association of Novel Domain in Active Site of Archaic Hyperthermophilic Maltogenic Amylase from *Staphylothermus marinus*
J. Biol. Chem., **287** (2012) 7979.
- M.Unno, K.Kizawa, M.Ishihara and H.Takahara
Crystallization and Preliminary X-Ray Crystallographic Analysis of Human Peptidylarginine Deiminase Type III
Acta Cryst. F, **68** (2012) 668.

- N.Maita, H.Taniguchi and H.Sakuraba
Crystallization, X-Ray Diffraction Analysis and SIRAS Phasing of Human α -L-Iduronidase
Acta Cryst. F, **68** (2012) 1363.
- K.Kubota, A.Yamagata, Y.Sato, S.Goto-Ito and S.Fukai
Get1 Stabilizes an Open Dimer Conformation of Get3 ATPase by Binding Two Distinct Interfaces
J. Mol. Biol., **422** (2012) 366.
- N.Yoshimoto, Y.Sakamaki, M.Haeta, A.Kato, Y.Inaba, T.Itoh, M.Nakabayashi, N.Ito and K.Yamamoto
Butyl Pocket Formation in the Vitamin D Receptor Strongly Affects the Agonistic or Antagonistic behavior of Ligands
J. Med. Chem., **55** (2012) 4373.
- Y.Sato, A.Yamagata, S.Goto-Ito, K.Kubota, R.Miyamoto, S.Nakada and S.Fukai
Molecular Basis of Lys-63-linked Polyubiquitination Inhibition by the Interaction between Human Deubiquitinating Enzyme OTUB1 and Ubiquitin-Conjugating Enzyme UBC13
J. Biol. Chem., **287** (2012) 25860.
- T.Kubota, A.Kumagai, H.Ito, S.Furukawa, Y.Someya, N.Takeda, K.Ishii, T.Wakita, H.Narimatsu and H.Shirato
Structural Basis for the Recognition of Lewis Antigens by Genogroup I Norovirus
J. Virol., **86** (2012) 11138.
- F.Akita, A.Higashiura, T.Shimizu, Y.Pu, M.Suzuki, T.Uehara-Ichiki, T.Sasaya, S.Kanamaru, F.Arisaka, T.Tsukihara, A.Nakagawa and T.Omura
Crystallographic Analysis Reveals Octamerization of Viroplasm Matrix Protein P9-1 of *Rice Black Streaked Dwarf Virus*
J. Virology, **86** (2012) 746.
- J.Tong, H.Yang, S.Ha, Y.Lee, S.H.Eom and Y.J.Im
Crystallization and Preliminary X-Ray Crystallographic Analysis of the Oxysterol-Binding Protein Osh3 from *Saccharomyces cerevisiae*
Acta Cryst. F, **68** (2012) 1498.
- R.Arai, S.Fukui, N.Kobayashi and J.Sekiguchi
Solution Structure of IseA, an Inhibitor Protein of DL-Endopeptidases from *Bacillus Subtilis*, Reveals a Novel Fold with a Characteristic Inhibitory Loop
J. Biol. Chem., **287** (2012) 44736.
- J.Park, F.Lammers, W.Herr and J.-J.Song
HCF-1 Self-Association via an Interdigitated Fn3 Structure Facilitates Transcriptional Regulatory Complex Formation
Proc. Natl. Acad. Sci. USA, **109** (2012) 17430.
- H.Tanaka, N.Miyazaki, K.Matoba, T.Nogi, K.Iwakasaki and J.Takagi
Higher-Order Architecture of Cell Adhesion Mediated by Polymorphic Synaptic Adhesion Molecules Neurexin and Neuroigin
Cell Reports, **2** (2012) 101.
- M.Fujihashi, M.Hiraki, G.Ueno, S.Baba, H.Murakami, M.Suzuki, N.Watanabe, I.Tanaka, A.Nakagawa, S.Wakatsuki, M.Yamamoto and K.Miki
Crystal Sample Pins and a Storage Cassette System Compatible with the Protein Crystallography Beamlines at both the Photon Factory and SPring-8
J. Appl. Cryst., **45** (2012) 1156.
- S.B.Hong, B.-W.Kim, J.H.Kim and H.K.Song
Structure of the Autophagic E2 Enzyme Atg10
Acta Cryst. D, **68** (2012) 1409.
- B.-G.Lee, M.K.Kim, B.-W.Kim, S.W.Suh and H.K.Song
Structures of the Ribosome-Inactivating Protein from Barley Seeds Reveal a Unique Activation Mechanism
Acta Cryst. D, **68** (2012) 1488.
- D.F.Li, J.Y.Zhang, Y.Hou, L.Liu, S.J.Liu and W.Liu
Crystallization and Preliminary Crystallographic Analysis of 2-Aminophenol 1,6-Dioxygenase Complexed with Substrate and with an Inhibitor
Acta Cryst. F, **68** (2012) 1337.
- T.Miyafusa, J.M.M.Caaveiro, Y.Tanaka and K.Tsumoto
Crystal Structure of the Enzyme CapF of *Staphylococcus aureus* Reveals a Unique Architecture Composed of Two Functional Domains
Biochem. J., **443** (2012) 671.
- K.H.Kim, D.R.An, J.Song, J.Y.Yoon, H.S.Kim, H.J.Yoon, H.N.Im, J.Kim, D.J.Kim, S.J.Lee, K-H.Kim, H-M.Lee, H-J.Kim, E-K.Jo, J.Y.Lee and S.W.Suh
Mycobacterium Tuberculosis Eis Protein Initiates Suppression of Host Immune Responses by Acetylation of DUSP16/MKP-7
Proc. Natl. Acad. Sci. USA, **109** (2012) 7729.
- H.Yoshida, A.Yoshihara, M.Teraoka, S.Yamashita, K.Izumori and S.Kamitori
Structure of L-Rhamnose Isomerase in Complex with L-Rhamnopyranose Demonstrates the Sugar-Ring Opening Mechanism and the Role of a Substrate Sub-Binding Site
FEBS Open Bio, **3** (2012) 35.
- S.Hoshino, T.Maki and I.Hayashi
Crystallization and Preliminary X-Ray Data Analysis of the pXO1 Plasmid-Partitioning Factor TubZ from *Bacillus cereus*
Acta Cryst. F, **68** (2012) 1550.
- S.Watanabe, D.Sasaki, T.Tominaga and K.Miki
Structural Basis of [NiFe] Hydrogenase Maturation by Hyp Proteins
Biol. Chem., **393** (2012) 1089.

S.Watanabe, R.Matsumi, H.Atomi, T.Imanaka and K.Miki
Crystal Structures of the HypCD Complex and the HypCDE Ternary Complex: Transient Intermediate Complexes during [NiFe] Hydrogenase Maturation
Structure, **20** (2012) 2124.

K.Ito, R.Murakami, M.Mochizuki, H.Qi, Y.Shimizu, K.Miura, T.Ueda and T.Uchiumi
Structural Basis for the Substrate Recognition and Catalysis of Peptidyl-tRNA Hydrolase
Nucl. Acids Res., **40** (2012) 10521.

T.Hayashi, M.Senda, H.Morohashi, H.Higashi, M.Horio, Y.Kashiba, L.Nagase, D.Sasaya, T.Shimizu, N.Venugopalan, H.Kumeta, N.Noda, F.Inagaki, T.Senda and M.Hatakeyama
Tertiary Structure-Function Analysis Reveals the Pathogenic Signaling Potentiation Mechanism of *Helicobacter pylori* Oncogenic Effector CagA
Cell Host & Microbe, **12** (2012) 20.

NW14A

S.Koshihara, K.Onda, Y.Okimoto and T.Ishikawa
Search for the Photo-Induced Hidden Phase in Inorganic and Organic System
Acta Physica Polonica A, **121** (2012) 328.

M.Hoshino, H.Uekusa, A.Tomita, S.Koshihara, T.Sato, S.Nozaawa, S.Adachi, K.Ohkubo, H.Kotani and S.Fukuzumi
Determination of the Structural Features of a Long-Lived Electron-Transfer State of 9-Mesityl-10-methylacridinium Ion
J. Am. Chem. Soc., **134** (2012) 4569.

J.Hu, K.Ichiyanagi, H.Takahashi, H.Koguchi, T.Akasaka, N.Kawai, S.Nozaawa, T.Sato, Y.C.Sasaki, S.Adachi and K.G.Nakamura
Reversible Phase Transition in Laser-Shocked 3Y-TPZ Ceramics Observed via Nanosecond Time-Resolved X-Ray Diffraction
J. Appl. Phys., **111** (2012) 053526.

T.Sato, S.Nozaawa, A.Tomita, M.Hoshino, S.Koshihara, H.Fujii and S.Adachi
Coordination and Electronic Structure of Ruthenium(II)-*tris*-2,2'-bipyridine in the Triplet Metal-to-Ligand Charge-Transfer Excited State Observed by Picosecond Time-Resolved Ru *K*-Edge XAFS
J. Phys. Chem. C, **116** (2012) 14232.

K.Ichiyanagi, N.Kawai, S.Nozaawa, T.Sato, A.Tomita, M.Hoshino, K.G.Nakamura, S.Adachi and Y.C.Sasaki
Shock-Induced Intermediate-Range Structural Change of SiO₂ Glass in the Nonlinear Elastic Region
Appl. Phys. Lett., **101** (2012) 181901.

K.H.Kim, S.Muniyappan, K.Y.Oang, J.G.Kim, S.Nozaawa, T.Sato, S.Koshihara, R.Henning, I.Kosheleva, H.K.Y.Kim, T.W.Kim, J.Kim, S.Adachi and H.Ihee
Direct Observation of Cooperative Protein Structural Dynamics of Homodimeric Hemoglobin from 100 Picoseconds to 10 Milliseconds with Pump-Probe X-Ray Solution Scattering
J. Am. Chem. Soc., **134** (2012) 7001.

A.F.Mabied, M.Muller, R.E.Dinnebier, S.Nozaawa, M.Hoshino, A.Tomita, T.Sato and S.Adachi
A Time-Resolved Powder Diffraction Study of *in-situ* Photodimerization Kinetics of 9-Methylanthracene using a CCD Area Detector and Parametric Rietveld Refinement
Acta Cryst. B, **68** (2012) 424.

T.Tsudoku, A.Tomita, S.Koshihara, S.Adachi and T.Yamato
Ligand Migration in Myoglobin: A Combined Study of Computer Simulation and X-Ray Crystallography
J. Chem. Phys., **136** (2012) 165101.

SPF

K.Wada, T.Hyodo, A.Yagishita, M.Ikeda, S.Ohsawa, T.Shidara, K.Michishio, T.Tachibana, Y.Nagashima, Y.Fukaya, M.Maekawa and A.Kawasuso
Increase in the Beam Intensity of the Linac-Based Slow Positron Beam and its Application at the Slow Positron Facility, KEK
Eur. Phys. J. D, **66** (2012) 37.

K.Michishio, T.Tachibana, R.H.Suzuki, K.Wada, A.Yagishita, T.Hyodo and Y.Nagashima
An Energy-Tunable Positronium Beam Produced using the Photodetachment of the Positronium Negative Ion
Appl. Phys. Lett., **100** (2012) 254102.

I.Mochizuki, Y.Fukaya, A.Kawasuso, K.Yaji, A.Harasawa, I.Matsuda, K.Wada and T.Hyodo
Atomic Configuration and Phase Transition of Pt-Induced Nanowires on a Ge(001) Surface Studied using Scanning Tunneling Microscopy, Reflection High-Energy Positron Diffraction, and Angle-Resolved Photoemission Spectroscopy
Phys. Rev. B, **85** (2012) 245438.

Y.Nagashima, K.Michishio, T.Tachibana, H.Terabe and R.Suzuki
Positronium Negative Ion Experiments - Formation, Photodetachment and Production of an Energy Tunable Positronium Beam -
J. Phys. Conf. Ser., **388** (2012) 012021.

H.Terabe, K.Michishio, T.Tachibana and Y.Nagashima
Durable Emission of Positronium Negative Ions from Na- and K-Coated W(100) Surfaces
New J. Phys., **14** (2012) 015003.

Synchrotron Radiation Science Division

A.Kotani, K.O.Kvashnina, P.Glatzel, J.C.Parlebas and G.Schmerber

Single Impurity Anderson Model Versus Density Functional Theory for Describing Ce L_3 X-Ray Absorption Spectra of CeFe₂: Resolution of a Recent Controversy

Phys. Rev. Lett., **108** (2012) 036403.

T.A.W.Beale, G.Beutier, S.R.Bland, A.Bombardi, L.Bouchenoire, O.Bunau, S.D.Matteo, J.F-Rodriguez, J.E.H-Borrero, J.H-Martin, V.L.R.Jacques, R.D.Johnson, A.Juhin, T.Matsumura, C.Mazzoli, A.M.Mulders, H.Nakao, J.Okamoto, S.Partzsch, A.J.Princep, V.Scagnoli, J.Stremper, C.Vecchini, Y.Wakabayashi, H.C.Walker, D.Wermeile and Y.Yamasaki

REXS Contribution to Electronic Ordering Investigation in Solids

Eur. Phys. J. Special Topics, **208** (2012) 89.

A.Kotani

Theoretical Analysis of X-Ray Magnetic Circular Dichroism at the Yb $L_{2,3}$ Absorption Edges of YbInCu₄ in High Magnetic Fields around the Field-Induced Valence Transition

Eur. Phys. J. B, **83** (2012) 31.

A.Kotani, K.O.Kvashnina, S.M.Butorin and P.Glatzel
Spectator and Participator Processes in the Resonant Photon-In and Photon-Out Spectra at the Ce L_3 Edge of CeO₂

Eur. Phys. J. B, **85** (2012) 257.

T.Nakamura, Y.H.Matsuda, J.-L.Her, K.Kindo, S.Michimura, T.Inami, M.Mizumaki, N.Kawamura, M.Suzuki, B.Chen, H.Ohta, K.Yoshimura and A.Kotani
High-Magnetic-Field X-Ray Absorption and Magnetic Circular Dichroism Spectroscopy in the Mixed-Valent Compound YbAgCu₄

J. Phys. Soc. Jpn., **81** (2012) 114702.

T.Nakamura, T.Hirono, T.Kinoshita, Y.Narumi, M.Hayashi, H.Nojiri, A.Mitsuda, H.Wada, K.Kodama, K.Kindo and A.Kotani

Soft-X-Ray Magnetic Circular Dichroism under Pulsed High Magnetic Fields at Eu $M_{4,5}$ Edges of Mixed Valence Compound EuNi₂(Si_{0.18}Ge_{0.82})₂

J. Phys. Soc. Jpn., **81** (2012) 103705.

H.Yamaoka, Y.Zekko, A.Kotani, I.Jarrige, N.Tsujii, J.-F.Lin, J.Mizuki, H.Abe, H.Kitazawa, N.Hiraoka, H.Ishii and K.-D.Tsuei

Electronic Transitions in CePd₂Si₂ Studied by Resonant X-Ray Emission Spectroscopy at High Pressures and Low Temperatures

Phys. Rev. B, **86** (2012) 235131.

T.Kawauchi, H.Yonemura, S.Kishimoto and K.Fukutani
Hydrogen Redistribution and Performance Improvement of Silicon Avalanche Photodiode by Low-Temperature Annealing

IEEE Electron Device Letters, **33** (2012) 1162.

I.Ascione, K.Asakura, G.N.George and S.Wakatsuki
International Workshop on Improving Data Quality and Quantity for XAFS Experiments (Q2XAFS 2011)

J. Synchrotron Rad., **19** (2012) 849.

Light Source Division

T.Honda and T.Obina

Top-Up Operation of Photon Factory Storage Ring

J. Jpn. Soc. Synchrotron Rad. Res., **25** (2012) 12. (*in Japanese*).

T.Honda, Y.Suetsugu and K.Mase

Damage at KEK B Factory and Photon Factory due to the Great East Japan Earthquake

J. Vacuum Society of Japan, **55** (2012) 7. (*in Japanese*).

The articles of the experiments utilizing multiple beamlines are simultaneously printed here in each section.