504688727 12/14/2017

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4735449

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
NOBUTAKA KODAMA	11/25/2017
EMI OKUBO	11/22/2017
OSAMU OKADA	12/04/2017
NOBUAKI HANAI	12/01/2017

RECEIVING PARTY DATA

Name:	SUMITOMO CHEMICAL COMPANY, LIMITED
Street Address:	27-1, SHINKAWA 2-CHOME, CHUO-KU
City:	TOKYO
State/Country:	JAPAN
Postal Code:	1048260
Name:	RENAISSANCE ENERGY RESEARCH CORPORATION
Street Address:	102, ADVANCED CHEMICAL TECHNOLOGY CENTER IN KYOTO
Internal Address:	105, JUBU-CHO, FUSHIMI-KU
City:	KYOTO-SHI, KYOTO
State/Country:	JAPAN
Postal Code:	6128374

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15736599

CORRESPONDENCE DATA

Fax Number: (202)293-7068

Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.

Phone: 202-293-7060

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Address Line 4: WASHINGTON, D.C. 20037

PATENT REEL: 044400 FRAME: 0887

504688727

ATTORNEY DOCKET NUMBER:	Q237087
NAME OF SUBMITTER:	BYRON F. GALVEZ
SIGNATURE:	/Byron Galvez/
DATE SIGNED:	12/14/2017
	This document serves as an Oath/Declaration (37 CFR 1.63).

Total Attachments: 6

source = Q237087 Assignment with Declaration executed as filed #page 1.tifsource = Q237087 Assignment with Declaration executed as filed #page 2.tifsource = Q237087 Assignment with Declaration executed as filed #page 3.tifsource = Q237087 Assignment with Declaration executed as filed #page 4.tifsource = Q237087 Assignment with Declaration executed as filed #page 5.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration executed as filed #page 6.tifsource = Q237087 Assignment with Declaration e

PATENT REEL: 044400 FRAME: 0888

Docket No.: Only After Sept 16, 2012

Whereas, I/We, the undersigned inventor(s) hereinafter called

ASSIGNMENT WITH DECLARATION FOR PATENT APPLICATION (37 CFR 1.63)

特許出願宣言書付き譲渡書(37 CFR 1.63)

Japanese Language Assignment with Declaration

下記に署名した発明者であり、以下に譲渡人と称される私

(我々)は、下記の出願に記載された改良に関する発明を し、	assignor(s), have invented certain improvements described in the application identified below; and
の(譲受人)は、本件出願 および本件発明、ならびに当該出願から得られるいかなる米 国特許に関する全ての権利、権原、および利益の取得を要求 します。	Whereas, SUMITOMO CHEMICAL COMPANY, LIMITED of 27-1, Shinkawa 2-chome, Chuo-ku, Tokyo 1048260 Japan and RENAISSANCE ENERGY RESEARCH CORPORATION of 102, Advanced Chemical Technology Center in Kyoto, 105, Jibu-cho, Fushimi-ku, Kyoto-shi, Kyoto 6128374, Japan, (assignee), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor;
よって、価値ある対価の受領をここに確認し、	Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,
上で譲渡人として指名された私(我々)は、米国における本件出願およびその発明開示、全ての分割出願および継続出願、これら出願について許可された米国特許証、全ての再発行特許、ならびに全ての外国出願に関する全ての権利(改正後のバリ条約(1883年)に基づく優先権、ならびに35 USC 119 に基づき優先権を主張する権利と過去分の損害賠償請求権を含む)、権原、および利益を、上で指定した譲受人、その承継人ないし権利承継者に売却、譲渡、移転するとともに、私(我々)は米国特許商標庁長官に対し、本件出願に記載の発明に対する特許証を、譲受人、その承継人ないし権利承継者に発行することを要請し、また、私(我々)は、譲受人が本件発明に係る外国特許出願を行うことに同意し、これ以上の対価なしに、譲受人の求めにより、本件米国・外国特許出願に関して譲受人が必要とみなす全ての書類を作成します。	I/We, the above named assignor(s), hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America, including all divisions, and continuations thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues thereof, and all countries foreign thereto, including rights of priority under the International Convention of Paris (1883) as amended, including the right to claim priority under 35 USC 119 and the right to sue for past damages, and I/we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignce, its successors and assigns; and I/we hereby agree that the assignee may apply for foreign Letters Patent on the invention and I/we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee.
(公証人による認証は不要であるが、これらの書類は、35 USC 261に基づく推定された証拠となる)	(Legalization not required for recording but is prima facie evidence of execution under 35 USC 261)
私は、下記に記載の発明者として、以下の通り宣言します。	As the below named inventor, I hereby declare that:
本宣言付き譲渡書は、以下に関します。	This assignment with declaration is directed to:
[添付の出願書、または、	The attached application, or
☑	United States Application or PCT International Application Number PCT/JP2016/068127 filed on June 17, 2016. ■ □ □ □ □ □ □
本件出願の名称は、以下の通りです。	The application is entitled:
	METHOD FOR SEPARATING CARBON DIOXIDE AND APPARATUS FOR SEPARATING CARBON DIOXIDE

[Page 1]

PATENT REEL: 044400 FRAME: 0889

Japanese Language Assignment with Declaration

上記に明示された出願は,私が作成した、または作成を許可 したものです。

私は、本件出願において請求項に記載された発明の本来の発 明者、または、本来の共同発明者であると信じています。

私は、本宣言付き譲渡書の提出に関わる本件出願の内容を検 討し、理解しています。

私は、37 CFR 1.56 に定義されるように、自身が知る全ての 特許性に関する重要な情報を、米国特許商標庁に開示する義 務があることを認識しています。

私は、本宣言付き譲渡書において故意に虚偽の供述を行った 場合、18 USC 1001 に基づき、罰金あるいは 5 年以下の懲 役、または両方による処罰の対象となることを認識していま す。 The above identified application was made or was authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application for which this assignment with declaration is being submitted.

I am aware of the duty to disclose to the Office all information known to me to be material to patentability as defined in 37 CFR 1.56.

I hereby acknowledge that any willful false statement made in this assignment with declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):

The assignment with declaration is an accurate translation of the corresponding English language assignment with declaration.

Signature

Date

March 11, 2014

PATENT

REEL: 044400 FRAME: 0890

NAME OF SOLE OR FIRST INVENTOR:	
唯一あるいは第一の発明者名	
Given Name (first and middle [if any]) 名(名およびミドルネーム [該当する場合]) Nobutaka	Family Name or Surname 姓 KODAMA
Inventor's signature 発明者の署名 Nobutaka Kodama	Date 日行Movember 25 , 2017
Residence: 住所: Osaka-shi, Japan	
Mailing Address: 郵送先: c/o SUMITOMO CHEMICAL COMPANY, LIMITE 1-98, Kasugadenaka 3-chome, Konohana-ku, Osaka-s	
NAME OF SECOND INVENTOR: 第二の発明者名:	Sin Courte J. 10000, super
Given Name (first and middle [if any]) 名(名およびミドルネーム[該当する場合]) Emi	Family Name or Surname 姓 OKUBO
Inventor's signature 発明者の署名 Emī Okubo	Date 目付 November 22, 2017
Residence: 佳所: Osaka-shi, Japan	
Mailing Address: 郵送先: c/o SUMITOMO CHEMICAL COMPANY, LIMITE 1-98, Kasugadenaka 3-chome, Konohana-ku, Osaka-t	
NAME OF THIRD INVENTOR: 第三の発明者名:	***************************************
Given Name (first and middle [if any]) 名(名およびミドルネーム [該当する場合]) Osamu	Family Name or Sumame 姓 OKADA
Inventor's signature 発明者の署名	Date 日付
Residence: 住所: Kyoto-shi, Japan	
Mailing Address: c/o RÊNAISSANCE ENERGY RESEARCH CORPO 郵送先: 102, Advanced Chemical Technology Center in Kyot 105, Jibu-cho, Fushimi-ku, Kyoto-shi, Kyoto 612837	0,
NAME OF FOURTH INVENTOR: 第四の発明者名:	
Givon Name (first and middle [if any]) 名(名およびミドルネーム [該当する場合])	Family Name or Sumame 姓
Nobuaki Inventor's signature	HANAI Date
発明者の署名 Residence:	日付
住所:	
Mailing Address: c/o RENAISSANCE ENERGY RESEARCH CORPC 郵送先: 102, Advanced Chemical Technology Center in Kyot 105, Jibu-cho, Fushimi-ku, Kyoto-shi, Kyoto 612837	ο,
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[Page 3] **PATENT REEL: 044400 FRAME: 0891**

Docket No.: Only After Sept 16, 2012

ASSIGNMENT WITH DECLARATION FOR PATENT APPLICATION (37 CFR 1.63)

特許出願宣言書付き譲渡書(37 CFR 1.63)

Japanese Language Assignment with Declaration

下記に署名した発明者であり、以下に譲渡人と称される私 (教々)は、下記の出願に記載された改良に関する発明を し、	Whereas, I/We, the undersigned inventor(s) hereinafter called assignor(s), have invented certain improvements described in the application identified below; and
の(議受人)は、本件出願 移よび本件発明、ならびに当該出願から得られるいかなる米 関特許に関する全ての権利、権原、および利益の取得を要求 します。	Whereas, SUMITOMO CHEMICAL COMPANY, LIMITED of 27-1, Shinkawa 2-chome, Chuo-ku, Tokyo 1048260 Japan and RENAISSANCE ENERGY RESEARCH CORPORATION of 102, Advanced Chemical Technology Center in Kyoto, 105, Jibucho, Fushimi-ku, Kyoto-shi, Kyoto 6128374, Japan, (assignce), desires to acquire the entire right, title, and interest in the application and invention, and to any United States patents to be obtained therefor;
よって、価値ある対価の支額をここに確認し、	Now therefore, for valuable consideration, receipt whereof is hereby acknowledged,
上で譲渡人として棺名された私(我々)は、米国における本 学出願およびその発明開手、全ての分割出解および継続出 額、これら出解について許可された米国特許証、全ての再発 資材終、ならびに全ての外国出郷に関する全ての権利(改正 後のバリ条約(1893 年)に基づく優先権、ならびに 35 USC 119 に基づき優先権を主張する権利と過去分の損害賠償請求 権を含む)。権原、および利益を、上で管定した辭受人。そ の単継人ないし権利承殺者に売却、譲渡、移転するととも に、私(我々)は米国特許無權庁長官に対し、本件出額に記 録の発明に対する特許証を、譲受人。その承継人ないし権利 承継者に発行することを要請し、また、私(我々)は、議受 人か本件発明に係る外国特許出額を行うことに同意し、これ 沃上の対価なしに、諺受入の求めにより。本件米国・外国特 許出額に関して議受人が必要とみなす全ての書類を作成しま ま。	I/We, the above named assignor(s), hereby sell, assign and transfer to the above named assignee, its successors and assigns, the entire right, title and interest in the application and the invention disclosed therein for the United States of America, including all divisions, and continuations thereof, and all Letters Patent of the United States that may be granted thereon, and all reissues thereof, and all countries foreign thereto, including rights of priority under the International Convention of Paris (1883) as amended, including the right to claim priority under 35 USC 119 and the right to sue for past damages, and I/we request the Director of the U.S. Patent and Trademark Office to issue any Letters Patent granted upon the invention set forth in the application to the assignee, its successors and assigns; and I/we hereby agree that the assignee may apply for foreign Letters Patent on the invention and I/we will execute without further consideration all papers deemed necessary by the assignee in connection with the United States and foreign applications when called upon to do so by the assignee.
(公証人による認能は不要であるが、これらの書類は、35 PSC 261に基づく推定された証拠となる)	(Legalization not required for recording but is prima facie evidence of execution under 35 USC 261)
移は、下記に記載の発明者として、以下の通り宣賞します。	As the below named inventor, I hereby declare that:
松宣喜付き譲渡書は、以下に関します。	This assignment with declaration is directed to:
□ 添付の出願書。または、	The attached application, or
図年_月_日に出願された米国出願あるいは	United States Application or PCT International Application
PCT 国際出脚番号	Number PCT/JP2016/068127 filed on June 17, 2016.
料件由願の名称は、以下の通りです。	The application is entitled:
	METHOD FOR SEPARATING CARBON DIOXIDE AND APPARATUS FOR SEPARATING CARBON DIOXIDE

PATENT REEL: 044400 FRAME: 0892

Japanese Language Assignment with Declaration

上記に明示された出額は、私が作成した、または作成を許可 したものです。

基は、本件出願において請求項に記載された発明の本来の発 明者、または、本来の共開発明者であると借しています。

軽は、本宣言付き譲渡器の提出に関わる本件出願の内容を検 調し、理解しています。

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核は、本寛曽付き譲渡書において故意に虚偽の供述を行った 場合、18 USC 1001 に基づき、罰金あるいは 5 年以下の億 後、または両方による処罰の対象となることを認識していま す。 The above identified application was made or was authorized to be made by me.

I believe that I am the original inventor or an original joint inventor of a claimed invention in the application.

I have reviewed and understand the contents of the application for which this assignment with declaration is being submitted.

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STATEMENT OF ACCURATE TRANSLATION IN ACCORDANCE WITH 37 CFR 1.69(b):

The assignment with declaration is an accurate translation of the corresponding English language assignment with declaration.

Signature

Date

March 11, 2014

NAME OF SOLE OR FIRST INVENTORS:	
唯一あるいは第一の発明者を	
Given Name (first and middle [if any]) 名(名およびミドルネーム[該当する場合]) Nobutaka	Family Name or Surname 姓 KODAMA
Ngputaka Inventor's signature 発明者の署名	Date 日付
Residence: 住所: Osaka-shi, Japan	
Mailing Address: 家庭文: c/o SUMITOMO CHEMICAL COMPANY, 1-98, Kasugadenaka 3-chome, Konohana-ku,	LIMITED, Osaka-shi, Osaka 5548558, Japan
NAME OF SECOND INVENTOR: 第二の発明者名:	
Given Name (first and middle [if any]) 名(名およびミドルネーム[該当する場合]) Emi	Family Name or Sumame 姓 OKUBO
Inventor's signature 発明者の署名	Date 日付
Residence: 住所: Osaka-shi, Japan	,
Mailing Address: 業者: c/a SUMITOMO CHEMICAL COMPANY, 1 1-98, Kasugadenaka 3-choma: Konshana-ku,	LIMITED, Osaka-shi, Osaka 5548558, Japan
NAME OF THIRD INVENTOR: 第三の発明者名:	
Given Name (first and middle [if any]) 名(名およびミドルネーム[該当する場合]) Osamu	Family Name or Surname 姓: OKADA
Inventor's signature 発明者の署名 Qaywin Q	Date 日付 Decompos 4, 2019
Residence: 住所: Kysto-shi, Japan	
Mailing Address: c/o RENAISSANCE ENERGY RESEARCH (郵送先: 102, Advanced Chemical Technology Center i 103, Jibn-cho, Fushimi-ku, Kyoto-shi, Kyoto (n Kyoto,
NAME OF FOURTH INVENTOR: 第四の発明者名:	
Given Name (first and middle [if any]) 名(名およびミドルネーム[該当する場合]) Nobuaki	Family Name or Surname K: HANAI
Inventor's signature 發明者の署名 Nobia Ki Hanai	Date 11 Pecamber 1st, 2017
Residence: (5.96) - Kyoto-shi, Japan	
Mailing Address: c/o RENAISSANCE ENERGY RESEARCH (郵送先: 102, Advanced Chemical Technology Center is 105, Jibu-cho, Fushimi-ku, Kyoto-shi, Kyoto 6	n Kyoto,