

Master thesis project

Property estimation using Matlab to determine tailored biofuel blends.



Purpose

This project aims at developing a Matlab script to find the properties of biofuel blends. The script will be used to find alternatives of fuel blends with desired properties to use in internal combustion engines. The script will use already derived calculation models for estimation of the physicochemical properties to find optimal blends for operation in spark ignited engines.

Contact

Does this sound like an interesting project to you? Just let me know:

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Structure

The project begins with a literature study to identify current models used to estimate fuel properties and what fuel properties should be considered. The calculation models derived from the literature study will be used in a script to find biofuel blends with user specified property ranges. Both theoretical and empirical studies may be needed to estimate the accuracy of the models and calculations.

Goal

The goal of the project is to identify and implement a Matlab script for estimation of tailored fuel blends for spark ignited engine testing. The project goals also include motivation of the calculations and models used in the script to estimate the fuel properties. The calculated properties agreement with reality should be investigated as well.