

ET 013
Extracting CO₂ from Ambient Air: A Novel Technology to Mitigate Global Climate Change

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Abstract

This collaborative project between researchers at CMU, LANL, and PA designers and manufacturers of thermal processing equipment will develop a novel carbon mitigation technology to meet the future restrictions on CO₂ emissions. The project goals are to provide a robust engineering and cost analysis of an alkali metal-based system for extracting CO₂ from ambient air and producing a concentrated CO₂ stream for geologic sequestration, and to experimentally demonstrate the feasibility of this system. At the end of year 1, project deliverables will include design criteria and cost estimates for; i) an efficient contactor for CO₂ extraction from air, and ii) a next-generation calciner capable of capturing CO₂ generated during CaCO₃ calcination.