## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6864980

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

### **CONVEYING PARTY DATA**

Name	Execution Date
JIPING ZHANG	01/12/2021
JONATHAN DAVID SHEEDER	01/13/2021
ROBERT SCHLEICHER	01/18/2021
JONAS OPPERMAN	01/15/2021

## **RECEIVING PARTY DATA**

Name:	GENERAL ATOMICS	
Street Address:	3550 GENERAL ATOMICS COURT	
City:	SAN DIEGO	
State/Country:	CALIFORNIA	
Postal Code:	92121	

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

Property Type	Number
Application Number:	17402487

## **CORRESPONDENCE DATA**

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:** 8587205700

**Email:** patentprocurement@perkinscoie.com

Correspondent Name: BING AI

Address Line 1: PERKINS COIE LLP
Address Line 2: P.O. BOX 1247

Address Line 4: SEATTLE, WASHINGTON 98111-1247

ATTORNEY DOCKET NUMBER:	074915-8039.US00	
NAME OF SUBMITTER:	DAI C. TRAN	
SIGNATURE:	/Dai C. Tran/	
DATE SIGNED:	08/13/2021	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

**Total Attachments: 16** 

PATENT REEL: 057180 FRAME: 0113

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In re Patent Application of: Jiping Zhang et al.

Application No.: Not yet assigned

Filed: Herewith

For: PRODUCING HIGH PURITY HYDROGEN AND CARBON MONOXIDE FROM A HYDROCARBON MATERIAL

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

## DECLARATION AND ASSIGNMENT BY THE INVENTOR

I, Jiping Zhang of San Diego, California, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

## PRODUCING HIGH PURITY HYDROGEN AND CARBON MONOXIDE FROM A HYDROCARBON MATERIAL

the specification of which is attached hereto and identified as Attorney Docket No. 074915-8039.US00.

I believe the following persons are additional original joint inventors of the aboveidentified patent application:

Jonathan David Sheeder of Escondido, California;

Robert Schleicher of Carlsbad, California; and

Jonas Opperman of San Diego, California.

The above-identified application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified patent application including the claims.

149179603.1

Inventor : Jiping Zhang et al. Appl. No.: Not yet assigned

Filed : Herewith Page

: 2 of 4

I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

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

### ASSIGNMENT

I hereby assign to General Atomics, a corporation of California, having a place of business at 3550 General Atomics Court, San Diego, California 92121, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent filed by me, entitled PRODUCING HIGH PURITY HYDROGEN AND CARBON MONOXIDE FROM A HYDROCARBON MATERIAL, filed on August 13, 2021 , and assigned U.S. Application Number 17/402,487 and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

149179603.1

Inventor : Jiping Zhang et al. Docket No. 074915-8039.US00

Appl. No.: Not yet assigned

Filed: Herewith Page: 3 of 4

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

The foregoing assignments, sale and transfer have been made for good and valuable consideration in accordance with the aforementioned employment agreement.

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to <u>General Atomics</u> as assignee of the entire interest, for the sole use and benefit of Assignee, its successors and assigns.

149179603.1

Inventor : Jiping Zhang et al. Appl. No. : Not yet assigned

Filed: Herewith Page: 4 of 4

I am competent to execute the above declaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Perkins Coie LLP P.O. Box 1247 Seattle, Washington 98111-1247

Telephone: (858) 720-5700 Facsimile: (206) 359-7198

149179603:1

In re Patent Application of: Jiping Zhang et al.

Application No.: Not yet assigned

Filed: Herewith

For: PRODUCING HIGH PURITY HYDROGEN AND CARBON MONOXIDE FROM A HYDROCARBON MATERIAL

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

## DECLARATION AND ASSIGNMENT BY THE INVENTOR

I, Jonathan David Sheeder of Escondido, California, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

## PRODUCING HIGH PURITY HYDROGEN AND CARBON MONOXIDE FROM A HYDROCARBON MATERIAL

the specification of which is attached hereto and identified as Attorney Docket No. 074915-8039.US00.

I believe the following persons are additional original joint inventors of the aboveidentified patent application:

Jiping Zhang of San Diego, California;

Robert Schleicher of Carlsbad, California; and

Jonas Opperman of San Diego, California.

The above-identified application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified patent application including the claims.

149179605;1

Inventor : Jiping Zhang et al. Appl. No. : Not yet assigned Filed : Herewith

Page : 2 of 4

I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

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

### ASSIGNMENT

I hereby assign to General Atomics, a corporation of California, having a place of business at 3550 General Atomics Court, San Diego, California 92121, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent filed by me, entitled PRODUCING HIGH PURITY HYDROGEN AND CARBON MONOXIDE FROM A HYDROCARBON MATERIAL, filed on August 13, 2021 \_\_\_\_, and assigned U.S. Application Number \_\_\_\_\_\_17/402,487 \_\_\_\_\_. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

149179605 1

Inventor: Jiping Zhang et al. Docket No. 074915-8039.US00

Appl. No. : Not yet assigned

Filed : Herewith Page : 3 of 4

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

The foregoing assignments, sale and transfer have been made for good and valuable consideration in accordance with the aforementioned employment agreement.

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to <u>General Atomics</u> as assignee of the entire interest, for the sole use and benefit of Assignee, its successors and assigns.

149179605.1

Inventor : Jiping Zhang et al. Appl. No. : Not yet assigned

Filed Page : Herewith : 4 of 4

I am competent to execute the above declaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Full name of inventor: JONATHAN DAVID SHEEDER

Inventor's signature:

Perkins Coie LLP P.O. Box 1247

Seattle, Washington 98111-1247

Telephone: (858) 720-5700 Facsimile: (206) 359-7198

149179605;1

In re Patent Application of: Jiping Zhang et al.

Application No.: Not yet assigned

Filed: Herewith

For: PRODUCING HIGH PURITY HYDROGEN
AND CARBON MONOXIDE FROM A
HYDROCARBON MATERIAL

Commissioner for Patents P.O. Box 1450 Alexandría, VA 22313-1450

## DECLARATION AND ASSIGNMENT BY THE INVENTOR

I, Robert Schleicher of Carlsbad, California, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

## PRODUCING HIGH PURITY HYDROGEN AND CARBON MONOXIDE FROM A HYDROCARBON MATERIAL

the specification of which is attached hereto and identified as Attorney Docket No. 074915-8039.US00.

I believe the following persons are additional original joint inventors of the aboveidentified patent application:

Jiping Zhang of San Diego, California;

Jonathan David Sheeder of Escondido, California; and

Jonas Opperman of San Diego, California.

The above-identified application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified patent application including the claims.

149179602.1

Inventor : Jiping Zhang et al. Appl. No. : Not yet assigned

Filed: Herewith Page: 2 of 4

I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

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

### ASSIGNMENT

I hereby assign to <u>General Atomics</u>, a corporation of California, having a place of business at 3550 General Atomics Court, San Diego, California 92121, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent filed by me, entitled *PRODUCING HIGH PURITY HYDROGEN AND CARBON MONOXIDE FROM A HYDROCARBON MATERIAL*, filed on August 13, 2021 \_\_\_, and assigned U.S. Application Number \_\_\_\_17/402,487 \_\_\_\_. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

149179602.1

Inventor : Jiping Zhang et al. Appl. No. : Not yet assigned Filed: Herewith : 3 of 4

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In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

The foregoing assignments, sale and transfer have been made for good and valuable consideration in accordance with the aforementioned employment agreement.

I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements. and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to General Atomics as assignee of the entire interest, for the sole use and benefit of Assignee, its successors and assigns.

149179602 1

Inventor : Jiping Zhang et al. Appl. No. : Not yet assigned

Filed : Herewith

Page

: 4 of 4

I am competent to execute the above declaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Full name of inventor: ROBERT SCHLEICHER Inventor's signature: Part Sallal

Perkins Coie LLP P.O. Box 1247

Seattle, Washington 98111-1247 Telephone: (858) 720-5700 Facsimile: (206) 359-7198

149179602.1

Docket No. 074915-8039.US00

In re Patent Application of: Jiping Zhang et al.

Application No.: Not yet assigned

Filed: Herewith

For: PRODUCING HIGH PURITY HYDROGEN AND CARBON MONOXIDE FROM A HYDROCARBON MATERIAL

Commissioner for Patents P.O. Box 1450 Alexandria, VA 22313-1450

## DECLARATION AND ASSIGNMENT BY THE INVENTOR

I, Jonas Opperman of San Diego, California, hereby declare that:

I believe I am the sole original inventor or an original joint inventor of a claimed invention in a patent application entitled:

# PRODUCING HIGH PURITY HYDROGEN AND CARBON MONOXIDE FROM A HYDROCARBON MATERIAL

the specification of which is attached hereto and identified as Attorney Docket No. 074915-8039.US00.

I believe the following persons are additional original joint inventors of the aboveidentified patent application:

Jiping Zhang of San Diego, California;

Jonathan David Sheeder of Escondido, California; and

Robert Schleicher of Carlsbad, California.

The above-identified application was made or authorized to be made by me.

I have reviewed and understand the contents of the above-identified patent application including the claims.

149179604.1

Inventor : Jiping Zhang et al. Appl. No. : Not yet assigned

Filed: Herewith Page: 2 of 4

I am aware of the duty to disclose to the U.S. Patent and Trademark Office all information known to me to be material to patentability as defined in 37 CFR §1.56.

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## ASSIGNMENT

I hereby assign to <u>General Atomics</u>, a corporation of California, having a place of business at 3550 General Atomics Court, San Diego, California 92121, and its successors and assigns (collectively hereinafter called "the Assignee"), the entire right, title and interest throughout the world in any and all inventions and improvements which are described in an application for United States Patent filed by me, entitled *PRODUCING HIGH PURITY HYDROGEN AND CARBON MONOXIDE FROM A HYDROCARBON MATERIAL*, filed on August 13, 2021 \_\_\_\_, and assigned U.S. Application Number \_\_\_\_17/402,487 \_\_\_\_. I authorize and request an attorney appointed in said application to hereafter insert above the filing date and application number of said application when known.

This assignment includes the entire right, title and interest in said application, all legal equivalents thereof in any country, any and all United States and foreign patents, utility models, and design registrations granted for any of said inventions and improvements, including, but not limited to, all divisions, continuations, reissues, reexamination certificates, any and all certificates issued in any post-grant proceeding, and extensions of said applications and patents of the United States, foreign patents, utility models, and design registrations, and the right to claim priority based on the filing date of said application under the International Convention for the Protection of Industrial Property, the Patent Cooperation Treaty, the European Patent Convention, and all other treaties of like purposes, and the right to seek relief and recover all damages, including, but not limited to, a reasonable royalty, by reason of infringement or any other violation of patent or patent application rights. I authorize the Assignee to apply in all countries in my name or in the name of the Assignee for patents, utility models, design registrations and like rights of exclusion and for inventors' certificates for said inventions and improvements.

149179604.1

Inventor : Jiping Zhang et al. Appl. No. : Not yet assigned

Filed Page

: Herewith

: 3 of 4

In addition, I hereby confirm the sale, assignment, and transfer to the Assignee of the entire right, title and interest throughout the world in said inventions and improvements that occurred by operation of an employment agreement between me and the Assignee existing at the time said inventions and improvements were made. Should I have any remaining interest, I hereby sell, assign, and transfer any right, title and interest I may have in said inventions and improvements anywhere in the world to the Assignee.

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I hereby represent and covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into that would conflict with the assignment of said inventions and improvements to the Assignee.

I further covenant for myself and my respective heirs, legal representatives and assigns, to assist the Assignee in handling various procedures, tasks and documentation in connection with this assignment, including, but not limited to, providing to the Assignee promptly upon the request of the Assignee all pertinent facts and documents relating to said invention and improvements, and said patents, said legal equivalents or other legal instrument as may be known and accessible to me and testifying as to the same in any interference, litigation, or proceeding relating thereto, and promptly executing and delivering to the Assignee or its legal representative any and all papers, documents, instruments or affidavits in connection with obtaining, maintaining, issuing or enforcing said application, said inventions and improvements, and said patents, said equivalents and other legal instrument which may be necessary or desirable to carry out the purposes thereof.

I hereby authorize and request the Commissioner of Patents and Trademarks to issue one or more patents in the United States for said inventions and improvements to General Atomics as assignee of the entire interest, for the sole use and benefit of Assignee, its successors and assigns. Inventor: Jiping Zhang et al. Appl. No.: Not yet assigned

appi. No. : Not yet ass Filed : Herewith

Filed: Herew Page: 4 of 4

I am competent to execute the above declaration and assignment. I hereby have duly executed the declaration and assignment below with my name.

Full name of inventor: JONAS OPPERMAN

Inventor's signature:

Date: <u>//15/2</u>

Perkins Coie LLP P.O. Box 1247

Seattle, Washington 98111-1247

Telephone: (858) 720-5700 Facsimile: (206) 359-7198

149179604.1

PATENT REEL: 057180 FRAME: 0130

Docket No. 074915-8039.US00