# Partanna Global Collaborates with Kaust to Enhance CO2 Removal in Concrete; LanzaTech and LanzaJet Launch CirculAir for Sustainable Aviation Fuel



Materials science company Partanna Global has partnered with King Abdullah University of Science and Technology (Kaust) to enhance the CO2 removal properties of Partanna’s concrete. This 12-month research initiative will integrate Partanna’s carbon-negative concrete with Kaust’s Direct Air Capture (DAC) technology.

Partanna’s concrete uses a binder made from natural and recycled materials, eliminating the need for Portland Cement, which is responsible for 9% of global CO2 emissions. The binder is cured at room temperature and absorbs atmospheric CO2 over its lifecycle.

The collaboration aims to support Saudi Vision 2030 and Saudi Green Initiative (SGI) by improving the carbon removal capacity of Partanna’s concrete. This follows Partanna’s successful test-run at SRM and recent collaborations with ROSHN Group and Diriyah Gate Development Authority.

Separately, LanzaTech and LanzaJet have launched CirculAir, a solution converting waste, carbon, and renewable power into sustainable aviation fuel (SAF). CirculAir employs a gas fermentation-to-ethanol and alcohol-to-jet (ATJ) technology to produce SAF, potentially reducing aviation emissions by 85% and achieving carbon-negative results depending on the feedstock.

CEO Jimmy Samartzis highlighted CirculAir's global impact, converting diverse waste sources into SAF to support the aviation sector’s net-zero emissions goal by 2050. The collaboration between LanzaTech and LanzaJet spans five continents, including projects in Australia, New Zealand, the UAE, and the UK.