### PATENT ASSIGNMENT

# Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:					
SUBMISSION TYPE:					
NATURE OF CONVEYANCE:		ASSIGNMENT			
CONVEYING PARTY DATA					
Name Execution Date					
Okan Max EKINER		Name	08/13/2009		
Timothy L. MURRAY			08/12/2009		
Nicolas RICHET			10/03/2009		
RECEIVING PARTY DATA					
Name:	L'Air Liquide Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude				
Street Address:	75 Quai d'Orsay				
City:	Paris				
State/Country:	FRANCE				
Postal Code:	F-75007				
PROPERTY NUMBERS Total: 1 Property Type Number					
Property Type		Number		49	
	/pe	Number		2	
Application Number:		00060		12	
	1245				
Application Number:	DATA	00060		\$40.00	
Application Number: CORRESPONDENCE Fax Number:	DATA (713)624-895	00060			
Application Number: CORRESPONDENCE Fax Number:	DATA (713)624-895	00060 i0 when the fax attempt is unsuccessful.		\$40.00	
Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will L</i> Phone: Email:	DATA (713)624-895 De sent via US Mail 713-624-843 Camela.Hill@	00060 i0 when the fax attempt is unsuccessful.		\$40.00	
Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will E</i> Phone: Email: Correspondent Name:	DATA (713)624-895 <i>De sent via US Mail</i> 713-624-843 Camela.Hill@ Air Liquide	00060 50 <i>when the fax attempt is unsuccessful.</i> 4 9airliquide.com		\$40.00	
Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will L</i> Phone: Email: Correspondent Name: Address Line 1:	DATA (713)624-895 <i>De sent via US Mail</i> 713-624-843 Camela.Hill@ Air Liquide 2700 Post Oa	90060 50 <i>when the fax attempt is unsuccessful.</i> 4 9airliquide.com ak Blvd., Suite 1800		\$40.00	
Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will E</i> Phone: Email: Correspondent Name:	DATA (713)624-895 <i>De sent via US Mail</i> 713-624-843 Camela.Hill@ Air Liquide 2700 Post Oa	90060 50 <i>when the fax attempt is unsuccessful.</i> 4 9airliquide.com ak Blvd., Suite 1800 roperty Department		\$40.00	
Application Number:         CORRESPONDENCE         Fax Number:         Correspondence will L         Phone:         Email:         Correspondent Name:         Address Line 1:         Address Line 2:	DATA (713)624-895 (713)624-895 (713-624-843) Camela Hill (713-624-843) Camela Hill (713-624-843) Camela Hill (713)624-895 (713)624-705 (713)624-705	90060 50 <i>when the fax attempt is unsuccessful.</i> 4 9airliquide.com ak Blvd., Suite 1800 roperty Department		\$40.00	
Application Number: CORRESPONDENCE Fax Number: <i>Correspondence will E</i> Phone: Email: Correspondent Name: Address Line 1: Address Line 2: Address Line 4:	DATA (713)624-895 (713)624-895 (713-624-843) Camela.Hill (713-624-843) Camela.Hill (713-624-843) Camela.Hill (713)624-895 (713)624-75 (713)624-75 (7	00060 i0 when the fax attempt is unsuccessful. 4 pairliquide.com ak Blvd., Suite 1800 roperty Department (AS 77056		\$40.00	

## PATENT REEL: 023353 FRAME: 0247

500985166

source=S7714\_US\_CIP2\_2009-10-09\_Assignment\_and\_Coversheet\_as\_filed#page1.tif source=S7714\_US\_CIP2\_2009-10-09\_Assignment\_and\_Coversheet\_as\_filed#page2.tif source=S7714\_US\_CIP2\_2009-10-09\_Assignment\_and\_Coversheet\_as\_filed#page3.tif

> PATENT REEL: 023353 FRAME: 0248

FACSIMILE OF FORM PTO-1595 RECORDATIO	<b>DN FORM COVER SHEET</b> U.S. DEPARTMENT OF PATENT AND TRADEMARK OFFICE			
PATENTS ONLY				
To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.				
1.Name of conveying party(ies):Okan Max EKINERAugust 13, 2009Timothy L. MURRAYAugust 12, 2009Nicolas RICHETOctober 3, 2009	2. Name and address of receiving party(ies): Name: L'Air Liquide Société Anonyme Pour L'Étude Et L'Exploitation Des Procedes Georges Claude			
Additional name(s) of conveying party(ies) attached? Yes <b>■ No</b>	Internal Address: 75 Quai d'Orsay			
3 Nature of Conveyance:	Street Address: 75 Quai d'Orsay			
<ul> <li>Assignment</li> <li>Security Agreement</li> <li>Other</li> <li>Execution Date: See Above</li> </ul>	City: <b>F-75007 Paris</b> State: <b>FRANCE</b> Zip: Additional name(s) & address(es) attached? Yes <b>■ No</b>			
<ul> <li>Application number(s) or patent number(s):</li> <li>If this document is being filed together with a new applie</li> <li>A. Patent Application No.(s):</li> <li>Application No.: 12/490,060</li> <li>Filed: June 23, 2009</li> </ul>	B. Patent No.(s):			
Additional numbers attached? Yes ■ No				
5. Name and address of party to whom correspondence concerning document should be mailed: Name: Air Liquide IP Department	6. Total number of applications and patents involved:			
Internal Address: 2700 Post Oak Blvd., Ste. 1800	7. Total fee (37 C.F.R. § 3.41) <b>\$40.00</b>			
Street Address: 2700 Post Oak Blvd., Ste. 1800	Enclosed <ul> <li>Authorized to be charged to deposit account</li> </ul>			
City: Houston State: TX Zip: 77056	8. Deposit account number: 01-1375 (Attach duplicate copy of this page if paying by deposit account)			
DO NOT USE THIS SPACE				
<ul> <li>9. Statement and signature.</li> <li>To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document.</li> </ul>				
Christopher J. Cronin, Reg. No. 46,513/Christopher SignatuName of Person SigningSignatu				
Total number of pages including cover sheet, attachments and documents: 3				

PATENT REEL: 023353 FRAME: 0249

#### Assignment of Invention

WHEREAS WE, Okan Max EKINER, Timothy L. MURRAY, and Nicolas RICHET, respectively, have invented certain new and useful improvements in Hollow Organic/Inorganic Composite Fibers, Sintered Fibers, Methods of Making Such Fibers, Gas Separation Modules Incorporating Such Fibers, and Methods of Using Such Modules, for which an application for Letters Patent was filed on June 23, 2009, having Application No. 12/490,060;

WHEREAS, L'Air Liquide Société Anonyme Pour L'Étude Et L'Exploitation Des Procedes Georges Claude (hereinafter referred to as "ASSIGNEE") having a place of business at: 75 Quai d'Orsay, F-75007 Paris, France, desires to acquire from Okan Max EKINER, Timothy L. MURRAY, and Nicolas RICHET, the entire right, title and interest we 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, we, 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 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 and to any and all subsequent provisionals, non-provisionals, divisions, reissues, continuations, substitutions and renewals thereof.

We 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 behoof 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, we agree that we will communicate to said ASSIGNEE or its representatives any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all non-provisional, 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 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: 8/12/09

Okan Max EKINER

Timothy L. MURRAY, (Invent

Date:

Nicolas RICHET, (Inventor)

S7714\_US\_CIP2\_Assignment\_to\_ALSA.doc

#### Assignment of Invention

WHEREAS WE, Okan Max EKINER, Timothy L. MURRAY, and Nicolas RICHET, respectively, have invented certain new and useful improvements in Hollow Organic/Inorganic Composite Fibers, Sintered Fibers, Methods of Making Such Fibers, Gas Separation Modules Incorporating Such Fibers, and Methods of Using Such Modules, for which an application for Letters Patent was filed on June 23, 2009, having Application No. 12/490,060;

WHEREAS, L'Air Liquide Société Anonyme Pour L'Étude Et L'Exploitation Des Procedes Georges Claude (hereinafter referred to as "ASSIGNEE") having a place of business at: 75 Quai d'Orsay, F-75007 Paris, France, desires to acquire from Okan Max EKINER, Timothy L. MURRAY, and Nicolas RICHET, the entire right, title and interest we 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, we, 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 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 and to any and all subsequent provisionals, non-provisionals, divisions, reissues, continuations, substitutions and renewals thereof.

We 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 behoof 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, we agree that we will communicate to said ASSIGNEE or its representatives any facts known to us respecting said invention, and testify in any legal proceeding, sign all lawful papers, execute all non-provisional, 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 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:

Okan Max EKINER, (Inventor)

Date:

Date: 10/03/09

Timothy L. MURRAY, (Inventor)

Nicolas RICHET, (Inventor)

S7714\_US\_CIP2\_Assignment\_to\_ALSA.doc

PATENT REEL: 023353 FRAME: 0251

**RECORDED: 10/09/2009**