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iINDUSTRIAL MiCROBES

## Industrial Microbes and Opus 12 Awarded \$1M to Turn Waste Gas into Valuable Chemicals

*Breakthrough chemistry + biotechnology alliance  
extends iMicrobes's ability to combat greenhouse gases*

Emeryville, CA – October 1, 2019 – The U.S. Department of Energy has announced a \$1M SBIR Phase II grant award for a collaboration between Industrial Microbes and Opus 12 to facilitate the integration of Industrial Microbes's methane-to-industrial-chemicals platform with Opus 12's CO<sub>2</sub>-to-methane platform.

The companies' combined technology addresses remediation of the two most important GHG gases: CO<sub>2</sub> and methane. "By conversion of CO<sub>2</sub> and methane into industrially relevant chemicals in a cost competitive manner, we will have a major impact on global warming," said Derek Greenfield, Founder and CEO of Industrial Microbes.

In the first phase of the project, the two teams demonstrated that their technologies could be combined to catalyze the conversion of CO<sub>2</sub> and methane contained in biogas into a high-value product. This new funding enables the partners to accelerate scale-up and validation of their breakthrough technology.

Through this project, the capture and reuse of greenhouse gases will be incentivized by the value of the final product.

The target product for this program, which has not been disclosed, is a versatile chemical intermediate for the materials sector with a market potential in excess of \$20B per year. As part of the program, the companies will demonstrate a physical prototype of the commercial process that will convert simulated biogas into the valuable chemical at high carbon efficiency.

"There is a clear trend towards sustainability in the materials sector. Consumers care about their carbon footprints more every day, but at the same time, there is resistance to paying higher prices for greener products," said Dr. Noah Helman, Founder and Head of Business Development at Industrial Microbes. "This project is a trailblazer for how to make a profitable chemical product using a carbon-negative process."

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### About Industrial Microbes:

Industrial Microbes is Bay Area company building a fermentation technology to convert methane and carbon dioxide into valuable, versatile, commercially-relevant chemicals. IM has raised more than \$3.5M in grant funding to date. Recently named to Biofuels Digest's NEXT 50 Companies to Disrupt the World, IM is inventing low-cost chemical manufacturing methods that are better for the environment and will be commercializing these technologies via partnerships with Global 500 companies.



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### **About Opus 12:**

Opus 12 has developed a device that recycles CO<sub>2</sub> into cost-competitive chemicals and fuels including a bio-based feedstock for the emerging bioeconomy. Our technology bolts onto any source of CO<sub>2</sub> emissions, and with only water and electricity as inputs, transforms that CO<sub>2</sub> into some of the world's most critical chemical products.

Opus 12 has attracted nearly \$20 million in funding from the U.S. DOE, NSF, NASA, Shell, SoCalGas, and top-tier venture investors in its 4 years of existence. The company is currently building its first commercial unit in collaboration with a world-leading systems integrator. Nicholas (CEO) is among Forbes' 30 under 30 in energy for 2016 and Kendra (CTO) is among the MIT Technology Review's TR35 Innovators for 2016. The company was featured in Rolling Stone's 25 People Shaping the Next 50 Years and the New York Times' Climate Visionaries.