

REFERENCES

- Alisaraei, A.T., Hosseini, S.H., Ghobadian, B., Motevali, A. 2017. Biofuel production from citrus waste: A feasibility study in Iran. *Renewable and Sustainable Energy Reviews*. 69, 1100-1112.
- Bouallagui, H., Touhami, Y., Ben Cheikh, R., and Hamdi, M. 2005. Bioreactor performance in anaerobic digestion of fruit and vegetable wastes. *Process Biochem*. 40, 989–995.
- Burt, S., 2004. Essential oils: their antibacterial properties and potential applications in foods – a review. *Int. J. Food Microbiol*. 94, 223–253.
- Deublein, D. and Steinhauser, A. 2008. *Biogas from waste and renewable resources*. Germany: Wiley-VHC Verlag GmbH & Co. KGaA.
- Dohany, J.E. 2000. Fluorine-containing polymers, poly(vinylidene fluoride). *Kirk-Othmer Encyclopedia of Chemical Technology*. New Delhi: John Wiley & Sons Inc.
- Effendi, A., Hellgardt, K., Zhang, Z.G., and Yoshida, T. 2005. Optimising H₂ production from model biogas via combined steam reforming and CO shift reactions. *Fuel*. 84, 869-74.
- Forgács, G. 2012. *Biogas Production from Citrus Wastes and Chicken Feather: Pretreatment and Co-Digestion (Vol. Ph.D. thesis)*. Chalmers University of Technology, Göteborg, Sweden.
- Gerardi, M.H. 2003. *The Microbiology of Anaerobic Digesters*. New Jersey: John Wiley & Sons, Inc.
- Gioannis, G.D., Muntoni, A., Poletti, A., Pomi, R., and Spiga, D. 2017. Energy recovery from one- and two-stage anaerobic digestion of food waste. *Waste Management*. Available online: <https://doi.org/10.1016/j.wasman.2017.06.013> (accessed 12 July 2017).
- Greene, P. 2015. *Anaerobic Digestion & Biogas*. America: Natural Systems Utilities.
- Grumezescu, A. M. 2016. *Emulsions: Nanotechnology in the Agri-Food Industry*. London: Academic Press.
- Hill, C. G. and Root, T. W. (1937). *An Introduction to chemical engineering kinetics & reactor design*. New Delhi: John Wiley & Sons, Inc.
- Izaxon, C., Pagels, J., Wiertzbicka, A., Eriksson, A., Gudmundsson, A., Nielsen, J., Dierschke, K., Assarsson, E., Andersson, U., Kleno, J., Nøjgaard, and Bohgard, M. 2009. Generation of nano size particles from limonene/ozone reactions, for controlled human exposures in a chamber. *European Aerosol Conference 2009, Karlsruhe*, Abstract T108A08.
- Jørgensen, P. J. 2009. *Biogas – green energy*. Denmark: PlanEnergi and Researcher for a Day.
- Kolbitsch, P., Pfeifer, C., and Hofbauer, H. 2008. Catalytic steam reforming of model biogas. *Fuel*. 87, 701-706.

- Lau, C.S., Tzolankis, A., and Wyszynski, M.L. 2011. Biogas upgrade to syngas (H₂-CO) via dry and oxidative reforming. *Int J Hydrogen Energy*. 36, 397-404.
- Lin, J., Zuo, J., Gan, L., Li, P., Fenglin, L., Wang, K., Chen, L., and Gan, H. 2011. Effects of mixture ratio on anaerobic co-digestion with fruit and vegetable waste and food waste of China. *J. Environ. Sci.* 23, 1403–1408.
- Liu, F., Hashim, N.A., Liu, Y., Abed, M.R.M., and Li, K. 2011. Progress in the production and modification of PVDF membranes. *Journal of Membrane Science*. 375, 1-27.
- Mahboubi, A., Ylittervo, P., Doyen, W., Wever, H.D., Taherzadeh, M.J. 2016. Reverse mebrane bioreactor: Introduction to a new technology or biofuel production. *Biotechnol Adv.* 34, 954-975.
- Millati, R., Lukitawesa, Permanasari, E.D., Sari, K.W., Cahyanto, M. N., Niklasson, C., and Taherzadeh, M. J. 2017. Anaerobic Digestion of Citrus Waste using Two-Stage Membrane Bioreactor. *The 15th International Conference on Quality in Research (QiR 2017)*.
- Mizuki, E., Akao, T., and Saruwatari, T.1990. Inhibitory effect of Citrus unshu peel on anaerobic digestion. *Biol. Wastes*. 3, 161–168.
- Negro, V., Mancini, G., Ruggeri, B., and Fino, D. 2016. Citrus waste as feedstock for bio-based products recovery: Review on limonene case study and energy valorization. *Bioresour. Technol.* 214, 806-815.
- Okwi, D.E. and Emenike I.N. 2006. Evaluation of the phytonutrients and vitamins contents of citrus fruits. *Int J Mol Med Adv Sci.* 2, 1–6.
- Patinvoh, R.J., Osadolo, O.A., Chandoliasn, K., Horvath, I.S., Taherzadeh, M.J. 2017. Innovative pretreatment strategies or biogas production. *Bioresour. Technol.* 224, 13-24.
- Pourbafrani, M., Forgacs, G., Horvath, I.S., Niklasson, C., Taherzadeh, M. 2010. Production of biofuels, limonene and pectin from citrus wastes. *Bioresour. Technol.* 101, 4246-4250.
- Pourbafrani, M., Talebnia, F., Niklasson, C., and Taherzadeh, M.J. 2007. Protective effect of encapsulation in fermentation of limonene-contained media and orange peel hydrolyzate. *Int. J. Mol. Sci.* 8, 777–787.
- Rao, D.G. 2005. *Introduction to Biochemical Engineering*. New Dehi: McGraw-Hill.
- Rapport, J.L., Zhang, R., Williams, R.B., and Jenkins, B.M. 2012. Anaerobic digestion technologies for the treatment of municipal solid waste. *Int. J. Environ. Waste Manage.* 9, 100.
- Rotaru, A.E., Schauer, R., Probian, C., Mussmann, M., Harder, J., 2012. Visualization of candidate division OP3 cocci in limonene-degrading methanogenic cultures. *Microbiol. Biotechnol.* 22, 457–461.
- Ruiz ,B. and Flotats, X. 2014. Citrus essential oils and their influence on the anaerobic digestion process: an overview. *Waste Manag.* 34, 2063–2079.
- Schievano, A., Tenca, A., Lonati, S., Manzini, E., and Adani, F. 2014. Can two-stage instead of one-stage anaerobic digestion really increase energy recovery from biomass? *Appl. Energy*. 124, 335–342.

- Seadi, T.A., Rutz, D., Prassl, H., Köttner, M., Finsterwalder, T., Volk, S., and Janssen, R. 2008. *Biogas Handbook*. Denmark: University of Southern Denmark Esbjerg.
- Siles, J.A., Vargas, F., Guitierrez, M.C., Chica, A.F., and Martin, M.A. 2016. Integral valorisation of waste orange peel using combustion, biomethanisation and co-composting technologies. *Bioresour. Technol.* 211, 173-182.
- Snape, J. B., Dunn, I. J., Ingham, J., and Prenosil, J. E. 1995. *Dynamics of Environmental Bioprocesses: Modelling & Simulation*. Germany: VCH Verlagsgesellschaft mbH.
- Sunyoto, N.M.S., Zhu, M., Zhang, Z., and Zhang, D. 2016. Effect of biochar addition on hydrogen and methane production in two-phase anaerobic digestion of aqueous carbohydrates food waste. *Bioresour. Technol.* 219, 29–36.
- Talebna, F. and Taherzadeh, M.J., 2007. Physiological and morphological study of encapsulated *Saccharomyces cerevisiae*. *Enzym. Microb. Technol.* 41, 683–688.
- Taherzadeh, M.J. and Jeihanipour, A. 2012. Recalcitrance of lignocellulosic biomass to anaerobic digestion. In: Mudhoo, A. (Ed.), *Biogas Production: Pretreatments for enhanced Anaerobic Technology*. 27–54.
- Vavilin, V.A., Rytov, S.V., and Lokshina, L.Y., 1996. A description of hydrolysis kinetics in anaerobic degradation of particulate organic matter. *Bioresour. Technol.* 56, 229–237.
- Wang, Q., Kuninobu, M., Ogawa, H.I. and Kato, Y., Degradation of volatile fatty acids in highly efficient anaerobic digestion. *Biomass and Bioenergy*. 16, 407-416.
- Westman, J.O., Bonander, N., Taherzadeh, M.J., and Franzén, C.J., 2014. Improved sugar coutilisation by encapsulation of a recombinant *Saccharomyces cerevisiae* strain in alginate-chitosan capsules. *Biotechnol. Biofuels* 7.
- Westman, J.O., Manikonda, R.B., Franzén, C.J., and Taherzadeh, M.J., 2012. Encapsulation induced stress helps *Saccharomyces cerevisiae* resist convertible lignocellulose derived inhibitors. *Int. J. Mol. Sci.* 13, 11881–11894.
- Wikandari, R., Millati, R., Cahyanto, M.N., Taherzadeh, M.J., 2014a. Biogas Production from Citrus Waste by Membrane Bioreactor. *Membranes*. 4, 596-607.
- Wikandari, R., Nguyen, H., Millati, R., Niklasson, C., Taherzadeh, M.J., 2015. Improvement of Biogas Production from Orange Peel Waste by Leaching of Limonene. *Biomed Res International*.
- Wikandari, R., Youngsukkasem, S., Millati, R., and Taherzadeh, M.J. 2014b. Performance of semi-continuous membrane bioreactor in biogas production from toxic feedstock containing D-Limonene. *Bioresource Technology*. 170, 350-355.
- Wilkins, M.R., Widmer, W.W., and Grohmann, K. 2007b. Simultaneous saccharification and fermentation of citrus peel waste by *Saccharomyces cerevisiae* to produce ethanol. *Process Biochem.* 42, 1614–1619.

- Wilkins, M.R., Widmer, W.W., Grohmann, K., Cameron, R.G., 2007a. Hydrolysis of grapefruit peel waste with cellulase and pectinase enzymes. *Bioresour. Technol.* 98, 1596–1601.
- Youngsukkasem, S., Akibomi, J., Rakshit, S.K., Taherzadeh, M.J., 2013. Biogas production by encased bacteria in synthetic membranes: protective effects in toxic media and high loading rates. *Environ. Technol.* 34, 2077-2084.
- Youngsukkasem, S., Rakshit, S.K., Taherzadeh, M.J., 2012. Biogas production by encapsulated methane-producing bacteria. *BioResources.* 7(1), 56-65.
- Zhang, D., Zhu, M., Zhou, W., Yani, S., Zhang, Z., Wu, J., Zhang, D., Zhu, M., Zhou, W., Yani, S., Zhang, Z., and Wu, J., 2015. A two-phase anaerobic digestion process for biogas production for combined heat and power generation for remote communities. *Handbook of Clean Energy Systems.* Chichester, UK: John Wiley & Sons Ltd.

- Anonymous. _____. Polyvinylidene fluoride (PVDF). Available online: <http://www.plasticseurope.org/what-is-plastic/types-of-plastics11148/engineering-plastics/pvdf.aspx> (Accessed 10 August 2017)
- Food and Agriculture Organization. Available online: <http://www.faostat.fao.org> (accessed on 5 July 2017).
- United States Department of Agriculture-Foreign Agriculture Service. Available online: <https://apps.fas.usda.gov> (accessed on 5 July 2017).