REFERENCES

Abdelkafi Z, Abdelmoula N, Khemakhem H, Bidault O, Maglione M. Dielectric relaxation in $BaTi_{0.85}(Fe_{1/2}Nb_{1/2})_{0.15}O_3$ perovskite ceramic. **J. Appl. Phys.** 2006; 100: 114111.

Adams TB, Sinclair DC, West AR. Giant barrier layer capacitance effects in $CaCu_3Ti_4O_{12}$ ceramics. **Adv. Mater.** 2002; 14: 1321-1323.

_____, Sinclair DC, West AR. Influence of processing conditions on the electrical properties of $CaCu_3Ti_4O_{12}$ ceramics. **J. Am. Ceram. Soc.** 2006; 89: 3129-3135

Ahmad MM, Yamada K. Superionic $PbSnF_4$: A giant dielectric constant material. **Appl. Phys.Lett.** 2007; 91: 052912.

Antolini E. $Li_xNi_{1-x}O$ ($0 < x \leq 0.3$) solid solutions: formation, structure and transport properties. **Mater. Chem. Phys.** 2003; 82: 937-948.

_____, Leonini M, Massarotti V, Marini A, Berbenni V, Capsoni D. On the role of lithium carbonate in the preparation of doped nickel oxide cathodes for molten carbonate fuel cells. **Solid State Ionics** 1990; 39: 251-161.

_____, Ferretti M. Structure change of $Li_xNi_{1-x}O$ during synthesis. **Mater. Lett.** 1997; 30: 59-63.

Bengone O, Alouani M, Blochl P, Hugel J. Implementation of the projector augmented-wave *LDA+U* method: Application to the electronic structure of NiO. **Phys. Rev. B** 2000; 62: 16292.

Biju V, Khadar MA. DC conductivity of consolidated nanoparticles of NiO. **Mater. Res. Bull.** 2001; 36: 216-33.

Bosman AJ, van Daal HJ. Small-polaron versus band conduction in some transition-metal oxides. **Adv. Phys.** 1970; 19: 1-117.

Cai J, Lin Y, Cheng B, Nan CW, He J, Wu Y, et al. Dielectric and nonlinear electrical behaviors observed in Mn-doped $CaCu_3Ti_4O_{12}$ ceramic. **Appl. Phys. Lett.** 2007; 91: 2529052.

Chen K, Yuan SK, Li PL, Gao F, Liu J, Li GL, et al. High permittivity in Zr doped NiO ceramics **J. Appl. Phys.** 2007; 102: 034103.

Chen GJ, Hsiao YJ, Chang YS, Chai YL. Structure and high dielectric permittivity of $Li_{0.01}M_{0.05}Ni_{0.94}O$ (M=V and W) ceramics. **J. Alloys Comp.** 2009; 474: 237-240.

Cheng B, Lin YH, Mei A, Cai JN, Nan CW, He J. Effects of grain modification on the dielectric properties of $A_{0.03}Ti_{0.10}Ni_{0.87}O$ (A=K^+,Mg^{2+},Y^{3+}) ceramics. **Appl. Phys. Lett.** 2008; 92: 142903.

Chung SY, Kim ID, Kang SJL. Strong nonlinear current–voltage behaviour in perovskite-derivative calcium copper titanate. **Nat. Mater.** 2004; 3: 774.

Chiang YM, Birnie D, Kingery WD. **Physical Ceramics**. New York: Wiley; 1997.

Cole KS, Cole RH. Dispersion and Absorption in Dielectrics I. Alternating Current Characteristics. **J. Chem. Phys.** 1941; 9: 341-351.

Cross LE. Relaxor ferroelectrics. **Ferroelectrics** 1987; 76: 241-267.

Cullity BD, Stock SR. **Elements of X-ray diffraction**. 3rd ed. New Jersey: Prentice Hall; 2001.

Dakhel AA. Giant dielectric permittivity in Li and Pr co-doped NiO ceramics. **J. Alloys Comp.** 2009; 488: 31-34.

Deng ZM, Wu JB, Fan LZ, Nan CW. Dielectric behavior of Li and Ti co-doped NiO/PVDF composites. **Chem. Phys. Lett.** 2003; 376: 389-394.

Deng ZM, Nan CW. Dielectric properties of LTNO ceramics and LTNO/PVDF composites. **Ceram. Int.** 2005; 31: 349-351.

Dharmaraj N, Park HC, Kim CK, Kim HY, Lee DR. Nickel titanate nanofibers by electrospinning. **Mater. Chem. Phys.** 2004; 87: 5-9.

Fang TT, Liu CP. Evidence of the internal domains for inducing the anomalously high dielectric constant of $CaCu_3Ti_4O_{12}$. **Chem. Mater.** 2005; 17: 5167-5171.

_____, Chung HY, Liou SC. Manifestation of the electrode-contact effect on the dielectric response and impedance spectra of $CaSiO_3$-doped $CaCu_3Ti_4O_{12}$. **J. Appl. Phys.** 2009; 106: 154106.

German RM, Munir ZA. A correlation between the Pilling-Bedworth ratio and the radius of curvature of metallic substrates with coherent thin oxide layers. **Oxid. Met.** 1974; 8: 123.

Guo M, Wu T, Liu T, Wang SX, Zhao XZ. Characterization of $CaCu_3Ti_4O_{12}$ varistor-capacitor ceramics by impedance spectroscopy. **J. Appl. Phys.** 2006; 99: 124113.

Gross B. On the theory of dielectric loss. **Phys. Rev.** 1941; 59: 748-750.

Hence LL, West JK. **Principles of Electronic Ceramics**. New York: Wiley; 1990.

Homes CC, Vogt T, Shapiro SM, Wakimoto S, Ramirez AP. Optical response of high-dielectric-constant perovskite-related oxide. **Science** 2001; 293: 673.

Hsiao YJ, Change YS, Fang TH, Chai TL, Chung CY, Chang YH. High dielectric permittivity of Li and Ta codoped NiO ceramics. **J. Phys D: Appl. Phys.** 2007; 40: 863-868.

Hunpratub S, Thongbai P, Yamwong T, Yimnirun R, Maensiri S. Dielectric relaxations and dielectric response in multiferroic $BiFeO_3$ ceramics. **Appl. Phys. Lett.** 2009; 94: 062904.

Ibach H, Luth H. **Solid state physics: An introduction to principles of materials science**. 3rd ed. Berlin: Spinger-Verlag; 2003.

Iida Y. Time dependence of NiO-Li_2O solid solution formation. **J. Am. Ceram. Soc.** 1960; 43(2): 117-118.

Ikeda N. Ohsumi H, Ohwada K, Ishii K, Inami T, Kakurai K, et al. Ferroelectricity from iron valence ordering in the charge-frustrated system $LuFe_2O_4$. **Nature (London)** 2005; 436: 1136.

Irvine JTS, Sinclair DC, West AR. Electroceramics: Characterization by impedance spectroscopy. **Adv. Mater.** 1990; 2: 132-138.

Jana PK, Sarkar S, Chaudhuri BK. Low loss giant dielectric and electrical transport behavior of $K_xTi_yNi_{1-x-y}O$ system. **Appl. Phys. Lett.** 2006; 88: 182901.

_____, Sarkar S, Chaudhuri BK. Effects of K doping and annealing on the grain size and giant dielectric constant of $K_xTi_{0.02}Ni_{0.98-x}O$ ceramics. **phys. stat. sol. (a)** 2007a; 204(5): 1580-1588.

_____, Sarkar S, Chaudhuri BK, Sakata H. Effect of dc electric field on conductivity and giant permittivity of $K_xTi_yNi_{1-x-y}O$. **Appl. Phys. Lett.** 2007b; 90: 242913.

Jana PK, Sarkar S, Karmakar S, Chaudhuri BK. Conduction mechanism and dielectric relaxation in high dielectric $K_xTi_yNi_{1-x-y}O$. **J. Appl. Phys.** 2007c; 102: 084105.

_____, Sarkar S, Karmakar S, Chaudhuri BK. Maxwell-Wagner polarization mechanism in potassium and titanium doped nickel oxide showing giant dielectric permittivity. **J. Phys. D: Appl. Phys.** 2007d; 40: 556-560.

_____, Sarkar S, Sakata H, Watanabe T, Chaudhuri BK. Microstructure and dielectric properties of $Na_xTi_yNi_{1-x-y}O$ (x = 0.05–0.30, y = 0.02). **J. Phys D: Appl Phys.** 2008; 41: 065403.

Johnk CTA. Engineering electromagnetic. New York: Wiley; 1988.

Kao KC. **Dielectric phenomena in solids**. California: Elsevier; 2004.

Kimura T, Sekio Y, Nakamura H, Siegrist T, Ramirez AP. Cupric oxide as induced-multiferroic with high-T_C, **Nature Mater.** 2008; 7: 291.

Krohns S, Lunkenheimer P, Ebbinghaus SG, Loidl1 A. Broadband dielectric spectroscopy on single-crystalline and ceramic $CaCu_3Ti_4O_{12}$. **Appl. Phys. Lett.** 2007; 91: 022910.

_____, Lunkenheimer P, Ebbinghaus SG, Loidl1 A. Colossal dielectric constants in single-crystalline and ceramic $CaCu_3Ti_4O_{12}$ investigated by broadband dielectric spectroscopy. **J. Appl. Phys.** 2008; 103: 2084107.

Kuiper P, Kruizinga G, Ghijsen J, Sawatzky GA. Character of hole in $Li_xNi_{1-x}O$ and their magnetic behavior. **Phys. Rev. Lett.** 1989; 62: 221-224.

Kunes J, Anisimov VI, Lukoyanov AV, Vollhardt D. Local correlations and hole doping in NiO: A dynamical mean-field study. **Phys. Rev. B** 2007a; 75: 165115.

Kunes J, Anisimov VI, Skornyakov SL, Lukoyanov AV, Vollhardt D. NiO: Correlated band structure of a charge-transfer insulator **Phys. Rev. Lett.** 2007b; 99: 156404.

Li M, Feteira A, Sinclair DC. Relaxor ferroelectric-like high effective permittivity in leaky dielectrics/oxide semiconductors induced by electrode effects: A case study of CuO ceramics. **J. Appl. Phys.** 2009a; 105: 114109.

_____, Shen Z, Nygern M, Feteira A, Sinclair DC, West AR. Origin(s) of the apparent high permittivity in $CaCu_3Ti_4O_{12}$ ceramics: clarification on the contributions from internal barrier layer capacitor and sample-electrode contact effects. **J. Appl. Phys.** 2009b; 106: 014106.

Li Z, Wang C, Ma X, Yual L, Sun J. Synthesis, structure and electrochemical properties of $Li_xNi_{1-x}O$. **Mater. Chem. Phys.** 2005; 91: 36-39.

Lin SP, Fung KZ, Hon YM, Hon MH. Crystallization kinetics and mechanism of the $Li_xNi_{2-x}O_2$ ($0 < x \leq 1$) from Li_2CO_3 and NiO. **J. Crystal Growth.** 2002; 234: 176-183.

_____, Wang J, Jiang L, Chen Y, Nan CW. High permittivity Li and Al doped NiO ceramics. **Appl. Phys. Lett.** 2004; 85: 5664-5666.

_____, Jiang L, Zhao R, Nan CW. High-permittivity core/shell stuctured NiO-based ceramics and their dielectric response mechanism. **Phys. Rev. B** 2005a; 72: 014103.

_____, Zhao R, Wang J, Cai J, Nan CW, Wang Y, et al. Polarization of high-permittivity dielectric NiO-based ceramics. **J. Am. Ceram. Soc.** 2005b; 88: 1808-1811.

_____, Li M, Nan CW, Li J, Wu J, He J. Grain and grain boundary effects in high-permittivity dielectric NiO-based ceramics. **Appl. Phys. Lett.** 2006a; 89: 032907.

_____, Wang J, Cai J, Ying M, Zhao R, Li M, Nan CW. Ferromagnetism and electrical transport in Fe-doped NiO. **Phys. Rev. B** 2006b; 73: 093308.

Liu J, Duan CG, Yin WG, Mei WN, Smith RW, Hardy JR. Large dielectric constant and Maxwell-Wagner relaxation ins $Bi_{2/3}Cu_3Ti_4O_{12}$. **Phys. Rev. B** 2004; 70: 144106.

_____,Liu J, Duan CG, Mei WN, Smith RW, Hardy JR. Dielectric properties and Maxwell-Wagner relaxation of compounds $ACu_3Ti_4O_{12}$ (A=Ca, $Bi_{2/3}$, $Y_{2/3}$, $La_{2/3}$). **J. Appl. Phys.** 2005; 98: 093703.

Liu YY, Chen XM, Liu XQ, Li L. Giant dielectric response and relaxor behaviors induced by charge and defect ordering in $Sr(Fe_{1/2}Nb_{1/2})O_3$ ceramics. **Appl. Phys. Lett.** 2007a; 90: 192905.

_____, Chen XM, Liu XQ, Li L. Dielectric relaxations in $Ca(Fe_{1/2}Nb_{1/2})O_3$ complex perovskite ceramics. **Appl. Phys. Lett.** 2007b; 90: 262904.

Loehman RE, Fitzpatrick LE. **Characterization of ceramics**. Greenwich: Manning; 1993.

Lopes KP, Cavalcante LS, Simoes AZ, Varela JA, Longo E, Leite ER. $NiTiO_3$ powders obtained by polymeric precursor method: Synthesis and characterization. **J. Alloys Comp.** 2009; 468: 327-332.

Lunkenheimer P, Bobnar V, Pronin AV, Ritus AI, Volkov AA, Loidl A. Nonintrinsic origin of the colossal dielectric constants in $CaCu_3Ti_4O_{12}$. **Phys. Rev. B** 2002; 66: 052105.

_____, Fichtl R, Ebbinghaus SG, Loidl A. Nonintrinsic origin of the colossal dielectric constants in $CaCu_3Ti_4O_{12}$. **Phys. Rev. B** 2004; 70: 172102.

Mckay JM, Henrich VE. Structure of valence and conduction levels in NiO. **Phys. Rev. Lett.** 1984; 53(24): 2343-2346.

Mckelvey JP. **Solid state physics for engineering and materials science**. 1st ed. Florida: Krieger Publishing; 1993.

Macdonald JR. **Impedance Spectroscopy**. 2nd ed. New York: Wiley; 2005.

Maensiri S, Thongbai P, Yamwong T. Giant dielectric response in (Li, Ti)-doped NiO ceramics synthesized by the polymerized complex method. **Acta Mat**. 2007; 55: 2851-2861.

Man CW. Physics of inhomogeneous inorganic materials. **Prog. Mater. Sci.** 1993; 37(1): 1-116.

Manna S, Dutta K, De SK. High dielectric permittivity observed in Na and Al doped NiO. **J. Phys D: Appl Phys.** 2008; 41: 155416.

_____, De SK. Giant dielectric permittivity observed in Li and Zr co-doped NiO High. **Solid State Commun.** 2010; 150: 399-404.

Mattheiss LF. Electronic structure of the 3*d* transition monoxides. I. Energy band results. **Phys. Rev. B** 1972a; 5: 290-306.

_____. Electronic structure of the 3*d* transition monoxides. II. Interpretation. **Phys. Rev. B** 1972b; 5: 306-315.

Morrison FD, Sinclair DC, West AR. Characterization of lanthanum-doped barium titanate ceramics using impedance spectroscopy. **J. Am. Ceram. Soc.** 2001; 84(3): 531-538.

Moulson AJ, Herbert JM. **Electroceramics**. 2nd ed. New York: Wiley; 2003.

Murugan AV, Samuel V, Navale SC, Ravi V. Phase evolution of $NiTiO_3$ by coprecipitation method. **Mater. Lett.** 2006; 60: 1791-1792.

Ni L, Chen XM. Dielectric relaxations and formation mechanism of giant dielectric constant step in $CaCu_3Ti_4O_{12}$ ceramics. **Appl. Phys. Lett.** 2007; 91: 122905.

Raevski IP, Prosandeev SA, Bogatin AS, Malitskaya MA, Jastrabik J. High dielectric permittivity in $\boldsymbol{A}Fe_{1/2}\boldsymbol{B}_{1/2}O_3$ nonferroelectric perovskite ceramics ($\boldsymbol{A}$=Ba, Sr, Ca; $\boldsymbol{B}$=Nb, Ta, Sb). **J. Appl. Phys.** 2003; 93(7): 4130–4136.

Ramirez AP, Subramanian MA, Gardel M, Blumberg G, Li D, Vogt T, et al. Giant dielectric constant response in a copper-titanate. **Solid State Commun.** 2000; 115: 217.

Rahaman MN. **Ceramics processing and sintering**. 2nd ed. New York: Marcel Dekker; 2003.

Saha SK, DaSilva M, Hang Q, Sands T, Janes DB. A nanocapacitor with giant dielectric permittivity. **Nanotechnology** 2006; 17: 2284-2288.

Sarkar S, Jana PK, Chaudhuri BK. Copper (II) oxide as a giant dielectric material. **Appl. Phys. Lett**. 2006; 89: 212905.

_____, Jana PK, Chaudhuri BK. Colossal internal barrier layer capacitance effect in polycrystalline copper (II) oxide. **Appl. Phys. Lett**. 2008a; 92: 022905.

_____, Jana PK, Chaudhuri BK. Origin of electrically heterogeneous microstructure in CuO from scanning tunneling spectroscopy study. **Appl. Phys. Lett**. 2008b; 92: 142901.

Schuler TM, Ederer DL, Itza-Ortiz S, Woods GT, Callcott TA, Woicik JC. Character of the insulating state in NiO: A mixture of charge-transfer and Mott-Hubbard character. **Phys. Rev. B** 2005; 71: 115113.

Scott JF. High-dielectric constant thin films for dynamic random access memories (DRAM). **Annu. Rev. Mater. Sci.** 1998; 28: 79-100.

Shannon RD. Revised effective ionic radii and systematic studies of interatomic distances in halides and chalcogenides. **Acta Cryst.** 1976; A32: 751-767.

Shao SF, Zhang JL, Zheng P, Zhong WL, Wang CL. Microstructure and electrical properties of $CaCu_3Ti_4O_{12}$ ceramics. **J. Appl. Phys.** 2006; 99: 084106.

Shin W, Murayama N. High performance p-type thermoelectric oxide based on NiO. **Mater. Lett.** 2000; 6: 302-306.

Sinclair DC, West AR. Impedance and modulus spectroscopy of semiconducting $BaTiO_3$ showing positive temperature coefficient of resistance. **J. Appl. Phys.** 1989; 66: 3850.

_____, Adams TB, Morrison FD, West AR. $CaCu_3Ti_4O_{12}$: One-step internal barrier layer capacitor. **Appl. Phys. Lett.** 2002; 80: 2153-2155.

Suryanarayana C, Norton MG. **X-ray diffraction: A practical approach**. 3rd ed. New York: Plenum Press; 1998.

Taguchi M, Matsunami M, Ishida Y, Eguchi R, Chainani A, Takata Y, et al. Revisiting the valence-band and core-Level photoemission spectra of NiO. **Phys. Rev. Lett.** 2008; 100: 06401.

Takahashi M, Igarashi J, Nomura T. Analysis of resonant inelastic x-ray scattering at the *K* edge in NiO. **Phys. Rev. B** 2007; 75: 235113.

Tasi JK, Wu TB. Non-ohmic characteristics of ZnO-V_2O_5 ceramics. **J. App. Phys.** 1994; 76: 4817.

Thongbai P, Masingboon C, Maensiri S, Yamwong T, Wongsaenmai S, Yimnirun R. Giant dielectric behaviour of $CaCu_3Ti_4O_{12}$ subjected to post-sintering annealing and uniaxial stress. **J. Phys: Condens Matter.** 2007; 19: 236208.

Van Elp J, Eskes H, Kuiper P, Sawatzky GA. Electronic structure of Li-doped NiO. **Phys. Rev. B** 1992; 45(4): 1612-1622.

Van Houten S, Semiconduction in $Li_xNi_{1-x}O$. **J. Phys. Chem. Solids** 1960; 17: 7-17.

Viehland D, Li JF, Jang SJ, Cross LE, M Wutting. Dipolar–glass model for lead magnesium niobate. **Phys. Rev. B** 1991; 43: 8316-8320.

Wang CC, Yan YJ, Zhang LW, Cui MY, Xie GL, Cao BS. Maxwell–Wagner relaxation in $CaCu_3Ti_4O_{12}$/Ag composites. **Scripta Mater.** 2006; 54: 1501–1504.

_____, Zhang LW. Surface-layer effect in $CaCu_3Ti_4O_{12}$. **Appl. Phys. Letts.** 2006; 88: 042906.

_____, Cui YM, Zhang LW. Dielectric properties of $TbMnO_3$ ceramics. **Appl. Phys. Lett.** 2007; 90: 012904.

Wahab MA. **Solid State Physics; Structure and Properties of materials**. 2nd ed. Harrow, U. K.: Alpha Science; 2005.

Waser R, Hagenbeck R. Grain boundaries in dielectric and mixed-conducting materials. **Acta Mat**. 2000; 48: 797-825.

West RW, Adams TB, Morrisom FD, Sinclair DC. Novel high capacitance materials:- $BaTiO_3$:La and $CaCu_3Ti_4O_{12}$. **J. Eur. Ceram. Soc.** 2004; 24: 1439-1448.

Wu JB, Nan CW, Lin YH, Deng Y. Giant dielectric permittivity observed in Li and Ti doped NiO. **Phys. Rev. Lett**. 2002; 89: 217601.

_____, Nan J, Nan CW, Lin YH, Deng Y, Zhao S. Analysis of AC electrical properties of (Li and Ti)-doped NiO. **Mater. Sci. Eng. B** 2003; B99: 294–297.

Wu P, Ligatchev V, Yu ZG, Zheng J, Sullivan MB, Zeng Y. Defects in codoped NiO with gigantic dielectric response. **Phys. Rev. B** 2009; 79: 235122.

Yamamoto S, Kakihana M, Kato S. A polymer complex solution route to the low-temperature synthesis of tetragonal $Zr_{0.88}Ce_{0.12}O$ with a reduced amount of organic substance. **J. Alloys Comp.** 2000; 297: 81-86.

Zaanen J, Sawatzky GA, Allen JW. Band gabs and electronic structure of transition-metalcompounds. **Phys. Rev. Lett.** 1985; 55(4): 418-421.

Zhang JL, Zheng P, Wang CL, Zhao ML, Li JC, Wang JF. Dielectric dispersion of $CaCu_3Ti_4O_{12}$ ceramics at high temperatures. **Appl. Phys. Lett.** 2005; 87: 142901.

Zhao F, Yue Z, Pei J, Yang D, Gui Z, Li L. Dielectric abnormities in $BaTi_{0.9}(Ni_{1/2}W_{1/2})_{0.1}O_3$ giant dielectric constant ceramics. **Appl. Phys. Lett.** 2007; 91: 052903.

APPENDICES

Appendix A: Paper publications

1. **Thongbai P**, Pongha S, Yamwong T, Meansiri S. Effects of Fe, Ti, and V doping on the microstructure and electrical properties of grain and grain boundary of giant dielectric NiO-based ceramics. **Appl. Phys. Lett.** 2009; 94: 022908.

2. **Thongbai P**, Yamwong T, Meansiri S. Electrical responses in high permittivity dielectric (Li, Fe)-doped NiO ceramics. **Appl. Phys. Lett.** 2009; 94: 152905.

3. **Thongbai P**, Maensiri S, Yamwong T, Yimnirun R. Giant dielectric properties of $CaCu_3Ti_4O_{12}$/(Li,Ti)-doped NiO composites subjected to postsintering annealing and compressive stress. **J. Appl. Phys.** 2008; 103: 114107.

4. **Thongbai P**, Maensiri S, Yamwong T. Effects of grain, grain boundary, and dc electric field on giant dielectric response in high purity CuO ceramics. **J. Appl. Phys.** 2008; 104: 036107.

5. **Thongbai P**, Yamwong T, Meansiri S. The sintering temperature effects on the electrical and dielectric properties of $Li_{0.05}Ti_{0.02}Ni_{0.93}O$ ceramics prepared by a direct thermal decomposition method. **J. Appl. Phys.** 2008; 104: 074109.

6. **Thongbai P**, Yamwong T, Maensiri S. Correlation between giant dielectric response and electrical conductivity of CuO ceramic. **Solid State Commun.** 2008; 147: 385-387.

7. **Thongbai P**, Tangwancharoen S, Yamwong T, Maensiri S. Dielectric relaxation and dielectric response mechanism in (Li, Ti)-doped NiO ceramics. **J Phys.: Condens. Matter** 2008; 20: 395227.

8. **Thongbai P**, Yamwong T, Meansiri S. Effects of Li and Fe doping on dielectric relaxation behavior in (Li, Fe)-doped NiO ceramics. **Mater. Chem. Phys. Inpress**

9. Tangwancharoen S, **Thongbai P**, Yamwong T, Maensiri S. Dielectric and electrical properties of giant dielectric (Li, Al)-doped NiO ceramics. **Mater. Chem. Phys.** 2009; 115: 585.

10. Pongha S, **Thongbai P**, Yamwong T, Maensiri S. Giant dielectric response and polarization relaxation mechanism in (Li, V)-doped NiO ceramics. **Scripta Mater.** 2009; 60: 870-873.

Appendix B: Presentations

1. **Thongbai P**, Yamwong T, Maensiri S. Giant dielectric response in $CaCu_3Ti_4O_{12}$/ (Li, Ti)–doped NiO nanocomposites subjected to post–sintering and uniaxial stress. **The 2nd International Workshop on Smart Materials and Structures**; August 2007, Kiel, Germany. (Oral presentation)

2. **Thongbai P**, Yamwong T, Maensiri S. High Dielectric response in (Li, Ti)–doped NiO Ceramics Prepared by a Simple Decomposition Method. **Smart/Intelligent Materials and Nanotechnology and 2nd International Workshop on Functional Materials and Nanotechnology (Smartmat-'08 & IWORM-2)**; 22-25 April 2008, Chiang Mai, Thailand. (Oral presentation)

3. **Thongbai P**, Yamwong T, Maensiri S. Giant Dielectric Permittivity Observed in Li and Fe doped NiO. **The 6th Asian Meeting on Electroceramics (AMEC-6)**; 22-24 October 2008, Tsukuba, Japan. (Oral presentation)

4. **Thongbai P**, Yamwong T, Maensiri S. Effects of insulating layers and dc bias on dielectric relaxation behavior of $Li_{0.05}Fe_{0.10}Ni_{0.85}O$ polycrystalline ceramics. **Siam Physics Congress 2009**; 19-21 March 2009, Phetchburi, Thailand. (Oral presentation)

5. **Thongbai P**, Yamwong T, Maensiri S. Effect of Ti doping on The Electrical and High Dielectric Properties of (Li, Ti)–doped NiO Ceramics Prepared by a Simple PVA sol–gel Method. **The 2nd International Conference on Science and Technology for Sustainable Development of the Greater Mekong Sub–region**; 2-3 October 2008, Hanoi, Vietnam. (Poster presentation)

6. **Thongbai P**, Yamwong T, Maensiri S. Magnetic and Giant Dielectric Properties of $(1-x)CaCu_3Ti_4O_{12}–xSr_{0.7}La_{0.3}Fe_{11.3}Co_{0.3}O_{19}$ Composites. **Asian Magnetic Conference 2008**; 10-13 December 2008, Busan, Korea. (Poster presentation)

7. **Thongbai P**, Yamwong T, Maensiri S. Effect of nanocrystalline film exhibiting on surface of (Li, Ti)-doped NiO ceramics on their dielectric properties. **4th International Conference on Surface, Coating, and Nanostructure materials**; 19-22 October 2009, Rome, Italy. (Oral presentation)

8. **Thongbai P**, Tanachat Eknapakul, Yamwong T, Maensiri S. Synthesis of nanocrystalline $Li_{0.05}In_{0.05}Ni_{0.90}O$ powder and its bulk giant dielectric properties. **IEEE International Nanoelectronics Conference**; 3-8 January 2010, City University of Hong Kong, Hong Kong. (Poster presentation)

9. **Thongbai P**, Yamwong T, Maensiri S. Giant dielectric behavior of $Li_xTi_yNi_{1-x-y}O$ ceramics. **Siam Physics Congress 2010**; 25-27 March 2010, Kanchanaburi, Thailand. (Oral presentation)

VITAE

The author, Prasit Tongbai, was born on the 29nd May in 1979 in Buriram Province, Thailand. He graduated Bachelor degree in Physics from the Department of Physics, Faculty of Science at Khon Kaen University in 2001. He started his graduate study at the same department and graduated in 2005. His M. Sc. thesis involved a study on dielectric properties of $CaCu_3Ti_4O_{12}$-$Li_{0.3}Ti_{0.02}Ni_{0.68}O$ nanocomposites. He then worked as a lecturer in School of Physics, Faculty of Science, Udonthani Rajabhat University, Udonthani, Thailand. In 2006, He returned to his education, by pursuing his Doctoral's degree in the Department of Physics at Khon Kaen University. His Ph.D. thesis was entitled "Dielectric Properties of NiO-based Ceramics" which was under the supervision of Assoc. Prof. Dr. Santi Maensiri and Dr. Teerapon Yamwong. His Ph.D. study was supported by grant from The National Science and Technology Development Agency through the Thailand Graduate Institute of Science and Technology (TGIST) Programs and Graduate School, Khon Kaen University.