

## LIST OF PUBLICATIONS AND PRESENTATIONS OF CHEN Ang

**88** articles in peer-reviewed journals (**13** articles in *Phys. Rev. B*, **18** articles in *Appl. Phys. Lett.*, **13** papers in *J. Appl. Phys.*; **7** papers in *J. Phys.: Condensed Matter*).

**27** articles in *proceedings* of conferences and workshops.

**1** book chapter.

**34** oral presentations in conferences (workshops) and seminars.

### **2004**

1. ZHI Yu and CHEN Ang, Electroactive fluorinate-based polymers: Ferroelectric and dielectric properties, *Journal of Applied Physics*, (tentatively scheduled in the December 15 issue, 2004. ID number: 056423JAP).
2. CHEN Ang and ZHI Yu, Ferroelectric, Electroactive and dielectric relaxation behavior of fluoro-polymers, *Advanced Materials*, **16**[12], 795-8 (2004).
3. CHEN Ang and ZHI Yu, DC electric-field dependence of the dielectric constant in polar dielectrics: “multi-polarization-mechanism” model, *Physical Review B***69**, 174109 (2004) (8 pages).
4. CHEN Ang and ZHI Yu, Phase transition temperature and character of Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, *Physics Review B***70**, 134103 (2004) (4 pages).
5. CHEN Ang and ZHI Yu, Dielectric behavior of PbZr<sub>0.52</sub>Ti<sub>0.48</sub>O<sub>3</sub> thin films: intrinsic and extrinsic dielectric response, *Applied Physics Letters*, **85**[17], 3821-23 (2004).
6. ZHI Yu, and CHEN Ang, Dielectric behavior of electroactive fluorinate-based polymers under dc bias, *Applied Physics Letters*, **85**[17], 3827-29 (2004).
7. CHEN Ang and ZHI Yu, Dielectric behavior of electroactive fluorinate-based terpolymers, *Applied Physics Letters*, **84**[12], 2145-7 (2004).
8. ZHI Yu, and CHEN Ang, Dielectric relaxor behavior of Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>, *Applied Physics Letters*, **85**[5], 801-3 (2004).
9. ZHI Yu, CHEN Ang, L. E. Cross, A. Petchsuk, and T. C. Chung, Electroactive strain properties of poly(vinylidene fluoride – trifluoroethylene – chlorotrifluoroethylene) terpolymers, *Applied Physics Letters*, **84**[10], 1737-9 (2004).
10. CHEN Ang and ZHI Yu, Physical nature of the high strain in electroactive polymers: ferroelectric relaxor or dielectric relaxor? Fundamental Physics of Ferroelectric 2004, Ed. P. Gehring, and R. E. Cohen, pp44-45 (*The Navy workshop on Fundamental Physics of Ferroelectrics, Colonial Williamsburg, February, 2004*).

### **2003**

11. CHEN Ang, ZHI Yu, and L. E. Cross, Electrostrictive properties of stretched poly(vinylidene fluoride – trifluoroethylene) copolymers at cryogenic temperatures, *Applied Physics Letters*, **83**[9], 1821-3 (2003).
12. CHEN Ang, ZHI Yu, Ruyan Guo, and A. S. Bhalla, Calculation of dielectric constant and loss of two-phase composites, *Journal of Applied Physics*, **93**[6], 3475-80 (2003).
13. CHEN Ang, ZHI Yu, H. J. Youn, C. A. Randall, A. S. Bhalla, L. E. Cross, J. Nino, and M. Lanagan, Dielectric properties of Bi<sub>2</sub>O<sub>3</sub>-ZnO-Ta<sub>2</sub>O<sub>5</sub> pyrochlore and zirconolite structure ceramics, *Applied Physics Letters*, **82**[21], 3734-6 (2003).
14. ZHI Yu, CHEN Ang, E. Furman, and L. E. Cross, Dielectric relaxation and strain behavior of 95.5% Pb(Zn<sub>1/3</sub>Nb<sub>2/3</sub>)O<sub>3</sub> – 4.5% PbTiO<sub>3</sub> single crystals at cryogenic temperatures, *Applied Physics Letters*, **82**[5], 790-792 (2003).
15. ZHI Yu, CHEN Ang, RuYan Guo, and A.S. Bhalla, Dielectric properties and tunability of (Sr,Bi)TiO<sub>3</sub> with MgO additive, *Materials Letters*, **57**[19], 2927-31 (2003).
16. ZHI Jing, ZHI Yu and CHEN Ang, Crystalline structure and dielectric behavior of Ba(Ti,Ce)O<sub>3</sub>, *Journal of Materials Science*, **38**[5], 1057-61 (2003).
17. ZHI Yu and CHEN Ang, Crystalline structure and dielectric properties of (Sr<sub>1-1.5x</sub>Bi<sub>x</sub>)TiO<sub>3</sub> ceramics, *Journal of Materials Science*, **38** [1], 113-118 (2003).

## 2002

18. **CHEN Ang**, ZHI Yu, H. J. Youn, C. A. Randall, A. S. Bhalla, L. E. Cross, J. Nino, and M. Lanagan, Low temperature dielectric relaxation in pyrochlore  $(\text{Bi}_{3/4}\text{Zn}_{1/4})_2(\text{Zn}_{1/4}\text{Ta}_{3/4})_2\text{O}_7$  compounds, *Applied Physics Letters*, **80**[25], 4807-09 (2002).
19. **CHEN Ang**, ZHI Yu, ZHI Jing, Ruyan Guo, A.S. Bhalla, and L. E. Cross, Piezoelectric and Electrostrictive strain behavior of Ce-doped  $\text{BaTiO}_3$  ceramics, *Applied Physics Letters*, **80**[18], 3424-26 (2002).
20. ZHI Jing, ZHI Yu and **CHEN Ang**, Crystalline structure and dielectric behavior of  $(\text{Ce,Ba})\text{TiO}_3$  ceramics, *Journal of Materials Research*, **17** [11], 2787-2793 (2002).
21. **CHEN Ang**, ZHI Jing, and ZHI Yu, Ferroelectric relaxor  $\text{Ba}(\text{Ti,Ce})\text{O}_3$ , *Journal of Physics: Condensed Matter*, **14**, 8901–12 (2002).
22. ZHI Yu and **CHEN Ang**, Dielectric and Conduction Anomalies in La-doped  $\text{SrTiO}_3$  with Suppression of Quantum-Paraelectric, *Applied Physics Letters*, **80**[4], 643-5 (2002).
23. **CHEN Ang** and ZHI Yu, Dielectric relaxor and ferroelectric relaxor: doped paraelectric  $\text{SrTiO}_3$ , *Journal of Applied Physics*, **91**[3], 1487-94 (2002).
24. ZHI Yu and **CHEN Ang**, Maxwell – Wagner polarization in Ceramic Composites  $\text{BaTiO}_3 - (\text{Ni}_{0.3}\text{Zn}_{0.7})\text{Fe}_{2.1}\text{O}_4$ , *Journal of Applied Physics*, **91**[2], 794-797 (2002).
25. ZHI Yu and **CHEN Ang**, Electrical and Magnetic Properties of  $\text{BaTiO}_3 - (\text{Ni}_{0.3}\text{Zn}_{0.7})\text{Fe}_{2.1}\text{O}_4$  Composites, *Journal of Materials Science: Materials in Electronics*, **13**, 193-196 (2002).
26. ZHI Yu, **CHEN Ang**, Ruyan Guo, and A.S. Bhalla, Dielectric properties and high tunability of  $\text{Ba}(\text{Ti}_{0.7}\text{Zr}_{0.3})\text{O}_3$  ceramics under dc bias, *Applied Physics Letters*, **81**[7], 1285-87 (2002).
27. ZHI Yu, **CHEN Ang**, Ruyan Guo, A.S. Bhalla, and L. E. Cross, Dielectric loss modes of  $\text{SrTiO}_3$  thin films deposited on different substrates, *Applied Physics Letters*, **80**[6], 1034-36 (2002).
28. ZHI Yu, **CHEN Ang**, Ruyan Guo, and A.S. Bhalla, Ferroelectric-relaxor behavior of  $\text{Ba}(\text{Ti}_{0.7}\text{Zr}_{0.3})\text{O}_3$ , *Journal of Applied Physics*, **92**[5], 2655-57 (2002).
29. ZHI Yu, **CHEN Ang**, Ruyan Guo, and A.S. Bhalla, Piezoelectric and strain properties of  $\text{Ba}(\text{Ti}_{1-x}\text{Zr}_x)\text{O}_3$  ceramics, *Journal of Applied Physics*, **92**[3], 1489-93 (2002).
30. H. J. Youn, Clive Randall, **CHEN Ang**, and M. Lanagan, Dielectric properties in  $(\text{Bi}_{3/4}\text{Zn}_{1/4})_2(\text{Zn}_{1/4}\text{Ta}_{3/4})_2\text{O}_7$  ceramics, *Journal of Materials Research*, **17**, 1502 (2002).
31. **CHEN Ang**, Ruyan Guo, A.S. Bhalla, and L. E. Cross, Dielectric Behavior and High Tunability in  $\text{Cd}_2\text{Nb}_2\text{O}_7$ , *Integrated Ferroelectrics*, **42**, 419-431 (2002).

## 2001

32. **CHEN Ang**, A. S. Bhalla, and L. E. Cross, Dielectric behavior of paraelectric  $\text{KTaO}_3$ ,  $\text{CaTiO}_3$  and  $(\text{Ln}_{1/2}\text{Na}_{1/2})\text{TiO}_3$  under dc electric-field, *Physical Review B* **64**, 18 4104 (2001) (6 pages).
33. **CHEN Ang**, ZHI Yu, L. E. Cross, Ruyan Guo, and A. S. Bhalla, Dielectric relaxation and conduction in  $\text{SrTiO}_3$  thin films under dc bias, *Applied Physics Letters*, **79**[6], 818-20 (2001).
34. **CHEN Ang**, L.E. Cross, ZHI Yu, Ruyan Guo, and A.S. Bhalla, Dielectric loss and defect mode of  $\text{SrTiO}_3$  thin film under direct-current bias, *Applied Physics Letters*, **78**[18], 2754-56 (2001).
35. **CHEN Ang**, A.S. Bhalla, Ruyan Guo, and L.E. Cross, Effect of dc bias on dielectric properties of  $\text{Cd}_2\text{Nb}_2\text{O}_7$  ceramics, *Journal of Applied Physics*, **90**[5], 2465-68 (2001).
36. ZHI Yu, **CHEN Ang**, Ruyan Guo, Amar S. Bhalla, and L. E. Cross, Oxygen vacancy related dielectric relaxation in  $(\text{Sr}_{1-1.5x}\text{Bi}_x)\text{TiO}_3$ , *Ferroelectrics*, **262**, 219-225 (2001).
37. ZHI Yu and **CHEN Ang**, Compatibility of  $\text{YBa}_2\text{Cu}_3\text{O}_{6+\delta}$  superconductor with  $\text{YBa}_3\text{Ti}_2\text{O}_{8.5}$  compound, *Journal of Materials Science Letter*, **20**, 1897-99(2001).
38. **CHEN Ang**, ZHI Yu, Ruyan Guo, and A.S. Bhalla, Effect of dc field on dielectric loss of  $\text{SrTiO}_3$  single crystals and thin films, *Dielectric Materials and Devices*, Ed. K.M. Nair, Amar S. Bhalla, Tapan K. Gupta, et al., pp339-348, 2001.

## 2000

39. **CHEN Ang**, ZHI Yu, and L. E. Cross, Oxygen-vacancies-related low-frequency dielectric relaxation and electrical conduction in Bi:SrTiO<sub>3</sub>, *Physical Review* **B62**, 228-236(2000).
40. **CHEN Ang** and ZHI Yu, Phonon-coupled impurity dielectric modes in Bi:SrTiO<sub>3</sub>, *Physical Review* **B61**, 11363-66(2000).
41. **CHEN Ang**, ZHI Yu, ZHI Jing, P. Lunkenheimer and A. Loidl, Dielectric spectra and electrical conduction in Fe doped SrTiO<sub>3</sub>, *Physical Review* **B61**, 3922-26(2000).
42. **CHEN Ang**, ZHI Yu, and ZHI Jing, Impurity induced ferroelectric relaxor behavior in quantum paraelectric SrTiO<sub>3</sub> and ferroelectric BaTiO<sub>3</sub>, *Physical Review* **B61**, 957-961(2000).
43. **CHEN Ang**, A.S. Bhalla, Ruyan Guo, and L.E. Cross, Dielectric loss of SrTiO<sub>3</sub> single crystal under direct current bias, *Applied Physics Letters*, **76**[14], 1929-1931(2000).
44. **CHEN Ang**, L.E. Cross, Ruyan Guo, and A.S. Bhalla, Clusters polarization in Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub> compound, *Applied Physics Letters*, **77**[5], 732-734(2000).
45. **CHEN Ang**, Ruyan Guo, A.S. Bhalla, and L.E. Cross, Dielectric relaxation processes in Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub> Compound, *Journal of Applied Physics*, **87**[10], 7452-56(2000).
46. **CHEN Ang**, Ruyan Guo, A.S. Bhalla, and L.E. Cross, Effect of Electrical Field and Post-Treatment on Dielectric Behavior of SrTiO<sub>3</sub>, *Journal of Applied Physics*, **87**[8], 3937-3940(2000).
47. **CHEN Ang**, ZHI Yu, J. Scott, A. Loidl, Ruyan Guo, Amar S. Bhalla, and L. E. Cross, Dielectric Polarization Processes in Bi:SrTiO<sub>3</sub>, *J. Phys. Chem. Solids*, **61**:(2), 191-196(2000).
48. J. Scott, **CHEN Ang**, H. Ledbetter, The myth of second sound in strontium titanate, *J. Phys. Chem. Solids*, **61**:(2), 185-190(2000).
49. **CHEN Ang**, Ruyan Guo, A.S. Bhalla, and L. E. Cross, Effect of Electric Field and Post-Treatment on Dielectric Behavior of SrTiO<sub>3</sub> Single Crystal, *Ceramics Transactions: Electronic Ceramic Materials and Devices*, Edited by K.M. Nair and A.S. Bhalla, Vol.106, pp149-155, 2000.
50. Zhi Yu, **Chen Ang**, A.S. Bhalla, and L. E. Cross, Dielectric anomalies in La and Bi doped SrTiO<sub>3</sub>, Part I: Oxygen-vacancy-related dielectric peaks, *Ceramics Transactions: Electronic Ceramic Materials and Devices*, Edited by K.M. Nair and A.S. Bhalla, Vol.106, pp123-131, 2000.
51. **Chen Ang**, Zhi Yu, A.S. Bhalla, and L. E. Cross, Dielectric anomalies in La and Bi doped SrTiO<sub>3</sub>, Part II: The low temperature dielectric behavior, *Ceramics Transactions: Electronic Ceramic Materials and Devices*, Edited by K.M. Nair and A.S. Bhalla, Vol.106, pp133-137, 2000.
52. Jing Zhi, **CHEN Ang**, P.M. Vilarinho, ZHI Yu, J.L. Baptista, Effect of Ce doping at Ba sites on the phase structure and the ferroelectric phase transition of BaTiO<sub>3</sub>, *Ceramics Transactions: Electronic Ceramic Materials and Devices*, Edited by K.M. Nair and A.S. Bhalla, Vol.106, pp115-121, 2000.

## 1999

53. **CHEN Ang**, J. F. Scott, ZHI Yu, H. Ledbetter, and J.L. Baptista, Dielectric and Ultrasonic Anomalies at 22K, 37K and 65K in SrTiO<sub>3</sub>, *Physical Review* **B59**, 6661-64(1999).
54. **CHEN Ang**, ZHI Yu, J. Hemberger, P. Lunkenheimer, and A. Loidl, Dielectric anomalies in bismuth doped SrTiO<sub>3</sub>; Defect modes at low impurity concentrations, *Physical Review* **B59**, 6665-69(1999).
55. **CHEN Ang**, ZHI Yu, P. Lunkenheimer, J. Hemberger, and A. Loidl, Dielectric relaxation modes in bismuth doped SrTiO<sub>3</sub>; The Relaxor Behavior, *Physical Review* **B59**, 6670-74(1999).
56. ZHI Jing, **CHEN Ang**, ZHI Yu, P. M. Vilarinho and J. L. Baptista, Solubility of Y in BaTiO<sub>3</sub> ceramics, *Journal of American Ceramic Society (Rapid Communication)*, **82**[5], 1345-48(1999).
57. ZHI Yu, **CHEN Ang**, and L. E. Cross, Oxygen-vacancy-related Dielectric anomalies in La:SrTiO<sub>3</sub>, *Applied Physics Letters*, **74**[20], 3044-46(1999).
58. **CHEN Ang**, ZHI Jing, and ZHI Yu, Insulator - Metallic transition in Cu-doped BaTiO<sub>3</sub> Multiphase Ceramics, *Journal of Physics: Condensed Matter*, **11**, 9703-08 (1999).

## 1998

59. **CHEN Ang**, ZHI Yu, P. M. Vilarinho and J. L. Baptista, Bi:SrTiO<sub>3</sub>: A quantum ferroelectric and a relaxor, *Physical Review B* **57**, 7403-06(1998).
60. **CHEN Ang**, J. R. Jurado, ZHI Yu, M.T. Colomer, J.R. Frade, and J.L. Baptista, A variable-range hopping conduction and dielectric relaxation in disordered Sr<sub>0.97</sub>(Ti<sub>1-x</sub>Fe<sub>x</sub>)O<sub>3-δ</sub>, *Physical Review B* **57**, 11858-61(1998).
61. ZHI Yu, **CHEN Ang**, P. M. Vilarinho, P. Mantas and J. L. Baptista, Dielectric properties of (Sr,Bi)TiO<sub>3</sub> ceramics at high temperature (500-800K), *Journal of Applied Physics*, **83**, 4874-77 (1998).
62. ZHI Jing, **CHEN Ang**, ZHI Yu, P. M. Vilarinho and J. L. Baptista, Dielectric properties of Ba(Ti,Y)O<sub>3</sub> ceramics, *Journal of Applied Physics*, **84**, 983-986 (1998).
63. **CHEN Ang**, ZHI Yu, Zhi jing, P. M. Vilarinho and J. L. Baptista, Dielectric Properties of (Sr<sub>0.76</sub>Bi<sub>0.16</sub>)TiO<sub>3</sub> - PbTiO<sub>3</sub> Ceramics, *Bol. Soc. Esp. Ceram. Vidrio*, **37**, 235-237(1998)
64. ZHI Yu, **CHEN Ang**, P. M. Vilarinho, P. Mantas and J. L. Baptista, Dielectric relaxation behaviour of Bi:SrTiO<sub>3</sub>: I. The low temperature permittivity peak, *Journal of the European Ceramic Society*, **18**, 1613-19 (1998).
65. ZHI Yu, **CHEN Ang**, P. M. Vilarinho, P. Mantas and J. L. Baptista, Dielectric relaxation behaviour of Bi:SrTiO<sub>3</sub>: II. Influence of heat treatment on dielectric properties, *ibid*, **18**, 1621-28 (1998).
66. ZHI Yu, **CHEN Ang**, P. M. Vilarinho, P. Mantas and J. L. Baptista, Dielectric relaxation behaviour of Bi:SrTiO<sub>3</sub>: III. Dielectric properties in the temperature range of 300 - 600K, *ibid*, **18**, 1629-35 (1998)

### **1997**

67. **CHEN Ang**, ZHI Yu, ZHI Jing, P. M. Vilarinho, and J. L. Baptista, Synthesis and characterization of Ba(Ti,Ce)O<sub>3</sub> ceramics, *Journal of the European Ceramic Society*, **17**, 1217-21(1997).
68. ZHI Yu, **CHEN Ang**, P. M. Vilarinho and J. L. Baptista, Dielectric properties of Ba(Ti,Ce)O<sub>3</sub> solid solutions in the temperature range of 85K-700K, *Journal of Physics: Condensed Matter*, **9**, 3081-88(1997).
69. Bao Yahua, **CHEN Ang**, and ZHI Yu, Piezoelectric properties of Pb(Li<sub>1/4</sub>Nb<sub>3/4</sub>)<sub>0.06</sub>(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)<sub>0.06</sub>(Zr<sub>0.88-x</sub>Ti<sub>x</sub>)O<sub>3</sub> ceramics and its application for transformer, *Journal of Zhejiang University*, **31**[2], 269-276 (1997). (in Chinese)
70. **CHEN Ang**, ZHI Jing, ZHI Yu, P. M. Vilarinho and J. L. Baptista, The formation and composition of compounds in Ba-rich corner of BaO-M<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> ternary system (M=Y and Nd), *Key Engineering Materials*, **132-136**, 1207-10(1998).
71. ZHI Yu, **CHEN Ang**, P. M. Vilarinho and J. L. Baptista, Dielectric anomaly of (Sr<sub>1-x</sub>Bi<sub>2x/3</sub>)TiO<sub>3</sub> ceramic in the temperature range of 300-600K, *Key Engineering Materials*, **132-136**, 1052-55(1998).
72. Jing Zhi, **CHEN Ang**, ZHI Yu, P. M. Vilarinho and J. L. Baptista, Dielectric behaviour of Ba(Ti,Ce)O<sub>3</sub> ceramics, *Key Engineering Materials*, **132-136**, 1187-90(1998).

### **1996**

73. **CHEN Ang**, ZHI Yu, V. M. Ferreira, P. M. Vilarinho, and J. L. Baptista, Occurrence of single phase dielectric compound in the BaO-rich corner of BaO - Re<sub>2</sub>O<sub>3</sub> - TiO<sub>2</sub> ternary system (Re=Y, Nd, and Sm), *Journal of Materials Science Letter*, **15**, 1313-14(1996).
74. **CHEN Ang**, ZHI Yu, P. M. Vilarinho, V. M. Ferreira, and J. L. Baptista, Synthesis and characterization of dielectric compounds in the BaO-rich corner of BaO - Y<sub>2</sub>O<sub>3</sub> - TiO<sub>2</sub> ternary system, *Journal of the European Ceramic Society*, **16**, 1051-56(1996).
75. Jiaping Han, X. L. Zhang, X. Z. Wang, ZHI Yu, and **CHEN Ang**, A study on the formation of Ba<sub>2</sub>Ti<sub>9</sub>O<sub>20</sub> phase in BaO-TiO<sub>2</sub> system, *Journal of the Chinese Ceramic Society*, **24**[2], 173-178(1996). (in Chinese)
76. J. L. Baptista, **CHEN Ang**, ZHI Yu, V. M. Ferreira, P. M. Vilarinho, and Jing Zhi, New dielectric compounds in the BaO -rich corner of BaO-Re<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> ternary system (Re=Nd, Sm, Y, La, and Pr), *Electroceramic V*, Book 2, pp5-8, 1996. (*The proceedings of The European Fifth International Conferences on Electroceramics and applications*, September 2 - 4, 1996, Aveiro, Portugal.)
77. **CHEN Ang**, Jing Zhi, ZHI Yu, P. M. Vilarinho and J. L. Baptista, Dielectric properties of BaTiO<sub>3</sub>/YBaTiO composite ceramics, *Electroceramic V*, Book 2, pp25-28, 1996. (*Ibid*)
78. **CHEN Ang**, Jing Zhi, ZHI Yu, Ya-hua, Jia-ping Han, P. M. Vilarinho and J. L. Baptista, Dielectric properties of the YBaCuO / YBaTiO composite ceramics, *Electroceramic V*, Book 2, pp281-284, 1996. (*Ibid*)

79. ZHI Yu, **CHEN Ang**, P. M. Vilarinho and J. L. Baptista, Dielectric dispersion behavior of Ba(Ti,Ce)O<sub>3</sub> solid solutions, *Electroceramic V*, Book 2 , pp9-12, 1996. (*Ibid*)
80. ZHI Yu, **CHEN Ang**, P. M. Vilarinho, P. Mantas and J. L. Baptista, Dielectric relaxation behaviour of (Sr,Bi)TiO<sub>3</sub> ceramics, *Electroceramic V*, Book 1 , pp491-495, 1996. (*Ibid*)
81. Jing Zhi, **CHEN Ang**, ZHI Yu, Ya-hua Bao, Jia-ping Han, P. M. Vilarinho and J. L. Baptista, Low temperature resistivity behaviour in Ba(Ti,Cu)O<sub>3</sub> composite ceramics, *Electroceramic V*, Book 2, pp33-36, 1996. (*Ibid*)
82. Jing Zhi, **CHEN Ang**, ZHI Yu, Ya-hua Bao, Jia-ping Han, P. M. Vilarinho and J. L. Baptista, Effect of lead doping on the microstructure and dielectric properties of YBa<sub>3</sub>Ti<sub>2</sub>O<sub>8.5</sub> ceramics, *Electroceramic V*, Book 2, pp29-32, 1996. (*Ibid*)
83. Bao Yahua, **CHEN Ang**, ZHI Yu, and Jiaping Han, Piezoelectric ceramics of Pb(Li<sub>1/4</sub>Nb<sub>3/4</sub>)<sub>0.06</sub>(Mg<sub>1/3</sub>Nb<sub>2/3</sub>)<sub>0.06</sub>(Zr<sub>0.88-x</sub>Ti<sub>x</sub>)O<sub>3</sub> system for transformer use, *Electroceramic V*, Book 2 , pp237-241, 1996. (*Ibid*)
84. Jiaping Han, **CHEN Ang**, ZHI Yu, and Bao Yahua, Factors affecting the formation of Ba<sub>2</sub>Ti<sub>9</sub>O<sub>20</sub> phase, *Electroceramic V*, Book 2 , pp475-478, 1996. (*Ibid*)

### **1995**

85. DAI Xi, and **CHEN Ang**, The soft mode behavior and electron correlation effect in the pseudo Jahn-Teller system, *Ferroelectrics*, 74, 277-282(1995).
86. ZHI Yu, **CHEN Ang**, and Han Japin, Influence of MgO on dielectric behavior of Sr(Bi)TiO<sub>3</sub> ceramics, *Journal of Zhejiang University*, 29[2], 214-218(1995). (*in Chinese*)
87. **CHEN Ang**, Dai Xi, ZHI Yu, and Yahua Bao, A special percolation problem in ceramic composite, *Journal of the Chinese Ceramic Society*, 23[6], 685-688(1995). (*in Chinese*)
88. Ferreira, **CHEN Ang**, ZHI Yu, Han Jiaping, and P. M. Vilarinho, Study of (Ni<sub>0.3</sub>Zn<sub>0.7</sub>)Fe<sub>2</sub>O<sub>4</sub>-BaTiO<sub>3</sub> ceramic composites, in *Proceedings of Materials '95*, 17 September, 1995, Aveiro, Portugal.

### **1994**

89. **CHEN Ang**, ZHI Yu, BAO Yahua, DAI Xi, and JIANG Qin, A study of the BaTiO<sub>3</sub>-YBa<sub>2</sub>Cu<sub>3</sub>O<sub>y</sub> ceramic composite system, *Journal of Physics: Condensed Matter*, 6, 3553-58(1994).
90. **CHEN Ang**, ZHI Yu and BAO Yahua, A study of BaTiO<sub>3</sub>-BaPbO<sub>3</sub> ceramic composites, *Journal of Physics: Condensed Matter*, 6, 7921-25(1994).

### **1993**

91. ZHI Yu and **CHEN Ang**, A Positron Annihilation Study of SrTiO<sub>3</sub> - based Ceramics, *Journal of Physics: Condensed Matter*, 5, 1877-82(1993).
92. ZHI Yu, **CHEN Ang**, X. L. Zhang, X. Z. Wang, and B. R. Li, Dielectric properties and defect mechanism of lanthanum doped strontium-bismuth titanate ceramics, *Journal of the Chinese Ceramic Society*, 21[2], 137-141(1993). (*in Chinese*)
93. ZHI Yu, **CHEN Ang**, Zhang Xuli, Zhou Guoliang, and Wang Xiaozheng, Manganese influence on the semiconductive (Ba,Pb)TiO<sub>3</sub> ceramics, *Journal of Zhejiang University*, 27[1], 116-121(1993). (*in Chinese*)

### **1992**

94. **CHEN Ang**, ZHI Yu, Li Biaorong, Wang Shaojie, and Chen Yilong, Doping Effect of Sn on Superconductivity of YBa<sub>2</sub>Cu<sub>3</sub>O<sub>y</sub>, *Journal of Physics: Condensed Matter*, 4, 4981-87(1992).
95. **CHEN Ang** and ZHI Yu, Dielectric Properties and Complex Defect Structure in (Sr<sub>1-x</sub>Bi<sub>x</sub>)TiO<sub>3</sub> Ceramics, *Journal of Applied Physics*, 71, 4451-54(1992) .
96. **CHEN Ang** and ZHI Yu, Dielectric Properties and Defect Structure in Lanthanum Doped SrTiO<sub>3</sub> Ceramics, *Journal of Applied Physics*, 71, 6025-28(1992).
97. **CHEN Ang**, ZHI Yu, Li Biaorong, and Wang Shaojie, Positron Annihilation Study of YBa<sub>2</sub>Cu<sub>3</sub>O<sub>y</sub> Superconductors Doped with SnO<sub>2</sub>, *Physical Letter*, A165, 171-174(1992).

98. **CHEN Ang**, ZHI Yu, and Lu Zhuo, Substitution effect of Sn and/or Ca elements in  $\text{YBa}_2\text{Cu}_3\text{O}_{7-x}$  superconducting ceramics, *Chinese Journal of Low Temperature Physics*, 14[4], 289-292(1992). (in Chinese)
99. **CHEN Ang**, ZHI Yu, Li Biaorong, and Zhang Xuli, Study of YBCO superconducting ceramics with dopant, *Chinese Journal of Low Temperature Physics*, 14[6], 450-454(1992). (in Chinese)
100. **CHEN Ang**, Xu Zhuan, Fang Minghu, et al, Superconductivity in  $\text{YBa}_2\text{Cu}_3\text{O}_y - \text{CeO}_2$  ceramics ( $0 < x < 1.5$ ), *Chinese Journal of Low Temperature Physics*, 13[4], 314-318(1992). (in Chinese)
101. **CHEN Ang**, ZHI Yu, Li Biaorong, Zhang Xuli, Li Xiaohua, and Wang Shaojie, Positron annihilation study of  $\text{YBa}_2\text{Cu}_3\text{O}_y$  superconducting ceramics, *Journal of Zhejiang University*, 26[1], 120-124(1992). (in Chinese)
102. ZHI Yu, and **CHEN Ang**, Influence of sintering process on PTC behavior of  $\text{BaTiO}_3$ -based thermistor, *Journal of Zhejiang University*, 26[6], 619-620(1992). (in Chinese)
103. **CHEN Ang**, ZHI Yu, Zhang Xuli, Wang Xiaozhen, Positron annihilation study of complex-defect in Sr-Bi-Ti-O system dielectric ceramics, *Journal of Inorganic Materials*, 7[4], 423-428(1992). (in Chinese)
104. **CHEN Ang**, and ZHI Yu, A Study of Trivalent-element Doped  $\text{SrTiO}_3$  Ceramics, in the *Proceedings of International Conference on Electronic Component and Materials*, pp538-542, 1992, Hangzhou, P.R. China.
105. **CHEN Ang**, and ZHI Yu, Superconductivity of  $\text{YBaCuO}$  Ceramics with Additive  $\text{SnO}_2$ , *1st International Conference on Advanced Materials and Processing*, pp404-405, 1992, Hangzhou, P.R. China.
106. **CHEN Ang**, and ZHI Yu, Doping Effect of Ce on the Superconductivity of  $\text{YBaCuO}$  Ceramics, *1st International Conference on Advanced Materials and Processing*, pp406-407, 1992, Hangzhou, P.R. China.

#### **Before 1992**

107. Chaoqun Tang, Biaorong Li, and **CHEN Ang**, Positron Annihilation Study of Oxygen-deficient  $\text{YBa}_2\text{Cu}_3\text{O}_x$  ( $6.3 < x < 6.9$ ), *Physical Review*, B42, 8078-81(1990).
108. **CHEN Ang**, and ZHI Yu, Substitution induced metal-insulator and structural transition in  $\text{YBa}_2(\text{Cu}_{1-x}\text{M}_x)_3\text{O}_y$  ceramics (M=Trivalent Cation), *Chinese Physics Letter*, 8[10], (supplement), 132-134(1991).
109. **CHEN Ang**, and ZHI Yu, Metal-insulator transition in YBCO superconductor, *Chinese Physics Letter*, 8[10], (supplement), 129-131(1991).
110. ZHI Yu, **CHEN Ang**, X. L. Zhang, X. Z. Wang, and B. R. Li, A Study of  $\text{SrTiO}_3 - \text{Bi}_2\text{O}_3 - \text{TiO}_2$  Solid Solution Doped with MgO Additive, *Advanced Structural Materials*, Ed. Yafang Han, Elsevier Publisher, North Holland, pp535-538, 1991.
111. Yilong Chen, Biaorong Li, **CHEN Ang**, and Baofu Xu, Mossbauer Effect on Sn in the High Tc Superconductor  $\text{YBa}_2(\text{Cu}_{1-x}\text{Sn}_x)_3\text{O}_y$ , *Hyperfine Interaction*, 55, 1249-53(1990).
112. Li Biaorong, **CHEN Ang**, and Chen Yilong, Some properties of  $\text{SnO}_2$  doped YBCO Superconductors, in the *Proceeding of 2nd International Conference on Superconductors*, 174-176, 1989, Scientific Publisher, Singapore.
113. **CHEN Ang**, Li Biaorong, Defect chemistry in YBCO oxide ceramics, *Rare Metal Materials*, No.3, 254-257(1988). (in Chinese)
114. Li Biaorong, **CHEN Ang**, Defect and normal-state characteristic in YBCO oxide ceramics, *Rare Metal Materials*, No.1, 260-263(1988). (in Chinese)
115. Pan Xiaoguang, Li Biaorong, **CHEN Ang**, Relation between critical current density and specimen-section in YBCO superconductor, *Rare Metal Materials*, No.3, 310-313(1988). (in Chinese)

#### **Book Chapter:**

“Piezoelectric materials and vibrators”, Chapter 3 in <<Ultrasonic Motors>>, Ed. Chen Yong-Xiao and Guo Ji-Feng, 1994, Zhejiang University Press, Hangzhou, China. (with Guo Ji-Feng) (in Chinese)

#### **Oral Presentations in Conferences (Workshops) and seminars:**

1. "Superconducting, quantum paraelectric and quantum ferroelectric behavior in SrTiO<sub>3</sub>", 2004 International Conference on Physics Education and Frontier Research, June 28 – July 1, 2004, Shanghai, China
2. "Dielectric/Ferroelectric/Piezoelectric Materials, Physics and Applications", June 30, 2004, Fu Dan University, Shanghai, China
3. "Ferroelectric properties of SrTiO<sub>3</sub>-based solid solutions", July 1, 2004, Shanghai Institute of Ceramics, Shanghai, China
4. "Ferroelectric polymers", July 5, 2004, Nangjing University, Nangjing, China
5. "Quantum paraelectric SrTiO<sub>3</sub>", July 7, 2004, Nangjing University, Nangjing, China
6. "Correlation of dielectric and strain behavior in electroactive fluorinate-based polymers", 2004 U.S. Navy Workshop on Acoustic Transducer Materials and Devices, May 11-13, State College, PA (**Invited**)
7. "Dielectric behavior of electroactive fluorinate-based polymers", Annual APS March Meeting 2004 March 22-26, Montreal, Canada
8. "Physical nature of dielectric and strain behavior in electroactive polymers: ferroelectric relaxor or dielectric relaxor?", 2004 Williamsburg workshop on the fundamentals of ferroelectrics, February 9-11, Williamsburg, Virginia.
9. "Impurity-doping effect in quantum paraelectric SrTiO<sub>3</sub>", Annual APS March Meeting 2003, March 3-7, Austin, TX
10. "Electrostrictive properties of P(VDF-TrFE) polymers at cryogenic temperatures", Annual APS March Meeting 2003, March 3-7, Austin, TX
11. "Correlation of dielectric and electrostrictive properties of poly(vinylidene fluoride)-based polymers", 2003 U.S. Navy Workshop on Acoustic Transducer Materials and Devices, May 5-7, State College, PA (**Invited**)
12. "Phase Diagram of Pb(Zn, Nb)TiO<sub>3</sub>-PbTiO<sub>3</sub> single crystals: low temperature dielectric Anomalies", 2002 U.S. Navy Workshop on Acoustic Transducer Materials and Devices, May 13-15, Baltimore (**Invited**)
13. "Calculation of dielectric constant and loss of two-phase composites", 104<sup>th</sup> Annual Meeting of American Ceramic Society, April 28 – May 1, 2002, St. Louis.
14. "Strain behavior of Ba(Ti,Ce)O<sub>3</sub> ceramics", the 35<sup>th</sup> The International Center of Actuators and Transducers (ICAT) Smart Actuator Symposium, April 18-19, 2002 State College
15. "Effect of dc field on permittivity of PbZr<sub>0.52</sub>Ti<sub>0.48</sub>O<sub>3</sub> thin films at cryogenic temperatures", 2001 U.S. Navy Workshop on Acoustic Transducer Materials and Devices, May 14-16, Baltimore (**Invited**)
16. "Dielectric loss of SrTiO<sub>3</sub> single crystals and thin films under dc bias", 103<sup>rd</sup> Annual Meeting of American Ceramic Society, April 22-25, 2001, Indianapolis.
17. "Dielectric behavior of doped and pure SrTiO<sub>3</sub> under dc bias", 102<sup>nd</sup> Annual Meeting of American Ceramic Society, April 30 – May 3, 2000, St. Louis.
18. "Dielectric Behavior and High Tunability in Cd<sub>2</sub>Nb<sub>2</sub>O<sub>7</sub>", 102<sup>nd</sup> Annual Meeting of American Ceramic Society, April 30 – May 3, 2000, St. Louis. (**Invited**)
19. "Evolution of polarization relaxation processes in doped quantum paraelectric SrTiO<sub>3</sub>", 102<sup>nd</sup> Annual Meeting of American Ceramic Society, April 30 – May 3, 2000, St. Louis.
20. "Dielectric Polarization Processes in Bi:SrTiO<sub>3</sub>", 1999 Williamsburg workshop on the ferroelectric relaxor, February 1-3, 1999, Williamsburg, Virginia. (**Invited**)
21. "Effect of Electric Field and Post-Treatment on Dielectric Behavior of SrTiO<sub>3</sub> Single Crystal", 101<sup>ST</sup> Annual Meeting of American Ceramic Society, April 25-28, 1999, Indianapolis.
22. "Dielectric anomalies in La and Bi doped SrTiO<sub>3</sub>: The low temperature dielectric behavior", 101<sup>ST</sup> Annual Meeting of American Ceramic Society, April 25-28, 1999, Indianapolis.
23. "Dielectric properties of BaTiO<sub>3</sub>/YBaTiO composite ceramics", The European Fifth International Conferences on Electroceramics and applications, September 2-4, 1996, Aveiro, Portugal.
24. "Dielectric properties of the YBaCuO/YBaTiO composite ceramics", The European Fifth International Conferences on Electroceramics and applications, September 2-4, 1996, Aveiro, Portugal. (**Served as a session chair**)

25. “New dielectric compounds in the BaO-rich corner of BaO-Re<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> ternary system (Re=Nd, Sm, Y, La, and Pr)”, *The European Fifth International Conferences on Electroceramics and applications, September 2-4, 1996, Aveiro, Portugal.*
26. “Microwave ceramics BaO-M<sub>2</sub>O<sub>3</sub>-TiO<sub>2</sub> ternary system (M = Y, Nd, and Sm), *The First International (Chinese) Young Scholar Conference on Materials Science and Engineering, September 11-14, 1995, Xian, China*
27. “Doping Effect of Sn on the Superconductivity of YBaCuO Ceramics”, *1st International Conference (the Pacific-Rim Regions) on Advanced Materials and Processing, October 5-7, 1992, Hangzhou, China.*
28. “Superconductivity of YBaCuO Ceramics with Additive SnO<sub>2</sub>”, *1st International Conference (the Pacific-Rim Regions) on Advanced Materials and Processing, October 5-7, 1992, Hangzhou, China.*
29. “A Study of Trivalent-element Doped SrTiO<sub>3</sub> Ceramics”, *International Conference (China-Japan) on Electronic Component and Materials, September 19-21, 1992, Hangzhou, P.R. China.*
30. “Substitution induced metal-insulator and structural transition in YBa<sub>2</sub>(Cu<sub>1-x</sub>M<sub>x</sub>)<sub>3</sub>O<sub>y</sub> ceramics (M=Trivalent Cations)”, *The Young Scholar Conference on High-Tc Superconductors, October 9-12, 1990, Beijing, China*
31. “Metal-insulator transition in YBCO superconductor”, *The Conference of Young Scholar on High-Tc Superconductor, October 9-12, 1990, Beijing, China*
32. “A Study of SrTiO<sub>3</sub>-Bi<sub>2</sub>O<sub>3</sub>:TiO<sub>2</sub> Solid Solution Doped with MgO Additive”, *1989 C-MRS International Conference on Advanced Materials, September 11-14, 1989, Beijing, China.*
33. Invited Speaker, “Dielectric and ferroelectric behavior of doped quantum paraelectric SrTiO<sub>3</sub>”, *September 25, 1997, University of Augsburg, Germany*
34. Invited Speaker, “Dielectric and conducting behavior in oxides”, *December 1, 1993, University of Aveiro, Portugal.*