

**CEO:** Dr. Jennifer Holmgren  
**Board:** Nigel Gormly, New Zealand Superannuation Fund; Jennifer Holmgren, LanzaTech; Jim Messina, The Messina Group; Datuk Abdul Rahim Hashim, Petronas; Gary Rieschel, Qiming Ventures; Toru Ryoso, Mitsui; Sean Simpson (founder), LanzaTech; Roger Wyse, Malaysian Life Sciences Capital Fund  
**140+ Staff Globally:** HQ, Laboratories: Chicago  
 Offices in: London; Shanghai; New Delhi;  
**Funding:** US \$250M+  
**IP Portfolio:** Over 350 issued; Over 390 Patents pending

---

## Introduction

LanzaTech is the global leader in gas fermentation technology. The company provides novel and economic routes to ethanol, jet fuel and high value chemicals from gas streams including industrial off-gases from steel and alloy mills; petroleum refineries, petrochemical complexes and gas processing facilities; syngas generated from any biomass resource (e.g. municipal solid waste, organic industrial waste, agricultural waste); and reformed biogas.

LanzaTech’s unique process provides a sustainable pathway to produce platform chemicals that serve as building blocks to products that have become indispensable in our lives such as rubber, plastics, synthetic fibers and fuels.

The company’s technology solutions mitigate carbon emissions from industry without adversely impacting food or land security. LanzaTech estimates that its products reduce greenhouse gas emissions by over 60% when compared to equivalent products derived from fossil fuels.

## Process Scale-up and Commercialization: Beyond Demonstration



**2008**

Blue Scope  
 New Zealand  
 Pilot  
 (15,000 gal/yr)



**2012**

BaoSteel  
 China  
 Pre-commercial  
 (100,000 gal/yr)



**2013**

Shougang  
 China  
 Pre-commercial  
 (100,000 gal/yr)



**2018-20**

4X Commercial  
 (10 - 30M gal/yr)  
 Shougang, China '18  
 ArcelorMittal, Belgium '19  
 Indian Oil Co., India '19  
 Aemetis, USA '20  
 Swayana, South Africa '20

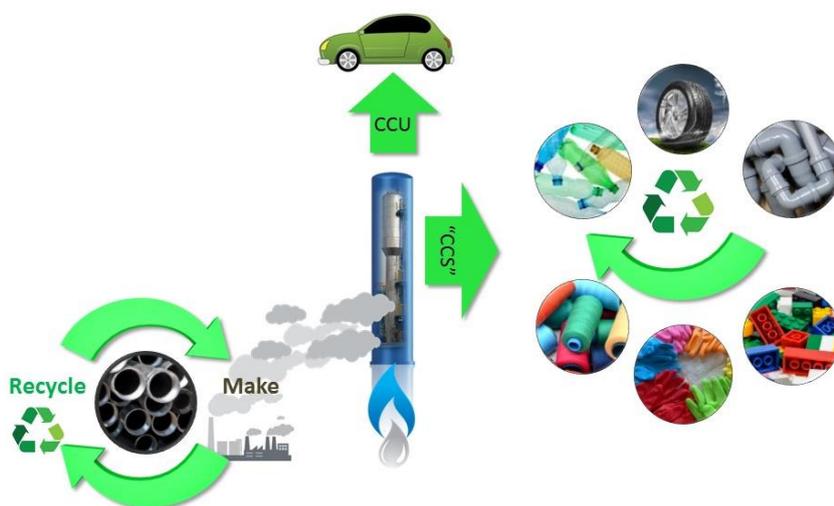
## LanzaTech Alcohol to Jet Fuel Technology

Ethanol derived via LanzaTech's gas fermentation technology can be converted to drop-in jet fuel using technology developed in collaboration with the US Department of Energy's Pacific Northwest National Laboratory (PNNL). Detailed lifecycle analysis (LCA) has shown that the LanzaTech-PNNL process delivers jet fuel with at least 65% reduction of greenhouse gas emissions relative to conventional (petroleum) jet fuel.

With sponsorship from Virgin Atlantic and HSBC, LanzaTech successfully converted ethanol derived from the LanzaTech Shougang facility in China to 4,000 USG of jet fuel.

## Fixing Carbon into Products

Across the supply chain, LanzaTech promotes a 'carbon smart' circular economy, where both gas providers and end users can choose to be resource efficient by recycling or "sequestering" carbon into new products rather than making them from new fossil resources. For example 2,3-Butanediol produced from waste steel mill gases can be converted to butadiene a precursor in the production of nylon and rubber.



A gas stream cannot be easily traded and therefore the utilization of a gas stream as a feedstock will result in decoupling the production of commodity chemicals from commodity feedstocks. This will have a game changing impact on the chemical industry and its supply chain - a trillion dollar industry shifting the way it thinks about commodity sourcing and supply; an impact that can only be derived through embracing the circular economy



**No Carbon Left Behind**

LanzaTech Inc., 8045 Lamon Ave, Suite 400, Skokie, Illinois 60077 USA Telephone: +1 847 3242400



[www.lanzatech.com](http://www.lanzatech.com)



[www.twitter.com/lanzatech](https://www.twitter.com/lanzatech)