

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT6347579

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
SHANSI TIAN	08/29/2020
BO LIU	08/29/2020
XIAOFEI FU	08/29/2020
FANG ZENG	08/29/2020
XU DONG	08/29/2020
YIFEI GAO	08/29/2020
ZHENJIE LUO	08/29/2020
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	NORTHEAST PETROLEUM UNIVERSITY
<b>Street Address:</b>	199 FAZHAN ROAD, HIGH-TECH DEVELOPMENT ZONE
<b>City:</b>	LONGFENG DISTRICT, DAQING, HEILONGJIANG
<b>State/Country:</b>	CHINA
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	17061550
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(954)507-4502
<i>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.</i>	
<b>Phone:</b>	9545074500
<b>Email:</b>	info@johnsondalal.com
<b>Correspondent Name:</b>	MARK C. JOHNSON
<b>Address Line 1:</b>	111 NORTH PINE ISLAND ROAD SUITE 103
<b>Address Line 4:</b>	PLANTATION, FLORIDA 33324
<b>ATTORNEY DOCKET NUMBER:</b>	NPU_20_NPA1
<b>NAME OF SUBMITTER:</b>	MARK C. JOHNSON
<b>SIGNATURE:</b>	/Mark C. Johnson/
<b>DATE SIGNED:</b>	10/13/2020
<b>Total Attachments: 21</b>	

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## WORLDWIDE ASSIGNMENT

Attorney Docket No: NPU\_20\_NPA1

For good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, **Shansi Tian**, a Chinese inventor located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignor," hereby sells, assigns, transfers, and sets over to **Northeast Petroleum University**, a Chinese university located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignee," the successors, assigns and legal representatives, the full, exclusive, and entire right, title and interest, in and for the United States and all foreign countries, in and to any and all inventions relating to, and which are disclosed in, the patent applications which are entitled as follows:

1. United States Patent Application No. 17/061,550 (entitled "METHOD AND SYSTEM FOR QUANTITATIVELY EVALUATING SURFACE ROUGHNESS OF ORGANIC PORE OF KEROGEN IN SHALE"), filed October 1, 2020,

including any all, divisional, continuing, substitute, renewal, reissue, re-examination, extensions, certificates, international, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said inventions or to which the benefits of the priority or filing date of said applications that are or will be claimed; and in and to all original and reissued patents which have been or shall be filed in the United States and all foreign countries on said inventions including all rights under the International Convention for the Protection of Industrial Property to be held and enjoyed by Assignee for its own use and the use of its successors, legal representatives and assigns to the full term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignor, had the assignment not been made;

Assignor agrees that Assignee may apply for and receive Letters Patent in this or any other countries for said inventions in its own name and that, at the request of the Assignee and, without charge to but at the expense of said Assignee, Assignor will carry out in good faith the intent and purpose of this Assignment; execute forms and documents for all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to Assignee all facts known to the undersigned relating to said inventions and the history thereof; and generally do everything possible which Assignee shall consider desirable for aiding in securing and mainlining proper patent protection for said inventions and for vesting title to said inventions, and all applications for patents and all patents on inventions in said Assignee;

Assignor covenants with Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned; AND

Assignor hereby requests the Commissioner of Patents to issue any Letters Patent of the United States to Assignee as the Assignee of said inventions and Letters Patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.

WORLDWIDE ASSIGNMENT (Continued)

Attorney Docket No: NPU\_20\_NPA1

Assignor's Name

Shansi Tian

*Shansi Tian*

Signature

*August 28, 2020*

Date of Execution

STATE OF

*Nebraska*

COUNTY OF

*Lincoln*

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

Notary Public

My Commission Expires:

Names of Additional Assignors? ☐ YES ☒ NO

WORLDWIDE ASSIGNMENT (Continued)

Attorney Docket No: NPU\_20\_NPA1

Assignee's Name

Northeast Petroleum University

*Shansi Tian*

Signature Shansi Tian

*August 21, 2020*

Date of Execution

STATE OF

*Heilongjiang*

COUNTY OF

*China*

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

Notary Public

My Commission Expires:

Names of Additional Assignees? [ ] YES [X] NO

## WORLDWIDE ASSIGNMENT

Attorney Docket No: NPU\_20\_NPA1

For good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, **Bo Liu**, a Chinese inventor located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignor," hereby sells, assigns, transfers, and sets over to **Northeast Petroleum University**, a Chinese university located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignee," the successors, assigns and legal representatives, the full, exclusive, and entire right, title and interest, in and for the United States and all foreign countries, in and to any and all inventions relating to, and which are disclosed in, the patent applications which are entitled as follows:

1. United States Patent Application No. 17/061,550 (entitled "METHOD AND SYSTEM FOR QUANTITATIVELY EVALUATING SURFACE ROUGHNESS OF ORGANIC PORE OF KEROGEN IN SHALE"), filed October 1, 2020.

including any all, divisional, continuing, substitute, renewal, reissue, re-examination, extensions, certificates, international, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said inventions or to which the benefits of the priority or filing date of said applications that are or will be claimed; and in and to all original and reissued patents which have been or shall be filed in the United States and all foreign countries on said inventions including all rights under the International Convention for the Protection of Industrial Property to be held and enjoyed by Assignee for its own use and the use of its successors, legal representatives and assigns to the full term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignor, had the assignment not been made;

Assignor agrees that Assignee may apply for and receive Letters Patent in this or any other countries for said inventions in its own name and that, at the request of the Assignee and, without charge to but at the expense of said Assignee, Assignor will carry out in good faith the intent and purpose of this Assignment; execute forms and documents for all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to Assignee all facts known to the undersigned relating to said inventions and the history thereof; and generally do everything possible which Assignee shall consider desirable for aiding in securing and mainlining proper patent protection for said inventions and for vesting title to said inventions, and all applications for patents and all patents on inventions in said Assignee;

Assignor covenants with Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned; AND

Assignor hereby requests the Commissioner of Patents to issue any Letters Patent of the United States to Assignee as the Assignee of said inventions and Letters Patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.

WORLDWIDE ASSIGNMENT (Continued)

Attorney Docket No: NPU\_20\_NPA1

Assignor's Name

Bo Liu

Bo Liu

Signature

August 29, 2020

Date of Execution

STATE OF Heilongjiang  
COUNTY OF China

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignors? ☐ YES ☒ NO

**WORLDWIDE ASSIGNMENT (Continued)**

**Attorney Docket No: NPU\_20\_NPA1**

Assignee's Name

**Northeast Petroleum University**

Shansi Tian

Signature Shansi Tian

August 26, 2020

Date of Execution

STATE OF Heilongjiang }

COUNTY OF China }

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignees? [ ] YES [X] NO

## WORLDWIDE ASSIGNMENT

Attorney Docket No: NPU\_20\_NPA1

For good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, Xiaofei Fu, a Chinese inventor located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignor," hereby sells, assigns, transfers, and sets over to **Northeast Petroleum University**, a Chinese university located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignee," the successors, assigns and legal representatives, the full, exclusive, and entire right, title and interest, in and for the United States and all foreign countries, in and to any and all inventions relating to, and which are disclosed in, the patent applications which are entitled as follows:

1. United States Patent Application No. 17/061,550 (entitled "METHOD AND SYSTEM FOR QUANTITATIVELY EVALUATING SURFACE ROUGHNESS OF ORGANIC PORE OF KEROGEN IN SHALE"), filed October 1, 2020,

including any all, divisional, continuing, substitute, renewal, reissue, re-examination, extensions, certificates, international, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said inventions or to which the benefits of the priority or filing date of said applications that are or will be claimed; and in and to all original and reissued patents which have been or shall be filed in the United States and all foreign countries on said inventions including all rights under the International Convention for the Protection of Industrial Property to be held and enjoyed by Assignee for its own use and the use of its successors, legal representatives and assigns to the full term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignor, had the assignment not been made;

Assignor agrees that Assignee may apply for and receive Letters Patent in this or any other countries for said inventions in its own name and that, at the request of the Assignee and, without charge to but at the expense of said Assignee, Assignor will carry out in good faith the intent and purpose of this Assignment; execute forms and documents for all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to Assignee all facts known to the undersigned relating to said inventions and the history thereof; and generally do everything possible which Assignee shall consider desirable for aiding in securing and mainlining proper patent protection for said inventions and for vesting title to said inventions, and all applications for patents and all patents on inventions in said Assignee;

Assignor covenants with Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned; AND

Assignor hereby requests the Commissioner of Patents to issue any Letters Patent of the United States to Assignee as the Assignee of said inventions and Letters Patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.

WORLDWIDE ASSIGNMENT (Continued)

Attorney Docket No: NPU\_20\_NPA1

Assignor's Name

Xiaofei Fu

Xiaofei Fu

Signature

August 29, 2020

Date of Execution

STATE OF Heilongjiang )  
COUNTY OF China )

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignors? ☐ YES ☒ NO

WORLDWIDE ASSIGNMENT (Continued)

Attorney Docket No: NPU\_20\_NPA1

Assignee's Name

Northeast Petroleum University

*Shansi Tian*

Signature Shansi Tian

*August 28, 2020*

Date of Execution

STATE OF *Hubei* )  
COUNTY OF *China* )

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignees? [ ] YES [X] NO

## WORLDWIDE ASSIGNMENT

Attorney Docket No: NPU\_20\_NPA1

For good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, **Fang Zeng**, a Chinese inventor located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignor," hereby sells, assigns, transfers, and sets over to **Northeast Petroleum University**, a Chinese university located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignee," the successors, assigns and legal representatives, the full, exclusive, and entire right, title and interest, in and for the United States and all foreign countries, in and to any and all inventions relating to, and which are disclosed in, the patent applications which are entitled as follows:

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Assignor agrees that Assignee may apply for and receive Letters Patent in this or any other countries for said inventions in its own name and that, at the request of the Assignee and, without charge to but at the expense of said Assignee, Assignor will carry out in good faith the intent and purpose of this Assignment; execute forms and documents for all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to Assignee all facts known to the undersigned relating to said inventions and the history thereof; and generally do everything possible which Assignee shall consider desirable for aiding in securing and maintaining proper patent protection for said inventions and for vesting title to said inventions, and all applications for patents and all patents on inventions in said Assignee;

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WORLDWIDE ASSIGNMENT (Continued)

Attorney Docket No: NPU\_20\_NPA1

Assignor's Name

Fang Zeng

Fang Zeng  
Signature

August 14, 2020  
Date of Execution

STATE OF Heilongjiang  
COUNTY OF Chengde

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignors? ☐ YES ☒ NO

WORLDWIDE ASSIGNMENT (Continued)

Attorney Docket No: NPU\_20\_NPA1

Assignee's Name

Northeast Petroleum University

Shansi Tian

Signature Shansi Tian

August, 28, 2020

Date of Execution

STATE OF Wailongjiang }  
COUNTY OF China }

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignees? [ ] YES [X] NO

## WORLDWIDE ASSIGNMENT

Attorney Docket No: NPU\_20\_NPA1

For good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, **Xu Dong**, a Chinese inventor located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignor," hereby sells, assigns, transfers, and sets over to **Northeast Petroleum University**, a Chinese university located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignee," the successors, assigns and legal representatives, the full, exclusive, and entire right, title and interest, in and for the United States and all foreign countries, in and to any and all inventions relating to, and which are disclosed in, the patent applications which are entitled as follows:

1. United States Patent Application No. 17/061,550 (entitled "METHOD AND SYSTEM FOR QUANTITATIVELY EVALUATING SURFACE ROUGHNESS OF ORGANIC PORE OF KEROGEN IN SHALE"), filed October 1, 2020.

including any all, divisional, continuing, substitute, renewal, reissue, re-examination, extensions, certificates, international, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said inventions or to which the benefits of the priority or filing date of said applications that are or will be claimed; and in and to all original and reissued patents which have been or shall be filed in the United States and all foreign countries on said inventions including all rights under the International Convention for the Protection of Industrial Property to be held and enjoyed by Assignee for its own use and the use of its successors, legal representatives and assigns to the full term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignor, had the assignment not been made;

Assignor agrees that Assignee may apply for and receive Letters Patent in this or any other countries for said inventions in its own name and that, at the request of the Assignee and, without charge to but at the expense of said Assignee, Assignor will carry out in good faith the intent and purpose of this Assignment; execute forms and documents for all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to Assignee all facts known to the undersigned relating to said inventions and the history thereof; and generally do everything possible which Assignee shall consider desirable for aiding in securing and mainlining proper patent protection for said inventions and for vesting title to said inventions, and all applications for patents and all patents on inventions in said Assignee;

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Assignor hereby requests the Commissioner of Patents to issue any Letters Patent of the United States to Assignee as the Assignee of said inventions and Letters Patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.

**WORLDWIDE ASSIGNMENT (Continued)**

**Attorney Docket No:** NPU\_20\_NPA1

Assignor's Name

**Xu Dong**

Xu Dong

Signature

August 24, 2020

Date of Execution

STATE OF Hai Long Hany  
COUNTY OF Chen

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignors? ☐ YES ☒ NO

**WORLDWIDE ASSIGNMENT (Continued)**

**Attorney Docket No: NPU\_20\_NPA1**

Assignee's Name

**Northeast Petroleum University**

Shansi Tian

Signature Shansi Tian

August, 28, 2020

Date of Execution

STATE OF Norway  
COUNTY OF China

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignees? ☐ YES ☒ NO

## WORLDWIDE ASSIGNMENT

Attorney Docket No: NPU\_20\_NPA1

For good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, **Yifei Gao**, a Chinese inventor located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignor," hereby sells, assigns, transfers, and sets over to **Northeast Petroleum University**, a Chinese university located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignee," the successors, assigns and legal representatives, the full, exclusive, and entire right, title and interest, in and for the United States and all foreign countries, in and to any and all inventions relating to, and which are disclosed in, the patent applications which are entitled as follows:

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Assignor hereby requests the Commissioner of Patents to issue any Letters Patent of the United States to Assignee as the Assignee of said inventions and Letters Patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.

WORLDWIDE ASSIGNMENT (Continued)

Attorney Docket No: NPU\_20\_NPA1

Assignor's Name

Yifei Gao

Yifei Gao

Signature

August 29, 2020

Date of Execution

STATE OF Heilongjiang

COUNTY OF China }

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignors? ☐ YES ☒ NO

**WORLDWIDE ASSIGNMENT (Continued)**

**Attorney Docket No: NPU\_20\_NPA1**

Assignee's Name

**Northeast Petroleum University**

Shansi Tian

Signature      Shansi Tian

August 28, 2020

Date of Execution

STATE OF Norway )  
COUNTY OF China )

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignees? [ ] YES      [X] NO

## WORLDWIDE ASSIGNMENT

Attorney Docket No: NPU\_20\_NPA1

For good and valuable consideration, the receipt and sufficiency whereof is hereby acknowledged, **Zhenjie Luo**, a Chinese inventor located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignor," hereby sells, assigns, transfers, and sets over to **Northeast Petroleum University**, a Chinese university located at 199 Fazhan Road, High-tech Development Zone, Longfeng District, Daqing, Heilongjiang, China, hereinafter referred to as "Assignee," the successors, assigns and legal representatives, the full, exclusive, and entire right, title and interest, in and for the United States and all foreign countries, in and to any and all inventions relating to, and which are disclosed in, the patent applications which are entitled as follows:

1. United States Patent Application No. 17/061,550 (entitled "METHOD AND SYSTEM FOR QUANTITATIVELY EVALUATING SURFACE ROUGHNESS OF ORGANIC PORE OF KEROGEN IN SHALE"), filed October 1, 2020,

including any all, divisional, continuing, substitute, renewal, reissue, re-examination, extensions, certificates, international, and all other applications for Letters Patent which have been or shall be filed in the United States and all foreign countries on any of said inventions or to which the benefits of the priority or filing date of said applications that are or will be claimed; and in and to all original and reissued patents which have been or shall be filed in the United States and all foreign countries on said inventions including all rights under the International Convention for the Protection of Industrial Property to be held and enjoyed by Assignee for its own use and the use of its successors, legal representatives and assigns to the full term or terms for which Letters Patent or Patents may be granted, as fully and entirely as the same would have been held and enjoyed by the Assignor, had the assignment not been made;

Assignor agrees that Assignee may apply for and receive Letters Patent in this or any other countries for said inventions in its own name and that, at the request of the Assignee and, without charge to but at the expense of said Assignee, Assignor will carry out in good faith the intent and purpose of this Assignment; execute forms and documents for all divisional, continuing, substitute, renewal, reissue, and all other patent applications on any and all said inventions; execute all rightful oaths, assignments, powers of attorney and other papers; communicate to Assignee all facts known to the undersigned relating to said inventions and the history thereof; and generally do everything possible which Assignee shall consider desirable for aiding in securing and mainlining proper patent protection for said inventions and for vesting title to said inventions, and all applications for patents and all patents on inventions in said Assignee;

Assignor covenants with Assignee that no assignment, grant, mortgage, license or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned; AND

Assignor hereby requests the Commissioner of Patents to issue any Letters Patent of the United States to Assignee as the Assignee of said inventions and Letters Patent to be issued thereon for the sole use of Assignee, its successors, legal representatives and assigns.

WORLDWIDE ASSIGNMENT (Continued)

Attorney Docket No: NPU\_20\_NPA1

Assignor's Name

Zhenjie Luo

Zhenjie Luo

Signature

August 24, 2020

Date of Execution

STATE OF Hong Kong  
COUNTY OF China

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignors? ☐ YES ☒ NO

WORLDWIDE ASSIGNMENT (Continued)

Attorney Docket No: NPU\_20\_NPA1

Assignee's Name

Northeast Petroleum University

Shansi Tian

Signature Shansi Tian

August, 28, 2020

Date of Execution

STATE OF Hailongjiang }  
COUNTY OF China }

BEFORE ME, the undersigned authority, personally appeared \_\_\_\_\_, known to me or who produced \_\_\_\_\_ as identification, and who upon oath deposes and says that the statements and signature contained herein are true and correct to the best of his/her knowledge and belief.

SWORN TO and subscribed before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2020.

\_\_\_\_\_  
Notary Public

My Commission Expires:

Names of Additional Assignees? [ ] YES [X] NO