

เอกสารอ้างอิง

1. D. Sporn, S. merckline, M. Grand, S. Seifert, S. Wahl and A. Berger, Sol-Gel Processing of Perovskite Thin Film, Microelectronic Engineering, **29**, 161-168(1995).
2. Y. L. Tu, Fabrication and Characterization of Lead Zirconate Titanate Thin Films, Ph.D. Thesis, University of Leeds(1996).
3. T. Sumi, Y. Judai, K. Hirano, T. Ito, T. Mikawa, M. Takeo, M. Azuma, S. Hayashi, Y. Uemoto, K. Arita, T. Nasu, Y. Nakamo, Y. Nagano, A. Inoue, A. Matsuda and E. Fuji, Ferroelectric Nonvolatile Memory Technology and its Applications, Jpn.J.Appl.Phys., **35**, 1516-1520(1996).
4. Lemanov, V. Yu, A.A. Iofan and V.K. Yarmarkin, Some Physical and Technological Aspects of Designing of Ferroelectric Non-volatile SRAM, Microelectronic Engineering, **29**, 37-40(1995).
5. T. Bland, J. Obhi, A. Patel, P. Kirkby, M. Robinson and J. Kerr, Integration of Sol-Gel PZT with Silicon-on-Sapphire CMOS Circuitry, Microelectronic Engineering, **29**, 29-32(1995).
6. A. J. Moulson and J. M. Herbert, Electronics : Materials, Properties, and Applications, Chapman and Hall, London(1990).
7. S. H. Pyke, Sol-Gel Synthesis of Lead Titanate and Lead Zirconate Titanate Thin Films, Ph.D Thesis, University of Leeds(1990).
8. Y. L. Tu, M. L. Calzada, and S. J. Milne, Synthesis and Electrical Characterization of Thin Film of PT and PZT Made from a Diol-Based Sol-Gel Route, J.Am.Ceram.Soc., **79**, 441-448(1996).
9. G. Yi, Z. Wu and M.Sayer, Preparation of Pb(Zr,Ti)O₃ Thin Films by Sol-Gel Processing : Electrical, Optical and Electro-Optic Properties, J.Appl.Phys., **64**, 2717-2724(1988).
10. H. D. Chen, K. R. Udayakumar, C. J. Gaskey, L. E. Cross, J. J. Berstien and L. C. Niles, Fabrication and Electrical Properties of Lead Zirconate Titanate Thick Films, J.Am.Ceram.Soc., **79**, 2189-2192(1996).
11. A. Wu, I. M. M.Salvado, P. M. Vilarinho and J. L. Baptista, Lead Zirconate Titanate Prepared From Different Zirconium and Titanium Precursors by Sol-Gel, J.Am.Ceram.Soc., **81**, 2640-2644(1998).

12. B. D. Cullity, Elements of X-ray Diffraction, Addison-Wiley series in Metallurgy and Materials, USA(1956).
13. R. E. Newhnam and G. R. Ruschau, Smart Electroceramics, J.Am.Ceram.Soc., 74, 463-480(1991).
14. K. Kakegawa, J. Mohri, S. Sirasaki, and K. Takanashi, Sluggish Transition Between Tetragonal and Rhombohedral phases of Pb(Zr,Ti)O₃ Prepared by Application of Electric Field, J.Am.ceram.Soc., 65, 515-519(1982).
15. D. L. Hankey and J. V. Bigger, Solid-State Reactions in the System PbO-TiO₂-ZrO₂, J.Am.Ceram.Soc.,64, C172-C173(1981).
16. R. L. Moon and R. M. Fulrath, High Temperature Phase Equilibria in the PbTiO₃-PbZrO₃ system, J.Am.Ceram.Soc., 54, 124-125(1971).
17. J. J. Dih and R. Mulrath, Electrical Conductivity in Lead Zirconate Titanate Ceramics, J.Am.Ceram.Soc., 61, 9-20(1978).
18. B. S. Chandratreya, R. M. Mulrath and J. A. Pask, Relation Mechanism in the Formation of PZT Solid Solutions, J.Am.Ceram.Soc., 64, 421-425(1981).
19. C. A. Sorell, Thermal Expansion of Rhombohedral PbO, J.Am.Ceram.Soc., 53, 552-554(1970).
20. C. A. Sorell, Thermal Expansion of Tetragonal PbO, J.Am.Ceram.Soc., 53, 641-664(1970).
21. K. Yao, L. Zhang and X. Yao, Controlled Crystallization in Lead Zirconate Titanate Glass -Ceramics Prepared by the Sol-Gel Process, J.Am.Ceram.Soc., 81, 1571-1576(1998).
22. R. C. Buchanan, Ceramic Materials for Electronics: Processing, Properties and Applications, Marcel Dekker, Inc., New York(1986).
23. W. D. Kingery, H. K. Bowen and D. R. Uhlman, Introduction to Ceramics, John Wiley & Sons, New York(1991).
24. K. Uchino and K. Oh, Piezoelectric Anisotropy and Polarization Sublattice Coupling in Perovskite Crystals, J.Am.Ceram. Soc., 74, 1131-1134(1991).
25. D. L. Logan, C. S. Ashley and C. J. Brinker, Sol-Gel Film with Tailored Microstructures, Mat.Res.Soc.Symp.Proc., 271, 541-546(1992).

26. J. Livage and M. Henny, A Predict Model for Inorganic polymerisation Reaction, pp.184-195 in *Ultrastructure Processing of Advanced Ceramics Advance Ceramics*, Edited by J. D. Mackenzie and D. R. Ulrich, John Wiley and Sons, New York(1988).
27. M. Ouglicmi and G. Cartwan, Precursors for Sol-Gel Preparation, *J.Non-Cryts.Solids.*, **100**, 16-30(1988).
28. C. Sanchez, J. Livage, M. Henry and F. Babonmean, Chemical Modification of Alkoxide Precursors, *J. Non-Cryst. Solids*, **100**, 65-76(1988).
29. D. E. Bonside, C. W. Macoska and L. E. Sriver, On the Modelling of Spin-Coating, *J. Imaging Tech.*, **13**, 122-129(1987).
30. H. D. Klug and L. E. Alexander, X-ray Diffraction Procedures for Polycrystalline and Amorphous Materials, John Wiley and Sons Inc., USA(1984).
31. L. E. Scriven, Physics and Applications of Dip Coating and Spin Coating, *Mat.Res.Soc.Sym.*, **121**, 717-729(1988).
32. G. Yi and M. Sayer, Sol-Gel Processing of Complex Oxide Films, *Ceram.Bull.*, **70**, 1173-1179(1991).
33. D. J. Gallaghen and T. A. Ring, Sol-Gel Processing of Ceramic Films, *Chemica*, **43**, 298-304(1989).
34. C. D. Bunchheit, Sol-Gel Processing of PZT Thin Films: A Review of the State-Of-The-Art and Process Optimization Strategic, *Integrated Ferroelectrics*, **7**, 259-277(1995).
35. C. J. Brinker and G. W. Scherer, Sol-Gel Sciences, Academic Press, New York (1992).
36. G. W. Scherer, Recent Progress in Drying of Gels, *J.Non-CyrtS.Solids*, **147&148**, 36-374(1992).
37. A. G. Evans, M. D. Drory and M. S. Hu, The Cracking and Decohesion of Thin Films, *J.Mat.Res.*, **3**, 1043-1049(1988).
38. K. D. Budd, Structure Evolution in Sol-Gel Derived Lead Titanate Based Materials and the Applications to the Processing of Thin Dielectric Layers, Ph.D. Thesis, University of Illinois at Urbana Champaign (1986).
39. J. N. Lind and T. B. Wu, Effects of Isovalent Substitutions on Lattice Softening and Transition Character of BaTiO₃ Solid Solution, *J.Appl.Phys.*, **68**, 985-993(1990).
40. T. Tunkasiri and D. Lewis, Damage in Gallium Asenide Crystals Produced by Ion Implantaion, Abrasion and Ball Milling, *J.Mater.Sci.*, **10**, 1367-1374(1975).

41. Powder Diffraction file, Card no.5-570, 5-561, Joint Committee on Powder Diffraction Standards, Swarthmore, PA (1983).
42. Powder Diffraction file, Card no.13-307, Joint Committee on Powder Diffraction Standards, Swarthmore, PA (1983).
43. Powder Diffraction file, Card no.21-1272, Joint Committee on Powder Diffraction Standards, Swarthmore, PA (1983).
44. Powder Diffraction file, Card no.33-784, Joint Committee on Powder Diffraction Standards, Swarthmore, PA (1983).
45. Powder Diffraction file, Card no.21-1276, Joint Committee on Powder Diffraction Standards, Swarthmore, PA (1983).
46. M. Klee, R. Eusemann, R. Waser, W. Brand and H. van-Hal, Processing and Electrical Properties of $\text{Pb}(\text{Zr}_x\text{Ti}_{1-x})\text{O}_3$ ($x=0.2-0.75$) Films : Comparison of Metallo-Organic Decomposition, J.Appl.Phys., **72**, 1566-1576(1992).
47. กฤษณา บุญชม, สมบัติเพียโซอิเล็กทริกของของผสม PZT/PVC แบบ 0-3, วิทยานิพนธ์วิทยาศาสตรมหาบัณฑิต, มหาวิทยาลัยเชียงใหม่(2541).
48. H. P.Klug and L. E. Alexander, X-ray Diffraction Procedures for Polycrystalline and Amorphous Materials, John Wiley and Sons. Inc., USA(1974).
49. Kakegawa, O. Matsunaga, T. Kato and Y. Sasaki, Compositional change and Compositional Fluctuation in $\text{Pb}(\text{Zr,Ti})\text{O}_3$ Containing excess PbO, J.Am.Ceram.Soc., **78**, 1071-1075(1995).
50. S. Y. Chen and I. W. Chen, Temperature -Time Texture Transition of $\text{Pb}(\text{Zr}_{1-x}\text{Ti}_x)\text{O}_3$ of Pb-rich Intermediate Phases, J.Am.Ceram.Soc., **77**, 2332-2336(1994).
51. T. Tunkasiri and G. Rujijanukul, Characterization of Barium Titanate Prepared by Precipitation Technique, Mater.Sci.letter, **13**, 165-169(1994).