

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT6477729

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
NICHOLAS P GODMAN	01/22/2020
TIMOTHY J WHITE	12/02/2019
HILMAR KOERNER	01/06/2020
ANESIA AUGUSTE	01/08/2020
TYLER GUIN	09/17/2020
BENJAMIN KOWALSKI	12/02/2020
AZIMUTH	06/14/2018
RECEIVING PARTY DATA	
Name:	GOVERNMENT OF THE UNITED STATES AS REPRESENTED BY THE SECRETARY OF THE AIR FORCE
Street Address:	2240 B STREET
Internal Address:	AREA B, BUILDING 11
City:	WRIGHT-PATTRSON AFB
State/Country:	OHIO
Postal Code:	45433
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16653876
CORRESPONDENCE DATA	
Fax Number:	
<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>	
Email:	afmclo.jaz.1@us.af.mil
Correspondent Name:	AFMCLO/JAZ
Address Line 1:	2240 B STREET
Address Line 2:	AREA B, BUILDING 11
Address Line 4:	WRIGHT-PATTERSON AFB, OHIO 45433
ATTORNEY DOCKET NUMBER:	AFD 1843
NAME OF SUBMITTER:	CHASTITY D. S. WHITAKER, PH.D.
SIGNATURE:	/ Chastity DS Whitaker /

DATE SIGNED:	01/04/2021
	This document serves as an Oath/Declaration (37 CFR 1.63).
Total Attachments: 7 source=1843 Executed Assignments#page1.tif source=1843 Executed Assignments#page2.tif source=1843 Executed Assignments#page3.tif source=1843 Executed Assignments#page4.tif source=1843 Executed Assignments#page5.tif source=1843 Executed Assignments#page6.tif source=1843 Executed Assignments#page7.tif	

**INVENTOR ASSIGNMENT AND DECLARATION
(Government Inventor)**

WHEREAS, I, NICHOLAS P GODMAN, while employed by the Government of the United States, made or contributed to an invention described in invention disclosure 1843 entitled "**LIQUID CRYSTAL ELASTOMERS VIA CHAIN TRANSFER,**" to be filed as an application for Letters Patent of the United States (Application Serial Number 16/653,876, filed 10/15/19), and I hereby authorize and request Air Force Patent Counsel to insert here in the above

parentheses (Application Serial Number, filed) the filing date and application number of said application when known;

WHEREAS, The above-identified application for Letters Patent was made or authorized to be made by me;

WHEREAS, I believe that I am an original joint inventor of a claimed invention in the application;

WHEREAS, I hereby acknowledge that any willful false statement made in this Declaration/Assignment is punishable under 18 U.S.C. § 1001 by fine, imprisonment of not more than five (5) years, or both; and

WHEREAS, the conditions under which said invention was made are such as to entitle the Government of the United States as represented by the Secretary of the Air Force, under Paragraph 1(a) of Executive Order 10096, to the entire right, title, and interest therein, including foreign rights.

NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the premises and other valuable considerations, I, **NICHOLAS P GODMAN**:

HEREBY HAVE SOLD, ASSIGNED, AND TRANSFERRED, and by these presents do sell, assign, and transfer unto the Government of the United States as represented by the Secretary of the Air Force, my entire right, title, and interest, in and to the aforesaid invention described in the invention disclosure, all subsequent information to support that aforesaid invention, and the resulting application for Letters Patent of the United States including all Letters Patent issuing thereon, and any continuations, continuations-in-part, divisions, and reissues or extensions thereof; and all priority resulting from the filing of the aforesaid application for patent in the United States;

HEREBY AUTHORIZE AND REQUEST any official whose duty it is to issue patents, to issue any patent thereon to the Government of the United States, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title, and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions, and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made;

HEREBY ALSO GRANT to the Government of the United States, as represented by the Secretary of the Air Force, the option to take the entire right, title, and interest in the invention or all applications for Letters Patent thereon in all countries or jurisdictions foreign to the United States in which the Government of the United States may file, or cause to be filed, applications for Letters Patent, without payment to me of any further consideration; provided, however, that this grant of an option to take foreign rights in the invention must be exercised by written notice to me within eight months of the first filing date of any application for United States Letters Patent covering the invention or within eight months from the declassification of the invention, whichever is later, and that all foreign rights not exercised under the option are left to me, subject to a nonexclusive, irrevocable, royalty-free license to the Government of the United States in any patent which may issue on said invention in any country or jurisdiction foreign to the United States, including the power to issue sublicenses for use on behalf of the Government of the United States and/or in furtherance of the foreign policies of the United States of America; and

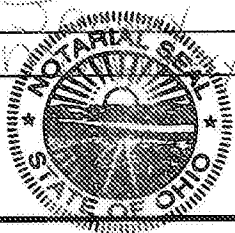
HEREBY AGREE to execute any and all applications for Letters Patent, and to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that I shall not be subject to any out-of-pocket expense relative to such action.

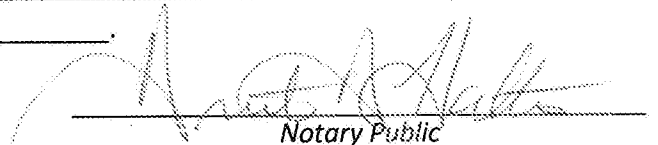

NICHOLAS P GODMAN

SUBSCRIBED AND ACKNOWLEDGED before me by **NICHOLAS P GODMAN** this 22nd day of 2020, at the city of Darien in the County of

and State of Ohio

ANITA A. HALTON
Notary Public, State of Ohio
My Commission Expires:




Notary Public

INVENTOR ASSIGNMENT AND DECLARATION
(Government Inventor)

WHEREAS, I, TIMOTHY J WHITE, while employed by the Government of the United States, made or contributed to an invention described in invention disclosure **1843** entitled "**LIQUID CRYSTAL ELASTOMERS VIA CHAIN TRANSFER**," to be filed as an application for Letters Patent of the United States (Application Serial Number 16/653,876, filed 10/15/19), and I hereby authorize and request Air Force Patent Counsel to insert here in the above

parentheses (Application Serial Number, filed) the filing date and application number of said application when known;

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WHEREAS, the conditions under which said invention was made are such as to entitle the Government of the United States as represented by the Secretary of the Air Force, under Paragraph 1(a) of Executive Order 10096, to the entire right, title, and interest therein, including foreign rights.

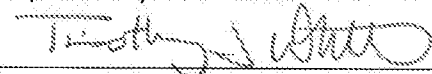
NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the premises and other valuable considerations, **I, TIMOTHY J WHITE**:

HEREBY HAVE SOLD, ASSIGNED, AND TRANSFERRED, and by these presents do sell, assign, and transfer unto the Government of the United States as represented by the Secretary of the Air Force, my entire right, title, and interest, in and to the aforesaid invention described in the invention disclosure, all subsequent information to support that aforesaid invention, and the resulting application for Letters Patent of the United States including all Letters Patent issuing thereon, and any continuations, continuations-in-part, divisions, and reissues or extensions thereof; and all priority resulting from the filing of the aforesaid application for patent in the United States;

HEREBY AUTHORIZE AND REQUEST any official whose duty it is to issue patents, to issue any patent thereon to the Government of the United States, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title, and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions, and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made;

HEREBY ALSO GRANT to the Government of the United States, as represented by the Secretary of the Air Force, the option to take the entire right, title, and interest in the invention or all applications for Letters Patent thereon in all countries or jurisdictions foreign to the United States in which the Government of the United States may file, or cause to be filed, applications for Letters Patent, without payment to me of any further consideration; provided, however, that this grant of an option to take foreign rights in the invention must be exercised by written notice to me within eight months of the first filing date of any application for United States Letters Patent covering the invention or within eight months from the declassification of the invention, whichever is later, and that all foreign rights not exercised under the option are left to me, subject to a nonexclusive, irrevocable, royalty-free license to the Government of the United States in any patent which may issue on said invention in any country or jurisdiction foreign to the United States, including the power to issue sublicenses for use on behalf of the Government of the United States and/or in furtherance of the foreign policies of the United States of America; and

HEREBY AGREE to execute any and all applications for Letters Patent, and to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that I shall not be subject to any out-of-pocket expense relative to such action.

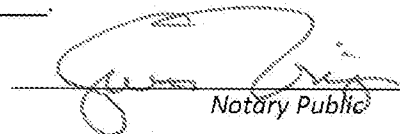


TIMOTHY J WHITE

SUBSCRIBED AND ACKNOWLEDGED before me by **TIMOTHY J WHITE** this 2nd day of December 2019, at the city of Boulder in the County of Boulder and State of Colorado.

JAMES TRUJILLO
NOTARY PUBLIC
STATE OF COLORADO

NOTARY ID 2004403632
MY COMMISSION EXPIRES NOVEMBER 4, 2023


Notary Public

INVENTOR ASSIGNMENT AND DECLARATION
(Government Inventor)

WHEREAS, I, HILMAR KOERNER, while employed by the Government of the United States, made or contributed to an invention described in invention disclosure 1843 entitled "**LIQUID CRYSTAL ELASTOMERS VIA CHAIN TRANSFER**," to be filed as an application for Letters Patent of the United States (Application Serial Number 16/653,876, filed 10/15/19), and I hereby authorize and request Air Force Patent Counsel to insert here in the above

parentheses (Application Serial Number, filed) the filing date and application number of said application when known;

WHEREAS, The above-identified application for Letters Patent was made or authorized to be made by me;

WHEREAS, I believe that I am an original joint inventor of a claimed invention in the application;

WHEREAS, I hereby acknowledge that any willful false statement made in this Declaration/Assignment is punishable under 18 U.S.C. § 1001 by fine, imprisonment of not more than five (5) years, or both; and

WHEREAS, the conditions under which said invention was made are such as to entitle the Government of the United States as represented by the Secretary of the Air Force, under Paragraph 1(a) of Executive Order 10096, to the entire right, title, and interest therein, including foreign rights.

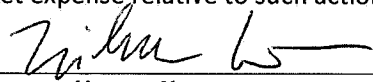
NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the premises and other valuable considerations, I, **HILMAR KOERNER**:

HEREBY HAVE SOLD, ASSIGNED, AND TRANSFERRED, and by these presents do sell, assign, and transfer unto the Government of the United States as represented by the Secretary of the Air Force, my entire right, title, and interest, in and to the aforesaid invention described in the invention disclosure, all subsequent information to support that aforesaid invention, and the resulting application for Letters Patent of the United States including all Letters Patent issuing thereon, and any continuations, continuations-in-part, divisions, and reissues or extensions thereof; and all priority resulting from the filing of the aforesaid application for patent in the United States;

HEREBY AUTHORIZE AND REQUEST any official whose duty it is to issue patents, to issue any patent thereon to the Government of the United States, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title, and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions, and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made;

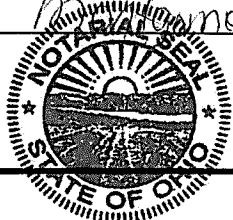
HEREBY ALSO GRANT to the Government of the United States, as represented by the Secretary of the Air Force, the option to take the entire right, title, and interest in the invention or all applications for Letters Patent thereon in all countries or jurisdictions foreign to the United States in which the Government of the United States may file, or cause to be filed, applications for Letters Patent, without payment to me of any further consideration; provided, however, that this grant of an option to take foreign rights in the invention must be exercised by written notice to me within eight months of the first filing date of any application for United States Letters Patent covering the invention or within eight months from the declassification of the invention, whichever is later, and that all foreign rights not exercised under the option are left to me, subject to a nonexclusive, irrevocable, royalty-free license to the Government of the United States in any patent which may issue on said invention in any country or jurisdiction foreign to the United States, including the power to issue sublicenses for use on behalf of the Government of the United States and/or in furtherance of the foreign policies of the United States of America; and

HEREBY AGREE to execute any and all applications for Letters Patent, and to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that I shall not be subject to any out-of-pocket expense relative to such action.



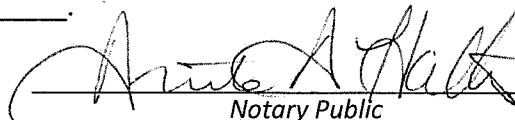
HILMAR KOERNER

SUBSCRIBED AND ACKNOWLEDGED before me by **HILMAR KOERNER** this 6th day of January, 2020, at the city of Dayton in the County of Montgomery and State of Ohio.



ANITA A. HALTON
Notary Public, State of Ohio
My Commission Expires:

August 6, 2021


Notary Public

INVENTOR ASSIGNMENT AND OATH
(National Research Council ("NRC") Inventor)

WHEREAS, I, **ANESIA AUGUSTE**, jointly made or contributed to an invention while working under Contract Number **FA9550-12-D-0001** between the United States Air Force Office of Scientific Research and the National Academy of Sciences, National Research Council, as described in invention disclosure **1843** entitled "**LIQUID CRYSTAL ELASTOMERS VIA CHAIN TRANSFER**," to be filed as an application for Letters Patent of the United States (Application Serial Number **16/653,876**, filed **10/15/19**), and I hereby authorize and request Air Force Patent Counsel to insert here in the above parentheses (Application Serial Number, filed) the filing date and application number of said application when known;

WHEREAS, I, **ANESIA AUGUSTE**, have indicated my intention to **NOT** elect title and **NOT** file an application for Letters Patent on the aforesaid invention;

WHEREAS, the above-identified application for Letters Patent was made or authorized to be made by me;

WHEREAS, I believe that I am an original inventor of a claimed invention in the application; and

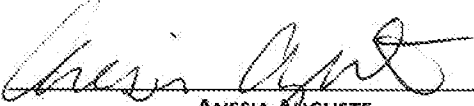
WHEREAS, I hereby acknowledge that any willful false statement made in this Declaration/Assignment is punishable under 18 U.S.C. § 1001 by fine, imprisonment of not more than five (5) years, or both.

NOW, THEREFORE, to all whom it may concern, be it known that, by agreement and in consideration of these premises and other valuable consideration, I, **ANESIA AUGUSTE**, elect herein to:

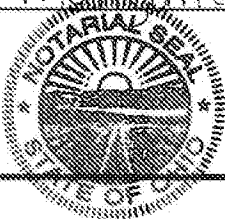
HEREBY HAVE SOLD, ASSIGNED, AND TRANSFERRED, and by these presents do sell, assign, and transfer unto the Government of the United States as represented by the Secretary of the Air Force, my entire right, title, and interest, in and to the aforesaid invention described in the invention disclosure, all subsequent information to support that aforesaid invention, and the resulting application for Letters Patent of the United States including all Letters Patent issuing thereon, and any continuations, continuations-in-part, divisions, and reissues or extensions thereof; and all patent applications claiming priority resulting from the filing of the aforesaid application for patent in the United States in any jurisdiction throughout the world;

HEREBY AUTHORIZE AND REQUEST any official whose duty it is to issue patents, to issue any patent thereon to the Government of the United States, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made; and

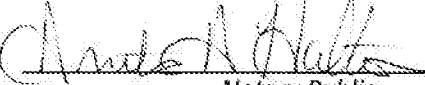
HEREBY AGREE to execute, and assist with executing, any and all applications for Letters Patent, and to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood I shall not be subject to any out-of-pocket expense relative to such action.


ANESIA AUGUSTE

SUBSCRIBED AND ACKNOWLEDGED before me by ANESIA AUGUSTE this 8th day of January, 2020, at the city of Dayton in the County of Montgomery and State of Ohio.



ANITA A. HALTON
Notary Public, State of Ohio
My Commission Expires:
August 16, 2021


Notary Public

INVENTOR ASSIGNMENT AND DECLARATION
(Contractor Inventor)

WHEREAS, I, Tyler Guin, while employed by Arizmuth Corp ("Contractor"), jointly made or contributed to an invention under contract/subcontract number FA8650-16-D-5404, as described in invention disclosure **1843** entitled "**LIQUID CRYSTAL ELASTOMERS VIA CHAIN TRANSFER**," to be filed as an application for Letters Patent of the United States (Application Serial Number 16/653,876, filed 10/15/19), and I hereby authorize and request Air Force Patent Counsel to insert here in the above parentheses (Application Serial Number, filed) the filing date and application number of said application when known;

WHEREAS, The above-identified application for Letters Patent was made or authorized to be made by me;

WHEREAS, I believe that I am an original joint inventor of a claimed invention in the application;

WHEREAS, I hereby acknowledge that any willful false statement made in this Declaration/Assignment is punishable under 18 U.S.C. § 1001 by fine, imprisonment of not more than five (5) years, or both; and

WHEREAS, Contractor and/or I, Tyler Guin, has indicated its intention to **NOT** elect title and **NOT** file an application for Letters Patent on the aforesaid invention.

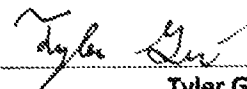
NOW, THEREFORE, to all whom it may concern, be it known that in recognition of my obligation to the Government of the United States under the above contract and by agreement, or in consideration of the premises and other valuable consideration, I, **Tyler Guin**, elect herein to:

HEREBY HAVE SOLD, ASSIGNED, AND TRANSFERRED, and by these presents do sell, assign, and transfer unto the Government of the United States as represented by the Secretary of the Air Force, my entire right, title, and interest, in and to the aforesaid invention described in the invention disclosure, all subsequent information to support that aforesaid invention, and the resulting application for Letters Patent of the United States including all Letters Patent issuing thereon, and any continuations, continuations-in-part, divisions, and reissues or extensions thereof; and all patent applications claiming priority resulting from the filing of the aforesaid application for patent in the United States in any jurisdiction throughout the world, subject to the reservation of any license to which Contractor and/or I, **Tyler Guin**, may be entitled under the above contract;

HEREBY AUTHORIZE AND REQUEST any official whose duty it is to issue patents, to issue any patent thereon to the Government of the United States, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title, and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions, and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made; and

HEREBY AGREE to execute, and assist with executing, any and all applications for Letters Patent, to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that Contractor and/or I, **Tyler Guin**, shall not be subject to any out-of-pocket expense relative to such action.

Contractor joins in and agrees to this assignment and, except for the reservation of any license under the above contract, relinquishes, and assigns to the Government of the United States, as represented by the Secretary of the Air Force its entire right, title, and interest throughout the world in and to such inventions, and further agrees to furnish to the Government of the United States, upon request, any available information and documents necessary for the timely preparation, filing, and prosecution of such applications, for Letters Patent.


Tyler Guin

SUBSCRIBED AND ACKNOWLEDGED before me by Tyler Guin this 17th day of September 2020, at the city of Aiken in the County of Aiken and State of South Carolina.

MY COMMISSION EXPIRES MARCH 21 2026


Notary Public

**INVENTOR ASSIGNMENT AND DECLARATION
(Contractor Inventor)**

WHEREAS, I, BENJAMIN KOWALSKI, while employed by Arizmuth Corp ("Contractor"), jointly made or contributed to an invention under contract/subcontract number FA8650-16-D-5404, as described in invention disclosure 1843 entitled "LIQUID CRYSTAL ELASTOMERS VIA CHAIN TRANSFER," to be filed as an application for Letters Patent of the United States (Application Serial Number 16/653,876, filed 10/15/19), and I hereby authorize and request Air Force Patent Counsel to insert here in the above parentheses (Application Serial Number, filed) the filing date and application number of said application when known;

WHEREAS, The above-identified application for Letters Patent was made or authorized to be made by me;

WHEREAS, I believe that I am an original joint inventor of a claimed invention in the application;

WHEREAS, I hereby acknowledge that any willful false statement made in this Declaration/Assignment is punishable under 18 U.S.C. § 1001 by fine, imprisonment of not more than five (5) years, or both; and

WHEREAS, Contractor and/or I, BENJAMIN KOWALSKI, has indicated its intention to **NOT** elect title and **NOT** file an application for Letters Patent on the aforesaid invention.

NOW, THEREFORE, to all whom it may concern, be it known that in recognition of my obligation to the Government of the United States under the above contract and by agreement, or in consideration of the premises and other valuable consideration, I, BENJAMIN KOWALSKI, elect herein to:

HEREBY HAVE SOLD, ASSIGNED, AND TRANSFERRED, and by these presents do sell, assign, and transfer unto the Government of the United States as represented by the Secretary of the Air Force, my entire right, title, and interest, in and to the aforesaid invention described in the invention disclosure, all subsequent information to support that aforesaid invention, and the resulting application for Letters Patent of the United States including all Letters Patent issuing thereon, and any continuations, continuations-in-part, divisions, and reissues or extensions thereof; and all patent applications claiming priority resulting from the filing of the aforesaid application for patent in the United States in any jurisdiction throughout the world, subject to the reservation of any license to which Contractor and/or I, BENJAMIN KOWALSKI, may be entitled under the above contract;

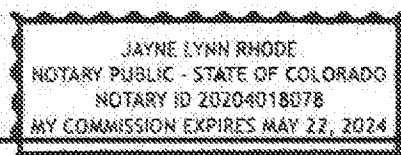
HEREBY AUTHORIZE AND REQUEST any official whose duty it is to issue patents, to issue any patent thereon to the Government of the United States, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title, and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions, and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made; and

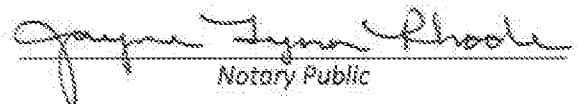
HEREBY AGREE to execute, and assist with executing, any and all applications for Letters Patent, to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that Contractor and/or I, BENJAMIN KOWALSKI, shall not be subject to any out-of-pocket expense relative to such action.

Contractor joins in and agrees to this assignment and, except for the reservation of any license under the above contract, relinquishes, and assigns to the Government of the United States, as represented by the Secretary of the Air Force its entire right, title, and interest throughout the world in and to such inventions, and further agrees to furnish to the Government of the United States, upon request, any available information and documents necessary for the timely preparation, filing, and prosecution of such applications, for Letters Patent.


BENJAMIN KOWALSKI

SUBSCRIBED AND ACKNOWLEDGED before me by BENJAMIN KOWALSKI this 2nd day of December 2020, at the city of Boulder in the County of Boulder and State of Colorado.




Notary Public

INVENTION ELECTION

Azimuth, as employer of Benjamin Kowalski and Anesia Auguste, named joint inventors with at least one Government employee inventor, in:

Air Force Docket Number	AFD 1843
Title	Liquid Crystal Elastomers via Chain Transfer
Government Inventor(s)	Nicholas Godman, Timothy White, Hilmar Koerner
FAR Contract Number	FA8650-16-D-5404

(hereafter "the Invention"), hereby signify my intention

- ☐ to file a patent application for letters patent on the above-referenced Invention and to retain my entire right, title, and interest in the Invention disclosed, subject to any rights to which the Government of the United States is entitled. I further agree to negotiate a separate agreement with the Government of the United States defining joint ownership terms for the Invention.

~or~

- ☒ not to file a patent application for letters patent on the Invention. I further agree to assign to the Government of the United States, as represented by the Secretary of the Air Force, my entire right, title, and interest throughout the world in the Invention disclosed and any subsequent continuations, continuations-in-part, divisions, and reissues or extensions thereof. I further agree to assist the Government of the United States, upon request, by furnishing any available information and documents, performing all acts, and doing all things that may be reasonably necessary to timely prepare, file, and prosecute such applications and to make the assignment of my entire right, title, and interest effective.

Valerie K Rossi

Signature

VALERIE K ROSSI

Printed Name

Azimuth

On behalf of

PRESIDENT

Title

6/14/18

Date

PATENT