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1. Original Papers

- 1) N.Fujiwara,K.tatsumi,T.Nakano,H.Okada,H.Tkhashi,Y.Kamihara,M.Hirano,and H.Hosono: ^{75}As -nuclear magnetic relaxation on $\text{LaFeAsO}_{1-x}\text{F}_x$ under pressure; *Physica C*, **207**,S347-S348(2010)
- 2) H.Oyamagi,C.J.Zhamg,Z.H.Sun,Y.Kamihara,and H.Hosono: Low-temperature lattice anomaly in $\text{LaFeAsO}_{0.93}\text{F}_{0.07}$ probed by X-ray absorption spectroscopy:Evidence for strong electron-lattice interaction; *Physica C*, **207**, S311-S312(2010)
- 3) Y.Tsuchiya,Y.Nakajima,T.Tamegai,Y.Kamihara,M.Hirano,and H.Hosono; Magneto-optical imaging of polycrystalline $\text{LaFePO}_{1-x}\text{F}_x$; *Physica C*, **207**,S300-S301(2010)
- 4) Yuuki Kawashima,Koichi Ichimura,Toru Kurosawa,Migaku Oda,Satoshi Tanda,Hiroki Tkahashi,Hironari Okada,Yoichi Kamihara, and Hideo Hosono: Electron tunneling using STM/STS on iron-based oxypnictides ; *Physica C*, **207**,S315-S316 (2010)
- 5) Yasuyuki Nakajima,Toshihide Maruoka,Tsuyoshi Tamegai,Yoichi Kamihara,Masahiro Hirano,and Hideo Hosono: Magneto-optical imaging of iron-oxypnictide superconductor $\text{LaFeAs}(\text{O},\text{F})$; *Physica C*, **207**,S406-S407(2010)
- 6) S.Kitagawa,Y.Nakai,T.Iye,K.Ishida,Y.Kamihara,M.hirano,and H.Hosono: F-doping dependence of ^{75}As nuclear quadrupole resonance frequency in $\text{LaFeAs}(\text{O}_{1-x}\text{F}_x)$; *Physica C*, **207**,S282-S283(2010)
- 7) N. Fujiwara, K. Tatsumi, T. Nakano, H. Okada, H. Takahashi, Y. Kamihara, M. Hirano, H. Hosono: ^{75}As -nuclear magnetic relaxation on $\text{LaFeAsO}_{1-x}\text{F}_x$ under pressure; *Physica C*, **470**, S347-348(2010).
- 8) Yoshinori Muraba, Satoru Matsuishi, Sung-Wng Kim, Toshiyuki Atou, Osamu Fukunaga, and Hideo Hosono: High-pressure synthesis of the indirectly electron-doped iron pnictide superconductor $\text{Sr}_{1-x}\text{La}_x\text{Fe}_2\text{As}_2$ with maximum $T_c = 22$ K; *PHYSICAL REVIEW B (RAPID COMMUNICATION)*, **82**, 180512(R), (2010).
- 9) Hiromichi Ohta, Yukio Sato, Takeharu Kato, SungWng Kim, Kenji Nomura, Yuichi Ikuhara & Hideo Hosono: Field-induced water electrolysis switches an oxide semiconductor from an insulator to a metal; *Nature Comm.*, **1**, 118, (2010).
- 10) T. Nakano, N. Fujiwara, M. Hirano, H. Hosono, H. Okada and T. Takahashi: Magnetic Fluctuation and Superconductivity in $\text{LaFeAsO}_{1-x}\text{F}_x$ under Pressure as

seen via ^{75}As NMR, ; *Physical Review B*, **82**, 172502, (2010).

- 11) Kenji Nomura, Toshio Kamiya, and Hideo Hosono: Interface and bulk effects for bias-light-illumination instability in amorphous-In-Ga-Zn-O thin-film transistors; *J. Soc. Inf. Display*, **18**, 789, (2010)
- 12) Hidenori Hiramatsu, Toshio Kamiya, Tetsuya Tohei, Eiji Ikenaga, Teruyasu Mizoguchi, Yuichi Ikuhara, Keisuke Kobayashi, and Hideo Hosono: Origins of Hole Doping and Relevant Optoelectronic Properties of Wide Gap p-Type Semiconductor, LaCuOSe; *J. Am. Chem. Soc.*, **132**, 15060-15067, (2010).
- 13) T. Tamegai, Y. Tsuchiya, Y. Nakajima, Y. Kamihara, H. Hosono: Inter-granular current in iron-oxypnictide superconductors; *Physica C*, **470**, 993-995, (2010).
- 14) Seigo SOUMA, Toshiyuki ARAKANE, Takafumi SATO, Takashi TAKAHASHI, Sung Wng KIM, Satoru MATSUIISHI, and Hideo HOSONO: Direct Evidence for Cage Conduction Band in Superconducting Cement $12\text{CaO} \cdot 7\text{Al}_2\text{O}_3$ by Low-Energy High-Resolution Photoemission Spectroscopy; *Journal of the Physical Society of Japan*, **79**, 103704-1 - 7, (2010).
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- 16) Hisato Yabuta, Nobuyuki Kaji, Ryo Hayashi, Hideya Kumomi, Kenji Nomura, Toshio Kamiya, Masahiro Hirano, and Hideo Hosono: Sputtering formation of p-type SnO thin-film transistors on glass toward oxide complimentary circuits; *APPLIED PHYSICS LETTERS*, **97**, 072111, (2010).
- 17) Shyam Mohan, Toshihiro Taen, Hidenori Yagyuda, Yasuyuki Nakajima, Tsuyoshi Tamegai, Takayoshi Katase, Hidenori Hiramatsu, and Hideo Hosono: Transport and magnetic properties of Co-doped BaFe_2As_2 epitaxial thin films grown on MgO substrate; *Supercond. Sci. Technol.*, **23**, 105016-1 - 5, (2010)
- 18) K.Matsuzaki, H.Hosono , T.Susaki, Layer-by-layer epitaxial growth of polar MgO(111) thin films;*PHYSICAL REVIEW B*,**82**,033408 (2010)
- 19) M.Zbiri, R.Mittal,S.Rols , YX Su, YG Xiao, H.Schober, SL.Chaplot, MR. Johnson, T. Chatterji, Y.Inoue,S Matsuishi,H. Hosono, T.Brueckel, Magnetic lattice dynamics of the oxygen-free FeAs pnictides: how sensitive are phonons to magnetic ordering?;*JOURNAL OF PHYSICS-CONDENSED MATTER*, **22**,315701 (1-8) (2010)
- 20) Masahiro Yasukawa, Toshio Kono, Kazushige Ueda, Hiroshi Yanagi, Hideo Hosono: High-temperature thermoelectric properties of La-doped BaSnO_3 ceramics; *Materials Science and Engineering B*, **173**, 29-32, (2010).

- 21) Tetsuya Tohei, Teruyasu Mizoguchi, Hidenori Hiramatsu, Hideo Hosono, and Yuichi Ikuhara: Interface atomic structure of LaCuOSe:Mg epitaxial thin film and MgO substrate; *Materials Science and Engineering B*, **173**, 229–233, (2010).
- 22) Y. Nishio, K. Nomura, H. Yanagi, T. Kamiya, M. Hirano, H. Hosono: Short-channel nanowire transistor using a nanoporous crystal semiconductor $12\text{CaO}\cdot 7\text{Al}_2\text{O}_3$; *Materials Science and Engineering B*, **173**, 37-40, (2010).
- 23) Hiroshi Yanagi, Katsutoshi Fukuma, Toshio Kamiya, Masahiro Hirano, Hideo Hosono: Electrical and magnetic properties of quaternary compounds LnMnPO ($\text{Ln} = \text{Nd}, \text{Sm}, \text{Gd}$) with ZrCuSiAs -type structure; *Materials Science and Engineering B*, **173**, 47-50, (2010).
- 24) Koichi Kajihara, Taisuke Miura, Hayato Kamioka, Masahiro Hirano, Linards Skuja, and Hideo Hosono: Diffusion of oxygen molecules in fluorine-doped amorphous SiO_2 ; *Materials Science and Engineering B*, **173**, 158-161, (2010).
- 25) Toshio Kamiya, Hidenori Hiramatsu, Takayoshi Katase, Masahiro Hirano, Hideo Hosono: Impurities in FeAs-based superconductor, SrFe_2As_2 , studied by first-principles calculations; *Materials Science and Engineering B*, **173**, 244-247, (2010).
- 26) Toshio Kamiya, Hiroshi Yanagi, Takumi Watanabe, Masahiro Hirano, Hideo Hosono: Electronic structures of MnP-based crystals: LaMnOP , BaMn_2P_2 , and KMnP ; *Materials Science and Engineering B*, **173**, 239-243, (2010).
- 27) Takayoshi Katase, Yoshihiro Ishimaru, Akira Tsukamoto, Hidenori Hiramatsu, Toshio Kamiya, Keiichi Tanabe and Hideo Hosono: DC superconducting quantum interference devices fabricated using bicrystal grain boundary junctions in Co-doped BaFe_2As_2 epitaxial films; *Supercond. Sci. Technol.*, **23**, 082001-1 - 4, (2010).
- 28) Dong Hee Lee, Ken-ichi Kawamura, Kenji Nomura, Toshio Kamiya, and Hideo Hosono: Large Photoresponse in Amorphous InGaZnO and Origin of Reversible and Slow Decay; *Electrochemical and Solid-State Letters*, **13**, H324-H327, (2010).
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- 34) Takayoshi Katase, Hidenori Hiramatsu, Toshio Kamiya, and Hideo Hosono: High Critical Current Density 4 MA/cm² in Co-doped BaFe₂As₂ Epitaxial Films Grown on (La,Sr)(Al,Ta)O₃ Substrates without Buffer Layers; *Applied Physics Express*, **3**, 063101, (2010).
- 35) Y. Xiao, Y. Su, R. Mittal, T. Chatterji, T. Hansen, S. Price, C. M. N. Kumar, J. Persson, S. Matsuishi, Y. Inoue, H. Hosono, and Th. Brueckel: Neutron diffraction study of phase transitions and thermal expansion of SrFeAsF; *Physical Review B*, **81**, 094523, (2010).
- 36) Tatsuya Nakano, Naoki Fujiwara, Kenichiro Tatsumi, Hironari Okada, Hiroki Takahashi, Yoichi Kamihara, Masahiro Hirano, and Hideo Hosono: Enhancement of the critical temperature of the pnictide superconductor LaFeAsO_{1-x}F_x studied via ⁷⁵As NMR under pressure; *PHYSICAL REVIEW B* **81**, 100510R (2010).
- 37) Tomomasa Shinozaki, Kenji Nomura, Takayoshi Katase, Toshio Kamiya, Masahiro Hirano, Hideo Hosono: Fabrication of GaN epitaxial thin film on InGaZnO₄ single-crystalline buffer layer; *Thin Solid Films*, **518**, 2996-2999, (2010).
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- 42) Toshio Kamiya, Kenji Nomura, and Hideo Hosono: Origin of definite Hall voltage and positive slope in mobility-donor density relation in disordered oxide semiconductors; *Appl. Phys. Lett.*, **96**, 122103-1 - 3, (2010).
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- 46) Hironari Okada, Hiroyuki Takahashi, Satoru Matsuishi, Masahiro Hirano, Hideo Hosono, Kazuyuki Matsubayashi, Yoshiya Uwatoko, and Hiroki Takahashi: Pressure dependence of the superconductor transition temperature of Ca(Fe_{1-x}Co_x)AsF compounds: A comparison with the effect of pressure on LaFeAsO_{1-x}F_x; *Phys. Rev. B*, **81**, 054507, (2010).
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- 48) Masashi Miyakawa, Hidenori Hiramatsu, Toshio Kamiya, Masahiro Hirano, Hideo Hosono: Fabrication and electron transport properties of epitaxial films of electron-doped 12CaO·7Al₂O₃ and 12SrO·7Al₂O₃; *Journal of Solid State Chemistry*, **183**, 385-391, (2010).

2. Books

- 1) Hideo Hosono: Chap.13. Transparent Amorphous Oxide Semiconductors for Flexible Electronics; *Handbook of Transparent Conductors*, ed. by Ginley, Hosono and Paine (Springer), 459-489, (2010).
- 2) Hideo Hosono: Chap.10 Non-conventional Materials; *Handbook of Transparent Conductors*, ed. by Ginley, Hosono and Paine (Springer), 313-351, (2010).
- 3) David Ginley, Hideo Hosono (editors), David Paine: Handbook of Transparent Conductors; Springer (534p), (2010).
- 4) ed. by H. Hosono, T. Atou, T. Kamiya, Y. Matsumoto: *Special Issue of STAC-3, Materials Science and Engineering B*, **173**, (2010).
- 5) Hideo Hosono: Chap 2 . Transparent Oxide Semiconductors:Fundamentals and Recent Progress, in Transparent Electronics; *edited by Facchetti and Marks (Wiley)*, (2010).
- 6) Edited by Hosono, Shigesato, Ginley: Transparent Conductive Oxide Thin Films 2009; Elsevier, (2010).

3. International/Domestic Conferences

- 1) Toshio Kamiya, Kenji Nomura, and Hideo Hosono : Why is amorphous oxide semiconductor expected for next-generation displays? ; *International Conference on Electronic Materials and Nanotechnology for Green Environment (ENGE2010) (2010/11/21-24, Jeju island, Korea)*, BA02, (2010).
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- 3) T. Katase, Y. Ishimaru, A. Tsukamoto, H. Hiramatsu, T. Kamiya, K. Tanabe, H. Hosono: GRAIN BOUNDARY PROPERTIES OF IRON-PNICTIDE SUPERCONDUCTOR, COBALT-DOPED BaFe₂As₂; *23rd International Symposium on Superconductivity 2010 (ISS 2010), Epochal Tsukuba , Tsukuba, Japan, 1st-3rd Nov.*, FD-5-INV, (2010).
- 4) Hideo HOSONO: Element Strategy for Sustainable Society:innovative materials science; *13th Millenium Forum (UK Embassy, Nov.10)*, (2010).
- 5) Hideo HOSONO: Recent Advance in New Superconductors; (*President designated invited lecture*) *3rd International Congress of Ceramics (ICC3) (Osaka, Nov.15)*, (2010).

- 6) Hideo HOSONO: Surface Properties of C12A7 Electride; *17th International Workshop on Oxide Electronics (Awaji Yumebutai, Sep. 20)*, (2010).
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- 8) Hideo Hosono: Ubiquitous Element Strategy in Materials Science; *Key Note Talk, CS3 symposium (London, Sep 7-10, 2010)*, (2010).
- 9) Toshio Kamiya: Present Status and Fundamental Requirements of Oxide-Channel Thin-Film Transistors ; *2010 Taiwan-Japan Bilateral Technology Interchange Project Workshop on Transparent Conductive Oxide Thin Films for Electronics and Optics in Green Energy (August 17-18, 2010, Industrial Technology Research Institute, Taiwan)*, (2010).
- 10) Hideo Hosono: Cultivation of electro-active function in C12A7: from insulator to superconductor ; *(Opening Talk) Gordon Research Conference on Solid State Chemistry, Colby-Sawyer College (Aug. 1-16, 2010)*, (2010).
- 11) Hiromichi Ohta, Kenji Sugiura, Kunihito Koumoto, Kenji Nomura, Hidenori Hiramatsu, Masahiro Hirano and Hideo Hosono: Heteroepitaxy of Complex Oxides With Natural Superlattice Structure; *Mater. Res. Soc. Spring Meeting (April 6, San Francisco)*, (2010).
- 12) Toshio Kamiya and Hideo Hosono: Material Frontier Opened from Function Cultivation in Transparent Oxide Utilizing Built-in Nanostructure; *The 3rd International Symposium on Organic and Inorganic Electronic Materials and Related Nanotechnologies (EM-NANO) (2010/6/23-25, Toyama)*, A7-1, (2010).
- 13) H. YANAGI, Univ. of Yamanashi, Kofu, Japan; K. NOMURA, H. HIRAMATSU, Y. TODA, T. KAMIYA, H. HOSONO: Electronic Structures and Energy Band Lineup of Transparent Conducting Materials Studied by Photoelectron Spectroscopy; *12th International Ceramics Congress and the 5th Forum on New Materials (CIMTEC) (Montecatini Terme, Italy, 2010/6/13-18)*, FI-2:IL26, (2010).
- 14) Hideo Hosono: Iron-based Superconductors: recent advances; *12th International Ceramics Congress and the 5th Forum on New Materials (CIMTEC) (Montecatini Terme, Italy, 2010/6/13-18)*, FK-2:IL01, (2010).
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- 17) Hideo Hosono: Cage Network Structure and Superconductivity in Electron-doped $12\text{CaO}\cdot 7\text{Al}_2\text{O}_3$ and High-Pressure Phase of Alkali/Alkaline Earth Metals; *2nd International Symposium on Advanced Microscopy and Theoretical Calculations (June 24-26, 2010, Nagoya)*, (2010).
- 18) Hideo Hosono: New Frontiers Opened through Research on Transparent Oxides (Plenary Talk); *International Conference on Core Research and Engineering Science of Advanced Materials (Global COE Program) & Third International Conference on Nanospintronics Design and Realization, 3rd-ICNDR (May 30 - June 4, 2010, Osaka University Convention Center)*, (2010).
- 19) Hideo Hosono: High Pressure Synthesis of Directly e-doped $\text{Sr}_{1-x}\text{La}_x\text{FeAs}_2$ and Fabrication of Josephson Junction in Co-doped BaFe_2As_2 epitaxial Thin Films; *9th International Conference on Spectroscopies of Novel Superconductors (Shanghai, May 23-28, 2010)*, (2010).
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- 21) K. Nomura, T. Kamiya, M. Hirano, and H. Hosono: Improvement of Device Characteristic and Stability of a-In-Ga-Zn-O Based TFTs; *International symposium on Transparent Amorphous Oxide Semiconductors (TAOS2010) (Suzukake-dai Campus, Tokyo Institute of Technology, 2010/1/25-26)*, (2010).
- 22) Toshio Kamiya: Closing Remarks; *International symposium on Transparent Amorphous Oxide Semiconductors (TAOS2010) (Suzukake-dai Campus, Tokyo Institute of Technology, 2010/1/25-26)*, (2010).
- 23) Hideo Hosono: Opening Remarks; *International symposium on Transparent Amorphous Oxide Semiconductors (TAOS2010) (Suzukake-dai Campus, Tokyo Institute of Technology, 2010/1/25-26)*, (2010).
- 24) Hideo Hosono: Unique Electro-active Properties of Electron-doped $12\text{CaO}\cdot 7\text{Al}_2\text{O}_3$; *Mater. Res. Soc. Spring Meeting (April 9, San Francisco)*, (2010).
- 25) Hideo Hosono: Doping issues in crystalline and amorphous transparent oxide; *Plenary Talk, Fourth International Conference on Optical, Optoelectronic and Photonic Materials and Applications (ICOOPMA2010) (Butapest, August*

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- 27) Toshio Kamiya, Nobuto Kobayashi, Kenji Nomura and Hideo Hosono: Fabrication and characteristics of short-channel a-IGZO TFTs; *Visual-JW2011 (Hotel Hankyu Expo Park, Osaka, 2011/11/12-12)*, (2010).
- 28) D. Nakamura, T. Akiike, H. Takahashi, F. Nabeshima, Y. Imai, A. Maeda, T. Katase, H. Hiramatsu, H. Hosono, S. Komiyama, I. Tsukada: TERAHERTZ CONDUCTIVITY MEASUREMENT OF THIN FILMS OF Co-DOPED BaFe₂As₂ AND FeSe_{1-x}Te_x; *23rd International Symposium on Superconductivity 2010 (ISS 2010), Epochal Tsukuba, Tsukuba, Japan, 1st-3rd Nov.*, PC-13, (2010).
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- 30) Hideo Hosono: Transparent Amorphous Oxide Semiconductor-TFTs: Features and Current status; *Flat Panel Display International in China (Beijing, 2010/12/10)*, (2010).
- 31) Hideo Hosono: TAOS-TFTs: history and perspective (Plenary Talk); *The 17th Int. Display Workshop (IDW2010) (2010/1-3, Fukuoka)*, (2010).
- 32) H. Hosono, K. Lee, Y. Ogo, H. Yanagi and T. Kamiya: Wide gap oxide semiconductors, SnO and a-IGZO, for solar cell; *3rd International Symposium on Innovative Solar Cells (October 7-8, 2010, Tokyo)*, (2010).
- 33) B. Maiorov, T. Katase, H. Hiramatsu, L. Civale, S. A. Baily, T. G. Holesinger, H. Hosono: High critical currents and strong pinning in low anisotropy BaCo_xFe_{2-x}As₂ thin films due to naturally grown correlated defects; *Applied Superconductivity Conference (ASC2010), August 1 - 6, Washington, D.C.*, 3MY-07, (2010).
- 34) T. Katase, Y. Ishimaru, A. Tsukamoto, H. Hiramatsu, T. Kamiya, K. Tanabe, and H. Hosono: Josephson junction with Fe-based superconductor Co doped Ba₂As₂ epitaxial film; *Applied Superconductivity Conference (ASC2010), August 1 - 6, Washington, D.C.*, 3MB-05, (2010).
- 35) Toshio Kamiya, Kenji Nomura, and Hideo Hosono: Defect states in amorphous oxide semiconductor, a-InGaZnO₄: Formation energies, cation deficiencies, and anion/cation anti-site linkages; *The 37th International Symposium on Compound Semiconductors (ISCS2010) (2010/5/31-6/4, Takamatsu Symbol Tower, Kagawa)*,

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- 36) Kenji Nomura, Toshio Kamiyaa, and Hideo Hosono: Influence of metastable chemical bonds on current-bias instability of a-In-Ga-Zn-O TFTs; *The 37th International Symposium on Compound Semiconductors (ISCS2010) (2010/5/31-6/4, Takamatsu Symbol Tower, Kagawa, Japan)*, TuD1-3, (2010).
 - 37) Dong Hee Lee, Kenji Nomura, Toshio Kamiya and Hideo Hosono: Diffusion-limited Schottky contact made of amorphous oxide semiconductor, a-In-Ga-Zn-O, and Pt; *4th International Conference on Science and Technology for Advanced Ceramics (STAC-4) (2010/6/21-23, Mielparque Yokohama, Japan)*, (2010).
 - 38) Toshio Kamiya, Yukimasa Nishio, Yutaka Adachi, Hiroshi Yanagi, and Hideo Hosono: Electronic devices realized by doping free electrons to $12\text{CaO}\cdot 7\text{Al}_2\text{O}_3$; *4th International Conference on Science and Technology for Advanced Ceramics (STAC-4) (2010/6/21-23, Mielparque Yokohama, Japan)*, (2010).
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- 45) A. MAEDA, D. NAKAMURA, T. KATASE, H. HIRAMATSU, H. HOSONO, Y. IMAI, T. AKIIKE, R. TANAKA, AND I. TSUKADA: THz conductivity of BaCo_{0.2}Fe_{1.8}As₂ and Fe(Se,Te) superconductor; *American Physical Society March Meeting 2010 (March 15 - 19, 2010 Portland, Oregon), J41.00011, (2010).*
- 46) Takayoshi Katase, Hidenori Hiramatsu, Toshio Kamiya and Hideo Hosono: Chemical Stability of Co-doped AEF₂As₂ (AE = Ba and Sr) Epitaxial Thin Films and Improvement of Crystalline Qualities and Superconducting Properties; *Mater. Res. Soc. Spring Meeting (April 6, San Francisco), (2010).*

4. Awards

- 1) Takayoshi Katase, Hidenori Hiramatsu, Toshio Kamiya and Hideo Hosono: Chemical Stability of Co-doped AEF₂As₂ (AE = Ba and Sr) Epitaxial Thin Films and Improvement of Crystalline Qualities and Superconducting Properties; *Oral Presentation Award, Symposium L of Mater. Res. Soc. Spring Meeting (April 6, San Francisco), (2010).*
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