

REFERENCES

- [1] Winyachompunart, B., Wibulswas, P. and Tiansuwan, J. (2000). Predictions of combustion rates of blended palm oil droplets by forced convection theory. World Renewable Energy Congress VI 1–7 July 2000, Brighton, UK, pp. 2410-2413.
- [2] Carraretto, C., Macor, A., Mirandola, A., Stoppato A. and Tonon, S. (2004). Biodiesel as alternative fuel: Experimental analysis and energetic evaluations. Energy, Volume 29, Issues 12-15, pp. 2195-2211.
- [3] Bamwal, B. K. and Shama, MP, (2005). Prospects of biodiesel production from vegetable oils in India. Renewable and Sustainable Energy Reviews, Volume 9, Paper No. 4, pp. 363-378.
- [4] Rosen MJ. (1989). Surfactants and Interfacial Phenomena, 2nd ed. New York. Wiley.
- [5] <http://merck-chemicals.com/span-80>
- [6] Hagos, F.Y., Aziz, A. Rashid A. and Isa, M Tan. (2011). Water-in-diesel emulsion and its micro-explosion phenomenon-review. In: Communication Software and Networks (ICCSN), IEEE 3rd International Conference, 27-29 May 2011, Xi'an, China, pp. 4984-4988.
- [7] Spalding, D.B., (1979), Combustion and Mass Transfer. Pergamon Press, pp. 125 – 144.
- [8] Wibulswas, P. and Jung O. (1989). Combustion of biomass liquid fuel. Asean Journal of Science and Technology, Vol. 6, No. 1, pp. 67-80.

- [9] Bracco, F.V. (1985). Modelling of engine spray. Society of Automotive Engineers, Paper No. 850394, pp. 113-136.
- [10] Spalding, D.B. (1963). Convective mass transfer. McGraw-Hill, New York.
- [11] Wibulswas, P., Supapimol, K. and Keochung U. (1993). Combustion of vegetable oils droplets. Research and Development Journal. Engineering Institute of Thailand, Vol. 4, No. 2, pp. 76 – 85.
- [12] Wibulswas, P., Chirachakhrit, S., Keochung, U. and Tiansuwan, J. (1999). Combustion of blends between plant oils and diesel oil. Renewable Energy, Vol. 16, pp. 1098 – 1101.
- [13] Samec, N., Kegl, B. and Dibble, R.W. (2002). Numerical and experimental study of water/oil emulsified fuel combustion in a diesel engine. Fuel, Vol. 81, pp. 2035-2044.
- [14] Kadota, T., Yamasaki, H. (2002). Recent advances in the combustion of water fuel emulsion. Progress in Energy and Combustion Science, Vol. 28, pp. 385-404.
- [15] Broniarz-Press, L., Ochowiak, M., Rozanski, J. and Woziwodzki, S. (2009). The atomization of water-oil emulsions. Experimental Thermal and Fluid Science, Vol. 33, pp. 955-962.
- [16] Pramanik, K. (2003). Properties and use of jatropha curcas oil and diesel fuel blends in compression ignition engine. Renewable Energy, Vol. 28, pp. 239 - 248.
- [17] Zubr, J. and Matzen, R. (1996). Mixed vegetable and diesel oil as fuel. Biomass for Energy, June, pp. 1644 – 1653.

- [18] Abu-Zaid, M. (2004). Performance of single cylinder direct injection Diesel engine using water fuel emulsions. *Energy Conversion and Management*, Vol. 45, pp. 697 – 705.
- [19] Kalam, M.A.. and Masjuki, H.H. (2004). Emissions and deposit characteristics of a small diesel engine when operated on preheated crude palm oil. *Biomass and Bioenergy*, Vol. 27, pp. 289 – 297.
- [20] Kerihuel, A., Senthil Kumar M., Bellettre J. and Tazerout M. (2005). Use of animal fats as CI engine fuel by making stable emulsions with water and methanol, *Fuel*, Vol. 84., pp. 1713 - 1716.
- [21] Armas, O., Ballesteros R., Martos F.J. and Agudelo J.R. (2005). Characterization of light duty Diesel engine pollutant emissions using water-emulsified fuel. *Fuel*, Vol. 84, pp.1011–1018.
- [22] Lin, C. Y. and Wang K. H. (2004). Diesel engine performance and emission characteristics using three-phase emulsions as fuel. *Fuel*, Vol. 83, pp. 537-545.
- [23] Lin, C. Y. and Lin H. A. (2007). Engine performance and emission characteristics of three-phase emulsions of biodiesel produced by peroxidation. *Fuel Processing Technology*, Vol. 88, pp. 35-41.
- [24] Lin, C.Y. and Chen L.W. (2006). Engine performance and emission characteristics of three-phase diesel emulsions prepared by an ultrasonic emulsification method. *Fuel*, Vol. 85, pp. 593-600.

- [25] Nadeem, M., Rankuti, C., Anuar, K., Haq, M.R.U., Tan, I.B. and Shah, S.S. (2006). Diesel engine performance and emission evaluation using emulsified fuels stabilized by conventional and Gemini surfactants. *Fuel*, Vol. 85, pp. 2111-2119.
- [26] Maiboom, A. and Tauzia, X. (2011). Nox and Pm emissions reduction on an automotive HSDI Diesel engine with water-in-diesel emulsion and EGR: An experimental study. *Fuel*, Vol. 90, pp. 3179-3192.
- [27] Abramzon, B. and Sirignano, W.A. (1989). Droplet vaporization model for spray combustion calculations. *International Journal of Heat Mass Transfer*, Vol. 32, No. 9, pp. 1605 – 1618.
- [28] Barison, Y. (1996). Palm Oil. In: Hui YH, editor., *Bailey's Industrial Oil & Fat Products Vol 2*. Singapore; John Wiley & Sons, Inc., pp. 271 – 376.
- [29] Bazari, Z. (1992). A DI diesel combustion and emission prediction capability for use in cycle simulation. *SAE Paper 920462*.
- [30] Chang, D.Y.Z., Gerpen, J.H.V., Lee, I., Johnson, L.A., Hammond, E.G. and Marley, S.J.(1996). Fuel properties and emission of soybean oil esters as diesel fuel. *Journal of the American Oil Chemists'Society*, Vol. 73, No. 11, pp. 1549-1555.
- [31] Chow, M.C. and Ho, C.C.(2000). Surface active properties of palm oil with respect to the processing of palm oil. *Journal of Oil Palm Research*, Vol.12, pp. 107 – 116.

- [32] Crookes, R. J., Fariborzkiannjad and Nazha M.A.A. (1997). Systematic assessment of combustion characteristics of biofuels and emulsion with water for use as diesel engine fuels. *Energy conservation & Management*, Vol. 38, P. 1785 – 1795.
- [33] Curtis, E.W., Uludogan, A. and Reitz, R.D. (1995). A new high pressure droplet vaporization model for diesel engine modeling. *SAE Paper* 952431.
- [34] Encinar, J.M., Gonzalez, J.F., Roriuez, J.J. and Tejedor, A.(2002). Biodiesel fuels from vegetable oils: transesterification of cynara cardunculus oils with ethanol. *Energy & Fuels*, Vol. 16, pp. 443-450.
- [35] Fawzi A. et. al. (1996). Physicochemical characterization of emulsion fuel fuel oil-water-charcoal and surfactants. *Fuel*, Vol. 75, No. 10, pp. 1193-1198.
- [36] Goodrum, J.W. and Eiteman, M.A. (1996). Physical properties of low molecular weight triglycerrides for the development of bio-diese fuel model. *Bioresource Technology*, Vol. 56, pp. 55 – 60.
- [37] Gunstone, F.D.(2002). Vegetables oils in food technology composition, properties and uses. Bladwell Publishing, CRC Press, FL, pp. 157-172.
- [38] Hassan, M.Hj. and Mat, S. (1991). Performance evaluation of palm oil diesel blends on small engine. *Journal of Energy, Heat and Mass Transfer*, Vol. 13, pp. 125-133.

- [39] Heywood, J.B. (1988). *Internal Combustion Engine Fundamental*. McGraw-Hill, pp. 419 – 566.
- [40] Hiroyasu, H., Kadota, T., and Arai, M. (1983). Development and use of a spray combustion modeling to predict diesel engine efficiency and pollution emission. *Combustion Modeling Bulletin of the JSME*, Vol. 26, No. 214, pp. 569 –575.
- [41] Hiroyasu, H., Kadota, T. and Arai, M. (1978). *Fuel Spray Characterization in Diesel Engine*. *Combustion Modeling in Reciprocating Engines*, Mattavi & Amann, pp. 369-408.
- [42] Kuensberg Sarre, C., Kong, S.C. and Reitz, R.D. (1999). Modeling the effects of injector nozzle geometry on diesel sprays. *SAE Paper* .1999-01-0912.
- [43] Lee, C.S. and Park, S.W. (2002). An experimental and numerical study on fuel atomization characteristics of high-pressure diesel injection sprays. *Fuel*. Vol. 81, pp. 2417 – 2423.
- [44] Lin, C.Y. and Wang K.H. (2004). Effects of diesel engine speed and water content on emission characteristics of three-phase emulsions. *Fuel*, Vol. 83, pp. 507-515.
- [45] Lin, C.Y. and Lin S.A. (2007). Effects of emulsification variables on fuel properties of two-and three-phase biodiesel emulsions. *Fuel*, Vol. 86, pp. 210-217.

- [46] Lin, C.Y. and Chen L.W. (2008). Comparison of fuel properties and emission characteristics of two-and three-phase emulsions prepared by ultrasonically vibrating and mechanically homogenizing emulsification methods. *Fuel*, Vol. 87, pp. 2154-2161.
- [47] Ma, A.N., Choo, Y.M. and Basion, Y. (1994). Production of palm oil methyl ester and its use as diesel substitute. *ASEAN Conference on Energy Technology*, Vol. 2, No. 5, pp. 161-170.
- [48] Ma, F., Clements, L.D. and Hanna, M.A. (1998). The effects of catalyst, free fatty acid and water on transesterification of beef tallow. *Trans ASAE* 41. pp. 1261-1264.
- [49] Machacon, H.T.C., Shiga, S., Karasawa, T. and Nakamura, H. (2001). Performance and emission characteristics of a diesel engine fueled with coconut oil-diesel fuel blend. *Biomass and Bioenergy*, Vol. 20, pp. 69 – 69.
- [50] Qi, D.H., Chen, H., Mathews, R.D. and Bian, Y.ZH. (2010). Combustion and emission characteristics of ethanol-biodiesel-water micro-emulsions used in a direct injection compression ignition engine. *Fuel*, Vol. 89, pp. 958-964.
- [51] Reheman, H. and Phadatare, A.G.(2004). Diesel engine emission and performance from blends of karanja methyl ester and diesel. *Biomass and Bioenergy*, Vol.27, pp. 393 – 397.
- [52] Spalding, D.B. (1979). *Combustion and Mass Transfer*. Pergamon Press, pp.125 – 144.

- [53] Srivastava, A. and Prasad, R. (2000). Triglycerides-based diesel fuels. Renewable & Sustainable Energy Reviews, Vol. 4, pp. 111-133.
- [54] Stiesch, G. (2003). Modeling engine spray and combustion process. Springer-Verlag, Heidelberg, Germany, pp. 101 – 253.
- [55] Timms, R.E. (1985). Physical Properties of Oils and Mixtures of Oils. Journal of the American Oil Chemists' Society (JAOCS), Vol. 62, pp. 241 - 248.