#### 507130740 02/15/2022

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT7177580

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

#### **CONVEYING PARTY DATA**

Name	Execution Date
KIRILL DROBYSHEV	12/07/2021
VINCENT COUPARD	01/17/2022
NIKOLAI NESTERENKO	11/17/2021
JEAN-CHRISTOPHE GABELLE	11/17/2021

#### **RECEIVING PARTY DATA**

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City:	RUEIL-MALMAISON CEDEX
State/Country:	FRANCE
Postal Code:	92852
Name:	TOTAL RESEARCH & TECHNOLOGY FELUY
Street Address:	ZONE INDUSTRIELLE C
City:	SENEFFE
State/Country:	BELGIUM
Postal Code:	7181

#### **PROPERTY NUMBERS Total: 1**

Property Type	Number
Application Number:	17413080

#### **CORRESPONDENCE DATA**

Fax Number: (703)243-6410

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: 7032436333 Email: mail@mwzb.com

**Correspondent Name:** MILLEN, WHITE, ZELANO & BRANIGAN-AEW

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Address Line 2: **SUITE 1400** 

ARLINGTON, VIRGINIA 22201 Address Line 4:

ATTORNEY DOCKET NUMBER: PET-3497

> **PATENT** REEL: 059018 FRAME: 0565

507130740

NAME OF SUBMITTER:	ASHLEY BROOKSHIRE
SIGNATURE:	/Ashley Brookshire/
DATE SIGNED:	02/15/2022
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 4	
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source=PET-3497\_EXECUTED\_DUAL\_DEC\_ASSIGNMENTS#page1.tif source=PET-3497\_EXECUTED\_DUAL\_DEC\_ASSIGNMENTS#page2.tif source=PET-3497\_EXECUTED\_DUAL\_DEC\_ASSIGNMENTS#page3.tif source=PET-3497\_EXECUTED\_DUAL\_DEC\_ASSIGNMENTS#page4.tif

PATENT REEL: 059018 FRAME: 0566

# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR MULTIPLE ASSIGNEES

Title of Invention	LOW-ENERGY CONSUMPTION METHOD FOR DEHYDRATING ETHANOL INTO ETHYLENE
As the below nam	ed inventor, I hereby declare that:
This declaration	The attached application, or
is directed to:	United States Application or PCT International Application number <a href="PCT/EP2019/082717">PCT/EP2019/082717</a> filed on <a href="November 27, 2019">November 27, 2019</a>
The above-identif	ied application was made or 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.
AND WHEREAS	
	IFP Energies nouvelles 1 & 4 avenue du Bois-Préau 92852, Rueil-Mailmaison, France
	Total Research & Technology Feluy Zone Industrielle C 7181, Seneffe, Belguim
all patent(s) listed including any and NOW, V ASSIGNOR herel right, title and into and all Letters Pat thereof, and in and to accrue with resinvention, SAID / including any and which may be graright to sue for dararising from or aprenewals, reissues representatives, in enjoyed the same, AND At and foreign countre execute any other AND At	d to as the ASSIGNEES, is desirous of acquiring the entire right, title, and interest in and to said invention and above, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, all renewals, reissues, reexaminations and extensions thereof.  WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, by assigns, sells, and transfers to ASSIGNEES, its assigns and legal representatives, the entire and exclusive reest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any ent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or freet to the filling or securing of patents in the United States and/or any countries foreign thereto concerning said ASSIGNEES, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent and therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the mages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise pertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all prevaminations and extensions thereof, for the use and benefit of ASSIGNEES and its assigns and legal as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and if the assignment had not been made.  SSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States ies for said invention and to assign the same to said ASSIGNEES, its assigns and legal representatives and to papers that may be needed in connection with securing Letters Patents thereon.  SSIGNO
assignment inform properly record th I hereby fine or imprisonm a patent, of the inf	IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by ent of not more than five (5) years, or both. I consent to the publication, and retention for purposes of obtaining ormation herein.
LEGAL NAME O Inventor: K	FINVENTOR  irill DROBYSHEV  Date: 07/12/2021
Signature:	

MILLEN, WHITE, ZELANO & BRANIGAN, P.C.
ATTORNEYS AT LAW
ARLINGTON COURTHOUSE PLAZA
2200 CLARENDON BOULEVARD | SUITE 1400 | ARLINGTON VA 22201
TELEPHONE: 703.243.6333 | FAX: 703.243.6410

EMAIL: MAIL@MWZB,COM

DOCKET NO.: PET-3497

PATENT REEL: 059018 FRAME: 0567

# DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR MULTIPLE ASSIGNEES

Title of	LOW-ENERGY CONSUMPTION METROD FOR DEHYDRATING ETHANOL INTO
Invention	ETHYLENE
As the below nam	ted inventor, I hereby declare that:
This declaration	The attached application, or
is directed to:	United States Application or PCT International Application number PCT/EP2019/082717 filed on November 27, 2019
The above-identif	ied application was made or authorized to be made by me.
I believe that I an	the original inventor or an original joint inventor of a claimed invention in the application.
AND WHEREAS	
	IFP Energies nouvelles
	1 & 4 avenue du Bois-Préau
	92852, Rueil-Mailmaison, France
	Total Research & Technology Feluy
	Zone Industrielle C
<b>9</b>	7181, Seneffe, Belguin  ed to as the ASSIGNEES, is desirous of acquiring the entire right, title, and interest in and to said invention and
NOW, A ASSIGNOR herel right, title and into and all Letters Pat thereof, and in and to accrue with res invention, SAID A including any and which may be gra right to sue for da arising from or ap renewals, reissues representatives, in enjoyed the same, AND A and foreign count execute any other AND A any and all division	all renewals, reissues, reexaminations and extensions thereof. WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, by assigns, sells, and transfers to ASSIGNEES, its assigns and legal representatives, the entire and exclusive erest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any tent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions d to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or pect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said ASSIGNEES, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent. It all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent anted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, including the mages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise pertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all as ample and beneficial a manner to all intents and purposes as the ASSIGNEES and its assigns and legal as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and, if the assignment had not been made.  SSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States rices for said invention and to assign the same to said ASSIGNEES, its assigns and legal representatives and to papers that may be needed in connection with securing Letters Patents thereon.  SSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on one and continuations thereof, to ASSIGNEES, its assigns and legal representatives, in accordance herewith.
assignment inform properly record th I hereby	nation which may be necessary or desirable in order for the United States Patent and Trademark Office to is document.  IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by tent of not more than five (5) years, or both. I consent to the publication, and retention for purposes of obtaining
LEGAL NAME C	
Inventor: <u>V</u>	/incent GOUPARD Date: January 17 LOCK
Signature:	AX

Millen, White, Zelano & Branigan, P.C. Attorneys at Law

ARLINGTON COURTHOUSE PLAZA

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TELEPHONE: 703.243.63331FAx: 703.243.6410 EMAIL: MAIL@MWZB.COM

PATENT

**REEL: 059018 FRAME: 0568** 

### DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR MULTIPLE ASSIGNEES

Title of Invention	LOW-ENERGY CONSUMPTION METHOD FOR DEHYDRATING ETHANOL INTO ETHYLENE
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The above-identif	ried application was made or authorized to be made by me.
I believe that I an	n the original inventor or an original joint inventor of a claimed invention in the application.
AND WHEREAS	
hereinafter referre all patent(s) listed including any and NOW, ASSIGNOR here right, title and int and all Letters Pa thereof, and in an to accrue with res invention, SAID including any and	IFP Energies nouvelles 1 & 4 avenue du Bois-Préau 92852, Rueil-Mailmaison, France  Total Research & Technology Feluy Zone Industrielle C 7181, Seneffe, Belguim  ed to as the ASSIGNEES, is desirous of acquiring the entire right, title, and interest in and to said invention and labove, including any and all earlier priority rights (U.S. and foreign), divisions and continuations thereof, all renewals, reissues, reexaminations and extensions thereof.  WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, by assigns, sells, and transfers to ASSIGNEES, its assigns and legal representatives, the entire and exclusive erest in and to said invention and patent(s), including any and all divisions and continuations thereof, and any tent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions d to any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accruing or spect to the filing or securing of patents in the United States and/or any countries foreign thereto concerning said ASSIGNEES, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent anted therefor, including any and all renewals, reissues, reexaminations thereof, including the
right to sue for da arising from or ap renewals, reissues representatives, in enjoyed the same	amages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise opertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all so, reexaminations and extensions thereof, for the use and benefit of ASSIGNEES and its assigns and legal in as ample and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and if the assignment had not been made.
and foreign count execute any other AND A	SSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States ries for said invention and to assign the same to said ASSIGNEES, its assigns and legal representatives and to appers that may be needed in connection with securing Letters Patents thereon.  SSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on one and continuations thereof, to ASSIGNEES, its assigns and legal representatives, in accordance herewith.
assignment inforr properly record th I hereby	IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR y acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by nent of not more than five (5) years, or both. I consent to the publication, and retention for purposes of obtaining
LEGAL NAME (	OF INVENTOR
	Nikolai NESTERENKO Date:
Signature:	Nikolay Spotture numérique de Shakony NESTERENKO Dels 2021.11.17 1956.15

MILLEN, WHITE, ZELANO & BRANIGAN, P.C. ATTORNEYS AT LAW ARLINGTON COURTHOUSE PLAZA 2200 Clarendon Boulevard | Suite 1400 | Arlington VA 22201 TELEPHONE: 703.243.6333 | Fax: 703.243.6410

EMAIL: MAIL@MWZB.COM

Signature:

DOCKET NO.: PET-3497

## DECLARATION (37 CFR 1.63) FOR UTILITY OR DESIGN APPLICATION USING AN APPLICATION DATA SHEET (37 CFR 1.76) AND ASSIGNMENT FOR MULTIPLE ASSIGNEES

Title of Invention	LOW-ENERGY CONSUMPTION METHOD FOR DEHYDRATING ETHANOL INTO ETHYLENE
As the below new	ed inventor, I hereby declare that:
This declaration	☐ The attached application, or
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The above-identif	ied application was made or 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.
AND WHEREAS	
	IFP Energies nouvelles 1 & 4 avenue du Bois-Préau 92852, Rueil-Mailmaison, France
	Total Research & Technology Febry Zone Industrielle C
all patent(s) listed including any and NOW. A ASSIGNOR herel right, title and into and all Letters Pat thereof, and in and to accrue with rest invention, SAID including any and which may be granight to sue for datassing from or aptronewals, reissues representatives, in enjoyed the same, AND A, and foreign countrexecute any other AND A; any and all division	It is any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accraing or section of pagents in the United States and or servicing any and all certers priority rights (U.S. and foreign), divisions and continuations thereof.  WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, by assigns, sells, and transfers to ASSIGNEES, its assigns and legal representatives, the entire and exclusive trest in and to said invention and patentis), including any and all divisions and continuations thereof, and any ent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions. It is any and all U.S. (including provisional) or foreign priority and/or convention rights or benefits accraing or sect to the filing or securing of patents in the United States and/or any examines foreign thereto concerning said aSSIGNEES, its assigns and legal representatives to have, hold, exercise, and enjoy said invention and patent, all earlier priority rights (U.S. and foreign), divisions and continuations thereof, any and all Letters Patent need therefor, including any and all tenewals, reissues, reexaminations and extensions thereof, including the mages occurring before the assignment, with all the rights, powers, privileges and advantages in anywise pertaining thereto, for and during the term or terms of any and all such Letters Patent, including any and all reexaminations and extensions thereof, for the use and benefit of ASSIGNEES and its assigns and legal as ample and beneficial a manner to all intents and purposes as the ASSIGNOE might or could have held and if the assignment had not been made.  SSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States itself of valid invention and to assign the same to said ASSIGNEES, its assigns and legal representatives and to papers that may be needed in connection with securing Letters Patents thereon.
assignment inform properly record th	ersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this action which may be necessary or desirable in order for the United States Patent and Trademark Office to is document.  IN TESTIMONY WHEREOF this assignment is executed by ASSIGNOR acknowledge that any willful false statement made in this declaration is punishable under 18 U.S.C. 1001 by
	ent of not more than five (5) years, or both. I consent to the publication, and retention for purposes of obtaining
LEGAL NAME Of forces of the second se	an-Christophe GABELLE Date: 14/17-1-20-27
Signature:	
•	
	MILLEN, WISTER, ZELANG & BRANIGAN, P.C.

ATTORNEYS AT LAW
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EMAIL: MAIL @MWZB.COM

DOCKET NO.: PET-3497

PATENT REEL: 059018 FRAME: 0570

**RECORDED: 02/15/2022**