

REFERENCES

- Amatucci, G.G., Tarascon, J.M., Klein, L.C. (1996) CoO₂, the end member of the Li_xCoO₂ solid solution. Journal of Electrochem Society, 143 (3) 1114–1123
- Amatucci, G.G., Tarascon, J.M., Klein, L.C. (1996) Cobalt dissolution in LiCoO₂-Based non-aqueous rechargeable batteries. Journal of Solid State Ionics, 83, 167–173
- Amin, R., Maier, J. (2008) Effect of annealing on transport properties of LiFePO₄: towards a defect chemical model. Journal of Solid State Ionics, 178, 1831–1836
- Baskaran, R., Kuwata, N., Kamishima, O., Kawamura, J., Selvasekarapandian S. (2009) Structural and electrochemical studies on thin film LiNi_{0.8}Co_{0.2}O₂ by PLD for micro battery. Journal of Solid State Ionics, 180, 636–643
- Besenhard, JO. (1999) Handbook of battery materials, Weinheim: Wiley-VCH
- Belov, D., Yang, M.-H. (2008) Investigation of the kinetic mechanism in overcharge process for Li-ion battery. Journal of Solid State Ionics, 179, 1816–1821
- Brinker, CJ., Scherer, GW. (1990) Sol-gel science. San Diego: Academic Press
- Chang, L.S., Hong, Y.G., Shang, B.W., Bin, C., Xing, H.Y., Jian G. (2004) Preparation of Mn₃O₄ Nanofibres via anElectrospinning Technique. Chinese Chemical Letters, 15 471-474
- Cheng, J.G., Zha, S.W., Huang, J., Liu, X.Q., Meng, G.Y. (2003) Sintering behavior and electrical conductivity of Ce_{0.9} Gd_{0.1} O_{1.95} powder prepared by the gel-casting process. Materials Chemistry and Physics, 78 791–795
- Dedryve`re, R., Olivier-Fourcade, J., Jumas, J. C., Denis, S., and Vicente C. Pe`rez (2000), Lithium Insertion in Copper, Indium, Tin Thiospinels Characterized by ¹¹⁹Sn Mössbauer Spectroscopy and Rietveld Analysis. Journal of Chemistry of Materials, 12, 1439-1445

- Doh, C.-H., Kim, D.-H., Kim, H.-S., Shin, H.-M., Jeong, Y.-D., Moon, S.-I., Jin, B.-S., Eom, S.W., Kim, H.-S., Kim, K.-W., Oh, D.-H. (2008) Veluchamy, Thermal and electrochemical behaviour of C/Li_xCoO₂ cell during safety test. *Journal of Power Sources*, 175, 881–885
- Fang, T.-T., Chung, H.-Y. (2008) Reassessment of the electronic-conduction behavior above Verwey-like transition of Ni²⁺- and Al³⁺-doped LiMn₂O₄. *Journal of the American Ceramic Society*, 91 (1) 342–345
- Fu, L.J., Liu, H., Li, C., Wu, Y.P., Rahm, E., Holze, R., Wu, H.Q. (2005) Electrode materials for lithium secondary batteries prepared by sol–gel methods. *Progress in Materials Science*, 50, 881–928
- Harrel, JH., Sakamoto, J., Dunn, B. (2003) Non-hydrolytic sol–gel synthesis and electrochemical characterization of tin-based oxide aerogels. *Journal of Power Sources*, 115 19–26
- Hongtao, C., Marcos, Z., and David, L. (2005) Sol-Gel Synthesis of Nanoscaled Spinels Using Propylene Oxide as a Gelation Agent. *Journal of Sol-Gel Science and Technology*, 35, 175–181
- Hongyu, G., Changlu, S., Yichun, L., Na, Y., Xinghua, Y. (2004) Fabrication of NiCo₂O₄ nanofibers by electrospinning. *Journal of Solid State Communications*, 131 107–109
- Hui, W., Rui, Z., Xinxin, L., Dandan, L., and Wei, P. (2007) Electrospinning of Fe, Co, and Ni Nanofibers: Synthesis, Assembly, and Magnetic Properties. *Journal of Chemistry of Materials*, 19, 3506–3511
- Hyun, P. (2005) Fabrication of Lanthanum copper oxide nanofiber by Electrospinning 66, 5034
- Jeffrey, W. F. (2010) Recent developments in cathode materials for lithium ion Batteries. *Journal of Power Sources*, 195, 939–954
- Jordi, C., Zlatka, S., Jeremy, J. T., Duncan, H. G., and Palacín, M.R. (2008) Towards New Negative Electrode Materials for Li-Ion Batteries Electrochemical Properties of LiNiN. *Journal of Chemistry of Materials*, 20, 1676–1678

- Kavan, L., GraÅntzel, M. (2002) Facile synthesis of nanocrystalline $\text{Li}_4\text{Ti}_5\text{O}_{12}$ spinel exhibiting fast Li insertion. *Electrochim Solid-State Letters*, 5 A39-A42
- Kobayashi Y., Okamoto, M., Tomita, A. (1996) Preparation of tin oxide monolith by the sol-gel method from inorganic salt. *Journal of Materials Science*, 31, 6125-6127
- Kosova, N.V., Devyatkina, E.T., Kaichev, V.V., Kellerman, D.G. (2008) Effect of electronic state of ions on the electrochemical properties of layered cathode materials $\text{LiNi}_{1-2x}\text{Co}_x\text{Mn}_x\text{O}_2$, Russ. *Journal of Electrochem*, 44 (5) 543–549
- Krtík, P., Fattakhov, D., Kavan, L., Burnside, S., GraÅntzel, M. (2000) Lithium insertion into self-organized mesoscopic TiO_2 (anatase) electrodes. *Journal of Solid State Ionics*, 135, 101
- Larsen, G., Velarde-Ortiz, R., Minchow, K., Barrero, A., Loscertales, I.G. (2003) A method for making inorganic and hybrid (organic/inorganic) fibers and vesicles with diameters in the submicrometer and micrometer range via sol-gel chemistry and electrically forced liquid jets. *Journal of the American Chemical Society*, 125 1154–1155
- Lee, D.G., Gupta, R.K., Cho, Y.S., Hwang, K.T. (2009) Improved electrochemical properties of $\text{Li}(\text{Ni}0.7\text{Co}0.3)\text{O}_2$ cathode for lithium ion batteries with controlled sintering conditions. *Journal of Applied Electrochemistry*, 39, 671–679
- Lee, J.-W., Park, S.-M., Kim, H.-J. (2009) Effect of $\text{LiNi}_{1/2}\text{Mn}_{1/2}\text{O}_2$ coating on the electrochemical performance of Li-Mn spinel. *Journal of Electrochemistry Communications*, 11, 1101–1104
- Li, D., Yuan, C., Dong, J., Peng, Z., Zhou, Y., (2008) Synthesis and electrochemical properties of $\text{LiNi}_{0.85-x}\text{Co}_x\text{Mn}_{0.15}\text{O}_2$ as cathode materials for lithium-ion batteries. *Journal of Solid State Electrochem*, 12, 323–327
- Li, J., Wang, L., Zhang, Q., He, X.-M. (2009) Synthesis and characterization of $\text{LiNi}_{0.6}\text{Mn}_{0.4-x}\text{Co}_x\text{O}_2$ as cathode materials for Li-ion batteries. *Journal of Power Sources*, 189, 28–33

- Linden, D. (Ed.), (1995) *Handbook of Batteries*, 2nd edn., McGraw-Hill, New York, pp. 36.44–36.48
- Livage, J., Henry, M., Sanchze, C. (1989) Sol-gel chemistry of transition metal Oxides. *Progress in Solid State Chemistry*, 18, 259.
- Manthiram, A., Kim, J. (1999) Oxide electrodes for rechargeable lithium batteries. *Recent Research developments in electrochemistry*, 2, 31
- Masoud, S. N., Fatemeh, D., Masoud, F. (2009) Synthesis and characterization of spinel-type CuAl₂O₄ nanocrystalline by modified sol-gel method. *Journal of Sol-Gel Science and Technology*, 51, 48–52
- Ning, LJ., Wu, YP., Fang, SB., Rahm, E., Holze, R. (2004) Materials prepared for lithium ion batteries by mechanochemical methods. *Journal of Power Sources*, 133, 229
- Nishi, Y. (1997), Something about lithium ion batteries. Tokyo: Shokabo Press
- Ohzuku, T., Takeda, S., Iwanaga, M. (1999) Solid-state redox potentials for Li[Me_{1/2}Mn_{3/2}]O₄ (Me: 3d-transition metal) having spinel-framework structures: a series of 5 volt materials for advanced lithium-ion batteries. *Journal of Power Sources*, 81–82, 90–94
- Padhi, A.K., Nanjundaswamy, K.S., Masquelier, C., Okada, S., Goodenough, J. (1997) Effect of structure on the Fe³⁺/Fe²⁺ redox couple in iron phosphates. *Journal of Electrochem Society*, 144 (5) (1997) 1609–1613
- Peramunage, D., Abraham, KM. (1998) Preparation of micron-sized Li₄Ti₅O₁₂ and its electrochemistry in polyacrylonitrile electrolyte-based lithium cells. *Journal of Electrochem Society*, 145, 2609
- Rho, YH., Kanamura, K. (2004) Preparation of Li_{4/3}Ti_{5/3}O₄ thin film electrodes by a PVP sol-gel coating method and their electrochemical properties. *Journal of Electrochem Society*, 151, A106
- Rougier, A., Bravereau, P., Delmas, D. (1996) Optimization of the composition of the Li^{1-z}Ni^{1+z}O₂ electrode materials: Structural, magnetic, and electrochemical studies. *Journal of Electrochem Society*, 143 (4) 1168–1175

- Rosciano, F., Colin, J.-F., La Mantia, F., Tran, N., Novák, P. (2009) Electrochemical stress at high potential to investigate phase transitions in $\text{Li}_{1.1}(\text{Ni}_{1/3}\text{Mn}_{1/3}\text{Co}_{1/3})_{0.9}\text{O}_2$. Electrochemical and Solid-State Letters, 12 (7) A140–A144
- Salavati-Niasari, M., Davar, F., Mazaheri, M. (2008) Bright blue pigment CoAl_2O_4 nanocrystals prepared by modified sol–gel method. Journal of Materials Letters, 62, 1890
- Shen, CM., Zhang, XG., Zhou, YK., Li, HL. (2002) Preparation and characterization of nanocrystalline $\text{Li}_4\text{Ti}_5\text{O}_{12}$ by sol–gel method. Journal of Materials Chemistry and Physics, 78, 437
- Shi, X., Wang, C., Ma, X., Sun, J. (2009) Synthesis and electrochemical properties of $\text{LiNi}_{0.9}\text{Co}_{0.1}\text{O}_2$ cathode material for lithium secondary battery. Journal of Materials Chemistry and Physics, 113, 780–783
- Shukla, S., Patil, S., Kuiry, S.C., Rahmana, Z., Dua, T., Ludwigb, L., Parish, C., Seal, S. (2003) Synthesis and characterization of sol–gel derived nanocrystalline tin oxide thin film as hydrogen sensor. Journal of Sensors and Actuators, 63, 203
- Soliman, S.A., Abu-Zied, B.M. (2009) Thermal genesis, characterization, and electrical conductivity measurements of terbium oxide catalyst obtained from terbium acetate. Journal of Thermochimica Acta, 491 84–91
- Stewart, S.G., Srinivasan, V., Newman, J. (2008) Modeling the performance of lithiumion batteries and capacitors during hybrid-electric-vehicle operation. Journal of Electrochemical Society, 155 (9) A664–A671
- Supaphol, P., Chuangchote, S. (2008) On the electrospinning of poly (vinyl alcohol) nanofiber mats: A revisit. Wiley InterScience, 108 969-978
- Takamura, T. (2002), Trends in advanced batteries and key materials in the new century. Journal of Solid State Ionics, 152–153, 19– 34
- Thackaray, M.M., Kock, de A., David, W.I.F. (1993) Synthesis and structural characterization of defect spinels in the lithium-manganese-oxide system. Materials Research Bulletin, 28, 1041–1049

- Thomas, M.G.S.R., David, W.I.F. J.B. (1984) Goodenough. Materials Research Bulletin, 19, 179
- Traversa, E., Di Vona, M.L., Nunziante, P., Licoccia, S., Yoon, JW., Sasaki, T., Koshizaki, N. (2001) Photoelectrochemical properties of sol-gel processed Ag-TiO₂ nanocomposite thin films. Journal of Sol-Gel Science and Technology, 22 115–123
- Verma, A., Kar, M., Agnihotry, SA. (2007) Aging effect of diethanolamine stabilized sol on different properties of TiO₂ films: Electrochromic applications. Journal of Solar Energy Materials & Solar Cells, 91 1305–1312
- Wang, H., Lu, X., Zhao, Y., Wang, C. (2006) Preparation and characterization of ZnS:Cu/PVA composite nanofibers via electrospinning. Journal of Materials Letters, 60 2480–2484
- Whittingham, M.S. (2004), Lithium batteries and cathode materials. Chemical Reviews, 104, 4271–4301
- Wu, YP., Wan, C., Jiang, C., Li, L., Li, YX. (1998) Research on anode materials of Tin oxides for lithium ion secondary battery. Journal of Chemistry, 10, 24
- Wu, YP., Wan, C., Jiang, C., Fang, SB. (2002) Lithium ion secondary batteries. Beijing: Chemical Industry Press
- Wu, YP., Rahm, E., Holze, R. (2002) Effects of heteroatoms on electrochemical performance of electrode materials for lithium ion batteries. Journal of Electrochim Acta, 47, 3491
- Wu, YP., Rahm, E., Holze, R. (2003) Preparation of electrode materials for lithium ion batteries by non-classic methods. Chinese Journal of Power Sources, 27, 45
- Wu, YP., Rahm, E., Holze, R. (2003) Preparation of subsidiary materials for lithium secondary batteries by composite technologies. Chinese Journal of Power Sources, 27, 260

- Yuan, Y.F., Wu, H.M., Guo, S.Y., Wu, J.B., Yang, J.L., Wang, X.L., Tu, J.P. (2008) Preparation, characteristics and electrochemical properties of surface-modified LiMn₂O₄ by doped LiNi_{0.05}Mn_{1.95}O₄. Journal of Applied Surface Science, 255, 2225–2229
- Zhang, R., Lee, J. Y., and Liu, Z. (2002) Pechini process-derived tin oxide and tin oxide-graphite composites for lithium-ion batteries. Journal of Power Sources, 112, 596–605
- Zhang, X., Fedkiw, P. S., Khan, S. A., Pourdeyhimi B. (2009) Electrospun Composite Nanofibers for Lithium-Ion Batteries. National Textile Center Annual Report: September 2010

CURRICULUM VITAE

Name: Mr. Tada Bintawihok

Date of birth: August 16, 1986

Nationality: Thai

University Education:

2005-2008 Bachelor Degree of Chemistry, Faculty of Science, Chiang Mai University, Chiang Mai, Thailand

Proceedings:

1. Bintawihok, T.; Luengnaruemitchai, A.; Chaisuwan, T.; and Wongkasemjit, S. (2011, April 26) Preparation of Copper-Indium-Tin Mixed Oxide (CuInSnO_4) Nanofibers via Sol-gel and Electrospinning Techniques. Proceedings of the 17th PPC Symposium Petroleum, Petrochemicals, and Polymers, Bangkok, Thailand.

Presentation:

1. Bintawihok, T.; Luengnaruemitchai, A.; Chaisuwan, T.; and Wongkasemjit, S. (2011, April 26) Preparation of Copper-Indium-Tin Mixed Oxide (CuInSnO_4) Nanofibers via Sol-gel and Electrospinning Techniques. Paper presented at the 17th PPC Symposium Petroleum, Petrochemicals, and Polymers, Bangkok, Thailand.