CURRICULUM VITAE

Name :
Yuichi Ikuhara

Position :
Professor, Director
Institute of Engineering Innovation
School of Engineering
The University of Tokyo
2-11-16, Yayoi, Bunkyo-ku, Tokyo 113-8656, Japan
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Degree of Information:
1983: Department of Metallurgy, Kyusyu University (BS)
1985: Department of Materials Science, Kyusyu University (MS)
1988: Department of Materials Science, Kyusyu University (Dr. Eng.)

Academic Position:
1988: Researcher, Japan Fine Ceramics Center
1991: Visiting Assistant Professor, Case Western Reserve University.
1993: Managing Researcher, Japan Fine Ceramics Center
1996: Associate Professor, Department of Materials Science, The University of Tokyo
2003: Full Professor, Institute of Engineering Innovation, The University of Tokyo
2005: Director, Institute of Engineering Innovation, The University of Tokyo

Membership of Professional Societies :
American Ceramics Society
Ceramics Society of Japan
Japan Institute of Metals
Japanese Society of Electron Microscopy
Japanese Society of Materials
Materials Research Society

Scientific Journal
Journal of Ceramics Society, Japan: Chief Editor
Materials Transaction JIM: Editorial Board
Denshikenbikyou (Japanese Society of Electron Microscopy): Editorial Board
Seramikkusu, CSJ: Editorial Board

Book(Author, Editor)

"Physics of Ceramics", Y.Ikuhara, Nikkan-Kogyo-Shinbun Pb. Co. (1999)

"Transmission Electron Microscopy", S.Horiuchi, Y.Ikuhara and K.Hojo, Maruzen Pub. Co.(1999)

"Grain Boundary Engineering in Ceramics", Ed. T.Sakuma, L.Shepard and Y.Ikuhara, Ceramic.Transaction Vol.118, Am.Ceram.Soc. (2000)

Awards

1. Ross Coffin Purdy Award, American Ceramics Society (2008)
2. Cosslett Award, Microbeam Analysis Society (2007)
3. The Seto Prize (Academic Prize), Microscopy Society of Japan (2007)
4. The Testimonial Prize, Japan Institute of Metals (2006)
5. Best Paper Award in Materials Transaction, JIM (2006)
6. Best Paper Award in J.Ceram.Soc.Jpn. (2006)
7. Fulrath Award, American Ceramics Society (2002)
8. The Academic Prize, Ceramics Society of Japan (2001)
9. The Exploits Award, Japan Institute of Metals (2001)
10. Best Paper Award in Science and Technology of Advanced Materials for 2001(2001)
11. Best Paper Award in Materials Transaction, JIM (1999)
12. Murakami Promotion Award, Murakami Memorial Foundation (1998)
13. Society promotion award, Japanese Society of Materials (1998)
14. Best researcher award, Japan Fine Ceramics Center (1991)
15. Honda Silver Award, Honda Memorial Foundation (1990)

Research Interests

Mechanical and electronic properties in ceramics are strongly influenced by the atomic structures of the grain boundaries and hetero interfaces. Prof. Ikuhara's main researches are related to the grain boundary and interface characterization and their phenomena. His interest topics are the followings:

1. Transmission electron microscopy for materials science (HRTEM, STEM, EDS, EELS)
2. Grain boundary and interface characterization
3. High temperature deformation behavior in single crystal and polycrystalline ceramics
4. Grain boundary phenomena in electronic ceramics
5. Bicrystal and tricrystal studies(Basic research for grain boundary engineering)
6. Lattice defects (Dislocation behavior)
7. Theoretical calculation for materials science (MO, MD, First-principles)
8. Nano-coating technology
9. Advanced materials (Superconductor ceramics, DLC, TiAlN, c-BN etc)
10. Ionic conductor and ceramic quantum device

Publications

Original papers: 288papers (Attached Sheet)

Science, Nature Materials, PRL, PRB, Adv.Mater., Acta Mater., Phil.Mag., APL, JAP, Ultramicroscopy, etc.

Proceedings: 122 papers (Attached Sheet)

Invited Talk(International only, 1995-Present)

1. Y.Ikuhara, "Interface Atomic Structures and Properties of Ceramics", The sixth International Conference on Materials Engineering for Resources (ICMR 2009), Akita View Hotel (2009.10.21-23)

2. Y.Ikuhara, **"**Atomic Structures, Segregation Site and Properties of Ceramic Interface", The Third International Conference on the Science and Technology for Advanced Ceramics (STAC-3), Mielparque-Yokohama (2009.6.16-18)

3. Y.Ikuhara, "Interface Structures and Properties in Ceramics", Formal Seminar, Pusan National University, Pusan, Korea (2009.4.24)

4. Y.Ikuhara, "Atomic Structures, Segregation Site and Properties of Ceramic Interfaces", KIM (Korea Institute of Metals) Annual Meeting, Changwan, Korea (2009.4.23)

5. Y.Ikuhara, "Towards Innovation in Interface Characterization of Ceramics", 5th Fulrath Memorial International Symposium on Advanced Ceramics, Tokyo Big Sight, Tokyo (2009.4.8)

6. Y.Ikuhara, "Interface Characterization by Cs corrected STEM", WPI Joint Seminar Series, Tohoku University (2008.12.9)

7. Y.Ikuhara, "Towards Innovation in Interface Characterization of Ceramics", Keynote Lecture, 4th International Symposium on Designing, Processing and Properties of Advanced Engineering Materials (ISAEM-2008), Noyori Hall, Nagoya (2008.11.18-21)

8. Y.Ikuhara, "STEM characterization of Grain Boundary Atomic Structures and Segregation Sites", The 9th Asia-Pacific Microscopy Conference (APEC9)APEM, Jeju, Korea (2008.112-7)

9. Y.Ikuhara, "Grain Boundary Atomic Structures, Segregation and Properties in Oxide Ceramics", KAIST seminar, Deajeon, Korea (2008.10.31)

10. Y. Ikuhara, "Dislocation Atomic Structures and Properties in Sapphire" Dislocations 2008, Hongkong (2008.10.13-17)

11. Y. Ikuhara, "Grain Boundary Atomic Structures, Segregation site and Properties in Oxide Ceramics" Materials Science & Technology 2008, Pittsburgh, USA (2008.10.5-9)

12. Y.Ikuhara, "Interfaces and Properties in Oxide Ceramics", CWRU colloquium, Cleveland, USA (2008.10.3)

13. Y. Ikuhara, "Grain Boundary Atomic Structures and Diffusion in Oxide Ceramics", Gordon Research Conference, Andover, New Hampshire, USA (2008.8.10-15)

14. Y. Ikuhara, "STEM characterization of ceramic interfaces" Keynote Lecture, 1st International Conference on Advanced Microscopy and Theoretical Calculation, Nagoya (2008.6.29-30)
15. Y.Ikuhara, "Dislocation Structures and Properties in Oxide Ceramics", Nabarro Legacy Symposium, MRS Spring Meeting, San Francisco (2008.3.24-28)

16. Y.Ikuhara, "Atomic resolution and in-situ characterization of nitride ceramics", 2nd International Symposium on SiAlONs and Non-Oxides, JSPS, Ise, Mie, Japan (2007.12.2-5)

17. Y.Ikuhara, "Nano-Interface Characterization of Ceramics", The Second International Symposium on Smart Processing Technology", Osaka, Japan (2007.11.27-28)

18. Y.Ikuhara, STEM and HVARM Characterization of Ceramic Interfaces", 6th International Symposium on Atomic Level Characterization for New Materials and Devices'07, Kanazawa, Japan (2007.10.28-11.2)

19. Y,Ikuhara, "Atomic Resolution, Z-contrast and In-Situ Characterization of Ceramic Interfaces"11th Conference of Frontiers of Electron Microscopy in Materials Science (FEMMS 2007) , Sonoma Wine Country, CA. USA (2007.9.23-28)

20. Y.Ikuhara, "STEM Characterization of Ceramic Grain Boundaries", Microscopy & Microanalysis 2007, Fort Lauderdale, FL.USA (2007.8.5-9)

21. Y.Ikuhara, "Nano-Interface Characterization by Cs corrected STEM", The 1st NIMS Conference on Recent Breakthroughs in Materials Science and Technology", Tsukuba (2007.7.11-13)

22. Y.Ikuhara, Atomic Resolution and In-Situ Characterization for Advanced Ceramic Interface, 2007 Workshop on NanoInterface Technology (NanoInterface 2007), KAIST, Deajeon, Korea (2007.3.2)

23. Y.Ikuhara and T.Nakagawa, "Atomic Structure-Diffusivity Relationship in Alpha-Al_2O_3 Grain Boundaries", Materials Science & Technology 2006 Conference and Exposition, Cincinnati, OH , USA (2006.10.15-19)

24. Y.Ikuhara, "Atomic Resolution, Z-contrast and In-Situ Characterization for Advanced Ceramics", The 16th International Microscopy Congress, Sapporo (2006.9.3-8)

25. Y.Ikuhara, "Grain Boundary Atomic Structures in Oxide Ceramics", The Fourth International Conference on DV-Xα Method, Jedu, Korea(2006.8.3-5)

26. Y.Ikuhara and J.P.Buban, "Dissociation of Grain Boundary Dissociation in Oxide Ceramics", Microscopy & Microanalysis 2006, Chicago(2006.7.30-8.3)

27. Y.Ikuhara, "Grain Boundary Character and Dopant Effects of Oxide Ceramics", The

Brandon Symposium, TMS 135th Annual Meeting & Exhibition, TMS 2006, San Antonio, Texas, USA (2006.3.12-16)

28. Y.Ikuhara and N.Shibata, "Grain Boundary Atomic Structures and Dopant Effect in Oxide Ceramics", 30th International Conference and Exposition on Advanced Ceramics and Composites- Cocoa Beach, Florida(2006, 1.22-27)

29. Y,Ikuhara, N.Shibata, 10th Conference of Frontiers of Electron Microscopy in Materials Science (FEMMS 2005) , Kasteel Vaalsbroek , Netherland, Germany (2005.9.25-30)

30. Y.Ikuhara, H.Yoshida, "Grain Boundary Structures, Chemistry and Properties in Oxide Bicrystals", Materials Science & Technology 2005 Conference and Exhibition(MS&T 05), Pittsburg, USA (2005.9.25-28)

31. Y.Ikuhara, "Grain Boundary Character, Atomic Structures and Properties in Ceramic Bicrystals" 6th International Workshop on Interfaces: Interfaces by Design, Santiago, Spain (2005.6.26-30)

32. Y.Ikuhara, "Grain Boundary Atomic Structures and Properties in Oxide Ceramics", International Conference on Solid-Solid Phase Transformations in Inorganic Materials 2005 (PTM2005) Phenix, USA (2005.5.29-6.3)

33. Y.Ikuhara, "Towards New Transmission Electron Microscopy in Advanced Ceramics", 8th SANKEN International Symposium, ISIR, Osaka University, Osaka, Japan (2004.12.6-7)

34. Y.Ikuhara, "Grain Boundary Atomic Structures in Oxide Bicrystals", International Conference on New Frontiers of Process Science and Engineering in Advanced Materials, PSEA'04, Kyoto, Japan (2004.11.24-26)

35. Y.Ikuhara, "Transmission Electron Microscopy for Materials Sciences", Formal Seminar of Seoul National University, SNU, Korea (2004.11.19)

36. Y.Ikuhara, Atomic Structures and Properties in Ceramic Bicrystals", EnCera 04, The 3rd International Symposium on the Science of Engineering Ceramics, Senri-Hankyu Hotel, Osaka, Japan (2004.10.31-11.3)

37. Y.Ikuhara, "TEM In-situ Observation of Fracture Behavior in Ceramics", Nano-Interface Mechanics Workshop, IIS, University of Tokyo, (2004.9.8-9)

38. Y.Ikuhara, "Bicrystal Studies on Oxide Ceramics", Gordon Research Conference, Meriden, NH, USA (2004.8.8-13)

39. Y.Ikuhara, "Grain Boundary Atomic Structures and Properties in Oxide Ceramics", Microscopy and Microanalysis 2004, Savanna, Georgia, USA (2004.8.1-5)

40. Y.Ikuhara, "Atomic Structures and Properties in Ceramic Bicrystals", Eleventh International Conference on Intergranular and Interface Boundaries (iib2004), Belfast, Ireland (2004.7.25-29)

41. Y.Ikuhara, "TEM In-Situ Observation of Fracture and Deformation Behavior in Materials", 9th International Symposium on Advanced Physical Fields (APF-9), Tsukuba, Japan (2004.3.1-4).

42. Y.Ikuhara, "TEM In-Situ Characterization for Ceramic Interfaces", 1st International Symposium on Active Nano-Characterization and Technology", Tsukuba (2003.11.12-14)

43. Y.Ikuhara, "Nanostructures and Properties in Oxide Ceramics—The Role of TEM Characterization—", 1st International Symposium on Nanostructured Materials: Structural Applications, Ministry of Science and Technology, KIST, Korea (2003.10.30-31)

44. Y.Ikuhara, "Grain Boundaries in Oxides", 2003 Interfaces, Within and Between Composites, Lake Louise, Canada (2003.10.19-24)

45. Y.Ikuhara, "Grain Boundary Structures and Chemistry in Oxide Ceramics", IUMRS-ICAM 2003, The 8th IUMRS International Conference on Advanced Materials, Yokohama (2003.10.8-13)

46. Y.Ikuhara, "Grain boundary character and atomic structures in oxide ceramics", The 11th Internatinal Symposium on High Temperature Materials Chemistry (HTMC-XI), Tokyo (2003.5.19-23)

47. Y.Ikuhara, "Grain Boundary Atomic Structures and Properties in Oxide Ceramics", 2nd Fulrath Memorial International Symposium on Advanced Ceramics, Tokyo Big Sight, Tokyo (2003.4.9)

48. Y.Ikuhara, "Bicryatal Studies on Oxide Ceramics", Annual Meeting & Exposition, The American Ceramics Society, Nashville, TN, USA (2003.4.27-30)

49. Y.Ikuhara, "Grain boundary quantum structures in oxide bicrystals", First Kyoto Workshop on Computational Materials Science", Kyoto (2003.3.2-4)

50. Y.Ikuhara, "TEM in-situ observation of high-temperature behaviour and fracture process in ceramics", Inter.Symp. on In-Situ Electron Microscopy", Nagoya (2003.1.20-22)

51. Y.Ikuhara, "Grain boundary structures and properties in oxide ceramics", Inter. Conf. on Designing of Interfacial Structures in Advanced Materialsl and Their Joints (DIS'02), Osaka (2002.11.26-18)

52. Y.Ikuhara, "Grain Boundary Character and Structures in Oxide Ceramics", The 2nd Inter.Symp.Adv.Ceram.(2nd ISAC), Shanghai, China (2002.11.19-22)

53. Y.Ikuhara, "Grain Boundary Structures of Structural Ceramics", (Key-Note) The 1st Asian International Sympo. on the Sci. of Eng.Ceram., 2002", Osaka (2002.11.4-6)

54. Y.Ikuhara, "Grain Boundary Structures and Properties in Ceramics", Korea Ceramics Society, Suncheon, Korea (2002.10.18)

55. Y.Ikuhara, "Grain Boundary Characters and Atomic Structures in Oxide Ceramics",

Annual Meeting & Exposition, The American Ceramics Society, St.Louis, USA (2002.4.28-5.1)

56. Y.Ikuhara, "HREM and AEM Characterization of Grain Boundaries in Ceramics", Formal Seminar of National Center for Electron Microscopy, Lowrence National Lab., Berkeley, USA (2002.4.25)

57. Y.Ikuhara, "Atomic Structures in Alumina Bicrystals", International Symposium on "Science and Technology of Alumina", Max-Planck-Institute, Stuttgart , Germany (2002.3.17-22)

58. Y.Ikuhara, "HREM and AEM Characterization in Ceramics", 7th International Symposium on Advanced Physical Fields (APF-7), Tsukuba (2001.11.12-15)

59. Y.Ikuhara, "High Resolution Transmission Electron Microscopy Study of Zirconia Bicrystals", Pac Rim IV: An International Conference on Advanced Ceramics and Glasses, , The American Ceramics Society, Wailea, Maui, Hawaii(2001.7.11)

60. Y.Ikuhara, "Grain Boundary Characters and Properties in Ceramics", 7th Japan-France Science Seminar (JFMSS-7), Sep.17-20, Sendai (2001)

61. Y.Ikuhara, "HREM and EELS Study for Grain Boundaries in Structural Cearmics" FEMMS2000(8th Conference on Frontiers of Electron Microscopy in Materials Science) Matsue (2000.11)

62. Y.Ikuhara, "Interface Characterization in Oxides", 6th International Workshop on Chemical Designing and Processing of High-Tc Superconductor, Nagatsuda (2000.10)

63. Y.Ikuhara, "Impurity Effects on the Atomic Structures and Strength in Structural Ceramics", ICSMA-12(12th International Conference of the Strength of Materials), Asilomar, California (2000.8)

64. JFCC International Workshop 2000, Nagoya (2000.3)

65. Materials Research Society, Boston (1999.12)

66. The Second International Symposium on the Science of Engineering Ceramics, Osaka (1998.9)

67. Third Pacific Rim international Conference on Advanced Materials and Processing, Hawaii (1998.7)

68. JSPS-Japan-France Seminar, Palis (1998.7)

69. JUTEM International Symposium XII, Ube (1998.5)

70. International Conference on Thermo.Processing of Steels & Advanced Materials, Wollongong, Australia (1997.7)

71. TMS Annual Meeting, Orland (1997.7)

72. The 6th Tohwa Univ. International Symposium, Fukuoka (1996.12)

73. JSPS-Japan-France Seminar, Nagoya (1996.7)

74. The 8th International Conference of Japan Institute of Metals, Toyama (1996.7)

75. Materials Research Society, Boston (1995.12)

Publication List (Yuichi Ikuhara)

A) Books

1) Y.Ikuhara, "Physics of Ceramics", Nikkan-Kogyo-Shinbun Pb. Co. (1999)
2) S.Horiuchi, Y.Ikuhara and K.Hojo, "Transmission Electron Microscopy", Maruzen Pub. Co.(1999)
3) "Grain Boundary Engineering in Ceramics", Ed. T.Sakuma, L.Shepard and Y.Ikuhara, Ceramic.Transaction Vol.118, Am.Ceram.Soc. (2000)

B) Articles in Journals/Original Papers

1. N.Shibata, S.D.Findlay, S.Azuma, T.Mizoguchi, T.Yamamoto and Y.Ikuhara, "Atomic-scale imaging of individual dopant atoms in a buried interface", Nature Mater. , on-line published, 21 June (2009)

2. S-Y.Choi, S-Y. Chung, T.Yamamoto and Y.Ikuhara, "Direct Determination of Dopant Site Selectivity in Ordered Perovskite $CaCu_3Ti_4O_{12}$ Polycrystals by Aberration-Corrected STEM", Adv.Mater., 21, 885-889 (2009)

3. Z.C.Wang, S.Tsukimoto, M.Saito and Y. Ikuhara, "SiC/Ti3SiC2 interface: Atomic structure, energetics, and bonding", PRB, 79, 045318 (2009)

4. M.Imaeda, T.Mizoguchi, Y.Sato, HS Lee, S.D. Findlay, N.Shibata, T.Yamamoto and Y.Ikuhara, "Atomic structure, electronic structure, and defect energetics in [001](310) Σ5 grain boundaries of $SrTiO_3$ and $BaTiO_3$", PRB., 78, 245320 (2009)

5. S-Y.Chung, S-Y.Choi, T.Yamamoto and Y.Ikuhara, "Orientation-Dependent Arrangement of Antisite Defects in Lithium Iron(II) Phosphate Crystals", Angewandte. Chem. Inter, Ed. 48, 543-546 (2009)

6. T.Mizoguchi, M.Saitoh and Y.Ikuhara, "First-principles calculation of oxygen K-electron energy loss near edge structure of HfO_2" J.Phys.Cond.matter., 21, 104212 (2009)

7. K.Matsui, H.Yoshida and Y.Ikuhara, "Isothermal Sintering Effects on Phase Separation and Grain Growth in Yttria-Stabilized Tetragonal Zirconia Polycrystal", J.Am. Ceram.Soc., 92, 467-475(2009)

8. N.Shibata, A. Goto, S. -Y. Choi, T. Mizoguchi, S. D. Findlay, T. Yamamoto and Y. Ikuhara, "Direct imaging of reconstructed atoms on TiO_2(110) surfaces", Science, 322, 570-573 (2008).

9. S. Kanehira, K. Miura, K. Hirao, N. Shibata, and Y. Ikuhara, "Cross patterning on MgO based on dislocations using femtosecond laser irradiation",Appl. Phys. A-Mater. Sci & Proc.

92 , 913-916 (2008).

10. S.Ii, H.Yoshida, K.Matsui and Y.Ikuhara, "Misfit Dislocation Formation at the c/t Interphase Boundary in Y-TZP", J. Am.Ceram.Soc., 91, 3810-3812 (2008)

11. R.Huang, T.Mizoguchi, K.Sugiura, H.Ohta, K.Koumoto, T.Hirayama and Y.Ikuhara, "Direct observations of Ca ordering in Ca0.33CoO2 thin films with different superstructures", Appl.Phys.Lett., 93, 181907 (2008).

12. Y. Tokumoto, N. Shibata, T. Mizoguchi, M. Sugiyama, Y. Shimogaki, JS. Yang, T. Yamamoto, and Y. Ikuhara, "High-resolution transmission electron microscopy (HRTEM) observation of dislocation structures in AlN thin films", J. Mater. Res. 23, 2188-2194 (2008).

13. H. Ohta, Y. Mune, K. Koumoto, T. Mizoguchi, and Y. Ikuhara, "Critical thickness for giant thermoelectric Seebeck coefficient of 2DEG confined in $SrTiO_3/SrTi_{0.8}Nb_{0.2}O_3$ superlattices",Thin Solid Films 516, 5916-5920 (2008).

14. H. Ohta, R. Huang, and Y. Ikuhara, "Large enhancement of the thermoelectric Seebeck coefficient for amorphous oxide semiconductor superlattices with extremely thin conductive layers", Phy. Sta. Sol. **2** , 105-107 (2008).

15. E. Tochigi, N. Shibata, A. Nakamura, T. Yamamoto, and Y. Ikuhara, "Partial dislocation configurations in a low-angle boundary in alpha-Al_2O_3", Acta. Mater. 56, 2015-2021 (2008).

16. S-Y Chung, S.Y.Choi, T.Yamamoto and Y.Ikuhara, "Atomic-scale visualization of antisite defects in LiFePO4", Phys.Rev.Lett., 100 (12): 125502 (2008)

17. K.Matsui, H.Yoshida and Y.Ikuhara, "Grain-boundary structure and microstructure development mechanism in 2-8 mol% yttria-stabilized zirconia polycrystals", Acta Mater., 56 (6) : 1315-1325 (2008)

18. H.Ohnishi, H.Naka, T. Sekino, Y.Ikuhara and K.Niihara, "Mechanical properties of Y2O3-stabilized ZrO2 polycrystals fabricated by the solid phase mixing and sintering method", J.Cearm.Soc.Jpn., 116 (1351): 1270-1277 (2008)

19. T.Mizoguchi, M.Varela, J.P.Buban, T.Yamamoto and Y.Ikuhara, "Site dependence and peak assignment of YBa2Cu3O7-xOK-edge electron energy loss near-edge fine structure", Phys.Rev.B., 77: Art. No.024504 (2008)

20. T.Kokubo, T.Ueda, M.Kawashita, Y.Ikuhara, G.H.Takaoka and T.Nakamura, "PET fiber fabrics modified with bioactive titanium oxide for bone substitutes", Journal of Materials

Science-Materials in Medicine, 19 (2): 695-702 (2008)

21. H.S.Lee, T.Mizoguchi, T.Yamamoto, S.J.L.Kang and Y.Ikuhara, "First-principles calculation of defect energetics in cubic-BaTiO3 and a comparison with SrTiO3", Acta Mater., 55 (19): 6535-6540 (2007)

22. T.Nakagawa, I.Sakaguchi, Isao), N.Shibata, K.Matsunaga, Katsuyuki, T.Mizoguchi, T.Yamamoto, H.Haneda and Y.Ikuhara, "Yttrium doping effect on oxygen grain boundary diffusion in alpha-Al2O3", Acta Mater., 55 (19): 6627-6633 (2007)

23. Y.Mune, H.Ohta, K.Koumoto, T.Mizoguchi and Y.Ikuhara, "Enhanced Seebeck coefficient of quantum-confined electrons in SrTiO3/SrTi0.8Nb0.2O3 superlattices", Appl.Phys.Lett., 91 (19): Art. No. 192105 (2007)

24. K.Sugiura, H.Ohta, K.Nomura, T.Saito, Y.Ikuhara, M.Hirano, H.Hosono and K.Koumoto, "Thermoelectric properties of the layered cobaltite Ca3Co4O9 epitaxial films fabricated by topotactic ion-exchange method", Mater. Trans., 48 (8): 2104-2107 (2007)

25. A.Nakahira, S.Takezoe, Y.Yamasaki, Y.Sasaki and Y.Ikuhara, "Synthesis and evaluation of bulky Y-zeolites by hydrothermal hot-pressing method", J.Am.Ceram.Soc., 90 (8): 2322-2326 (2007)

26. T.Mizoguchi, J.P.Buban, K.Matsunaga, T.Yamamoto and Y.Ikuhara, "First-principles study on incident direction, individual site character, and atomic projection dependences of ELNES for perovskite compounds (vol 106, pg 92, 2006) ", Ultramicroscopy, 107 (8): 703-704 (2007)

27. K.Nakamura, T.Mizoguchi, N.Shibata, K.Matsunaga, T.Yamamoto and Y.Ikuhara, "First-principles study of grain boundary sliding in alpha-Al2O3", Phys.Rev.B., 75 (18) : Art. No.184109 (2007)

28. S.Kanehira, K.Miura, K.Fujita, K.Hirao, J.Si, N.Shibata and Y.Ikuhara, "Optically produced cross patterning based on local dislocations inside MgO single crystals", Appl.Phys.Lett., 90 (16) : Art. No.163110 (2007)

29. H.Ohnishi, T.Fukuhara, T.Kawanami, T.Sekino, Y.Ikuhara and K.Niihara, "Microstructure and crystal phase development of Y2O3-stabilized ZrO2 polycrystal fabricated by the solid phase mixing and sintering method", J.Cearm.Soc.Jpn., 115 (1339): 210-215 (2007)

30. N.Shibata, M.F. Chisholm, A.Nakamura, S.J.Pennycook SJ, T.Yamamoto and Y.Ikuhara, "Nonstoichiometric dislocation cores in alpha-alumina", Science, 316 (5821): 82-85 (2007)

31. H.Ohta, S.Kim, Y.Mune, T.Mizoguchi, K.Nomura, S.Ohta, T.Nomura, Y.Nakanishi, Y.

Ikuhara, M. Hirano, H.Hosono and K. Koumoto, "Giant thermoelectric Seebeck coefficient of two-dimensional electron gas in SrTiO3", Nature Materials, 6 (2): 129-134 (2007)

32. Y.Sato, T.Yamamoto and Y.Ikuhara, "Atomic structures and electrical properties of ZnO grain boundaries", J.Am.Ceram.Soc., 90 (2): 337-357 (2007)

33. T.Mizoguchi, T.Sasaki, S.Tanaka, K.Matsunaga, T.Yamamoto, K. Kohyama and Y.Ikuhara, "Chemical bonding, interface strength, and oxygen K electron-energy-loss near-edge structure of the Cu/Al2O3 interface", Phys.Rev.B., 74 (23): Art. No. 235408 (2006)

34. T.Nakagawa, A. Nakamura, I.Sakaguchi, N.Shibata, K.P.D. Lagerlof, T.Yamamoto, H.Haneda and Y.Ikuhara, "Oxygen pipe diffusion in sapphire basal dislocation", J.Cearm.Soc.Jpn., 114 (1335): 1013-1017 (2006)

35. Y.Tokumoto, T.Mizoguchi, Y.Sato, N.Shibata, T.Yamamoto and Y.Ikuhara, "Atomic structure and relaxation behavior at AlN (0001)/Al2O3(0001) interface", J.Ceram.Soc.Jpn., 114 (1335): 1018-1021 (2006)

36. S.Y.Chung, S.Y.Choi, T.Yamamoto and Y.Ikuhara, "Inherent nanoscale bend of crystal lattice in Fe-doped calcium copper titanate", Appl.Phys.Lett., 89 (12): Art. No. 121903 (2006)

37. K.Matsui, N.Ohmichi, M.Ohgai, H.Yoshida and Y.Ikuhara, "Effect of alumina-doping on grain boundary segregation-induced phase transformation in yttria-stabilized tetragonal zirconia polycrystal", J. Mater.Res., 2278-2289 (2006)

38. S.Ii, H.Yoshida, K.Matsui, N.Ohmichi and Y.Ikuhara, "Microstructure and surface segregation of 3 mol% Y2O3-doped ZrO2 particles", J.Am.Ceram.Soc., 89 (9): 2952-2955 (2006)

39. M.Takimura, H.Nagata, Y.Yamasaki, T. Suzuki, Y. Ikuhara and A.Nakahira, "Synthesis and characterization of bulky FSM with interconnected mesopore-networks using an HHP method", J.Ceram.Soc.Jpn., 114 (1330): 554-557 (2006)

40. Y.Tokumoto, Y.Sato, T.Yamamoto, N.Shibata and Y.Ikuhara, "Atomic structure of AlN/Al2O3 interfaces fabricated by pulsed-laser deposition", J.Mater.Sci., 41 (9): 2553-2557 (2006)

41. S.Y.Choi, J.P.Buban, M.Nishi, H.Kageyama, N.Shibata, T.Yamamoto, S.J.Kang and Y. Ikuhara, "Dislocation structures of low-angle boundaries in Nb-doped SrTiO3 bicrystals", J.Mater.Sci., 41 (9): 2621-2625 (2006)

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