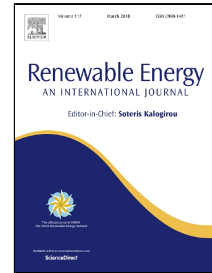


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Experimental investigation on the effects of diesel and mahua biodiesel blended fuel in direct injection diesel engine modified by nozzle orifice diameters

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Highlights:

- The diesel engine is modified with each of the three nozzles has 3 injection holes, with the aperture of $\varnothing = 0.20$ mm (modified), $\varnothing = 0.28$ mm (base), and $\varnothing = 0.31$ mm (modified) and was tested with diesel and mahua biodiesel blended fuel.
- The plantation of mahua tree is very much essential in a future generation.
- The physical properties and chemical composition of biodiesel are seen to be more effective.
- The B20 with smaller orifices NHD are agreed to be more successful in combustion performance and emissions.
- During the process with B20 and smaller orifice NHD, it's implementing the NO_x formation highly.

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