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PATENT ASSIGNMENT COVER SHEET

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CONVEYING PARTY D	ATA						
EDGAR S. SANDERS JR.			Name			Execution D	ate
						12/20/2017	
RECEIVING PARTY DA							
Name:	AIR LIQ	AIR LIQUIDE ADVANCED TECHNOLOGIES U.S. LLC					
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City:	HOUST	ON					
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Property Type			Number				
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2016P00657US

Assignment of Invention

WHEREAS WE, Philippe A. COIGNET, Dean W. KRATZER, Sudhir S. KULKARNI and Edgar S. SANDERS, Jr., have invented certain new and useful improvements documented in a patent application entitled, SORBENT-LOADED BEADS FOR HIGH TEMPERATURE ADSORPTION PROCESSES. for which a United States patent application was filed on April 17, 2017 , having Application No. 15/396,644.

WHEREAS, Air Liquide Advanced Technologies U.S. LLC (hereinafter referred to as "ASSIGNEE") having a place of business at 9811 Katy Freeway, Suite 100, Houston, Texas 77024, U.S.A., desires to acquire from Edgar S. SANDERS, Jr. the entire right, title and interest I have in and to said invention and in and to any Letters Patent that may be granted thereof in the United States and its territorial possessions and in any and all foreign countries;

NOW, THEREFORE, for valuable consideration, the receipt whereof is hereby acknowledged, I, by these presents do sell, assign and transfer unto said ASSIGNEE, effective as of the first priority date, the full and exclusive right to the said invention in the United States and its territorial possessions and in all foreign countries, including the right to claim priority of the above-mentioned patent application(s) in patent applications filed in or for any such foreign country, and the entire right, title and interest in and to any and all Letters Patent which may be granted therefor in the United States and its territorial possessions and in any and all foreign countries and in and to any and all subsequent provisionals, non-provisionals, divisions, reissues, continuations, continuations-in-part, reexaminations, substitutions and renewals thereof,

I hereby authorize and request the Patent Office Officials in the United States and its territorial possessions and any and all foreign countries to issue any and all of said Letters Patent, when granted, to said ASSIGNEE as the assignee of the entire right, title and interest in and to the same, for the sole use and benefit of said ASSIGNEE, its successors and assigns, to the full end of the term for which said Letters Patent may be granted, as fully and entirely as the same would have been held by me had this Assignment and sale not been made.

Further, I agree that I will communicate to said ASSIGNEE or its representatives any facts known to me respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all nonprovisional, divisional, continuation, substitute, renewal and reissue applications, execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, make all rightful oaths, and, generally do everything possible to aid said ASSIGNEE, its successors and assigns, to obtain and enforce proper protection for said invention in the United States and its territorial possessions and in any and all foreign countries,

The undersigned hereby grants authorized representatives of the above identified ASSIGNEE the power to insert on this assignment any further identification, INCLUDING ANY SUBSEQUENT DATE OF APPLICATION FILING AND THE APPLICATION SERIAL NUMBER, which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

Date: 27-Feb-2012

MS Sandy fr. SANDERS, Jr. (Inventor)