502592493 12/05/2013

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2

EPAS ID: PAT2638708

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
MAKOTO YOSHIZAKI	07/17/2013
HIRONORI IIDA	07/08/2013
TAKASHI OBIKAWA	07/20/2013
SHINICHIRO YAMADA	07/08/2013
SEIICHIRO TABATA	07/08/2013
KAZUMA USAMI	07/05/2013
MASAKAZU MITSUGI	07/09/2013
HIROTSUGU ISHIHARA	07/25/2013
SHUN YAMANOI	07/18/2013
MACHIKO MINATOYA	07/06/2013

RECEIVING PARTY DATA

Name:	SONY CORPORATION	
Street Address:	1-7-1 KONAN, MINATO-KU	
City:	ТОКУО	
State/Country:	JAPAN	
Postal Code:	108-0075	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	14006187

CORRESPONDENCE DATA

Fax Number: (617)646-8646 **Phone**: 6176468000

Email: patents_SonyAdmins@wolfgreenfield.com, vbowden@wolfgreenfield.com

Correspondence will be sent via US Mail when the email attempt is unsuccessful.

Correspondent Name: WOLF GREENFIELD & SACKS, P.C.

Address Line 1: 600 ATLANTIC AVENUE

PATENT

REEL: 031725 FRAME: 0462

502592493

Address Line 2: RANDY J. PRITZKER, ESQ. Address Line 4: BOSTON, MASSACHUSETTS 02210	
ATTORNEY DOCKET NUMBER: \$1459.71202US00	
NAME OF SUBMITTER: VALERIE J. BOWDEN	
Signature: /Valerie J. Bowden/	
Date:	12/05/2013
Total Attachments: 12 source=S145971202US00-ASSIGN-RJP#page1.tif source=S145971202US00-ASSIGN-RJP#page2.tif source=S145971202US00-ASSIGN-RJP#page3.tif source=S145971202US00-ASSIGN-RJP#page4.tif source=S145971202US00-ASSIGN-RJP#page5.tif source=S145971202US00-ASSIGN-RJP#page6.tif source=S145971202US00-ASSIGN-RJP#page7.tif source=S145971202US00-ASSIGN-RJP#page8.tif source=S145971202US00-ASSIGN-RJP#page9.tif source=S145971202US00-ASSIGN-RJP#page9.tif source=S145971202US00-ASSIGN-RJP#page10.tif source=S145971202US00-ASSIGN-RJP#page11.tif	

ASSIGNMENT

WHEREAS, I, as below named inventors, residing at the addresses stated next to our names, am a sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of certain new and useful improvements in POROUS CARBON MATERIAL, ADSORBENT, ORAL ADSORBENT, MEDICAL ADSORBENT, FILLER FOR BLOOD PURIFICATION COLUMN, WATER PURIFICATION ADSORBENT, CLEANSING AGENT, CARRIER, SUSTAINED RELEASE PHARMACEUTICAL, CELL CULTURE SCAFFOLD, MASK, CARBON/POLYMER COMPOSITE, ADSORBENT SHEET AND FUNCTIONAL FOOD for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, SONY CORPORATION, a Japanese corporation, with offices at 1-7-1 Konan, Minato-ku, Tokyo, Japan (hereinafter referred to as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries;

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filling of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto;

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto;

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense;

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto;

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

And I hereby authorize and request my attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow: International Application No.: PCT/JP2012/001565 , International Filing Date: 2012/03/07

This assignment executed on the dates indicated below.

MAKOTO YOSHIZAKI	
Name of first or sole inventor KANAGAWA, JAPAN	Execution date of U.S. Patent Application
Residence of First or sole inventor Makoto Yoshizaki Signature of first or sole inventor	July 17, 2013 Date of this assignment
HIRONORI IIDA	
Name of second inventor KANAGAWA, JAPAN	Execution date of U.S. Patent Application
Residence of second inventor	
Signature of second inventor	Date of this assignment
TAKASHI OBIKAWA	
Name of third inventor KANAGAWA, JAPAN	Execution date of U.S. Patent Application
Residence of third inventor	•
Signature of third inventor	Date of this assignment

SHINICHIRO YAMADA	
Name of fourth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	` .
Residence of fourth inventor	
Signature of fourth inventor	Date of this assignment
SEIICHIRO TABATA	
Name of fifth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	A A
Residence of fifth inventor	
Signature of fifth inventor	Date of this assignment
KAZUMA USAMI	
Name of sixth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of sixth inventor	
Signature of sixth inventor	Date of this assignment
MASAKAZU MITSUGI	
Name of seventh inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of seventh inventor	
Signature of seventh inventor	Date of this assignment
HIROTSUGU ISHIHARA	
Name of eighth inventor	Execution date of U.S. Patent Application
TOKYO, JAPAN Residence of eighth inventor	
Signature of eighth inventor	Date of this assignment
SHUN YAMANOI	
Name of ninth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	• •
Residence of ninth inventor	
Signature of ninth inventor	Date of this assignment

MACHIKO MINATOYA	
Name of tenth inventor TOKYO, JAPAN	Execution date of U.S. Patent Application
Residence of tenth inventor	
Signature of tenth inventor	Date of this assignment
Name of eleventh inventor	Execution date of U.S. Patent Application
Residence of eleventh inventor	
Signature of eleventh inventor	Date of this assignment
Name of twelfth inventor	Execution date of U.S. Patent Application
Residence of twelfth inventor	
Signature of twelfth inventor	Date of this assignment
Name of thirteen inventor	Execution date of U.S. Patent Application
Residence of thirteen inventor	
Signature of thirteen inventor	Date of this assignment
Name of fourteen inventor	Execution date of U.S. Patent Application
Residence of fourteen inventor	
Signature of fourteen inventor	Date of this assignment
Name of fifteen inventor	Execution date of U.S. Patent Application
Residence of fifteen inventor	e anglie i veneral de la
Signature of fifteen inventor	Date of this assignment

ASSIGNMENT

WHEREAS, I, as below named inventors, residing at the addresses stated next to our names, am a sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of certain new and useful improvements in POROUS CARBON MATERIAL, ADSORBENT, ORAL ADSORBENT, MEDICAL ADSORBENT, FILLER FOR BLOOD PURIFICATION COLUMN, WATER PURIFICATION ADSORBENT, CLEANSING AGENT, CARRIER, SUSTAINED RELEASE PHARMACEUTICAL, CELL CULTURE SCAFFOLD, MASK, CARBON/POLYMER COMPOSITE, ADSORBENT SHEET AND FUNCTIONAL FOOD for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, SONY CORPORATION, a Japanese corporation, with offices at 1-7-1 Konan, Minato-ku, Tokyo, Japan (hereinafter referred to as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries;

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filling of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto;

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto;

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense;

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto;

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

And I hereby authorize and request my attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow: International Application No.: PCT/JP2012/001565 , International Filing Date: 2012/03/07 This assignment executed on the dates indicated below. MAKOTO YOSHIZAKI Name of first or sole inventor Execution date of U.S. Patent Application KANAGAWA, JAPAN Residence of First or sole inventor Signature of first or sole inventor Date of this assignment HIRONORI IIDA Name of second inventor Execution date of U.S. Patent Application KANAGAWA, JAPAN Residence of second inventor July 8, 2013
Date of this assignment Hironori Signature of second inventor TAKASHI OBIKAWA Name of third inventor Execution date of U.S. Patent Application KANAGAWA, JAPAN Residence of third inventor Signature of third inventor

1

PATE

SHINICHIRO YAMADA	
Name of fourth inventor KANAGAWA, JAPAN	Execution date of U.S. Patent Application
Residence of fourth inventor Shinitive Jamada	July 8, 2013
Signature of fourth inventor	Date of this assignment
SEIICHIRO TABATA	
Name of fifth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	Execution date of C.S. Fatein Application
Residence of fifth inventor	41.
Seiichine Tabata	July 8, 2013
Signature of fifth inventor	Date of this assignment
KAZUMA USAMI	
Name of sixth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of sixth inventor	
Signature of sixth inventor	Date of this assignment
MASAKAZU MITSUGI	
Name of seventh inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of seventh inventor	
Signature of seventh inventor	Date of this assignment
HIROTSUGU ISHIHARA	
Name of eighth inventor TOKYO, JAPAN	Execution date of U.S. Patent Application
Residence of eighth inventor	
Signature of eighth inventor	Date of this assignment
SHUN YAMANOI	
Name of ninth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of ninth inventor	
Signature of ninth inventor	Date of this assignment

MACHIKO MINATOYA	•
Name of tenth inventor	Execution date of U.S. Patent Application
TOKYO, JAPAN	
Residence of tenth inventor	
Signature of tenth inventor	Date of this assignment
Name of eleventh inventor	Execution date of U.S. Patent Application
Residence of eleventh inventor	
Signature of eleventh inventor	Date of this assignment
Name of twelfth inventor	Execution date of U.S. Patent Application
Residence of twelfth inventor	
Signature of twelfth inventor	Date of this assignment
Name of thirteen inventor	Execution date of U.S. Patent Application
Residence of thirteen inventor	
Signature of thirteen inventor	Date of this assignment
Name of fourteen inventor	Execution date of U.S. Patent Application
Residence of fourteen inventor	
Signature of fourteen inventor	Date of this assignment
Name of fifteen inventor Residence of fifteen inventor	Execution date of U.S. Patent Application
Signature of fifteen inventor	Date of this assignment

ASSIGNMENT

WHEREAS, I, as below named inventors, residing at the addresses stated next to our names, am a sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of certain new and useful improvements in POROUS CARBON MATERIAL, ADSORBENT, ORAL ADSORBENT, MEDICAL ADSORBENT, FILLER FOR BLOOD PURIFICATION COLUMN, WATER PURIFICATION ADSORBENT, CLEANSING AGENT, CARRIER, SUSTAINED RELEASE PHARMACEUTICAL, CELL CULTURE SCAFFOLD, MASK, CARBON/POLYMER COMPOSITE, ADSORBENT SHEET AND FUNCTIONAL FOOD for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, SONY CORPORATION, a Japanese corporation, with offices at 1-7-1 Konan, Minato-ku, Tokyo, Japan (hereinafter referred to as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries;

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto;

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto;

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense;

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto;

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

And I hereby authorize and request my attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow: International Application No.: PCT/JP2012/001565 , International Filing Date: 2012/03/07 This assignment executed on the dates indicated below. MAKOTO YOSHIZAKI Name of first or sole inventor Execution date of U.S. Patent Application KANAGAWA, JAPAN Residence of First or sole inventor Signature of first or sole inventor Date of this assignment HIRONORI IIDA Name of second inventor Execution date of U.S. Patent Application KANAGAWA, JAPAN Residence of second inventor Signature of second inventor Date of this assignment TAKASHI OBIKAWA Name of third inventor Execution date of U.S. Patent Application

> PATENT REEL: 031725 FRAME: 0470

Date of this assignment

KANAGAWA, JAPAN
Residence of third inventor

Signature of third inventor

SHINICHIRO YAMADA	
Name of fourth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of fourth inventor	
Signature of fourth inventor	Date of this assignment
•	
SEIICHIRO TABATA	
Name of fifth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of fifth inventor	
•	
Signature of fifth inventor	Date of this assignment
	· ·
KAZUMA USAMI	
Name of sixth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of sixth inventor	
Kazuma Usami	July 5.2013
Signature of sixth inventor	July 5.20/3 Date of this assignment
MASAKAZU MITSUGI	
Name of seventh inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of seventh inventor	. •
Masakazu Mitsuzi	July 9. 2013 Date of this assignment
Masakazu Milsus) Signature of seventh inventor	Date of this assignment
	-
HIROTSUGU ISHIHARA	•
Name of eighth inventor	Execution date of U.S. Patent Application
TOKYO, JAPAN	
Residence of eighth inventor	
Historia Ishihara	July 25, 2013
Signature of eighth inventor	Date of this assignment
SHUN YAMANOI	•
Name of ninth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of ninth inventor	<u> </u>
Shyon Tamamoi	
Signature of ninth inventor	Date of this assignment

MACHIKO MINATOYA	
Name of tenth inventor TOKYO, JAPAN	Execution date of U.S. Patent Application
Residence of tenth inventor	\
Signature of tenth inventor	Date of this assignment
Name of eleventh inventor	Execution date of U.S. Patent Application
Residence of eleventh inventor	:
Signature of eleventh inventor	Date of this assignment
Name of twelfth inventor	Execution date of U.S. Patent Application
Residence of twelfth inventor	
Signature of twelfth inventor	Date of this assignment
Name of thirteen inventor	Execution date of U.S. Patent Application
Residence of thirteen inventor	
Signature of thirteen inventor	Date of this assignment
Name of fourteen inventor	Execution date of U.S. Patent Application
Residence of fourteen inventor	
Signature of fourteen inventor	Date of this assignment
Name of fifteen inventor	Execution date of U.S. Patent Application
Residence of fifteen inventor	
Signature of fifteen inventor	Date of this assignment

Attorney Docket No. S1459,71202US00 SONY Ref. No.:SP311543US00

ASSIGNMENT

WHEREAS, I, as below named inventors, residing at the addresses stated next to our names, am a sole inventor (if only one name is listed below) or a joint inventor (if plural names are listed below) of certain new and useful improvements in POROUS CARBON MATERIAL, ADSORBENT, ORAL ADSORBENT, MEDICAL ADSORBENT, FILLER FOR BLOOD PURIFICATION COLUMN, WATER PURIFICATION ADSORBENT, CLEANSING AGENT, CARRIER, SUSTAINED RELEASE PHARMACEUTICAL, CELL CULTURE SCAFFOLD, MASK, CARBON/POLYMER COMPOSITE, ADSORBENT SHEET AND FUNCTIONAL FOOD for which application for Letters Patent of the United States of America was executed by me on the date indicated next to my name and address;

AND WHEREAS, SONY CORPORATION, a Japanese corporation, with offices at 1-7-1 Konan, Minato-ku, Tokyo, Japan (hereinafter referred to as ASSIGNEE) is desirous of acquiring all interest in, to and under said invention, said application disclosing the invention and in, to and under any Letters Patent or similar legal protection which may be granted therefor in the United States and in any and all foreign countries;

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00), and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, I, as a sole or joint inventor as indicated below, by these presents do hereby assign, sell and transfer unto the said ASSIGNEE, its successors, assigns, and legal representatives, the entire right, title and interest in the said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights and/or convention rights under the International Convention for the Protection of Industrial Property, Inter-American Convention Relating to Patents, Designs and Industrial Models, and any other international agreements to which the United States of America adheres, and to any other benefits accruing or to accrue to me with respect to the filling of applications for patents or securing of patents in the United States and countries foreign thereto, and I hereby authorize and request the Commissioner of Patents to issue the said United States Letters Patent to said ASSIGNEE, as the assignee of the whole right, title and interest thereto:

And I further agree to execute all necessary or desirable and lawful future documents, including assignments in favor of ASSIGNEE or its designee, as ASSIGNEE or its successors, assigns and legal representatives may from time-to-time present to me and without further remuneration, in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto;

And I further agree to properly execute and deliver and without further remuneration, such necessary or desirable and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and or, for obtaining any reissue or reissues of any Letters patent which may be granted for my aforesaid invention, as the ASSIGNEE thereof shall hereafter require and prepare at its own expense;

And I further agree that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said application, said invention and said Letters Patent and legal equivalents in foreign countries as may be known and accessible to me and will testify as to the same in any interference or litigation related thereto;

And I hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

And I hereby authorize and request my attorney(s) of record in this application to insert the serial number and filing date of this application in the spaces that follow: International Application No.: PCT/JP2012/001565, International Filing Date: 2012/03/07

This assignment executed on the dates indicated below.

MAKOTO YOSHIZAKI	
Name of first or sole inventor KANAGAWA, JAPAN	Execution date of U.S. Patent Application
Residence of First or sole inventor	
Signature of first or sole inventor	Date of this assignment
HIRONORI IIDA	
Name of second inventor KANAGAWA, JAPAN	Execution date of U.S. Patent Application
Residence of second inventor	
Signature of second inventor	Date of this assignment
TAKASHI OBIKAWA	
Name of third inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN Residence of third inventor	
Signature of third inventor	Date of this assignment

SHINICHIRO YAMADA	
Name of fourth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of fourth inventor	
Signature of fourth inventor	Date of this assignment
SEIICHIRO TABATA	
Name of fifth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of fifth inventor	
Signature of fifth inventor	Date of this assignment
KAZUMA USAMI	
Name of sixth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of sixth inventor	
Signature of sixth inventor	Date of this assignment
	·
MASAKAZU MITSUGI	
Name of seventh inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of seventh inventor	
Signature of seventh inventor	Date of this assignment
HIROTSUGU ISHIHARA	
Name of eighth inventor	Execution date of U.S. Patent Application
TOKYO, JAPAN	
Residence of eighth inventor	
Signature of eighth inventor	Date of this assignment
SHUN YAMANOI	* - <u></u>
Name of ninth inventor	Execution date of U.S. Patent Application
KANAGAWA, JAPAN	
Residence of ninth inventor	
Signature of ninth inventor	Date of this assignment

MACHIKO MINATOYA Name of tenth inventor TOKYO, JAPAN Residence of tenth inventor Signature of tenth inventor	Execution date of U.S. Patent Application Date of this assignment
Name of eleventh inventor	Execution date of U.S. Patent Application
Residence of eleventh inventor	
Signature of eleventh inventor	Date of this assignment
Name of twelfth inventor	Execution date of U.S. Patent Application
Residence of twelfth inventor	
Signature of twelfth inventor	Date of this assignment
Name of thirteen inventor	Execution date of U.S. Patent Application
Residence of thirteen inventor	
Signature of thirteen inventor	Date of this assignment
Name of fourteen inventor	Execution date of U.S. Patent Application
Residence of fourteen inventor	
Signature of fourteen inventor	Date of this assignment
Name of fifteen inventor	Execution date of U.S. Patent Application
Residence of fifteen inventor	
Signature of fifteen inventor	Date of this assignment

PATENT REEL: 031725 FRAME: 0475

RECORDED: 12/05/2013