#### 504865640 04/12/2018

# PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4912380

SUBMISSION TYPE:	NEW ASSIGNMENT		
NATURE OF CONVEYANCE:	ASSIGNMENT		
CONVEYING PARTY DATA			
	Name	Execution Date	
BRIAN M. WEISS		02/26/2018	
GERARDO J. MAJANO		11/14/2017	
TILMAN W. BEUTEL		11/14/2017	
KARL G. STROHMAIER		02/09/2018	
JOHN F. BRODY		03/22/2018	
SAMIA ILIAS		11/17/2017	
SCOTT J. WEIGEL		03/22/2018	
SHAMEL MERCHANT		11/14/2017	
EUGINE CHOI		11/15/2017	
ROBERT J. COLBY		11/15/2017	

## **RECEIVING PARTY DATA**

WALTER WEISSMAN

Name:	EXXONMOBIL RESEARCH AND ENGINEERING COMPANY
Street Address:	1545 ROUTE 22 EAST
Internal Address:	P.O. BOX 900
City:	ANNANDALE
State/Country:	NEW JERSEY
Postal Code:	08801

## **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	15831594

## CORRESPONDENCE DATA

(908)335-3649 Fax Number: 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: 9083353605 Email: kimberly.m.shapiro@exxonmobil.com EXXONMOBIL RESEARCH AND ENGINEERING COMPANY Correspondent Name: Address Line 1: 1545 ROUTE 22 EAST Address Line 2: P.O. BOX 900

## 504865640

## PATENT **REEL: 045521 FRAME: 0052**

12/04/2017

Address Line 4: ANN/	ANDALE, NEW JERSEY 08801	
ATTORNEY DOCKET NUMBER:	2016EM379-US2	
NAME OF SUBMITTER:	ANTHONY G. BOONE	
SIGNATURE:	/Anthony G. Boone/	
DATE SIGNED:	04/12/2018	
Total Attachments: 6		
source=2016EM379-US2-2018-04-12-Assignment#page1.tif		
source=2016EM379-US2-2018-04-12-Assignment#page2.tif		
source=2016EM379-US2-2018-04-12-Assignment#page3.tif		
source=2016EM379-US2-2018-04-12-Assignment#page4.tif		
source=2016EM379-US2-2018-04-12-Assignment#page5.tif		
source=2016EM379-US2-2018-04-12-Assignment#page6.tif		

Application Serial No.	15/831,594
EMRE Docket No.	2016EM379-US2

### ASSIGNMENT INVENTOR or INVENTORS:

BRIAN M. WEISS	GERARDO J. MAJANO	TILMAN W. BEUTEL	KARL G. STROHMAIER
JOHN F. BRODY	SAMIA ILIAS	SCOTT J. WEIGEL	SHAMEL MERCHANT
EUGINE CHOI	ROBERT J. COLBY	WALTER WEISSMAN	

For good and valuable consideration, the undersigned person(s) named above, herein referred to as UNDERSIGNED, hereby agree(s) as follows:

1) UNDERSIGNED hereby assign(s) to ExxonMobil Research and Engineering Company (formerly Exxon Research and Engineering Company), a corporation of Delaware, its successors, legal representatives and assigns, herein referred to collectively as ASSIGNEE, the entire right, title and interest, for the United States and all foreign countries, in and to UNDERSIGNED's invention or improvement and to all patent applications and patents covering same which is described in a patent application entitled

#### FUEL UPGRADING BY REFORMING AND DEHYDROCRACKING

22nd	March , 2018
9th & 26th	February, 2018
4th	December, 2017
14th, 15th &	

said application having been executed on the 17th day(s) of November, 2017, and being further identified as EMRE Docket No. 2016EM379-US2; all rights of priority created by said application under provisions of international convention or treaties.

2) UNDERSIGNED agree(s) upon the request of ASSIGNEE to execute any and all applications for and documents relating to obtaining patents and the prosecution thereof for said invention or improvement, and any continuations of such applications or substitutes therefor or registrations thereof, and any specific separate assignments of any of the above required for recording in the United States Patent and Trademark Office and any foreign patent office that ASSIGNEE may deem necessary or expedient.

3) UNDERSIGNED agree(s) that in the event of any application based on said assigned invention or improvement, or patent issued thereon, or any reissue or application for the reissue thereof, becoming involved in priority of invention proceedings, UNDERSIGNED will cooperate with ASSIGNEE to the best of the ability of UNDERSIGNED in the matter of preparing and executing all documents and giving and producing evidence in support thereof.

4) UNDERSIGNED agree(s) to perform upon ASSIGNEE's request any and all affirmative acts to obtain United States and foreign patents covering said invention or improvement and to vest all rights therein hereby conveyed to ASSIGNEE, as fully and as entirely as the same would have been held and enjoyed by UNDERSIGNED if this assignment and sale had not been made.

5) UNDERSIGNED hereby authorize(s) ASSIGNEE to insert in this instrument the date(s) on which UNDERSIGNED executed the Declaration for the above-referenced patent application.

IN WITNESS WHEREOF, this assignment has been executed by UNDERSIGNED on the date opposite UNDERSIGNED's NAME.

Date <u>26 Felo 2018</u>	Inventor (LS)	Witness 12 d. C.
Date	Inventor(LS) GERARDO J. MAJANO	Witness
Date	Inventor(LS) TILMAN W. BEUTEL	Witness
Date	Inventor(LS) KARL G. STROHMAIER	Witness

Page 1 of 3

*27810*				
27810 PATENT TRADEMARK OFFICE				

	Application Serial No.	15/831,594
	EMRE Docket No.	2016EM379-US2
NMENT		

### INVENTOR or INVENTORS:

ASSIG

BRIAN M. WEISS	GERARDO J. MAJANO	TILMAN W. BEUTEL	KARL G. STROHMAIER
JOHN F. BRODY	SAMIA ILIAS	SCOTT J. WEIGEL	SHAMEL MERCHANT
EUGINE CHOI	ROBERT J. COLBY	WALTER WEISSMAN	

For good and valuable consideration, the undersigned person(s) named above, herein referred to as UNDERSIGNED, hereby agree(s) as follows:

I) UNDERSIGNED hereby assign(s) to ExxonMobil Research and Engineering Company (formerly Exxon Research and Engineering Company), a corporation of Delaware, its successors, legal representatives and assigns, herein referred to collectively as ASSIGNEE, the entire right, title and interest, for the United States and all foreign countries, in and to UNDERSIGNED's invention or improvement and to all patent applications and patents covering same which is described in a patent application entitled

#### FUEL UPGRADING BY REFORMING AND DEHYDROCRACKING

22nd		Marc	h	, 2018
9th & 26th		Febru	ary	, 2018
4th		Decer	nber	, 2017
14th, 15th &				

said application having been executed on the 17th day(s) of November, 2017, and being further identified as EMRE Docket No. 2016EM379-US2; all rights of priority created by said application under provisions of international convention or treaties.

2) UNDERSIGNED agree(s) upon the request of ASSIGNEE to execute any and all applications for and documents relating to obtaining patents and the prosecution thereof for said invention or improvement, and any continuations of such applications or substitutes therefor or registrations thereof, and any specific separate assignments of any of the above required for recording in the United States Patent and Trademark Office and any foreign patent office that ASSIGNEE may deem necessary or expedient.

3) UNDERSIGNED agree(s) that in the event of any application based on said assigned invention or improvement, or patent issued thereon, or any reissue or application for the reissue thereof, becoming involved in priority of invention proceedings, UNDERSIGNED will cooperate with ASSIGNEE to the best of the ability of UNDERSIGNED in the matter of preparing and executing all documents and giving and producing evidence in support thereof.

4) UNDERSIGNED agree(s) to perform upon ASSIGNEE's request any and all affirmative acts to obtain United States and foreign patents covering said invention or improvement and to vest all rights therein hereby conveyed to ASSIGNEE, as fully and as entirely as the same would have been held and enjoyed by UNDERSIGNED if this assignment and sale had not been made.

5) UNDERSIONED hereby authorize(s) ASSIGNEE to insert in this instrument the date(s) on which UNDERSIGNED executed the Declaration for the above-referenced patent application.

IN WITNESS WHEREOF, this assignment has been executed by UNDERSIGNED on the date expectation UNDERSIGNED's NAME.

Date_3/22/18	Inventor Star F. Bridy (LS)	moness Jer
Date 11/17/17	Inventor	Wilnes Grove
Date 3/22/18	Inventor	Willing and
	Inventor (LS)	
Date 11 14 2017	Inventor Dramed Man (LS) SHAMEL MERCHANT	Winds Jan

Page 2 of 3

\*27810\* 27810 PATENT TRADEMARK OFFICE

### Application Serial No. 15/831,594 EMIRE Docket No. 2016EM379-US2

ASSIGNMENT INVENTOR or INVENTORS:				
<b>BRIAN M. WEISS</b>	GE&ARDO J. MAJANO	TILMAN W. BEUTEL	KARL G. STROHMAIER	
JOHN F. BRODY	SAMIA ILIAS	SCOTT J. WEIGEL	SHAMEL MERCHANT	
EUGINE CHOI	ROBERT J. COLBY	WALTER WEISSMAN		

For good and valuable consideration, the undersigned person(s) named above, herein referred to as UNDERSIGNED, hereby agree(s) as follows:

1) UNDERSIGNED hereby assign(s) to ExxonMobil Research and Engineering Company (formerly Exxon Research and Engineering Company), a corporation of Delaware, its successors, legal representatives and assigns, herein referred to collectively as ASSIGNEE, the entire right, title and interest, for the United States and all foreign countries, in and to UNDERSIGNED's invention or improvement and to all patent applications and patents covering same which is described in a patent application entitled

### FUEL UPGRADING BY REFORMING AND DEHYDROCRACKING

22nd	March , 2018
9th & 26th	February , 2018
4th	December, 2017
14th, 15th &	

said application having been executed on the 17th day(s) of November, 2017, and being further identified as EMRE Docket No. 2016EM379-US2; all rights of priority created by said application under provisions of international convention or treaties.

2) UNDERSIGNED agree(s) upon the request of ASSIGNEE to execute any and all applications for and documents relating to obtaining patents and the prosecution thereof for said invention or improvement, and any continuations of such applications or substitutes therefor or registrations thereof, and any specific separate assignments of any of the above required for recording in the United States Patent and Trademark Office and any foreign patent office that ASSIGNEE may deem necessary or expedient.

3) UNDERSIGNED agree(s) that in the event of any application based on said assigned invention or improvement, or patent issued thereon, or any reissue or application for the reissue thereof, becoming involved in priority of invention proceedings, UNDERSIGNED will cooperate with ASSIGNEE to the best of the ability of UNDERSIGNED in the matter of preparing and executing all documents and giving and producing evidence in support thereof.

4) UNDERSIGNED agree(s) to perform upon ASSIGNEE's request any and all affirmative acts to obtain United States and foreign patents covering said invention or improvement and to vest all rights therein hereby conveyed to ASSIGNEE, as fully and as entirely as the same would have been held and enjoyed by UNDERSIGNED if this assignment and sale had not been made.

5) UNDERSIGNED hereby authorize(s) ASSIGNEE to insert in this instrument the date(s) on which UNDERSIGNED executed the Declaration for the above-referenced patent application.

IN WITNESS WHEREOF, this assignment has been executed by UNDERSIGNED on the date opposite UNDERSIGNED's NAME.

Date	Inventor (LS)	Witness
Dale 11/19/2017	BRIAN M. WEISS	when he had a second
Care	Alerardo J. Majano	
Date 1005 14 2017	Inventor Carta (LS)	Windes A
Date Feb 9, 2018	Inventor Karl G. STOHMAIER	Wind fler



-----

		Application	a Serial No.	15/831,594	
		EMRE	Docket No.	2016EM379-US2	
ASSIGN	MENT			***************************************	
INVENTOR or	INVENTORS:				
NO E MATANO	THE SEAND M	ושדוושמ	VADLO	CONDUCTER & A KOOD	

BRIAN M. WEISS	GERARDO J. MAJANO	TILMAN W. BEUTEL	KARL G. STROHMAIER
JOHN F. BRODY	SAMIA ILIAS	SCOTT J. WEIGEL	SHAMEL MERCHANT
EUGINE CHOI	ROBERT J. COLBY	WALTER WEISSMAN	

For good and valuable consideration, the undersigned person(s) named above, herein referred to as UNDERSIGNED, hereby agree(s) as follows:

1) UNDERSIGNED hereby assign(s) to <u>ExxonMobil Research and Engineering Company</u> (formerly Exxon Research and Engineering Company), a corporation of Delaware, its successors, legal representatives and assigns, herein referred to collectively as ASSIGNEE, the entire right, title and interest, for the United States and all foreign countries, in and to UNDERSIGNED's invention or improvement and to all patent applications and patents covering same which is described in a patent application entitled

#### FUEL UPGRADING BY REFORMING AND DEHYDROCRACKING

22nd	March , 2018
9th & 26th	February , 2018
4th	December, 2017
14th, 15th &	

said application having been executed on the 17th day(s) of November , 2017, and being further identified as EMRE Docket No. 2016EM379-US2; all rights of priority created by said application under provisions of international convention or treaties.

2) UNDERSIGNED agree(s) upon the request of ASSIGNEE to execute any and all applications for and documents relating to obtaining patents and the prosecution thereof for said invention or improvement, and any continuations of such applications or substitutes therefor or registrations thereof, and any specific separate assignments of any of the above required for recording in the United States Patent and Trademark Office and any foreign patent office that ASSIGNEE may deem necessary or expedient.

3) UNDERSIGNED agree(s) that in the event of any application based on said assigned invention or improvement, or patent issued thereon, or any reissue or application for the reissue thereof, becoming involved in priority of invention proceedings, UNDERSIGNED will cooperate with ASSIGNEE to the best of the ability of UNDERSIGNED in the matter of preparing and executing all documents and giving and producing evidence in support thereof.

4) UNDERSIGNED agree(s) to perform upon ASSIGNEE's request any and all affirmative acts to obtain United States and foreign patents covering said invention or improvement and to vest all rights therein hereby conveyed to ASSIGNEE, as fully and as entirely as the same would have been held and enjoyed by UNDERSIGNED if this assignment and sale had not been made.

5) UNDERSIGNED hereby authorize(s) ASSIGNEE to insert in this instrument the date(s) on which UNDERSIGNED executed the Declaration for the above-referenced patent application.

IN WITNESS WHEREOF, this assignment has been executed by UNDERSIGNED on the date opposite UNDERSIGNED's NAME.

Date 11/15/2810

Inventor

Witness

Date

Inventor\_\_\_\_\_ ROBERT L COLBY Witness

(LS)

Date

Witness



BRIAN M. WEISS JOHN F. BRODY

EUGINE CHOI

	• •	a Serial No. Docket No.	<u>15/831,594</u> 2016EM379-US2
ASSIGNM INVENTOR of IN	ENT		
GERARDO J. MAJANO	TILMAN W. BEUTEL	KARL C	S. STROHMAIER

SCOTT J. WEIGEL

WALTER WEISSMAN

.. ..

~ . . . . .

SHAMEL MERCHANT

For good and valuable consideration, the undersigned person(s) named above, herein referred to as UNDERSIGNED, hereby agree(s) as follows:

SAMIA ILIAS

ROBERT J. COLBY

1) UNDERSIGNED hereby assign(s) to <u>ExxonMobil Research and Engineering Company</u> (formerly Exxon Research and Engineering Company), a corporation of Delaware, its successors, legal representatives and assigns, herein referred to collectively as ASSIGNEE, the entire right, title and interest, for the United States and all foreign countries, in and to UNDERSIGNED's invention or improvement and to all patent applications and patents covering same which is described in a patent application entitled

#### FUEL UPGRADING BY REFORMING AND DEHYDROCRACKING

22nd	March , 2018
9th & 26th	February , 2018
4th	December, 2017
14th, 15th &	
4th	 , , , , , , , , , , , , , , , , , , ,

said application having been executed on the 17th day(s) of November , 2017, and being further identified as EMRE Docket No. 2016EM379-US2; all rights of priority created by said application under provisions of international convention or treaties.

2) UNDERSIGNED agree(s) upon the request of ASSIGNEE to execute any and all applications for and documents relating to obtaining patents and the prosecution thereof for said invention or improvement, and any continuations of such applications or substitutes therefor or registrations thereof, and any specific separate assignments of any of the above required for recording in the United States Patent and Trademark Office and any foreign patent office that ASSIGNEE may deem necessary or expedient.

3) UNDERSIGNED agree(s) that in the event of any application based on said assigned invention or improvement, or patent issued thereon, or any reissue or application for the reissue thereof, becoming involved in priority of invention proceedings, UNDERSIGNED will cooperate with ASSIGNEE to the best of the ability of UNDERSIGNED in the matter of preparing and executing all documents and giving and producing evidence in support thereof.

4) UNDERSIGNED agree(s) to perform upon ASSIGNEE's request any and all affirmative acts to obtain United States and foreign patents covering said invention or improvement and to vest all rights therein hereby conveyed to ASSIGNEE, as fully and as entirely as the same would have been held and enjoyed by UNDERSIGNED if this assignment and sale had not been made.

5) UNDERSIGNED hereby authorize(s) ASSIGNEE to insert in this instrument the date(s) on which UNDERSIGNED executed the Declaration for the above-referenced patent application.

IN WITNESS WHEREOF, this assignment has been executed by UNDERSIGNED on the date opposite UNDERSIGNED's NAME.

Date	Inventor	(LS)	Witness
Date	EUGINE Inventor ROBER	(LS)	Windes Dec
Date	Inventor WALTE	(LS) R WEISSMAN	Witness



## Application Serial No. <u>15/831,594</u> EMRE Docket No. <u>2016EM379-US2</u>

#### ASSIGNMENT INVENTOR or INVENTORS:

BRIAN M. WEISS	GERARDO J. MAJANO	TILMAN W. BEUTEL	KARL G. STROHMAIER
JOHN F. BRODY	SAMIA ILIAS	SCOTT J. WEIGEL	SHAMEL MERCHANT
EUGINE CHOI	ROBERT J. COLBY	WALTER WEISSMAN	

For good and valuable consideration, the undersigned person(s) named above, herein referred to as UNDERSIGNED, hereby agree(s) as follows:

1) UNDERSIGNED hereby assign(s) to <u>ExxonMobil Research and Engineering Company</u> (formerly Exxon Research and Engineering Company), a corporation of Delaware, its successors, legal representatives and assigns, herein referred to collectively as ASSIGNEE, the entire right, title and interest, for the United States and all foreign countries, in and to UNDERSIGNED's invention or improvement and to all patent applications and patents covering same which is described in a patent application entitled

### FUEL UPGRADING BY REFORMING AND DEHYDROCRACKING

22nd	March , 2018
9th & 26th	February, 2018
4th	December, 2017
14th, 15th &	

said application having been executed on the 17th day(s) of November, 2017, and being further identified as EMRE Docket No. 2016EM379-US2; all rights of priority created by said application under provisions of international convention or treaties.

2) UNDERSIGNED agree(s) upon the request of ASSIGNEE to execute any and all applications for and documents relating to obtaining patents and the prosecution thereof for said invention or improvement, and any continuations of such applications or substitutes therefor or registrations thereof, and any specific separate assignments of any of the above required for recording in the United States Patent and Trademark Office and any foreign patent office that ASSIGNEE may deem necessary or expedient.

3) UNDERSIGNED agree(s) that in the event of any application based on said assigned invention or improvement, or patent issued thereon, or any reissue or application for the reissue thereof, becoming involved in priority of invention proceedings, UNDERSIGNED will cooperate with ASSIGNEE to the best of the ability of UNDERSIGNED in the matter of preparing and executing all documents and giving and producing evidence in support thereof.

4) UNDERSIGNED agree(s) to perform upon ASSIGNEE's request any and all affirmative acts to obtain United States and foreign patents covering said invention or improvement and to vest all rights therein hereby conveyed to ASSIGNEE, as fully and as entirely as the same would have been held and enjoyed by UNDERSIGNED if this assignment and sale had not been made.

5) UNDERSIGNED hereby authorize(s) ASSIGNEE to insert in this instrument the date(s) on which UNDERSIGNED executed the Declaration for the above-referenced patent application.

IN WITNESS WHEREOF, this assignment has been executed by UNDERSIGNED on the date opposite UNDERSIGNED's NAME.

Date	Inventor(LS) EUGINE CHOI	Witness
Date	Inventor(LS) ROBERT J. COLBY	Witness
Date 12/4/13	Inventor Caller Carona (LS) WALTER WEISSMAN	Witness Mourson Hofschild

Page 3 of 3

**RECORDED: 04/12/2018**