

## IMAM JA'AFAR AL-SADIO UNIVERSITY



17.2.4 - Does your university as a body, through international collaboration and research, review comparative approaches and develop international best practice on tackling the SDGs?

Imam Ja'afar Al-Sadiq University works on encouraging academics and students at the university to publish numerous scholarly articles in a variety of academic subjects related to sustainability development goals. According to the annual financial report of Imam Ja'afar Al-Sadiq University with no. m r/826 and dated 30/5/2020, the report of the scientific committee at the university was approved, in which the university has increased the financial reward to researchers in the event that they publish scientific research within international journals with high impact coefficient and indexed within Scopus, SCIE (Web of Science), RePEc, and other databases. For instance, one of the teachers in the College of Information Technology obtained an invention in the design and development of prosthetic limbs.

(R) Check for updates

## **scientific** reports

OPEN Utilization of additive from waste products with gasoline fuel

to operate spark ignition engine

Omar I. Awad<sup>1,3</sup>, Obed M. Ali<sup>2</sup>, Bo Zhou<sup>1</sup>, Xiao Ma<sup>3</sup>, Ali Thaeer Hammid<sup>4</sup>, Naseer T. Alwan<sup>5,6</sup>, Salam J. Yaqoob<sup>721</sup>, Saad Motahhir<sup>8</sup>, S. S. Askar<sup>9</sup> & Mohamed Abouhawwash<sup>10,11</sup>

Impacts of blending fusel oil with gasoline on fuel combustion have been investigated experimentally in the current research to evaluate engine performance improvement and exhaust emission. Tested fuel include £10, £70 £10 £40 and £40 €6 fusel oil by volume) and pure gasoline as baseline fuel have been used to operate 4-cylinder 51 engine at increasing engine speed and constant throttle valve of 45%. The present results reveal a shorter combustion duration and better engine performance with £10 over engine speed with maximum value of 33.9% for the engine break thermal efficiency. The

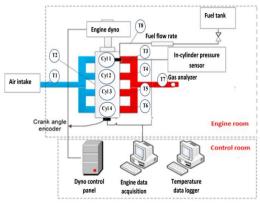


Figure 1. Schematic diagram of the proposed experimental setup





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Saccharine based carbonyl multi-walled carbon nanotubes: novel modification, characterization and its ability for removing Cd(II) and Cu(II) from soil and environmental water samples

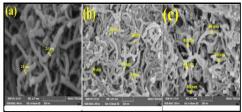
> Ahmed Raoof Mahmood\*1, Mustafa A Alheety 2, Mohammed M M Asker 3, Alarqam Zyaad Tareq 4 and Ahmet Karadağ

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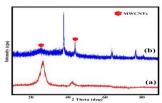


Figure 5 XRD patterns of (a) MWCNTs-COCl and (b) MWCNTs-CO-Sac

Examples of Sustainability Research Published Papers (Imam Ja'afar Al-Sadiq University, Iraq).



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5 College of Science, Department of Biotechnology, Bartin University, Bartin, Turkey