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PNNL-SA-161143

100+ RON Gasoline Blendstock for High Efficiency, Low Emissions

CRADA 493

April 2021

Vanessa Dagle

LanzaTech, Inc.

U.S. DEPARTMENT OF ENERGY

Prepared for the U.S. Department of Energy
under Contract DE-AC05-76RL01830

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Abstract

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Abstract

The PNNL/LanzaTech alcohol-to-Jet (ATJ) patented process converts ethanol from LanzaTech's syngas fermentation process to low aromatic jet-range isoparaffins. Compounds are generated across a wide boiling range by the process. The project goal is to improve the viability of the ATJ process by increasing the RON of the gasoline fraction and determine what types of engines and vehicles can be fueled with this gasoline. PNNL experts' team will investigate the impact of the process conditions and catalysts formulation on the blendstock composition in relation with the fuel properties. Co-optima capabilities for fuel properties measurements will be leveraged to assess the potential engines/ vehicles applications of the produced blendstock. A techno-economic-analysis will be conducted to assess the commercial viability of the process for generating a high RON gasoline-range fuel.

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