

เอกสารอ้างอิง

- [1] www.neutron.rmutphysics.com/sciencenews/index.php?option=com_content&task=view&id=470&Itemid=0&limit=1&limitstart=7
- [2] www.vcharkarn.com/varticle/324
- [3] www.il.mahidol.ac.th/e-media/nano/Page/Unit2-5.html
- [4] www.manager.co.th/Science/ViewNews.aspx?NewsID=9510000128559
- [5] www.student.chula.ac.th/~53370750/nano%20cloth.html
- [6] www.manager.co.th/Science/ViewNews.aspx?NewsID=9510000020403
- [7] promgong.wordpress.com/2007/07/19/ซิลเวอร์นาโนฆ่าเชื้อโรค-2/
- [8] www.manager.co.th/Science/ViewNews.aspx?NewsID=9520000043163
- [9] T. Joseph and M. Morrison. Nanotechnology in agriculture and food. Europ Nanotechnology Gateway, Nanoforum report, 2006. Available from www.nanoforum.org
- [10] www.manager.co.th/science/viewnews.aspx?NewsID=9560000103860
- [11] nstda.or.th/rural/public/100%20articles-stkc/33.pdf
- [12] <http://th.wikipedia.org/wiki/นาโนเทคโนโลยี>
- [13] <http://www.vcharkarn.com/varticle/352>
- [14] archive.lib.cmu.ac.th/full/T/2552/aphys0852pp_ch2.pdf
- [15] http://nanotech-me.blogspot.com/2009_12_01_archive.html (befor 14) p8
- [16] disayaphong.wordpress.com/2008/11/03/nanosilver/
- [17] www.prime-nano.com/#!ag/c132q
- [18] Morones, J.R., *et al*, *Nanotechnology*, 16, 2346 (2005). The bactericidal effect of silver nanoparticles
- [19] www.chemistry.science.msu.ac.th/download/K_L/Acid_base.pdf
- [20] nanotech-me.blogspot.com/2009/12/silver-nano.html
- [21] Detsri, E., Dubas, S. T. Interfacial polymerization of polyaniline and its Layer by Layer assembly into polyelectrolyte multilayer thin film *Journal of Applied polymer Science* 2013.1.28, 558-565
- [22] www.journal.kmutnb.ac.th/journal/49106255413454.pdf
- [23] K. Hatada, T. Kitayama, *Macromolecular design of polymeric materials*, Marcel Dekker, Inc., 1997, USA.
- [24] openi.nlm.nih.gov/detailedresult.php?img=3231435_sensors-11-06425f3&req=4

- [25] www.smela.umd.edu/polymer-actuators/pani-fiber.html
- [26] <http://www.seem.kmutt.ac.th/research/pentec/download/Chapter2011.pdf>
- [27] J. Stejskal, A. Riede, D. Hlavatá, J. Prokeá M.Helmstedt, and P. Holler, "The effect of polymerization temperature on molecular weight, crystallinity, and electrical conductivity of polyaniline," *Synthetic Metals*, vol. 96, pp.55-61, 1998
- [28] W.A. Gazotti and M.-A. De Paoli, "High yieldpreparation of a soluble polyaniline derivative,"*Synthetic Metals*, vol. 80, pp. 263-269, 1996.
- [29] Jinsung Park *et al* 2012 *Nanotechnology* 23 365705. The work function of doped polyaniline nanoparticles observed by Kelvin probe force microscopy
- [30] Huang and Zhang, 2001; Kong et al., 2010;The high flux poly(m-phenylene isophthalamide) nano filtration membrane for dye purification and desali-nation *Desalination* 282 :19-26
- [31] R. K. Iler (1966). "Multilayers of colloidal particles". *Journal of Colloid and Interface Science* 21: 569. doi:10.1016/0095-8522(66)90018-3
- [32] Gero Decher, Jong-Dal Hong (2011). "Buildup of ultrathin multilayer films by a self-assembly process, consecutive adsorption of anionic and cationic bipolar amphiphiles on charged surfaces". *Macromolecular Symposia* 46: 321. doi:10.1002/masy.19910460145
- [33] Fuoss RM, Sadek H. Mutual interaction of polyelectrolytes. *Science* 1949; 110: 552-554
- [34] Thünemann AF, Müller M, Dautzenberg H, Joanny JF, Löwen H. Polyelectrolyte complexes. *Adv Polym Sci* 2004; 166: 16-33
- [35] Lankalapalli S, Kolapali VRM. Polyelectrolyte complexes: A review of their applicability in drug delivery technology. *Indian J Pharm Sci* 2009; 71(5): 481-487
- [36] Thoedtoon Champaiboon ,2007 .Polyelectrolyte multilayer film containing polydiacetylene vesicles for naked eye detection of aromatic compounds, Chulalongkorn University
- [37] Dhawan, S.K.; Kumar, D.; Ram, M.K.; Chandra, S.; Trivedi, D.C. 1997. "Application of conducting polyaniline as sensor material for ammonia" *Sens. Actuators, B* 40, 99.
- [38] Ambrosi, A.; Morrin, A.; Smyth, M.R.; Killard, A.J. 2008. "The application of conducting polymer nanoparticle electrodes to the sensing of ascorbic acid" *Anal. Chim. Acta* 609, 37.
- [39] H. Guo, H. Zhu, H. Lin, and J. Zhang, "Polyaniline/Fe₃O₄ nanocomposites synthesized under the direction of cationic surfactant," *Materials Letters*, vol. 62, pp.2196-2199, 2008.

- [40] O. Ngamna, A. Moorin, A.J. Killard, S.E.Moulton, M.R. Smyth, and G.G. Wallace, "Inkjet Printable Polyaniline Nanoformulations," *Langmuir*, vol.23, pp. 8569-5874, 2007.]
- [41] A. Morrin, F. Wilbeer, O. Ngamna, S.E.Moulton, A.J. Killard, G.G. Wallace, and M.R.Smyth, "Novel biosensor fabrication methodology based on processable conducting polyaniline nanoparticles," *Electrochemistry Communications*, vol.7, pp.317-322, 2005.
- [42] <https://fys.kuleuven.be/iks/nvsf/experimental-facilities/x-ray-diffraction-2013-bruker-d8-discover>
- [43] orgchem.colorado.edu/Spectroscopy/irtutor/aminesir.html
- [44] <http://www.home.agilent.com/agilent/editorial.jsp?cc=TH&lc=eng&ckey=1774141&nid=-33986.0.02&id=1774141>
- [45] <https://sjhsr.wikispaces.com/AFM>
- [46] www.nano.kmitl.ac.th/index.php/tool/219-atomic-force-microscope-afm-.html
- [47] www.il.mahidol.ac.th/e-media/nano/Page/Unit4-5.html
- [48] physics.ucf.edu/~roldan/gallery.html
- [49] faculty.sdmiramar.edu/fgarces/LabMatters/Instruments/UV_Vis/Cary50.htm
- [50] cnx.org/content/m34525/latest/
- [51] <http://share.psu.ac.th/blog/easysci/17648>
- [52] <http://www.mfu.ac.th/center/stic/index.php/micro-analysis-instrument-menu/item/178-zetasizer-nano-zs90.html>
- [53] http://en.wikipedia.org/wiki/File:Diagram_of_zeta_potential_and_slipping_planeV2.svg
- [54] วารสารวิชาการพระจอมเกล้าพระนครเหนือ ปีที่ 21 ฉบับที่ 1 ม.ค. - เม.ย. 2554 The Journal of KMUTNB., Vol. 21, No. 1, Jan. - Apr. 2011
- [55] Yu.A. Krutyakov, A.A. Kudrinsky, A.Yu. Olenin, G.V. Lisichkin. Synthesis of highly stable silver colloids stabilized with water soluble sulfonated polyaniline. *Applied Surface Science*. (2010) 7037–7042
- [56] Sofiane Bouazzaa*, Veronique Alonzob, Didier Haucharda. Synthesis and characterization of Ag nanoparticles–polyaniline composite powder material. *Synthetic Metals*. (2009) 1612–1619
- [57] P. Paulraj, N. Janaki, S. Sandhya, K. Pandian*. Single pot synthesis of polyaniline protected silver nanoparticles by interfacial polymerization and study its application on

electrochemical oxidation of hydrazine. *Colloids and Surfaces A: Physicochem. Eng. Aspects* 377 (2011) 28–34

- [58] Shengyu Jing a, Shuangxi Xing a,b, Lianxiang Yu b, Yan Wua, Chun Zhao a. Synthesis and characterization of Ag/polyaniline core–shell nanocomposites based on silver nanoparticles colloid. *Materials Letters* 61 (2007) 2794–2797
- [59] Jiangtao Chen, Jie Yang, Xingbin Yan*, Qunji Xue. NH₃ and HCl sensing characteristics of polyaniline nanofibers deposited on commercial ceramic substrates using interfacial polymerization. *Synthetic Metals* 160 (2010) 2452–2458