



## บรรณานุกรม

- [1] Zhao, J., Li, L., Qi, J. and Gui, Z. (2002). The variable thermal sensitivity of strontium-lead titanate semiconducting ceramics. *Journal of Electroceramic*, 9, 173-177.
- [2] Forrester, J.S., Zobec, J.S., Phelan, D. and Kisi, E.H. (2004). Syntensis of  $\text{PbTiO}_3$  ceramics using mechanical alloying and solid state sintering. *Journal of solid state sintering*, 177, 3553-3559.
- [3] Rahmati, B., Fleig, J., Sigle, W., Bischoff, E., Maier, J. and Ruhle, M. (2005). Oxidation of reduced polycrystalline Nb-doped  $\text{SrTiO}_3$ : characterization of surface islands. *Surface Science*, 595, 115-126.
- [4] Moulson, A.J. and Herbert, J.M. (1993). *Electroceramics : materials properties and applications*. London: Chapman and Hall.
- [5] Ianculescu, A., Braileanu, A. and Voicu, G. (2007). Synthesis, microstructure and dielectric properties of antimony-doped strontium titanate ceramics. *Journal of the European Ceramics Society*, 27, 1123-1127.
- [6] Shen, Z., Liu, H., Wu, Z., Yao, Z., Cao, M. and Luo, D. (2007). Preparation and dielectric properties of  $\text{Sr}(\text{Ti}_{0.95}\text{Zr}_{0.05})\text{O}_3$  ceramics doped with  $\text{CaO-TiO}_2\text{-SiO}_2(\text{CTS})$ . *Materials Science and Engineering B*, 136, 11-14.
- [7] Li, L., Zhao, J. and Gui, Z. (2004). The thermal sensitivity and dielectric properties of  $\text{SrTiO}_3$ -based ceramics. *Ceramics International*, 30, 1073-1078.
- [8] Ohta, H. (2007). Thermoelectrics based on strontium titanate. *Materials Today*, 10, 44-49.
- [9] Xing, X., Chen, J., Deng, J. and Liu, G. (2003). Solid solution  $\text{Pb}_{1-x}\text{Sr}_x\text{TiO}_3$  and Its thermal expansion. *Journal of Alloys and Compounds*, 360, 286-289.
- [10] Zhang, F., Karaki, T. and Adachi, M. (2005). Synthesis of nanosized  $(\text{Pb,Sr})\text{TiO}_3$  perovskite powders by coprecipitation processing. *Powder Technology*, 159,13-16.

- [11] Wang, P.J., Zeng, Z.Q., Gui, Z.L. and Long, T.L. (1997). Strontium-lead titanate ceramics with positive temperature coefficient of resistance. *Materials Letters*, 30, 275-277.
- [12] Zhao, J., Li, L. and Gui, Z. (2003). The PTCR effect of  $\text{Ag}^+$  modified strontium-lead titanate semiconducting ceramics doped with excess PbO. *Materials Science and Engineering B*, 99, 313-315.
- [13] Jain, M., Majumder, S.B., Guo, R., Bhalla, A.S. and Katiyar, R.S. (2002). Synthesis and characterization of lead strontium titanate thin films by sol-gel technique. *Materials Letters*, 56, 692-697.
- [14] Yoon, D.H., Kim, J.H., Park, J.H. and Yoon, K.H. (2001). Characteristics of  $(\text{Pb}_{1-x}\text{Sr}_x)\text{TiO}_3$  thin film prepared by a chemical solution processing. *Materials Research Bulletin*, 36, 265-276.
- [15] Kong, L.B., Ma, J., Huang, H. and Zhang, R.F. (2002). Effect of excess PbO on microstructure and electrical properties of PLZT/60/40 ceramics derived from a high-energy ball milling process. *Journal of Alloys and Compound*, 345, 238-245.
- [16] Zhang, Y., Kuang, A. and Chan, L.W. (2003). Effects of excess PbO on the preparation process of modified lead-calcium titanate ceramics. *Microelectronic Engineering*, 159, 918-925.
- [17] Miclea, C., Tanasoiu, C.T., Amarande, L., Gheorghiu, A., Spanulescu, I., Plavitu, C., et al. (2007). Effect of lead content on the structure and piezoelectric properties of hard type Lead titanate-zirconate ceramics. *Journal of the European Ceramics Society*, 27, 4055-4059.
- [18] Bongkarn, T., Rujjanagul, G. and Milne, S.J. (2004). Effect of excess PbO on phase formation and properties of  $(\text{Pb}_{0.90}\text{Ba}_{0.10})\text{ZrO}_3$  ceramics. *Materials Letters*, 6, 1200-1205.

- [19] Wang, M.C., Huang, M.S. and Wu, N.C. (2002). Effect of PbO excess on sintering and piezoelectric properties of  $12\text{Pb}(\text{Ni}_{1/3}\text{Sb}_{2/3})\text{O}_3\text{-}40\text{PbZrO}_3\text{-}48\text{PbTiO}_3$  ceramics. *Materials Chemistry and Physics*, 77, 103-109.
- [20] Amarande, L., Miclea, C. and Tanasoiu, C. (2002). Effect of excess PbO on the structure and piezoelectric properties of bi-modified  $\text{PbTiO}_3$  ceramics. *Journal of European Ceramics Society*, 22, 1269-1275.
- [21] ศุภสโรช หมั่นสิทธิ์. (2535). *ฟิสิกส์ของวัสดุ*. กรุงเทพฯ: ศูนย์สื่อเสริมกรุงเทพ.
- [22] Hammond, C. (2003). *The basics of crystallography and diffraction second edition*. New York: Oxford University Press.
- [23] Haertling, G.H. (1999). Ferroelectric ceramics: history and technology. *Journal American Ceramic Societies*, 82, 797-799.
- [24] แม้น อมรสิทธิ์ และสมชัย อัครทิวา. (1998). *วัสดุวิศวกรรม*. กรุงเทพฯ: แมคกรอ-ฮิล.
- [25] Moulson, A.J. and Herbert, J.M. (2003). *Electroceramics: materials, properties, applications*. England: West Sussex PO19 8SQ.
- [26] Reed, J.S. (1996). *Introduction to the principles of ceramic processing*. New York: CRC Press.
- [27] Schwartz, M. (1992). *Ceramics process*. New York: Mcgrawhill.
- [28] สุกานดา เจียรศิริสมบุญ. (1992). กระบวนการประดิษฐ์สำหรับเซรามิกขั้นสูง. ใน *เอกสารประกอบการสอนรายวิชา ว.วศ. 210443*. เชียงใหม่: ภาควิชาฟิสิกส์ คณะวิทยาศาสตร์ มหาวิทยาลัยเชียงใหม่.
- [29] Thermal gravimetric analysis (TGA). (n.d.). Retrieved July, 20, 2005, from [www.amft.fugraz.at](http://www.amft.fugraz.at).
- [30] วีระศักดิ์ อุดมกิจเดชา. (2543). *เครื่องมือวิจัยทางวิทยาศาสตร์: ทฤษฎีและหลักการทำงานเบื้องต้น*. กรุงเทพฯ: โรงพิมพ์แห่งจุฬาลงกรณ์มหาวิทยาลัย.
- [31] Kang, D.H. Kim, J.H. Park, J.H. and Yoon, K.H. (2001). Characteristics of  $(\text{Pb}_{1-x}\text{Sr}_x)\text{TiO}_3$  thin film prepared by a chemical solution processing. *Materials Research Bulletin*, 36, 265-276.

- [32] Bongkarn, T. and Rujijanagul, G. (2006). Effect of excess PbO on microstructure and mechanical properties of  $(\text{PbO}_{0.975}\text{Ba}_{0.025})\text{ZrO}_3$  ceramics. *Current Applied Physics*, 6, 319-322.
- [33] Udomporn, A. and Ananta, S. (2004). Effect of calcination condition on phase formation and particle size of lead titanate powders synthesized by the solid-state seaction. *Materials Letters*, 58, 1154– 1159.
- [34] Tagawa, H. and Igarashi, K. (1986). Reaction of strontium carbonate with anatase and rutile. *Journal of American ceramic society*, 69, 310-314.
- [35] Cullity, B.C. (1956). *X-ray diffractio*. USA: Addison-Wesley Publishing Company.
- [36] Rivera, I., Kumar, A., Mendoza, F. and Katiyar, R.S. (2008). Investigation of dielectric, electrical and optical properties of  $\text{Pb}_{0.5}\text{Sr}_{0.5}\text{TiO}_3$  ceramics. *Physica B*, 403, 2423-2430.
- [37] Subrahmanyam, S. and Goo, E. (1998). Nucleation of the ferroelectric phase in the  $(\text{Pb}_x\text{Sr}_{1-x})\text{TiO}_3$  system. *Acta Mater*, 46, 817-822.
- [38] Chu, S.Y., Chen, T.Y. and Tsai, I.T. (2003). Effects of sintering temperature on the dielectric and piezoelectric properties of Nb-doped PZT ceramics and their applications. *Integrated Ferroelectrics*, 58, 1293-1303.
- [39] Yimnirun, R., Tipakontitikul, R. and Ananta, S. (2006). Effect of sintering temperature on densification and dielectric properties of  $\text{Pb}(\text{Zr}_{0.44}\text{Ti}_{0.56})\text{O}_3$  ceramics. *International Journal of Modern Physics B*, 20, 2415-2424.
- [40] Chaisan, W., Yimnirun, R., Ananta, S. and Cann, D.P. (2007). Dielectric and ferroelectric propertieess of lead zirconate titanate-barium titanate ceramics prepared by a modified mixed-oxide method. *Materials Chemistry and Physics*, 104, 113-118.
- [41] Chaisan, W., Yimniran, R., Ananta, S. and Cann, D.P. (2006). Phase development and deielctric properties of  $(1-x)\text{Pb}(\text{Zr}_{0.52}\text{Ti}_{0.48})\text{O}_3-x\text{BaTiO}_3$  ceramics. *Materials Science and Engineering B*, 132, 300-306.

- [42] Udornporn, A., Pengpat, K. and Ananta, S. (2004). Highly dense lead titanate ceramics from refined processing. *Journal of the European Ceramics Society*, 24, 185-188.
- [43] Garg, A. and Agrawal, D.C. (1999). Effect of net PbO content on mechanical and electromechanical properties of lead zirconate titanate ceramics. *Materials Science and Engineering B*, 56, 46-50.
- [44] Zeng, T., Dong, X.L., Chen, H. and Wang, Y.L. (2006). The effects of sintering behavior on piezoelectric properties of porous PZT ceramics for hydrophone application. *Materials Science and Engineering B*, 131, 181-185.
- [45] Kang, B.S., Choi, D.G. and Choi, S.K. (1998). Effects of grain size on pyroelectric and dielectric properties of  $Pb_{0.9}La_{0.1}TiO_3$  ceramics. *Journal of Materials Science: Materials In Electronics*, 9, 139-144.
- [46] Okazaki, K. and Nagata, K. (1973). Effects of grain size and porosity on electrical and optical properties of PLZT ceramics. *Journal of the American Ceramic Society*, 56, 82-86.
- [47] Sumang, R. and Bongkarn, T. (2009). Phase formation, microstructure and phase transition of lead barium titanate ceramics: effect of PbO content. *Ferroelectrics*, 383, 57-64.