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***Corresponding Author:**
Asfa Ashraf

Email:
sundausnaeem@yahoo.com

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Gasoline Alcohol Blends as Alternative Fuels for Spark-Ignition Internal Combustion Engines: Applications, Challenges and Global Potential

Iqra Iqbal^{1,3}, Asfa Ashraf^{2,3*}, Muhammad Shuaib⁴

¹Department of Zoology, Government College Women University Sialkot, Pakistan.

²Pakistan Science Mission (PSM), Narowal (Noor Kot 51770), Pakistan.

³The School of Life Sciences, Fujian Normal University, Fuzhou 350117, China.

⁴School of Ecology and Environmental Science, Yunnan University, NO.2 North Cuihu Road, Kunming, Yunnan, 650091, PR. China.

Abstract:

Fossil fuels depletion and other environmental issues including global warming and climate changes add up the problems that need to be dealt with immediately. Alternative fuels for spark-ignition engines include fuels from oil shales and tar sands, as well as synthetic fuels, alcohols, and gases; sources include coal, natural gas, and biological origins. Gasoline is a mixture of volatile petroleum components, used as the energy source in internal combustion spark-ignition engines. The use of alcohol as a fuel for internal combustion engines, either alone or in combination with other fuels, has been given much attention mostly because of its possible environmental and long-term economical advantages over fossil fuel. The use of alternative fuels such as gasoline alcohol blended fuels in internal combustion engines aims to reduce air pollution while compensating for energy demand. This article covers such topics as the use of gasoline alcohol blends as a renewable and clean energy source for spark-ignition internal combustion engines: applications, challenges, and global potential.

Keywords: Fossil fuels, global warming, and climate change, gasoline alcohol blends, internal combustion engines.