



Biography

KUET

Dr. Md. Abdul Wakil

Professor

Research Area Alternative Energy, Biofuel, Microwave assisted LIBS, Online in-situ elemental detection in solid, liquid and gaseous phase using Microwave assisted Laser Induced Breakdown Spectroscopy (LIBS)

Education

Doctor of Philosophy

The University of Adelaide, Australia()

Thesis Title: [Elemental Detection at Ambient Condition by LIBS and Microwave-assisted LIBS](#)

Master of Engineering Science

University of Malaya, Malaysia()

Thesis Title: [Combustion and Reduction of Nitrogen Oxide using Moringa, Rice bran and Sesame Biodiesel in a CI Engine](#)

Bachelor of Science in Mechanical Engineering

Rajshahi University of Engineering and Technology (RUET), Bangladesh() Group: Mechanical Engineering,

Service Records

- **Associate Professor**

Department/Section: Mechanical Engineering

KUET From 01-01-1970 to 01-01-1970

Working Area: Alternative Energy, Biofuels, Online elemental detection in solid, liquid and gaseous phase using Microwave assisted Laser Induced Breakdown Spectroscopy

Research Interest

Alternative Energy, Biofuel, Microwave assisted LIBS, Online in-situ elemental detection in solid, liquid and gaseous phase using Microwave assisted Laser Induced Breakdown Spectroscopy (LIBS)

Publication

Books

Journals

17. KASIM, A. F. A. , Wakil, M. , Grant, K. , Hearn, M. and ALWAHABI, Z. T. (2022) , " Aqueous ruthenium detection by microwave-assisted laser-induced breakdown spectroscopy," **Plasma Science and Technology**, IOP Publishing, vol24, no.8, pp.084004
16. Wakil, M. and Alwahabi, Z. T. (2021) , " Gated and non-gated silver detection using microwave-assisted laser induced breakdown spectroscopy," **Journal of Analytical Atomic Spectrometry**, Royal Society of Chemistry, vol34, no.1, pp.185-193
15. (2020) , " In situ measurement of potassium release during biomass combustion using laser-induced breakdown spectroscopy: effect of silicate on potassium release," **Energy & Fuels**, American Chemical Society, vol34, no.3, pp.3262-3271
14. Wakil, M. and Alwahabi, Z. T. (2020) , " Quantitative fluorine and bromine detection under ambient conditions via molecular emission," **Journal of Analytical Atomic Spectrometry**, Royal Society of Chemistry, vol35, no.11, pp.2620-2626
13. Shuaili, A. A. A. , Hadhrami, A. M. A. , Wakil, M. and Alwahabi, Z. T. (2019) , " Improvement of palladium limit of detection by microwave-assisted laser induced breakdown spectroscopy," **Spectrochimica Acta Part B: Atomic Spectroscopy**, Elsevier, vol159, pp.105666
12. Wakil, M. and Alwahabi, Z. T. (2019) , " Microwave-assisted laser induced breakdown molecular spectroscopy: quantitative chlorine detection," **Journal of Analytical Atomic Spectrometry**, Royal Society of Chemistry, vol34, no.9, pp.1892-1899
11. Wakil, M. , Kalam, M. A. , Masjuki, H. and Fattah, I. R. (2016) , " Rice bran: a prospective resource for biodiesel production in Bangladesh," **International Journal of Green Energy**, Taylor & Francis, vol13, no.5, pp.497-504
10. Wakil, M. , Kalam, M. , Masjuki, H. H. , Atabani, A. and Fattah, I. R. (2015) , " Influence of biodiesel blending on physicochemical properties and importance of mathematical model for predicting the properties of biodiesel blend," **Energy Conversion and Management**, Pergamon, vol94, pp.51-67
9. Wakil, M. , Masjuki, H. H. , Kalam, M. , Teoh, Y. , How, H. and Imtenan, S. (2015) , " Influence of engine operating variable on combustion to reduce exhaust emissions using various biodiesels blend," **RSC advances**, Royal Society of Chemistry, vol5, no.122, pp.100674-100
7. Masum, B. , Masjuki, H. , Kalam, M. , Palash, S. , Wakil, M. and Imtenan, S. (2014) , " Tailoring the key fuel properties using different alcohols (C2 to C6) and their evaluation in gasoline engine," **Energy conversion and management**, Pergamon, vol88, pp.382-390
6. Fattah, I. R. , Masjuki, H. , Kalam, M. , Wakil, M. , Ashraful, A. and Shahir, S. A. (2014) , " Experimental investigation of performance and regulated

emissions of a diesel engine with Calophyllum inophyllum biodiesel blends accompanied by oxidation inhibitors," **Energy Conversion and Management**, Pergamon, vol83, pp.232-240

5. Fattah,I. R. , Masjuki,H. , Kalam,M. , Wakil,M. , Rashedul,H. and Abedin,M. (2014) , " Performance and emission characteristics of a CI engine fueled with Cocos nucifera and Jatropha curcas B20 blends accompanying antioxidants," **Industrial crops and products**, Elsevier, vol57, pp.132-140

4. Wakil,M. , Kalam,M. , Masjuki,H. , Fattah,I. R. and Masum,B. (2014) , " Evaluation of rice bran, sesame and moringa oils as feasible sources of biodiesel and the effect of blending on their physicochemical properties," **RSC Advances**, Royal Society of Chemistry, vol4, no.100, pp.56984-56999

3. Fattah,I. , Kalam,M. , Masjuki,H. and Wakil,M. (2014) , " Biodiesel production, characterization, engine performance, and emission characteristics of Malaysian Alexandrian laurel oil," **RSC advances**, Royal Society of Chemistry, vol4, no.34, pp.17787-1779

1. Wakil,M. , Ahmed,Z. , Rahman,M. and Arifuzzaman,M. (2012) , " Study on fuel properties of various vegetable oil available in Bangladesh and biodiesel production," **International Journal of Mechanical Engineering**, vol2, no.5, pp.10-17

Conference

2. Alwahabi,M. A. W. a. Z. and ,(December 2-4, 2019) , "Optimised gating for detecting chlorine and fluorine in molecular form using microwave-assisted LIBS," **IX Australian Conference on Laser Diagnostics Adelaide, Australia** , pp.74-78

1. Hasan,A. P. ,Wakil,M. A. and Kafy,M. A. (2014) , "Prospect of rice bran for biodiesel production in Bangladesh," **10th International Conference on Mechanical Engineering, ICME 2013** , Procedia Engineering, pp.746-752