

## REFERENCES

- Abbasi, T. & Abbasi, S., A. (2010). Production of clean energy by anaerobic digestion of phytomass-New prospects for a global warming amelioration technology. *Renewable and Sustainable Energy Reviews* 14, 1653–1659
- Aberer, W., Hahn, M., Klade, M., Seebacher, U., Spok, A., & Wallner, K. (2002). *Collection of information on enzymes*. European Communities.
- Abdul Nasir, A. A. (2007). *Institutionalizing solid waste management in Malaysia*. Department of National Solid Waste Management, Ministry of Housing and Local Government Malaysia.
- Abioye, P. O., Abdul Aziz, A., & Agamuthu, P. (2009). Enhanced biodegradation of used engine oil in soil amended with organic wastes. *Water, Air and Soil Pollution* 209, (1-4), 173-179.
- Abu Eusuf, M., Che Omar, C. M., Shamzani, A. M. D., & Mansor, I. (2007). *An overview on waste generation characteristics in some selected local authorities in Malaysia*. Proceedings of the International Conference on Sustainable Solid Waste Management, 5 - 7 September 2007, Chennai, India. p 118-125.
- Acuna-Arguelles, M. E., Gutierrez-Rojas, M., Viniestra-Gonzalez, G., & Favela-Torres, E. (1994). Effect of water activity on exo-pectinase production by *Aspergillus niger* CH<sub>4</sub> on solid state fermentation. *Biotechnology Letters*, 16, 23–28.
- Adan, O.C.G., & Samson, R.A. (1994). Fungal disfigurement of interior finishes. In: Sing, J. (Ed.), *Building Mycology Management of Decay and Health in Buildings*. Chapman & Hall, London, 115–121.
- Adejoye, O. D., Adebayo-Tayo, B. C., Ogunjobi, A. A., & Afolabi, O. O. (2007). Physicochemical studies in *Schizophyllum commune* (Fries) a Nigerian edible fungus. *World Applied Science Journal*, 2(1), 73 – 76.
- Agamuthu, P. (2001). *Solid waste: Principles and management*. Kuala Lumpur, Malaysia: University of Malaya Press, 174 – 179.
- Agamuthu, P. (2010). Global warming and waste (Editorial). *Malaysian Journal of Science*. 29: i-ii
- Agamuthu, P., Fauziah, S. H., & Kahlil Khidzir (2009). Drivers of sustainable waste management in Asia. *Waste Management and Research*, 27, 625-633.
- Agamuthu, P., Fauziah, S. H., & Kahlil Khidzir. (2008). Evolution of solid waste management in Malaysia: Impacts and implications of the solid waste bill, 2007. *Journal of Material Cycles Waste Management*, 11, 96-103.
- Agamuthu, P., Mohd Jamil, M., Fauziah, S. H., & Noorazamimah Aiza, A. (2007). *Health and environmental impacts of reclamation of ex-mining land - A Malaysian Case Study*. Proceedings of the 2007 International Symposium on Environmental Science and Technology (ISEST), China, pp 42 - 47.

Ahmad Fariz, M. (2008). Chapter 3: Recycling System in Malaysia: Case Studies on Industrial Waste in ERIA Research Project Report 2008 No6.1: *3R Policies for Southeast and East Asia*, 53-72.

Aidoo, K. E., Hendry, R., & Wood, B. J. B. (1981). Estimation of fungal growth in a solid state system. *European Journal of Applied Microbiology Biotechnology*, 12, 6-9.

Alam, M. Z., Muhammad, N., & Mahmat, M. E. (2005). Production of cellulase from oil palm biomass as substrate by solid state bioconversion. *American Journal of Applied Science*, 2(2), 569-572.

Alriksson, B., Rose, S. H., van Zyl, W. H., Sjode, A., Nilvebrant, N. O., & Jossen, L. F. (2009). Cellulase production from spent lignocellulose hydrolysates by recombinant *Aspergillus niger*. *Applied and Environmental Microbiology*, 75(8), 2366–2374.

Alva, S., Anupama, J., Salva, J., Chiu, Y. Y., Vyshali, P., Shruti, M., Yoheetha, B. S., Bhavya, D., Purvi, J., Ruchi, K., Kumudini, B. S., & Varalakshmi, K. N. (2007). Production and characterization of fungal amylase enzyme isolated from *Aspergillus* sp. jgi 12 in solid state culture. *African Journal of Biotechnology*, 6(5), 576-581.

American Mushroom Institute (AMI). (2005). Spent Mushroom Substrate: *Scientific Research and Practical Applications*, 23.

Andersen, J. K., Boldrin, A., Christensen, T. H., & Scheutz, C. (2010). Greenhouse gas emissions from home composting of organic household waste. *Waste Management*, 30, 2475-2482.

AOAC (Association of Official Analytical Chemists), International. (2006). Official Methods of Analysis.

AOAC Official Method 930.29 Protein in Dried Milk

AOAC Official Method 991.20 Nitrogen (Total) in Milk Kjeldahl Methods

Arora, D.S., & Gill, P. K. (2000). Laccase production by some white rot fungi under different nutritional conditions. *Bioresource Technology*, 73, 283-285.

Arora, D. S., & Gill, P. K. (2001). Comparison of two assay procedures for lignin peroxidase. *Enzyme and Microbial Technology*, 28, 602 - 605.

Arora, D.S., Chander, M., & Gill, P. K. (2002). Involvement of lignin peroxidase, manganese peroxidase and laccase in the degradation and selective ligninolysis of wheat straw. *International Biodegradation and Biodegradation*, 50, 115-120.

Azin, M., Moravej, R., & Zareh, D. (2007). Production of xylanase by *Trichoderma longibrachiatum* on a mixture of wheat bran and wheat straw: Optimization of culture condition by Taguchi method. *Enzyme and Microbial Technology*, 40, 801-805.

Ano, T., Jin, G. Y., Mizumoto, S., Rahman, M. S., Okuno, K., & Shoda, M. (2009). Solid state fermentation of lipopeptide antibiotic iturin A by using a novel solid state fermentation reactor system. *Journal of Environmental Sciences*, 21(1), S162-S165.

- Bai, R., & Sutanto, M. (2002). The practice and challenges of solid waste management in Singapore. *Waste Management, Volume, 22(5)*, 557-567.
- Bailey, M. J., Biely, P., & Poutanen, K. (1992). Laboratory testing of methods of assay of xylanase activity. *Journal of Biotechnology, 23*, 257 – 270.
- Bak, J. S., Ko, J. K., Choi, I. G., Park, Y. C., Seo, J. H., & Kim, K. H. (2009). Fungal pretreatment of lignocellulose by *Phanerochaete chrysosporium* to produce ethanol from rice straw. *Biotechnology and Bioengineering, 104(3)*, 471–482.
- Baldrian, P., & Gabriel, J. (2002). Copper and cadmium increase laccase activity in *Pleurotus ostreatus*. *FEMS Microbiology Letters, 206*, 69-74.
- Bancerz, R., Ginalska, G., Fiedurek, J., & Gromada, A. (2005). Cultivation conditions and properties of extracellular crude lipase from the psychrotrophic fungus *Penicillium chrysogenum* 9. *Journal of Industrial Microbiol Biotechnology, 32(6)*, 253-260.
- Bartolome, B., & Cordoves, G. C. (1999). Barley spent grain: Release of hydroxycinnamic acids (ferulic and p-coumaric acids) by commercial enzyme preparations. *Journal of the Science of Food and Agriculture, 79*, 435 – 439.
- BBC Research Market Forecasting. (2011). *Biotechnology: Enzymes in industrial applications: Global Market*. Report code BIO030F, 6<sup>th</sup> January 2011. Accessed on 15<sup>th</sup> February 2011  
<http://bccresearch.blogspot.com/2011/01/global-market-for-industrial-enzymes-to.html>
- Beattie, V.E., Sneddon, I.A., Walker, N., & Weatherup, R.N. (2001). Environmental enrichment of intensive pig housing using spent mushroom compost. *Animal Science 72(1)*, 35–42.
- Benito, M. J., Nunezb, F., Maria, G., & Cordoba, J. J. (2005). Generation of non-protein nitrogen and volatile compounds by *Penicillium chrysogenum* Pg222 activity on pork myofibrillar proteins. *Food Microbiology, 22*, 513–519.
- Berka, R. M., Dunn-Coleman, N. S., & Ward, M. (1992). Industrial enzymes from *Aspergillus* species. *Biotechnology, 23*, 155-202.
- Bernfeld, P. (1955). Enzymes of carbohydrate metabolism; Amylases, alpha and beta. *Methods in Enzymology 1*, 149 – 158.
- BIOTECHCORP (2009). *Overview: Malaysian Industrial Biotechnology*. Malaysian Biotechnology Corporation
- Blanchette, R. A., Held, B. W., Jurgens, J. A., McNew, D. L., Harrington, T. C., Duncan, S. M., & Farrell, R. L. (2004). Wood-destroying soft rot fungi in the historic expedition huts of Antarctica. *Applied and Environmental Microbiology, 70*, 1328–1335.
- Blanchette, R. A., Nilsson, T., Daniel, G., & Abad, A. (1990). Biological degradation of wood. *Adv. Chem. Ser., 225*, 141– 174.

Botella, C., Diaz, A., de Ory, I., Webb, C., & Blandino, A. (2007). Xylanase and pectinase production by *Aspergillus awamori* on grape pomace in solid state fermentation. *Process Biochemistry*, 42, 98–101.

Bussmann, V. (1996). Aktivierte Enzymsysteme zum Schutz kosmetischer Mittel. *Parfümerie und Kosmetik* 77(9).

Cabaleiro, D. R., Rodriguez-Couto, S., Sanroman, A., & Longo, M. A. (2002). Comparison between the protease production ability of ligninolytic fungi cultivated in solid state media. *Process Biochemistry*, 37, 1017-1023.

Carlsberg Group Environmental Report (2005/2006). Downloaded from the worldwide web:

<http://www.carlsberggroup.com/Company/CR/EnvironmentalAffairs/Pages/Default.aspx>.

Carlsberg Group (2009). *Environmental Report (2008)*. Downloaded from the worldwide web :

<http://www.carlsberggroup.com/Company/CR/EnvironmentalAffairs/Pages/Default.aspx>.

Carvalho, F., Esteves, M. P., Parajo, J. C., Pereira, H., & Girio, F. M. (2004). Production of oligosaccharides by autohydrolysis of brewery's spent grain. *Bioresource Technology*, 91, 93 – 100.

Carvalho, J. C., Pandey, A., Oishi, B. O., Brand, D., Rodriguez-L´eon, J. A., & Soccol, C. R. (2006). Relation between growth, respirometric analysis and biopigments production from *Monascus* by solid-state fermentation. *Biochemical Engineering Journal*, 29, 262–269.

Castillo, L. R., Medronho, R. A., & Alves, T. L. M. (2000). Production and extraction of pectinases obtained by solid-state fermentation of agro industrial residues with *Aspergillus niger*. *Bioresource Technology*, 71, 45-50.

Central Intelligent Agency (CIA). (2011).

<https://www.cia.gov/library/publications/the-world-factbook/geos/my.html>. Retrieved on 12th August 2011

Charlie, M. J., Watkinson, S. C., & Gooday, G. W. (2001). *The fungi*. Second Edition. America Express

Cha, J. Y., Dawar, N., Luechai, S., & Dharmstithi, S. C. (2010). Multiple non-polysaccharide-degrading enzyme production from solid state fermentation of *Aspergillus niger* AK10. *Asian Journal of Food and Agro-Industry*, 3(01), 108-119.

Chimata, M. K., Sasidhar, P., & Challa. S. (2010). Production of extracellular amylase from agricultural residues by a newly isolated *Aspergillus* species in solid state fermentation. *African Journal of Biotechnology*, 9(32), 5162-5169.

Chi, Y., Hatakka, A., & Majjala, P. (2007). Can co-culturing of two white-rot fungi increase lignin degradation and the production of lignin-degrading enzymes. *International Biodeterioration & Biodegradation*, 59, 32-39.

- Chen, G. Q., Zeng, G.M., Tu, X., Huang, G. H., & Chen, Y. N. (2005). A novel biosorbent: characterization of the spent mushroom compost and its application for removal of heavy metals. *Journal of Environmental Sciences – China* 17(5), 756–760.
- Chen, Z., Wang, Z., & Zhou, A. (2010). Fungal protein estimation of *Aspergillus oryzae* growing in solid state cultivation conditions. *Canadian Journal of Pure & Applied Sciences*, 4(2), 1127-1131.
- Christopher, L., Sadvir, B., Suren, S., Judit, S., & George, S. (2005). Bleach-enhancing abilities of *Thermomyces lanuginosus* xylanases produced by solid state fermentation: *Process Biochemistry*, 40, 3230-3235.
- Chung-Yi, W., Yi-Ru, H., Ng, C. C., Chan, H., Lin, H. T., Wen-Sheng, T., & Shyu, Y. T. (2009). Purification and characterization of a novel halostable cellulase from *Salinivibrio* sp. strain NTU-05. *Enzyme Microb Technol* 44(6–7), 373–379.
- Cordova, J., Nemmaoui, M., Ismaili-Alaoui, M., Morin, A., Roussos, S., Raimbault, M., & Benjilali, B. (1998). Lipase production by solid state fermentation of olive cake and sugar cane bagasse. *Journal of Molecular Catalysis B: Enzymatic* 5, 75–78.
- Cohen, R., Suzuki, M. R., & Hammel, K. E. (2005). Processive endoglucanase active in crystalline cellulose hydrolysis by the brown rot basidiomycete *Gloeophyllum trabeum*. *Applied and Environmental Microbiology*, 71, 2412–2417 .
- Collins, P. J., & Dobson, A.D.W. (1997). Regulation of laccase gene transcription in *Trametes versicolor*. *Appl. Environ. Microbiol.*, 63(9), 3444-3450.
- Couto, S. R., Gundin, M., Lorenzo, M., and Sanroman, M. A. (2002). Screening of supports and inducers for laccase production by *Trametes versicolor* in semi-solid-state conditions. *Process Biochemistry*, 38, 249-255.
- Couto, S. R., Rosales, E., Gundin, M., & Sanroman, M. A. (2004). Exploitation of a waste from the brewing industry for laccase production by two *Trametes* species. *Journal of Food Engineering* 64, 423–428.
- Couto, S. R., & Toca-Herrera, J. L. (2007). Laccase production at reactor scale by filamentous fungi. *Biotechnology Advances*, 25, 558 – 569.
- Couto, S. R., Osma, J. F., Saravia, V., Gübitz, G. M., & Toca Herrera, J. L. (2007). Coating of immobilised laccase for stability enhancement: A novel approach. *Applied Catalysis A: General*, 329(1), 156-160.
- Couto, S. R., & Sanroman, M. A. (2005). Application of solid-state fermentation to ligninolytic enzyme production. *Biochemical Engineering Journal* (22), 211-219.
- Daniel, G. (2003). Micro view of wood under degradation by bacteria and fungi. In: Goodell, B., Nicholas, D.D. & Schultz, T.P. (Eds.). *Wood Deterioration and Preservation: Advances in our Changing World*. American Chemical Society, Washington, DC, 34–72.

Daniel, G., & Nilsson, T. (1998). Development in the study of soft rot & bacterial decay. In: Bruce, A. & Palfreyman, J.W. (Eds.). *Forest Products Biotechnology*. Taylor and Francis, London, 37–62.

Dashtban, M., Schraft, H., & Qin, W. (2009). Fungal bioconversion of lignocellulosic residues; opportunities and perspectives. *International Journal of Biological Science*, 5(6), 578–595.

Davis, D. D., & Kuhns, L. J. (2005). Spent mushroom compost suppresses artillery fungi in landscape mulch. *Mush. News* 53(10), 11–13.

de Hoog, G. S., Guarro, J., Gené, J., & Figueras, F. (2000). *Atlas of Clinical Fungi - 2nd Edition*. Centraal bureau voor Schimmelcultures (Utrecht)

de Siqueira, F. G., de Siqueira, E. G., Jaramillo, P. M. D., Silveira, M. H. L., Andreus, J., Couto, F. A., Batista, L. R., & Filho, E. X. F. (2010). The potential of agro-industrial residues for production of holocellulase from filamentous fungi. *I International Biodeterioration & Biodegradation*, 64(1), 20–26.

Department of Environment, Food & Rural Affairs (DEFRA). (2006). <http://www.defra.gov.uk/>.

Demirbas, A. (2011). Competitive liquid biofuels from biomass. *Applied Energy*, 88, 17–28.

Deng, S. P., & M. A. Tabatabai. (1995). Cellulase activity of soils: Effect of trace elements. *Soil Biology and Biochemistry*, 27(7), 977-979.

Department of Statistics (DoS) Malaysia. (2010). *Yearbook of Statistics Malaysia 2009*

Department of Agriculture (DoA). (2009)

Desgranges, C., Vergoignan, C., Georges, M., & Durand, A. (1991). Biomass estimation in solid state fermentation. I. Manual biochemical method. *Applied Microbiology and Biotechnology*, 35, 200-205.

Dinis, M., Bezerra, R., Nunes, F., Dias, A., Guedes, C., Ferreira, L., Cone, J., Marques, G., Barros, A., & Rodrigues, M. (2009). Modification of wheat straw lignin by solid state fermentation with white-rot fungi. *Bioresource Technology*, 100, 4829–4835.

Dobrev, G. T., Pishtiyski, I. G., Stanchev, V. S., & Micheva, R. (2007). Optimization of nutrient medium containing agricultural wastes for xylanase production by *Aspergillus niger* B03 using optimal composite experimental design. *Bioresource Technology*, 98, 2671-2678.

Dogaris, I., Vakontios, G., Kalogeris, E., Mamma, D., & Kekos, D. (2009). Induction of cellulases and hemicellulases from *Neurospora crassa* under solid-state cultivation for bioconversion of sorghum bagasse into ethanol. *Industrial Crops and Products*, 29, 404–411.

- Donohue, M., Chung, Y., Magnuson, M. L., Ward, M., Selgrade, M. J., & Vesper, S. (2005). Hemolysin chrysolysin TM from *Penicillium chrysogenum* promotes inflammatory response. *Int. J. Hyg. Environ.-Health*, 208, 279–285.
- Durand, A., de la Broise, D., & Blachère, H. (1988). Laboratory scale bioreactor for solid state processes. *Journal of Biotechnology*, 8(1), 59-66.
- Douwenga, R., de Boks, P. A. & Luyben, K. C. A. M. (1988). Degradation of suspended proteins in an anaerobic rotating bed contactor. *Biotechnology Letters* 10(4), 267 – 272.
- Duff, S. J. B., Cooper, D. G., & Fuller, O. M. (1987). Effect of media composition and growth conditions on the production of cellulase by a mixed mold fermentation. *Enzyme Microbial Technology*, 9, 27-32.
- Ellaiah, P., Adinarayana, K., Bhavan, Y., Padmaja, P., & Srinivasulu, B. (2002). Optimization of process parameters for glucoamylase production under solid-state fermentation by a newly isolated *Aspergillus* species. *Process Biochemistry*, 38, 615-620.
- Elshafei, A. M., Vega, J. L., Klassen, K. T., Claussen, E. C., & Gaddy, J. L. (1990). Cellulase and hemicellulase formation by fungi using corn stover as a substrate. *Biological Wastes*, 32, 209-218.
- Farani de Souza, D., Marques de Souza, C. G., & Peralta, R. M. (2001). Effect of easily metabolizable sugars in the production of xylanase by *Aspergillus tamaritii* in solid-state fermentation. *Process Biochemistry*, 36(8-9), 835-838.
- Fauziah, S.H. (2010). Municipal solid waste management: A comprehensive study in Selangor. *Malaysian Journal of Science*. 29(2), 188
- Fazaeli, H., & Talebian Masoodi, A. R. (2006). Spent wheat straw compost of *Agaricus bisporus* mushroom as ruminant feed. *Asian-Aust. J. Anim. Sci.* 19, 845-851.
- Fillaudeau, L., Blanpain-Avet, P., & Daufin, G. (2006). Water, wastewater and waste management in brewing industries. *J. Cleaner Prod.* 14, 463- 471.
- Fincham, J. R. S. (1989). Transformation in fungi. *Microbiol Rev*, 53, 148–70.
- Finney, K. N., Sharifi, V. N., & Swithenbank, J. (2009). Combustion of spent mushroom compost and coal tailing pellets in a fluidized-bed. *Renewable Energy*, 34, 860-863.
- Forssell, P., Kontkanen, H., Schols, H. A., Hinz, S., Eijsink, V. G. H., Treimo, J., Robertson, J. A., Waldron, K. W., Faulds, C. B., & Buchert, J. (2008). Hydrolysis of brewers' spent grain by carbohydrate degrading enzymes. *Journal of the Institute of Brewing*, 114(4), 306-314.
- Fujian, X., Hongzhang, C., & Zouhu, L. (2001). Solid state production of lignin peroxidase (lip) and manganase peroxidase (mnp) by *Phanerochaete chrysosporium* using steam-exploded straw as substrate. *Bioresource Techonology* 80, 149-151.

- Ganesh Kumar, A., Sekaran, G., & Krishnamoorthy, S. (2006). Solid state fermentation of *Achras zapota* lignocellulose by *Phanerochaete chrysosporium*. *Bioresource Technology*, *97*, 1521–1528.
- Gangadharan, D., Sivaramakrishnan, S., Nampoothiri, K. M., Sukumaran, R. K., & Pandey A. (2008). Response surface methodology for the optimization of alpha amylase production by *Bacillus amyloliquefaciens*. *Bioresource technology*, *99*(11), 4597-4602.
- Gao, J., Weng, H., Zhu, D., Yuan, M., Guan, F., & Xi, Y. (2009). Production and characterization of cellulolytic enzymes from the thermoacidophilic fungal *Aspergillus terreus* M11 under solid-state cultivation of corn stover. *Bioresource Technology*, *99*, 7623–7629.
- Germano, S., Pandey, A., Osaku, C. A., Rocha, S. N., & Soccol, C. R. (2003). Characterization and stability of proteases from *Penicillium* sp. produced by solid-state fermentation. *Enzyme and Microbial Technology* *32*, 246-251.
- Gervais, P., & Molin, P. (2003). The Role of water in solid state fermentation. *Biochemical Engineering Journal* *13*, 85-101.
- Gomez, J., Pazos, M., Couto, S. R., & Sanroman, M. A. (2005). Chestnut shell and barley bran as potential substrates for laccase production by *Corioloropsis rigida* under solid-state conditions. *Journal of Food Engineering* *68*, 315-319.
- Gottschalk, L. M. F., Oliveira, R. A., & da Silva Bon, E. P. (2010). Cellulases, xylanases,  $\beta$ -glucosidase and ferulic acid esterase produced by *Trichoderma* and *Aspergillus* act synergistically in the hydrolysis of sugarcane bagasse. *Biochemical Engineering Journal*, *51*, 72–78.
- Gowthaman, M. K., Krishna, C., & Moo-Young, M. (2001). Fungal solid state fermentation- An overview. *Applied Mycology and Biotechnology*, *1*, 305-352.
- Gregori, A., Svagelj, M., Pahor, B., Berovic, M., & Pohleven, F. (2008). The use of spent brewery grains for *Pleurotus ostreatus* cultivation and enzyme production. *New Biotechnology*, *25*, 157-161.
- Guo, R., Liu, X., Gao, K., Gao, B., Shi, B., & Zhen, Z. (2002). Progress in biocontrol research with *Trichoderma*. *Chinese J Biological Control*, *18*, 180–184.
- Guo, M. & Chorover, J. (2006). Leachate migration from spent mushroom substrate through intact and repacked subsurface soil columns. *Waste Management* *26*(2), 133-140.
- Gupte, A., Gupte, S., & Patel, H. (2007). Ligninolytic enzyme production under solid state fermentation by white rot fungi. *Journal of Scientific and Industrial Research*, *66*, 611- 614.
- Gusakov, A. V., Salanovich, T. N., Antonov, A. I., Ustinov, B. B., Okunev, O. N., Burlingame, R., Emalfarb, M., Baez, M., & Sinitsyn, A. P. (2007). Design of highly efficient cellulase mixtures for enzymatic hydrolysis of cellulose. *Biotechnology and Bioengineering*, *97*, 1028–1038.



- Gutierrez-Correa, M., Portal, L., Moreno, P., & Tengerdy, R. P. (1999). Mixed culture solid substrate fermentation of *Trichoderma reesei* with *Aspergillus niger* on sugar cane bagasse. *Bioresource Technology*, 68, 173-178.
- Hamidi-Esfahania, Z., Shojaosadatia, S. A., and Rinzema, A. (2004). Modelling of simultaneous effect of moisture and temperature on *A. niger* growth in solid-state fermentation. *Biochemical Engineering Journal* 21, 265–272.
- Hamed, M. E. S., Magdy, M. Y., & Salwa, A. K. (2008). Inducers and inhibitors of laccase from *Penicillium*. *Biotechnology*, 7(1), 35-42.
- Hang, Y. D., Splittstoesser, D. F., & Woodams, E. E. (1975). Utilization of brewery spent grain liquor by *Aspergillus niger*. *Applied Microbiology*, 30(5), 879-880.
- Hansen, J. (2005). A slippery slope: How much global warming constitutes “dangerous anthropogenic interference”? *Climate Change* 68(3), 269-279.
- Hansen, J. A., & Agamuthu, P. (2008). Carbon credit: for whom the bells ring in greenhouse gas mitigation (Editorial). *Waste Management and Research*, 26, 407-408.
- Harris, D. M., Westerlaken, I., Schipper, D., van der Krogt, Z. A., Gombert, A. K., Shutherland, J., Raamsdonk, L. M., van den Berg, M. A., Bovenberg, R. A. L., Pronk, J. T. & Jean-Marc, D. (2009). Engineering of *Penicillium chrysogenum* for fermentative production of a novel carbamoylated cephem antibiotic precursor. *Metabolic Engineering*, 11(2), 125-137.
- Hassona, H. L. (1993). High fiber bread containing brewer's spent grains and its effect on lipid metabolism in rats. *Die Nahrung*, 37, 576-582.
- Hawksworth, D. L. (1991). The fungal dimension of biodiversity: magnitude, significance, and conservation. *Mycological Research*, 95(6), 641-655.
- Heijnen, J. J., & Romein, B. (1995). Derivation of kinetic equations for growth on single substrates based on general properties of a simple metabolic network. *Biotechnol. Prog.* 11, 712-716.
- Hernanz, D., Nunez, V., Sancho, A.I., Faulds, C.B., Williamson, G., Bartolome, B., & Gomez-Cordove, C. (2001). Hydroxycinnamic acids and ferulic acid dehydrodimers in barley and processed barley. *Journal of Agriculture and Food Chemistry*, 49, 4884–4888.
- Hiller, A., Plazin, J., & Van Slyke, D. D. (1948). A study of conditions for Kjeldahl determination of nitrogen in protein. *Journal of Biological Chemistry*, 176, 1401-1420.
- Holker, U., & Lenz, J. (2005). Solid-state fermentation-Are there any biotechnological advantages? *Current Opinion in Microbiology*, 8, 301 – 306.
- Hunter, C.A., & Lea, R.G. (1995). The airborne fungal population of representative British homes. *Air Qual. Monogr.*, 2, 141–153.
- Ibrahim, C. O. (2008). Development of application of industrial enzymes from Malaysian indigenous microbial sources. *Bioresource Technology*, 99, 4572–4582.

Ikasari, L., & Mitchell, D.A. (2000). Two-phase model of the kinetics of growth of *Rhizopus oligosporus* in membrane culture. *Biotechnol. Bioeng.*, 68, 619–627.

Industrial Waste and Wastewater Management (IWWM). (2010). *Towards sustainability and profitability*. 23-25 March 2010. PWTC, Kuala Lumpur

International Finance Corporation of the World Bank Group. (2007). *Environmental, Health and Safety Guidelines for Breweries*. Downloaded from the worldwide web on 25<sup>th</sup> December 2007 (1145 local time) at [http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/gui\\_EHSGuidelines2007\\_Breweries/\\$FILE/Final+-+Breweries.pdf](http://www.ifc.org/ifcext/enviro.nsf/AttachmentsByTitle/gui_EHSGuidelines2007_Breweries/$FILE/Final+-+Breweries.pdf)

Jay, A. J., Parker, Faulks, R., Husband, F., Wilde, P., Smith, A. C., Faulds, C. B., & Waldron, K. W. (2008). A systematic micro-dissection of brewers' spent grain. *Journal of Cereal Science*, 47(2), 357-364.

Jae-Won, L., Ho-Yong, K., Bon-Wook, K., Don-Ha, C., Mi Kwon., & In-Gyu, C. (2008). Enzymatic saccharification of biologically pretreated *Pinus densiflora* using enzymes from brown rot fungi. *Journal of Bioscience and Bioengineering*, 106(2), 162-167.

Jecu, L. (2000). Solid state fermentation of agricultural wastes for endoglucanase production. *Industrial Crops and Products*, 11(1), 1-5.

Jerusik, R. J. (2010). Fungi and paper manufacture. *Fungal Biology Review*, 24, 68-72.

Jha, K., Khare, S. K., & Ghandi, A. P. (1995). Short Communication: Solid state fermentation of soyhull for the production of cellulase. *Bioresource Technology*, 54, 321-322.

Jimenez, L., Martinez, C., Perez, I., & Lopez, F. (1997). Biobleaching procedures for pulp from agricultural residues using *Phanerochaete chrysosporium* and enzymes. *Process Biochemistry*, 32, 297-304.

Jordan, S. N., Mullen, G. J., & Murphy, M. C. (2008). Composition variability of spent mushroom compost in Ireland. *Bioresource Technology*, 99, 411-418.

Jorgensen, H., Eriksson, T., Borjesson, J., Tjerneld, F., & Olsson, L. (2003). Purification and characterization of five cellulases and xylanase from *Penicillium brasilianum* IBI 20888. *Enzyme and Microbial Technology*. 32, 851-861.

Juhász, T., Szengyel, Z., Réczey, K., Siika-Aho, M., & Viikari, L. (2005). Characterization of cellulases and hemicellulases produced by *Trichoderma reesei* on various carbon sources. *Process Biochemistry*, 40(11), 3519-3525.

Kadrekar, S. N., & Ramasarma, G. B. (1990). Amylase and protease production by *Bacillus subtilis*: Studies on improvement of strain and medium. *J. Food. Sci. Technol.* 27, 4-6.

Kapoor, K. K., Chaudhury, K., & Tauro, P. (1982). Citric acid in Prescott and Dunn's *Industrial microbiology*. Reed, G. AVI Publishing Co., Westport Connecticut USA, 709-746

- Kanmani, P., Karuppasamy, P., Pothiraj, C., & Arul, V. (2009). Studies on lignocellulose biodegradation of coir waste in solid state fermentation using *Phanerocheatechryso sporium* and *Rhizopus stolonifer*. *African Journal of Biotechnology*, 8(24), 6880-6887.
- Kansoh, A. L., Essam, S. A., & Zeinat, A. N. (1999). Biodegradation and utilization of bagasse with *Trichoderma reesie*. *Polymer Degradation and Stability* 63, 273-278.
- Katapodis, P., Christakopoulou, V., Kekos, D., & Christakopoulos, P. (2007). Optimization of xylanase production by *Cahaetomium thermophilum* in wheat straw using response surface methodology. *Biochemical Engineering Journal* 35, 136-141.
- Kaur, G., & Sathiyarayanan, T. (2004). Production of extracellular pectinolytic, cellulolytic and xylanolytic enzymes by thermophilic mold *Sporotrichum thermophile* Apinis in solid state fermentation. *Indian Journal of Biotechnology*, 3, 552-557.
- Kaur, V. I., & Saxena, P. K. (2004). Incorporation of brewery waste in supplementary feed and its impact on growth in some carps. *Bioresource Technology*, 91(1), 101-104.
- Kawagoe, M., Hyakumura, K., Suye, S. I., Miki, K., & Naoe, K. (1997). Application of bubble column fermentors to submerged culture of *Schizophyllum commune* for production of L-malic acid. *Journal of Fermentation and Bioengineering*, 84(4), 333-336.
- Kheng P. P., & Ibrahim, C. O (2005). Xylanase production by a local fungal isolate, *Aspergillus niger* USM AI 1 via solid state fermentation using palm kernel cake (PKC) as substrate. *Songklanakar J. Sci. Technol.* 27(2), 325-336.
- Khidzir, K. M., Agamuthu, P., & Abdullah, N. (2007). *Utilizing solid waste from a brewery as a substrate in enzyme production*. In: Proceedings of the International Solid Waste Association Annual Congress 2007 (24 – 27 September 2007, Amsterdam, the Netherlands), 17
- Khosravi-Darani, K., & Zoghi, A. (2008). Comparison of pretreatment strategies of sugarcane baggase: Experimental design for citric acid production. *Bioresource Technology*, 99, 6986–6993.
- Kirk, T. K., & Highley, T. L. (1973). Quantitative changes in structural components of conifer woods during decay by white- and brown-rot fungi. *Phytopathology*, 63, 1338–1342.
- Kopsahelis, N., Agouridis, N., Bekatorou, A., & Kanellaki, M. (2007). Comparative study of spent grains and delignified spent grains as yeast supports for alcohol production from molasses. *Bioresource Technology*, 98, 1440 – 1447.
- Kumar, D, Jain, V. K., Shanker, G., & Srivastava, A. (2003). Utilization of fruits waste for citric acid production by solid state fermentation. *Proc Biochem.*, 38, 1731-1738.
- Kunamneni, A., Permaul, K., & Singh, S. (2005). Amylase production in solid state fermentation by the thermophilic fungus *Thermomyces lanuginosus*. *Journal of Bioscience and Bioengineering*, 100, 168–171.

- La Nauze, I. M. (1966). Aconitase and isocitric dehydrogenase of *Aspergillus niger* in relation to citric acid production. *Journal of Genetic Microbiology*, *44*, 73-81.
- Landshoot, P., & McNitt, A., 2005. *Using spent mushroom substrate as a soil amendment to improve turf*.  
 <<http://turfgrassmanagement.psu.edu/spentmushrooms substrate.cfm>> (accessed August 21, 2008).
- Larone, D. H. (1995). *Medically important fungi: A guide to identification*. 3<sup>rd</sup> Ed. ASM Press, Washington, D. C.
- Latifah, A. M, Mohd Armi, A. S., & Nur Ilyana, M. Z. (2009). Municipal solid waste management in Malaysia: Practice and challenges. *Waste Management* *29*, 2902-2906.
- Latifian, M., Hamidi- Esphaini, Z., & Barzegar, M. (2007). Evaluation of culture conditions for cellulase production by two *Trichoderma reesei* mutants under solid-state fermentation conditions. *Bioresource Technology*, *98*, 3634-3637.
- Lee, Y., Iyer, P., & Torget, R. (1999). Dilute-acid hydrolysis lignocellulosic biomass. *Recent Progress in Bioconversion of Lignocellulosics*, 93-115.
- Leontievsky, A. A., Vares, T., Lankinen, P., Shergill, J. K., Pozdnyakova, N. N., Myasoedova, N. M., Kalkkinen, N., Golovleva, L. A., Cammack, R., Thurston, C. F., & Hatakka, A. (1997). Blue and yellow laccases of ligninolytic fungi. *FEMS Microbiol. Lett.*, *156*, 9–14.
- Lestan, D., & Lamar, R. T. (1996). Development of fungal inocula for bioaugmentation of contaminated soils. *Applied Environmental Microbiology*, *62*, 2045–2052.
- Levin, L., Herrmann, C., & Papinutti, V. L. (2008). Optimization of lignocellulolytic enzyme production by the white-rot fungus *Trametes trogii* in solid-state fermentation using response surface methodology. *Biochemical Engineering Journal*, *39*(1), 207-214.
- Lewis, M. J., & Young T. W. (1995). *Brewing*. Chapman & Hall, London, England, 260.
- Ljungdahl, L. G. (2008). The cellulase/hemicellulase system of the anaerobic fungus *Orpinomyces PC-2* and aspects of its applied use. *Annals of the New York Academy of Sciences*, *1125*, 308–321.
- Lo, C. M., Zhang, Q., Callow, N. V., & Ju, L. K. (2010). Cellulase production by continuous culture of *Trichoderma reesei* Rut C30 using acid hydrolysate prepared to retain more oligosaccharides for induction. *Bioresource Technology*, *101*(2), 717–723.
- Lods, Dres, Johnson, Scholz, & Brooks. (2000). The future of enzymes in cosmetics. *International Journal of Cosmetic Science*, *22*, 85–94.
- Low, K. S., Lee, C. K., & Liew, S. C. (2000). Sorption of cadmium and lead from aqueous solutions by spent grain. *Process Biochemistry*, *36*(1-2), 59 – 64.
- Lubertozzi, D., & Keasling, J. D. (2009). Developing *Aspergillus* as a host for

heterologous expression. *Biotechnology Advances*, 27(1), 53-75.

Mach, R. L., & Zeilinger, S. (2003). Regulation of gene expression in industrial fungi: *Trichoderma*. *Applied Microbiology Biotechnology*, 60, 515-522.

Machado, V. C., Tapia, G., Gabriel, D., Lafuente, J., & Baeza, J. A. (2009). Systematic identifiability study based on the Fisher Information Matrix for reducing the number of parameters calibration of an activated sludge model. *Environmental Modelling & Software*, 24(11), 1274-1284.

Machuca, A., & Ferraz, A. (2001). Hydrolytic and oxidative enzymes produced by white- and brown-rot fungi during *Eucalyptus grandis* decay in solid medium. *Enzyme and Microbial Technology*, 29(6-7), 386-391.

Maciel, G. M., de Souza Vandenberghe, L. P., Windson, C., Haminiuk, I., Fendrich, R. C., Bianca, B. E. D., da Silva Brandalize, T. Q., Pandey, A., and Soccol, C. R. (2008). Xylanase production by *Aspergillus niger* LPB 326 in solid-state fermentation using statistical experimental designs. *Food Technology and Biotechnology*, 46(2), 181-187.

Madamwar, D., Patel, S., & Parikh, H. (1989). Solid state fermentation for cellulases and  $\beta$ -glucosidase production by *Aspergillus niger*. *Journal of Fermentation and Bioengineering*, 67(6), 424-426.

Mahadik, N. D., Puntambekar, U. S., Bastawde, K. B., Khire, J. M., & Gokhale, D. V. (2002). Production of acidic lipase by *Aspergillus niger* in solid state fermentation. *Process Biochemistry*, 38, 715-721.

Mahin, A. A., Hasan, S. M., Khan, M. H., & Begum, R. (2008). Citric acid production by *Aspergillus niger* through solid-state fermentation on sugarcane bagasse. *Bangladesh J Microbiol*, 25(1), 9-12.

Malaysia Green Pages. (2006). *Agricultural Wastes*. Published on 19 September 2006. Accessed on 16 September 2008.  
<file:///K:/thesis%20chapters/Journals/green%20pages.htm>

Mamiro, D. P., & Royse, D. J. (2008). The influence of spawn type and strain on yield, size and mushroom solids content of *Agaricus bisporus* produced on non-composted and spent mushroom compost. *Bioresource Technology*, 99(8), 3205-3212.

Margesin, R., & Schinner, F. (1994). Properties of cold-adapted microorganisms and their potential role in biotechnology. *J. Biotechnol.* 33, 1-14.

Mathew, G. M., Sukumaran, R. K., Singhanian, R. R., & Ashok, P. (2008). Progress in research on fungal cellulases for lignocellulose degradation. *Journal of Scientific and Industrial Research*, 67(11), 898-907.

Martin, S. H., Wingfield, B. D., Wingfield, M. J., & Steenkamp, E. T. (2011). Causes and consequences of variability in peptide mating pheromones of ascomycete fungi. *Molecular Biology and Evolution*, 28(7), 1987-2003.

Martinez-Inogi, M. J., Gutierrez, A., del Rio, J. C., Martinez, M. J., & Martinez, A. T. (2001). Time course of fungal removal of lipophilic extractives from *Eucalyptus globulus* wood. *Journal of Biotechnology* 84, 119-126.

Mazur, P., Rall, W. F., & Rigopoulos, N. (1981). Relative contributions of the fraction of unfrozen water and of salt concentration of the survival of slowly frozen human erythrocytes. *Biophys. J.* 36, 653– 675.

Mazutti, M. A., Zobot, G., Boni, G., Skovronski, A., de Oliveira, D., Di Luccio, M., Rodrigues, M. I., Treichel, H., & Maugeri, F. (2010). Kinetics of inulinase production by solid-state fermentation in a packed-bed bioreactor. *Food Chemistry*, 120(1), 163-173.

Maziero, R. (1990). Substratos alternativos para o cultivo de *Pleurotus* spp. Sao Paulo, 136p. (MSc Dissertation, Instituto de Biociencias, USP)

McCahey, S., McMullan, J. T., & Williams, B. C. (2003). Consideration of spent mushroom compost as a source of energy. *Developments in Chemical Engineering and Mineral Processing*, 11(1–2), 43–53.

Mesa, L., González, L., Ruiz, E., Romero, L., Cara, C., Felissia, F., & Castro, E. (2010). Preliminary evaluation of organosolv pre-treatment of sugar cane bagasse for glucose production: Application of 23 experimental designs. *Applied Energy*, 87,109–114.

Meza, J. C., Lomascolo, A., Casalot, L., Sigoillot, J. C., & Auria, R. (2005). Laccase production by *Pycnoporus cinnabarinus* grown on sugar-cane bagasse: Influence of ethanol vapours as inducer. *Process Biochemistry*, 40, 3365 – 3371.

Milagres, A. M. F., Santos, E., Piovan, T., & Roberto, I. C. (2004). Production of Xylanase by *Thermoascus aurantiacus* from sugar cane bagasse in an aerated growth fermentor. *Process Biochemistry*, 39, 1387–1391.

Milala, M. A., Shugaba, A., Gidado, A., Ene, A. C., & Wafar, J. A. (2008). Studies on the use of agricultural wastes for cellulase enzyme production by *Aspergillus niger*. *Food Technology Biotechnology*, 46(2),181-187.

Minussi, R. C., Miranda, M. A., Silva, J. A., Ferreira, C. V., Aoyama, H., Marangoni, S., Rotilio, D., Pastore, G. M., & Durán, N. (2007). Purification, characterization and application of laccase from *Trametes versicolor* for colour and phenolic removal of olive mill wastewater in the presence of 1-hydroxybenzotriazole. *African Journal of Biotechnology*, 6(10), 1248-1254.

Mishra, A., & Kumar, S. (2007). Cyanobacterial biomass as N-supplement to agro-waste for hyper-production of laccase from *Pleurotus ostreatus* in solid state fermentation. *Process Biochemistry*, 42, 681-685.

Mitchell, D. A., von Meien, O. F., Krieger, N., & Farah Diba, H. D. (2004). A review of recent developments in modeling of microbial growth kinetics and intra-particle phenomena in solid-state fermentation. *Biochemical Engineering Journal*, 17, 15–26.

Mitchell D. C., Sisco, M., Yun Li, Zelikoff, J. T., & Schlesinger, T. B. (2001). Ozone-induced modulation of cell-mediated immune responses in the

lungs. *Toxicology and Applied Pharmacology*, 171(2),71-84.

Mohan A. D., & Vijay-Raj A. S. (2009). Pigment and amylase production in *Penicillium* sp NIOM-02 and its radical scavenging activity. *International Journal of Food Science and Technology*, 44(12), 2424-2430.

Mohd Nasir, H., Rafia, A., Ahmad Fariz, M., & Awang, M. (2005). Economic Instruments for Managing Industrial Waste in Malaysia. *Malaysian Journal of Environmental Management*, 6, 87 – 106.

Mohebbly, B. (2005). Attenuated total reflection infrared spectroscopy of white-rot decayed beech wood. *International Biodeterioration & Biodegradation*, 55, 247–251.

Moldes, D., Couto, S. R., Cameselle, C., & Sanromán, M. A. (2003). Study of the degradation of dyes by MnP of *Phanerochaete chrysosporium* produced in a fixed-bed bioreactor. *Chemosphere*, 51(4), 295-303.

Moo-Young, M., Moreira, A. R., & Tengerdy, R. P. (1983). Principle in solid state fermentation. In J. E. Smith, D. R. Berry and B. Kristiansen, *The Filamentous Fungi* (pp117). Edward Arnold Publishers, London.

Moyin-Jesu, E. I. (2007). Use of plant residues for improving soil fertility, pod nutrients, root growth & pod weight of okra (*Abelmoschus esculantum* L). *Bioresource Technology*, 98, 2057 – 2064.

Mrudula, S., & Kokila, R. (2010). Production of thermostable  $\alpha$ -amylase by *Bacillus cereus* MK in solid state fermentation: Partial purification and characterization of the enzyme. *The Internet Journal of Microbiology*, 8 (1).

Mulimani, V. H., Patil, G., & Ramalingan, N. (2000). Alpha amylase production by solid state fermentation: A new practical approach to biotechnology sources. *Biochemical Education*,28, 161-163.

Mullen, G. J., & McMahon, C. A. (2001). A note on the effects of land spreading and soil incorporation of spent mushroom compost on County Monaghan grassland soils. *Irish Journal Agricultural Food Research*, 40, 189–197.

Murthy, G. S., Sall, E. D., Metz, S. G., Foster, G., & Singh, V. (2009). Evaluation of a dry corn fractionation process for ethanol production with different hybrids. *Industrial Crops and Products*, 29(1), 67-72.

Muthezhilan, R., Ashok, R., & Jayalakshmi, S. (2007). Production and optimization of thermostable alkaline xylanase by *Penicillium oxalicum* in solid state fermentation. *African Journal of Microbiology Research*, 1(2), 020-028.

Mussatto, S. I., & Roberto, I. C. (2005). *Determination of brewer's spent grain chemical composition and production of pentose sugars as alternative for its use*. Poster presented on the 27th Symposium on Biotechnology for Fuels and Chemicals, May 1 - 4 2005. Denver, Colorado. United States of America.

Mussatto, S. I., Fernandes, M., Milagres, A. M. F., & Roberto, I. C. (2008). Effect of hemicellulose and lignin on enzymatic hydrolysis of cellulose from brewer's spent

grain. *Enzyme and Microbial Technology*, 43(2), 124-129.

Mussatto, S. I., Dragone, G., & Roberto, I. C. (2006). Brewer's spent grain: generation, characteristics and potential applications. *Journal of Cereal Science*, 43(1), 1 – 14.

Mussatto, S. I., Dragone, G., & Roberto, I. C. (2005). Influence of the Toxic Compounds present in brewer's spent grain hemicellulosic hydrolysate on xylose to xylitol bioconversion by *Candida guilliermondii*. *Process Biochemistry*, 40, 3801-3806.

Muthuvelayutham, R., & Viruthagiri, T. (2006). Fermentative production and kinetics of cellulose protein on *Trichoderma reesei* using sugarcane bagasse and rice straw. *African Journal of Biotechnology*, 5(20), 1873-1881.

Muzinic, L. A., Thompson, K. R., Morris, A., Webster, C. D., Rouse, D. B., & Manomaitis, L. (2004). Partial and total replacement of fish meal with soybean meal and brewer's grains with yeast in practical diets for Australian red claw crayfish *Cherax quadricarinatus*. *Aquaculture*, 230(1-4), 359-376.

Najafi, G., Ghobadian, B., Tavakoli, T., & Yusaf, T. (2009). Potential of bioethanol production from agricultural wastes in Iran. *Renewable and Sustainable Energy Reviews*, 13, 1418-1427.

Nagamalleswararao, B., Prasanth kumar, K., Varaprasad, B., & Prabhakar, T. (2008). Optimization of xylanase production under solid state fermentation by isolated *Aspergillus fumigatus* (MTCC 9372). *Indian Journal of Multidisciplinary Research*, 4(4), 507 – 516.

Nagao, N., Matsuyama, T., Yamamoto, H., & Toda, T. (2003). A novel hybrid system of solid state and submerged fermentation with recycle for organic solid waste treatment. *Process Biochemistry*, 39(1), 37-43.

Nasir, M. H., Kamil, M. Y., Azmin, S. N., & Rakmi, A. R. (1998). "Issues and problems of solid waste management," in Mohd Nordin Hasan *et.al.*, eds. *National Review on Environmental Quality Management in Malaysia; Towards the Next Two Decades* (pp. 179 – 225). Bangi: Institute for Environment and Development, Universiti Kebangsaan Malaysia

Ng, S. K., Ainsworth, P., Plunkett, A., Haigh, A. D., Gipson, A. A. P., Parkinson, G., Stojceska, V., & Jacobs, G. (2007). The Characterization of extruded brewer's spent grain and resistant starch using a microwave transmission line technique. *Journal of Food Engineering*, 83, 614 – 620.

Nguyen Ngoc & Schnitzer. (2009). Sustainable solutions for solid waste management in Southeast Asian countries. *Waste Management*, 29(6), 1982-1995.

Nicholson, P., Chandler, E., Draeger, R. C., Gosman, N. E., Simpson, D. R., Thomsett, M., & Wilson, A. H. (2003). Molecular tools to study epidemiology and toxicology of fusarium head blight of cereals. *European Journal of Plant Pathology*, 109, 691-703.



Niladevi, K. N., Sukumaran, R. K., & Prema, P. (2007). Utilization of rice straw for laccase production by *Sreptomyces psammoticus* in solid state fermentation. *Journal of Industrial Microbiology and Biotechnology*, 34, 665-674.

Neville, J. D., & Webster, J. (1994). *Fungal Ecology*. Chapman and Hall.

Noyes, R. (1969). *Citric acid production processes*. Noyes Development Corporation, Parkridge, New Jersey, USA.

Ntougias, S., Zervakis, G. I., Kavroulakis, N., Ehaliotis, C., & Papadopoulou, K. K. (2004). Bacterial diversity in spent mushroom compost assessed by amplified rDNA restriction analysis and sequencing of cultivated isolates system. *Applied Microbiology*, 27, 746-754.

Okafor, U. A., Emezue, T. I., Onyegeme-Okerenta, B. M., & Nwodo-Chinedu, S. (2007). Xylanase production by *Penicillium chrysogenum* (PCL501) fermented on cellulosic wastes. *African Journal of Biochemistry Research*, 1, 48-53.

Okamura-Matsui, T., Takemura, K., Sera, M., Takeno, T., Noda, H., Fukuda, S., & Ohsugi, M. (2001). Characteristics of a cheese-like food produced by fermentation of the mushroom *Schizophyllum commune*. *Journal of Bioscience and Bioengineering*, 92(1), 30-32.

Oku, T., Roy, C., Watsona, D. C., Wakarchuk, W., Campbell, R., Yaguchi, M., Jurasek, L., & Paiceb, M. G. (1993). Amino acid sequence and thermostability of xylanase A from *Schizophyllum commune*. *Federation of European Biochemical Societies*, 334(3), 296-300.

Osma, J. F., Toca Herrera, J. L. & Couto, S. R. (2007). Banana skin: A novel waste for laccase production by *Trametes pubescens* under solid-state conditions. Application to synthetic dye decolouration. *Dyes and Pigments*, (75): pp 32-37

Orzua, M. C., Mussatto, S. I., Contreras-Esquivel, J. C., Rodriguez, R., Garza, H., Teixeira, J. A., & Aguilar, C. N. (2009). Exploitation of agro industrial waste as immobilization carrier for solid-state fermentation. *Industrial Crops and Products*, 30, 24-27.

Ousley, M. A., Lynch, J. M., & Whipps, J. M. (1994). The effects of addition of *Trichoderma* inocula on flowering and shoot growth of bedding plants. *Scientia Horticulturae*, 59(2), 147-155.

Palmieri, G., Bianco, C., Cennamo, G., Giardina, P., Marino, G., Monti, M., & Sannia, G. (2001). Purification, characterization, and functional role of a novel extracellular protease from *Pleurotus ostreatus*. *Applied Environmental Microbiology*, 67, 2754-2759.

Panagiotou, G., Kekos, D., Macris, B. J., & Christakopoulos, P. (2003). Production of cellulolytic and xylanolytic enzymes by *Fusarium oxysporum* grown on corn stover in solid state fermentation. *Industrial Crops and Products*, 18, 37-45.

Panagiotou, G., Christakopoulos, P., & Olsson, L. (2005). Simultaneous saccharification and fermentation of cellulose by *Fusarium oxysporum* F3-growth

- characteristics and metabolite profiling. *Enzyme and Microbial Technology*, 36, 693–699.
- Pandey, A. (1991). Effect of particle size of substrate on enzyme production. *Bioresource Technology*, 37, 169-172.
- Pandey, A. (1992). Recent process development in solid state fermentation. *Process Biochemistry*, 27, 109-117.
- Pandey, A. (2003). Solid-state fermentation. *Biochemical Engineering Journal*, 13, 81-84.
- Pandey, A., Soccol, C. R., & Mitchell, D. (2000). New developments in solid state fermentation: I-bioprocesses and products. *Process Biochemistry*, 35, 1153–1169.
- Pandey, A., Soccol, C. R., & Larroche, C. (2008). *Current development in solid state fermentation*. Springer Science and Business Media LLC.
- Pandey, A. (1990). Improvements in solid state fermentation for glucoamylase production. *Biological Wastes*, 34(1), 11-19.
- Park, Y. S., Kang, S. W., Lee, J. S., Hong, S. I., & Kim, S.W. (2002). Xylanase production in solid state fermentation by *Aspergillus niger* mutant using statistical experimental designs. *Applied Microbiology and Biotechnology*, 58, 761–766.
- Patel, H., Gupte, A., & Gupte, S. (2009). Effect of different culture condition and inducers on production of laccase by a basidiomycetes fungal isolate *Pleurotus ostreatus* HP-1 under solid state fermentation. *Bioresources*, 4(1), 268-284.
- Pointing, S. B. (2001). Feasibility of bioremediation by white-rot fungi. *Applied Microbiology and Biotechnology*, 57, 20-33.
- Polat, E., Ibrahim Uzun, H., Topcuolu, B., Onal, K., Naci Onus, A., & Karaca, M. (2009). Effects of spent mushroom compost on quality and productivity of cucumber (*Cucumis sativus* L.) grown in greenhouses. *African Journal of Biotechnology*, 8(2), 176-180.
- Porras, M., Barrau, C., & Romero, F. (2007). Effects of soil solarization and *Trichoderma* on strawberry production. *Crop Protection*, 26, 782-787.
- Prabhakar, A., Krishnaiah, K., Janaun, J., & Bono, A. (2005). An overview of engineering aspects of solid state fermentation. *Malaysian Journal of Microbiology*, 1(2), 10-16.
- Priest, F. G., & Campbell, I. (2003). *Brewing Microbiology*. 3rd edition, Library of Congress Cataloging-in Publication Data ISBN 0-306-47288-0: pp 118-152
- Qader, S. A., Bano, S., Aman, A., Syed, N., & Azhar, A. (2006). Enhanced production and extracellular activity of commercially important amyolytic enzyme by a newly isolated strain of *Bacillus* sp. AS-1. *Turk J Biochem.*, 31(3), 135-140.

Råberg, U., Terziev, N., & Land, C. J. (2009). Short communication: Early soft rot colonization of Scots sapwood pine in above-ground exposure. *International Biodeterioration & Biodegradation*, 63, 236–240.

Rahmah, I. (2001). "Dasar untuk Meningkatkan Mutu Pengurusan Sisa Pepejal: Peruntukan Undang-Undang Serta Perubahan yang diperlukan (Policy to improve quality of solid waste management: Legislative requirement and changes needed," in Siwar et. al., eds. *Dasar Memperbaiki Pengurusan Sisa Pepejal Perbandaran (Policies to Improve Municipal Waste Management)* (pp. 13 – 18). Bangi: Institute for Environment and Development (LESTARI), UKM.

Ride, J. P., & Drysdale, R. B. (1972). A rapid method for the chemical estimation of filamentous fungi in plant tissue. *Physiol. Plant Pathol.* 2, 7-15.

Raimbault M. (1980). "*Fermentation en milieu solide: Croissance de champignons filamenteux sur substrats amylaces*". These de Doct. , U.P.S.Toulouse, ORSTOM Paris Ed., N.127.

Raimbault, M. (1998). General and microbial aspects of solid state fermentation. *Electronic Journal of Biotechnology*, 1(3), 15.

Rajagopalan, G., & Krishnan, C. (2008).  $\alpha$ -Amylase production from catabolite derepressed *Bacillus subtilis* KCC103 utilizing sugarcane bagasse hydrolysate. *Bioresource Technology*, 99, 3044–3050.

Ramachandran, S., Patel, A. K., Nampoothri, K. M., Francis, F., Nagy, V., Szakacs, G., & Pandey, A. (2004). Coconut oil cake. A potential raw material for the production of  $\alpha$ -amylase. *Bioresource Technology*, 93, 169-174.

Ramesh, M. V., & Lonsane, B. K. (1987). Solid-state fermentation for production of alpha amylase by *Bacillus megaterium* 16M. *Biotechnology Letters*, 9, 323–328.

Recycling Point Dot Com, 2003.

<<http://www.recyclingpoint.com.sg/Articles/>>(accessed 15 July 2008).

Reddy, G. V., Ravindra Babu, P., Komaraiah, P., Roy, K. R. R. M., & Kothari, I. L. (2003). Utilization of banana waste for the production of lignolytic and cellulolytic enzymes by solid substrate fermentation using two *Pleurotus* species (*P. ostreatus* and *P. sajor-caju*). *Process Biochemistry*, 38, 1457-1462.

Robertson, S. A., Mason, S. L., Hack, E., & Abbott, G. D. (2008). A Comparison of lignin oxidation, enzymatic activity and fungal growth during white-rot decay of wheat straw. *Organic Geochemistry*, 39, 945-951.

Robinson, T., Chandran, B., & Nigam, P. (2001). Studies on the production of enzymes by white-rot fungi for the decolourisation of textile dyes. *Enzyme and Microbial Technology*, 29(8-9), 575-579.

Roche, N., Venague, A., Desgranges, C., & Durand, A. (1993). Use of chitin measurement to estimate biomass in solid state fermentation. *Biotech. Adv.* 11, 77.

- Romaine, C. P., & Holcomb, E. J. (2001). Spent mushroom substrate: a novel multifunctional constituent of a potting medium for plants. *Mush. News*, 49(11), 4–15.
- Romero, M. D., Aguado, J., Gonzalez, L., & Ladero, M. (1999). Cellulase Production by *Neurospora crassa* on Wheat Straw. *Enzyme and Microbial Technology*, 25, 244-250.
- Roncero, M. I. G., Hera, C., Ruiz-Rubio, M., Garcí'a Maceira, F. I., Madrid, M. P., Caracuel, Z., Calero, F., Delgado-Jarana, J., Rolda'n-Rodríguez, R., Martí'nez-Rocha, A. L., Velasco, C., Roa, J., Martí'n-Urdiroz, M., Co'rdoba, D., & Pietro, A. D. (2003). *Fusarium* as a model for studying virulence in soilborne plant pathogens. *Physiological and Molecular Plant Pathology*, 62(2), 87-98.
- Rosales, E., Couto, S. R., & Sanroman, M. A. (2005). Reutilisation of food processing wastes for production of relevant metabolites: application to laccase production by *Trametes hirsuta*. *Journal of Food Engineering*, 66(4), 419-423.
- Rossi, S., Grémare, A., Josep-Marià G., Jean-Michel, A., Jordana, E., & Vétion, G. (2003). Biochemical characteristics of settling particulate organic matter at two north-western Mediterranean sites: a seasonal comparison. *Estuarine, Coastal and Shelf Science*, 58(3), 423-434.
- Roy, R. V., Das, M., Banerjee, R., & Bhowmick, A. K. (2006). Comparative studies on rubber biodegradation through solid-state and submerged fermentation. *Process Biochemistry*, 41(1), 181-186.
- Russ, W., Mortel, H., & Meyer-Pittroff, R. (2005). Application of spent grains to increase porosity in bricks. *Construction and Building Materials*, 19(2), 117-126.
- Russell, M., Basheer, P. A. M., & Rao, R. J. (2005). Potential use of spent mushroom compost ash as an activator for pulverised fuel ash. *Construction and Building Materials* 19, 698–702.
- Sabu, A., Pandey, A., Jaafar Daud, M., & Szakacs, G. (2005). Tamarind seed powder and palm kernel cake: two novel agro residues for the production of tannase under solid state fermentation by *Aspergillus niger* ATCC 16620. *Bioresource Technology*, 96, 1223-1228.
- Saito, T., Hong, P., Kato, K., Okazaki, M., Inagaki, H., Maeda, S., & Yokogawa, Y. (2003). Purification and characterization of an extracellular laccase of a fungus (family *Chaetomiaceae*) isolated from soil. *Enzyme and Microbial Technology*, 33(4), 520- 526.
- Samson, R. A., Hadlok, R., & Stolk, A. C. (1977). A taxonomic study of the *Penicillium chrysogenum* series. *Antonie van Leeuwenhoek*, 43(2), 169–175.
- Sandhya, C., Sumantha, A., Szakacs, G., & Pandey, A., (2005). Comparative evaluation of neutral protease production by *Aspergillus oryzae* in submerged and solid state fermentation. *Process Biochemistry*, 40, 2689-2694.
- Shankaranand, V. S., & Lonsam, B. K. (1994). Ability of *Aspergillus niger* to tolerate metal ions and minerals in a solid-state fermentation system for the production of citric

acid. *Process Biochemistry*, 29, 29-37.

Sangsurasak, P., Nopharatana, M., & Mitchell, D.A. (1996). Mathematical modeling of the growth of filamentous fungi in solid-state fermentation. *J. Sci. Ind. Res.*, 55, 333-342.

Santos, M., Jimenez, J. J., Bartolome, B., Gomez-Cordoves, C., & del Nozal, M. J. (2003). Variability of brewer's spent grain within a brewery. *Food Chemistry*, 80, 17-21.

Santos, M. M., Rosa, A. S., Dal'boit, S., Mitchell, D. A., & Kriger, N. (2004). Thermal denaturation: is solid-state fermentation really a good technology for the production of enzymes? *Bioresource Technology*, 93, 261-268.

Santos, D. T., Sarrouh, B. F., Rivaldia, J. D., Converti, A., & Silvaa, S. S. (2008). Use of sugarcane bagasse as biomaterial for cell immobilization for xylitol production. *Journal of Food Engineering*, 86, 542-548.

Santos, S. C., Fernandez, L. G., Rossi-Alva, J. C., & de Abreu Roque, M. R. (2010). Evaluation of substrates from renewable-resources in biosurfactants production by *Pseudomonas* strains. *African Journal of Biotechnology*, 9(35), 5704-5711.

Schulein M. (2000). Protein engineering of cellulases. *Biochim Biophys Acta-Protein Struct Mol Enzymol*, 1543(2), 239-252.

Schumacher, B. A. (2002). Methods for the determination of total organic carbon (TOC) in soils and sediments. (Doctoral dissertation, *United States Environmental Protection Agency*)

Scotti, C. T., Vergoignan, C., Feron, G., & Durand, A. (2001). Glucosamine measurement as indirect method for biomass estimation of *Cunninghamella elegans* grown in solid state cultivation conditions. *Biochemical Engineering Journal*, 7, 1-5.

Serena, A., & Bach Knudsen, K. E. (2007). Chemical and physicochemical characterization of co-products from the vegetable food and agro industries. *Animal Feed Science and Technology*, 139, 109-124.

Sharma, A., Vivekanand, V., & Singh, R. P. (2008). Solid state fermentation for gluconic acid production from sugarcane molasses by *Aspergillus niger* ARNU-4 employing tea waste as the novel solid support. *Bioresource Technology*, 99, 3444-3450.

Sharma, P. D., Fisher P. J., & Webster, J. (1977). Critique of the chitin assay technique for estimation of fungal biomass. *Trans. Br. Mycol. Soc.*, 69(3), 479-483.

Shen, H. D., Chou, H., Tam, M. F., Chang, C. Y., Lai, H. Y., & Wang, S. R. (2003). Molecular and immunological characterization of Pen ch 18, the vacuolar serine protease major allergen of *Penicillium chrysogenum*. *Allergy*, 58(10), 993-1002.

Shojaosadati, S. A., Faraidouni, R., Madadi-Nouei, A., & Mohamadpour, I. (1999). Protein enrichment of lignocellulosic substrates by solid state fermentation using

*Neurospora sitophila*. *Resources, Conservation and Recycling*, 27, 73–87.

Shrestha, P., Khanal, S. K., Pomettoii, A. L., & Van Leeuwen, J. (2009). Enzyme production by wood-rot and soft-rot fungi cultivated on corn fiber followed by simultaneous saccharification and fermentation. *J Agric Food Chem*, 57(10), 4156–4161.

Shugaba, A., Nok, A. J., Ameh, S. A., & Lori, J. A. (2010). Studies on the growth of some filamentous fungi in culture solutions containing Hexavalent chromium. *International Journal of Biotechnology and Biochemistry*, 6(5), 715-722.

Sindhu, R., Suprabha G. N., & Shashidhar, S. (2009). Optimization of process parameters for the production of  $\alpha$ -amylase from *Penicillium janthinellum* (NCIM 4960) under solid state fermentation. *African Journal of Microbiology Research*, 3(9), 498-503.

Silva, J. P., Goncalves, I., Porter, J. J., & Ferreira-Dias, S. (2004). Modelling adsorption of acid orange 7 dye in aqueous solution to spent brewery grains. *Separation and Purification Technology*, 40, 163-170.

Sinegani, A. K. S., & Emtiazi, G. (2006). The relative effects of some elements on the DNS method in cellulase assay. *Applied Science and Environmental Management*, 10(3), 93 – 96.

Singhania, R. R., Patel, A. K., Soccol, C. R., & Pandey, A. (2009). Review: Recent advances in solid-state fermentation. *Biochemical Engineering Journal*, 44, 13–18.

Singhania, R. R., Sukumaran, R. K., Patel, A. K., Larroche, C., & Pandey, A. (2010). Advancement and comparative profiles in the production technologies using solid-state and submerged fermentation for microbial cellulases. *Enzyme and Microbial Technology*, 46, 541–549.

Singh, A. D., Vikineswary, S., Abdullah, N. (2002). Extraction of enzymes from spent compost of *Pleurotus sajor-caju* and its potential use for decolourization of synthetic dyes. *Malaysian Journal of Science*, 21, 1-8.

Smiths, J. P., Rinzema, A., Tramper, J., Schlosser, E. E. & Knol, W. (1996). Accurate determination of process variables in a solid-state fermentation system. *Process Biochemistry*, 31(7), 669-678.

Song, C. G., Cho, K. Y., & Nair, N. G. (1987). A synthetic medium for the production of submerged cultures of *Lentinus edodes*. *Mycologia*, 79(6), 866-876.

Spier, M. R., Letti, L. A. J., Woiciechowski, A. L., & Soccol, C. R. (2009). A simplified model for *A. niger* growth during phytase formation in solid state fermentation. *Brazilian Archives of Biology and Technology*, 52, 151-158.

Srinivasan, C., D'Souza, T. M., Boominathan, K., & Reddy, C. A. (1995). Demonstration of laccase in the white rot basidiomycete *Phanerochaete chrysosporium* BKM-F-1767. *Applied and Environmental Microbiology*, 61, 4274-4277.

Stajic, M., Persky, L., Friesem, D., Hadar, Y., Wasser, S. P., Nevo, E., & Vukojevic, J. (2006). Effect of different carbon and nitrogen sources on laccase and peroxidases production by selected *Pleurotus* species. *Enzyme and Microbial Technology*, 38, 65-73.

Stojceska, V., & Ainsworth, P. (2008). The effect of different enzymes on the quality of high-fibre enriched brewer's spent grain breads. *Food Chemistry*, 110, 865-872.

Stroem, L. K., Desai, D. K., & Hoadley, A. F. A. (2009). Superheated steam drying of brewer's spent grain in a rotary drum. *Advanced Power Technology*, 20(3), 240-244.

Strohl, W. R. (1997). *Biotechnology of Antibiotics*. 2nd Edn., Marcel Dekker, New York.

Sukumaran, R. K., Singhanian, R. R., & Pandey, A. (2005). Microbial cellulases—production, applications and challenges. *J Sci Ind Res*, 64, 832-844.

Szczepanowska, H., & Lovett, C. M. (1992). A study of removal and prevention of fungal stains on paper. *Journal of the American Institute for Conservation*, 31, 261-287.

Talınli, I., Yamanturk, R., Aydın, E., & Basakçıldan-Kabakci, S. (2005). A rating system for determination of hazardous wastes. *Journal of Hazardous Materials*, B126, 23-30.

Tanaka, H., Koike, K., Itakura, S., & Enoki, A. (2009). Degradation of wood and enzyme production by *Ceriporiopsis subvermispora*. *Enzyme Microb Technol*, 45(5), 384-90.

Teixeira, E. M. (1996). Effect of supplementation of sawdust of *Eucalyptus grandis* (Hill ex Maiden), speed and intensity of colonization of the substrate for the production of "Seed" of *Lentinula edodes* (Berk.) (M.Sc. Dissertation. Faculty of Agriculture and Veterinary Sciences ( UNESP)).

Terebiznik, M., & Pilosof, A. (1999). Biomass estimation in solid state fermentation by modeling dry matter weight loss. *Biotechnol Tech*. 13(3), 215-219.

*The Star*. (4<sup>th</sup> December 2003). "RM 12 million disposal costs shock Selangor exco".

Tengerdy, R. P. (1996). Cellulase production by solid substrate fermentation. *Journal of Scientific and Industrial Research*, 55, 313-316.

Tournas, V. H. (2005). Spoilage of vegetable crops by bacteria and fungi and related health hazards. *Crit Rev Microbiology*, 31(1), 33-44.

Travares, A. P. M., Cristovao, R. O., Loureiro, R. A. R., & Macedo, E. A. (2009). Application of statistical experimental methodology to optimize reactive dye decolourization by commercial laccase. *Journal of Hazardous Materials*, 162, 1255-1260.

Trejo-Hernandez, M.R., Lopez-Munguia, A., & Quintero, R.R.(2001). Residual compost of *Agaricus bisporus* as a source of crude laccase for enzymic oxidation of phenolic compounds. *Process Biochem*. 36, 635–639.

Trejo-Hernández, M.R., Ortiz, A., Okoh, A.I., Morales, D., & Quintero, R. (2007). Biodegradation of heavy crude oil Maya using spent compost and sugar cane bagasse wastes. *Chemosphere*, 68, 848-855.

Tsuji, A., Kinashita, T., & Hoshino, M. (1969). Analytical chemical studies on amino sugars. 11. Determination of hexosamines using 3-methyl-2-benzothiozalone hydrazone hydrochloride. *Chem Pharm Bull*, 7, 1505-1510.

Tychanowicz, G. K., de Souza, D. F., Souza, C. G. M., Kadowaki, M. K., & Peralta, R. M. (2006). Copper improves the production of laccase by the white-rot fungus *Pleurotus pulmonarius* in solid state fermentation. *Brazilian Archives of Biology and Technology*, 49(5), 699 – 704.

Valverde, P. (1994). Barley spent grain and its future. *Cerveza y Malta*, 122, 7-26.

Vandenbergh, L. P. S., Soccol, C. R., Pandey, A., & Lebeault, J. M. (2000). Short communication: Solid-state fermentation for the synthesis of citric acid by *Aspergillus niger*. *Bioresource Technology*, 74, 175-178.

Van Horn, W., & Shema, B. F. (1957). *Sheets comprising filamentous of fungi*. U.S. Patent 2,811,442

Vasudev, K., Dhawan, S., Kapoor, R. K., & Kuhad, R. C. (2005). Biochemical characterization and molecular evidence of laccase from bird's nest fungus *Yathus bulleri*. *Fungal Genetics and Biology*, 42, 684-693.

Viccini, G., Mitchell, D. A., & Krieger, N. (2003). A model for converting solid state fermentation growth profiles between absolute and relative measurement bases. Inter-Conversion of Growth Profiles in SSF. *Food Technol. Biotechnol.*, 41(3), 191–201.

Viniegra-Gonzalez, G., Favela-Torres, E., Aguilar, C. N., Romero-Gomez, S. J., Diaz-Godinez, G., & Agur, C. (2003). Advantages of fungal enzyme production in solid state fermentation over liquid fermentation systems. *Biochemical Engineering Journal* 13, 157-167.

Vinoth Kumar, V., Vigneswaran, K., Pradheep Isaac, J., & Bharathiraja, B. (2010). Optimization of sugarcane bagasse, nutrient and temperature on the yield of penicillin v in solid state fermentation by *Penicillium chrysogenum*. *International Journal of Biotechnology and Biochemistry*, 6(3), 477–483.

Vintila, T., Dragomirescu, M., Jurcoane, S., Vintila, D., Caprita, R., & Maniu, M. (2009). Production of cellulase by submerged and solid-state cultures and yeasts selection for conversion of lignocellulose to ethanol. *Romanian Biotechnol Lett*, 14, 4275–4281.

Virupakshi, S., Babu, K. G., Gaikwad, S. R., & Naik, G.R. (2005). Production of a xylanolytic enzyme by a thermoalkaliphilic *Bacillus* sp. JB-99 in solid state fermentation. *Process Biochemistry*, 40, 431–435.



- Wagacha, J. M., & Muthomi, J. W. (2007). *Fusarium culmorum*: Infection process, mechanisms of mycotoxin production and their role in pathogenesis in wheat. *Crop Protection*, 26(7), 877-885.
- Wagner, W. D. (1979). A more sensitive assay discriminating galactosamine and glucosamine in mixtures. *Analytical Biochemistry*, 94, 394-396.
- Wang, D., Sakoda, A., & Suzuki, M. (2001). Biological efficiency and nutritional value of *Pleurotus ostreatus* cultivated on spent beer grain. *Bioresource Technology*, 78, 293-300.
- Warnock, D. W. (1971). Assay of fungal mycelium in grains of barley, including the use of the fluorescent antibody technique for individual fungal species. *Journal of General Microbiology*, 67, 197-205.
- Wichern, F., & Hafeel, K. (2004). The fungal-bacterial ratio: Tipping the balance for soil health. *Soils are Alive Newsletter* 3(3).
- Williams, B. C., McMullan, J. T., & McCahey, S. (2001). An initial assessment of spent mushroom compost as a potential energy feedstock. *Bioresource Technology*, 79, 227-230.
- Wischmann, H., & Steinhart, H. (1997). The formation of PAH oxidation products in soil and soil/compost mixtures. *Chemosphere*, 35(8), 1681-1698.
- Wojciechowski, M., Mileski, S., Mezerski, J., & Borowski, E. (2005). Glucosamine-6-phosphate synthase, a novel target for antifungal agents. Molecular modelling studies in drug design. *Acta Biochemica Polonica*, 53(3), 647-653.
- Wood, D. A. (1979). A method for estimating biomass of *Agaricus bisporus* in a solid substrate, composted wheat straw. *Biotechnol Lett*, 1, 255-260.
- Xavier, A. M. R. B., Evtuguin, D. V., Ferreira, R. M. P., & Amado, F. L. (2001). Laccase production for lignin oxidative activity. *Proceeding of the 8th International Conference on Biotechnology in the Pulp and Paper Industry, 4-8 June, Helsinki, Finland*.
- Xia, L., & Cen, P. (1999). Cellulase production by solid state fermentation on lignocellulosic waste from the xylose industry. *Process Biochemistry*, 34, 909-912.
- Xiros, C., Topakas, E., Katapodis, P., & Christakopoulos, P. (2008). Hydrolysis and fermentation of brewer's spent grain by *Neurospora crassa*. *Bioresource Technology* 99, 5427-5435.
- Xu, G., & Goodell, B. (2001). Mechanism of wood degradation by brown-rot fungi: chelator-mediated cellulose degradation and binding of iron by cellulose. *Journal of Biotechnology*, 87, 43-57.
- Yamanak, S., Kikuchi, R., & Ajinomoto, K. K. (1992). Manufacture of reinforced fibers with fungi. *Japanese Patent 04112784*

Yamane, Y., Fujita, J., Shimizu, Ryu-Ichi., Hiyoshi, A., Fukuda, H., Kizaki, Y., & Wakabayashi, S. (2002). Production of cellulose- and xylan-degrading enzymes by a koji mold, *Aspergillus oryzae*, and their contribution to the maceration of rice endosperm cell wall. *Journal of Bioscience and Bioengineering*, 93, 1947.

Yang, X. W., Ma, F., Zeng, Y., Yu, H., Xu, C., & Zhang, X. (2010). Structure alteration of lignin in corn stover degraded by white-rot fungus *Irpex lacteus* CD2. *International Biodeterioration & Biodegradation*, 64, 119-123.

Zadrazil, F., Gonser, A., & Lang, E. (1999). Influence of incubation temperature on the secretion of extracellular ligninolytic enzymes of *Pleurotus* sp. and *Dichomitus squalens* into soil. *Proceedings of the Conference on Enzymes in the Environment: Activity, Ecology and Applications*. 12-16 July. Granada, Spain.

Zamani, A., Jeyhanipour, A., Edebo, L., Nikasson, C., & Taherzadeh, M. J. (2008). Determination of glucosamine and *N-acetyl* glucosamine in fungal cell walls. *Journal of Agricultural and Food Chemistry*, 56, 8314-8318.

Zhang, C. K., Gong, F., & Li, D. S. (1995). A note on the utilisation of spent mushroom composts in animal feeds. *Bioresource Technology*, 52, 89-91.

Zheng, Z., & Shetty, K. (1998). Solid-state production of beneficial fungi on apple processing wastes using glucosamine as the indicator of growth. *J Agric Food Chem*, 46, 783-787.

Zonneveld, B. J. M. (1971). Biochemical analysis of the cell wall of *Aspergillus nidulans*. *Biochem Biophys Acta*, 249, 506-514.