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## List of Publications 2007

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T. Awano

**Far-Infrared and Millimeter of Wave Spectroscopy of Superionic Copper Conductors**

Infrared Phys.Tech. **51** (2008) 458.

S. Bielawski, C. Evain, T. Hara, M. Hosaka, M. Katoh, S. Kimura, A. Mochihashi, M. Shimada, C. Szwaj, T. Takahashi, Y. Takashima

**Tunable Narrowband Terahertz Emission from Mastered Laser-Electron Beam Interaction**

Nat. Phys. **4** (2008) 390.

K. Chong, T. Hirai, T. Kawai, S. Hashimoto, N. Ohno

**Optical Properties of Bi<sup>3+</sup> Ions Doped in NaYF<sub>4</sub>**

J. Lumin. **122-123** (2007) 149.

M. Fujita, M. Itoh, S. Takagi, T. Shimizu, N. Fujita

**Comparative Study of Optical Spectra and Electronic Structures of Ca MoO<sub>4</sub> and CaWO<sub>4</sub> Crystals**

Phys. Stat. Sol. (b) **243** (2006) 1898.

G. Funabashi, H. Fujiwara, A. Sekiyama, M. Hasumoto, T. Ito, S. Kimura, P. Baltzer, S. Suga  
**Ultrahigh-Resolution Vacuum Ultraviolet Light Source System for Extremely Low Energy Photoelectron Spectroscopy**

Jpn. J. Appl. Phys. **47** (2008) 2265.

D. Fukamaki, T. Takeuchi, K. Soda, M. Hasegawa, U. Mizutani, H. Sato

**Electronic Structure and Phase Stability of the Pd-Based Metallic Glass**

J. Jpn. Soc. Powder Powder Metallurgy **54** (2007) 754.

M. Hasegawa, T. Takeuchi, K. Soda, H. Sato, U. Mizutani

**Electronic Structure and Phase Stability of Glassy Alloys**

Mater. Sci. Forum **539-543** (2007) 2048.

M. Hasegawa, K. Soda, H. Sato, T. Suzuki, T. Taketomi, T. Takeuchi, H. Kato, U. Mizutani

**Stability and Electronic Structure of Zr-Based Ternary Metallic Glasses and Relevant Compounds**

J. Alloys and Compd. **434-435** (2007) 149.

S. Hino, M. Kato, D. Yoshimura, H. Moribe, H. Umemoto, Y. Ito, T. Sugai, H. Shinohara, M. Otani, Y. Yoshimoto, S. Okada

**Effect of Encapsulated Atoms on the Electronic Structure of the Fullerene Cage: A Case Study on La<sub>2</sub>@C<sub>78</sub> and Ti<sub>2</sub>C<sub>2</sub>@C<sub>78</sub> Via Ultraviolet Photoelectron Spectroscopy**  
Phys. Rev. B **75** (2007) 125418.

T. Hirai, K. Maeda, M. Yoshida, J. Kubota, S. Ikeda, M. Matsumura, K. Domen  
**Origin of Visible Light Absorption on GaN-Rich (Ga<sub>1-x</sub>Zn<sub>x</sub>)(N<sub>1-x</sub>O<sub>x</sub>) Photocatalysts**  
J. Phys. Chem. C **111**(2007) 18853.

T. Hirai, S. Hashimoto, S. Sakuragi, N. Ohno  
**4f-5d Absorption of Gadolinium Ions on Sodium Gadolinium Tetrafluorides**  
Chem. Phys. Lett. **446** (2007) 138.

T. Hirai, H. Yoshida, S. Sakuragi, S. Hashimoto, N. Ohno  
**Transfer of Excitation Energy from Pr<sup>3+</sup> to Gd<sup>3+</sup> in YF<sub>3</sub>:Pr<sup>3+</sup>, Gd<sup>3+</sup>**  
Jpn. J. Appl. Phys. **46** (2007) 660.

T. Ito, H. Kato, Y. Ohki  
**Mechanisms of Several Photoluminescence Bands in Hafnium and Zirconium Silicates Induces by Ultraviolet Photons**  
J. Appl. Phys. **99** (2006) 094106.

M. Itoh, S. Takagi, M. Kitaura, M. Fujita, N. Endo  
**Luminescence Properties of Piezoelectric Single Crystals with Langasite Structure**  
J. Lumin. **122-123** (2007) 205.

B. P. Kafle, H. Katayanagi, M. S. I. Prodhan, H. Yagi, C. Huang, K. Mitsuke  
**Absolute Total Photoionization Cross Section of C<sub>60</sub> in the Range of 25-120eV: Revisited**  
J. Phys. Soc. Jpn. **77** (2008) 014302.

T. Kamikake, M. Imamura, Y. Murase, A. Tanaka, H. Yasuda  
**Electronic Structures of Alkyl-Passivated Si Nanoparticles: Synchrotron-Radiation Photoemission Study**  
Trans. Mat. Res. Soc. Jpn. **32** (2007) 433.

M. Kamohara, Y. Izumi, M. Tanaka, K. Okamoto, K. Nakagawa  
**The Optical Oscillator Strength Distribution of Amino Acids from 3 to 250 eV and Examination of the Thomas-Reiche-Kuhn Sum Rule**  
Rad. Phys. Chem. (2008) (*in press*).

K. Kanda, J. Igaki, Y. Kato, R. Kometani, A. Saikubo, S. Matsui

**NEXAFS Study on Carbon-Based Material Formed by Focused-Ion-Beam  
Chemical-Vapor-Deposition**

Rad. Phys. Chem. **75** (2006) 1850.

S. Kera, H. Yamane, H. Fukagawa, T. Hanatani, K. K. Okudaira, K. Seki, N. Ueno

**Angle-Resolved UV Photoelectron Spectroscopy of Titanyl Phthalocyanine Monolayer Film  
on Graphite**

J. Electron Spectrosc. Relat. Phenom. **156-158** (2007) 135.

S. Kimura, H. Im, T. Mizuno, S. Narazu, E. Matsuoka, T. Takabatake

**Infrared Study on the Electronic Structure of the Alkaline-Earth-Filled Skutterudites  
 $AM_4Sb_{12}$  ( $A$ =Sr, Ba;  $M$ =Fe, Ru, Os)**

Phys. Rev. B **75** (2007) 245106.

S. Kimura, N. Kimura, H. Aoki

**Low-Energy Electrodynamics of Heavy Quasiparticles in  $ZrZn_2$**

J. Phys. Soc. Jpn. **76** (2007) 084710.

S. Kimura, T. Mizuno, K. Matsabayashi, K. Imura, H. S. Suzuki, N. K. Sato

**Infrared Study on the Electronic Structure of SmS in the Black Phase**

Physica B **403** (2008) 805.

M. Kitaura, Y. Nakajima, M. Kaneyoshi, H. Nakagawa

**Effect of  $Zr^{4+}$  Addition on Photoluminescence Properties of  $YPO_4:\text{Mn}^{2+}$**

Jpn. J. Appl. Phys. **46** (2007) 6691.

E. Kobayashi, K. Mase, A. Nambu, J. Seo, S. Tanaka, T. Kakiuchi, K. Okudaira, S. Nagaoka,  
M. Tanaka

**Recent Progress in Coincidence Studies on Ion Desorption Induced by Core Excitation**

J. Phys.: Condens. Matter **18** (2006) S1389.

H. Kobayashi, S. Emura, Y. Arachi, K. Tatsumi

**Investigation of Inorganic Compounds on the Surface of Cathode Materials Using Li and O  
K-edge XANES**

J. Power Sources **174** (2007) 774.

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**Investigation on Lithium De-Intercalation Mechanism for  $\text{LiNi}_{0.45}\text{Mn}_{0.45}\text{Al}_{0.1}\text{O}_2$**

Solid State Ionics **178** (2007) 1101.

H. Kobayashi, M. Shikano, S. Koike, H. Sakaeb, K. Tatsumi  
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**Local Heating Induced by Coherent Harmonic Generation on Electron Beam Dynamics in Storage Ring**  
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**Change in Optical Anisotropy with Rotation of Orbital Stripe in a Half-Doped Bilayer Manganite**  
Phys. Rev. B **75** (2007) 174406.

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**Correlation of Electronic Structure and Ordered Charge and Orbital Patterns for Single-Layered Manganites in a Wide Hole-Doping Range ( $0 < x < 1$ )**  
Phys. Rev. B **75** (2007) 144407.

K. Matsubayashi, K. Imura, H.S. Suzuki, T. Mizuno, S. Kimura, T. Nishioka, K. Kodama, N. K. Sato  
**Effect of Single Crystal Composition on Electrical, Optical, Magnetic and Thermodynamic Properties of SmS**  
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**Relative Partial Cross Sections for Single, Double, and Triple Photoionization of C<sub>60</sub> and C<sub>70</sub>**  
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**Angle-Resolved Photoemission Study on the Ferromagnetic Ordering of EuO Thin Films**  
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**Ultraviolet Photoemission Study of Lithium Nickel Oxide: A Contact of Valence Band Structure and Selective Oxidation**  
Appl. Catalysis A: General **338** (2008) 79.

H. Oakamura, T. Watanabe, N. Tsujii, T. Ebihara, T. Nanba  
**Mid-Infrared Absorption in Strongly Correlated Yb Compounds**  
Physica B **378-380** (2006) 756.

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**The Valence Electronic Structure of a Peanut-Shaped C<sub>60</sub> Polymer: In Situ High-Resolution Photoelectron Spectroscopic and Density-Functional Studies**  
Phys. Rev. B **75** (2007) 233410.

J. Onoe, Y. Ochiai, T. Ito, S. Kimura, S. Ueda, Y. Noguchi, K. Ohno  
**Electronic and Electron-Transport Properties of Peanut-Shaped C<sub>60</sub> Polymers**  
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J. Onoe, T. Ito, S. Kimura, K. Ohno  
**In Situ High-Resolution Valence Photoelectron Spectra of a Peanut-Shaped C<sub>60</sub> Polymer**  
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**Features of Fluorescence Spectra of Polyethylene 2,6-Naphthalate Films**  
J. Appl. Polym. Sci. **105** (2007) 114.

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**Angle-Dependent Measurement of Near Edge X-ray Absorption Fine Structure of Annealing Effect on Local Structure of Focused-Ion-Beam Chemical Vapor Deposition Diamond-Like Carbon**  
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Y. Sakurai, S. Kimura, K. Seki  
**Infrared Reflection-Absorption Spectroscopy of Alq<sub>3</sub> Thin Film on Silver Surface Using Synchrotron Radiation**  
Appl. Phys. Lett. **91** (2007) 061922.

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T. Takahashi  
**Intense Terahertz Synchrotron Radiation by Laser Bunch Slicing at UVSOR-II Electron Storage Ring**  
Jpn. J. Appl. Phys. **46** (2007) 7939.

J. Sichelschmidt, S. Kimura, C. Krellner, C. Geibel, F. Steglich  
**Optical Properties of YbRh<sub>2</sub>Si<sub>2</sub> and YbIr<sub>2</sub>Si<sub>2</sub>: a Comparison**  
Physica B **403** (2008) 775.

K. Soda, S. Ota, T. Suzuki, H. Miyazaki, M. Inukai, M. Kato, S. Yagi, T. Takeuchi, M. Hasegawa, H. Sato, U. Mizutani

**Electronic Structure of Pd- and Zr-Based Bulk Metallic Glasses Studied by Use of Hard X-Ray Photoelectron Spectroscopy**

AIP Conf. Proc. **879** (2007) 1821.

N. Tagami, M. Okada, N. Hirai, Y. Ohki, T. Tanaka, T. Imai, M. Harada, M. Ochi

**Dielectric Properties of Epoxy/Clay Nanocomposites -Effects of Curing Agent and Clay Dispersion Method-**

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A. Tanaka, R. Saito, T. Kamikake, M. Imamura, H. Yasuda

**Optical and Photoelectron Spectroscopic Studies of Alkyl-Passivated Silicon Nanoparticles**

Euro. Phys. J. D **43** (2007) 229.

A. Tanaka, T. Kamikake, M. Imamura, Y. Murase, H. Yasuda

**Spectroscopic Characterization of Alkyl-Passivated Si Nanoparticles Synthesized by a Solution Route**

Mater. Res. Soc. Symp. Proc. **958** (2007) 0958-L10-29.

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**Electronic Structure and Stability of the Pd-Ni-P Bulk Metallic Glass**

Mater. Trans. **48** (2007) 1292.

S. Tanaka, Y. Yoshida, M. Nonomura, K. Yoshino, I. Hiromitsu

**Effect of Insertion of a Thin Bathocuproine Layer at Au/Zn-Phthalocyanine Interface on Energy Level Alignment and Morphology**

Thin Solid Films **516** (2008) 1006.

S. Tanaka, M. Toba, T. Nakashima, T. Kawai, K. Yoshino

**Photoelectron Spectroscopy Study of Photoresponsive Change in Electronic Structure of Amorphous Photochromic Diarylethene Film**

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M. Yamaga, Y. Ohsumi, T. Nakayama, N. Kashiwagura, T. P. J. Han

**Long-Lasting Phosphorescence in Ce-Doped Oxides**

J. Mater. Sci. : Materials in Electronics (2008) (*in press*).

H. Yamane, D. Yoshimura, E. Kawabe, R. Sumii, K. Kanai, Y. Ouchi, N. Ueno, K. Seki

**Electronic Structure at Highly Ordered Organic/Metal Interfaces: Pentacene on Cu(110)**

Phys. Rev. B **76** (2007) 165436.

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**Experimental and Theoretical Investigations for Excitation Properties of  $\text{Ba}_{1-x}\text{Eu}_x\text{MgAl}_{10}\text{O}_{17}$**   
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**Measurement of Soft X-Ray Excited Optical Luminescence of a Silica Glass**  
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**Depth Selective Electronic State Analysis of Implanted Nitrogen in Visible-Light Response  $\text{TiO}_2$  Photocatalyst**  
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**Elucidation and Control of Energy Level Alignment at Organic/Metal Interfaces**  
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