

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
YOANN JESTIN	04/26/2019
LUCA RAZZARI	04/24/2019
ROBERTO MORANDOTTI	05/03/2019
RICCARDO PICCOLI	04/24/2019
ALESSANDRO TOMASINO	05/03/2019
RECEIVING PARTY DATA	
Name:	INSTITUT NATIONAL DE LA RECHERCHE SCIENTIFIQUE
Street Address:	490 RUE DE LA COURONNE
City:	QUEBEC
State/Country:	CANADA
Postal Code:	G1K9A9
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	17086814
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:	USPATENTS@LAVERY.CA
Correspondent Name:	HUGH HUGH MANSFIELD
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ATTORNEY DOCKET NUMBER:	G144448-00232-GB
NAME OF SUBMITTER:	HUGH MANSFIELD
SIGNATURE:	/HUGH MANSFIELD/
DATE SIGNED:	12/17/2020
Total Attachments: 12	
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ASSIGNMENT

WHEREAS I, the undersigned, Yoann Jestin, Researcher Associate at INRS (hereinafter referred to as the "Assignor"), residing at 2547 rue Sicard, app. 301, Montréal, province of Québec, H1V 2Y8, Canada have, with others, made a certain invention known as « A METHOD AND A SYSTEM FOR HOMODYNE SOLID-STATE BIASED COHERENT DETECTION OF ULTRA-BROADBAND TERAHERTZ PULSES » hereinafter referred to as the "Invention");

WHEREAS INSTITUT NATIONAL DE LA RECHERCHE SCIENTIFIQUE, whose full post office address is

490 rue de la Couronne, Quebec City, Quebec, G1K 9A9, Canada,

(hereinafter referred to as the "Assignee") is desirous of acquiring the entire right, title, and interest that I hold in and to said Invention, in and to any patent applications which may be filed in any and all countries in the world on said Invention, including divisional applications and continuation applications on the Invention and including any patent applications on the Invention in any foreign country under the provisions of the International Convention (hereinafter collectively the "Applications") and in and to any and all patents on the Invention obtained in any country in the world;

I hereby authorize and request my patent agent to insert missing information regarding any application covering the same invention when known here in parentheses (Country United States, Application number 62/930,771); filed November 5, 2019,

Country United States, Application number 17/086,814, filed November 2, 2020;

Country Canada, Application number 3,097,792, filed November 2, 2020);

NOW THEREFORE, in return for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged

- I the Assignor, do hereby confirm any assignment already made by me in favour of INRS in and to the Invention, its constituent parts, any Applications, and any patents on the Invention which may be obtained;
- And for more certainty I, the Assignor, do hereby sell, assign, transfer, and set over unto the Assignee, its successors and assigns, my entire right, title, and interest which I hold in and to said Invention, in any form or embodiment thereof, and in and to the above-described Applications; also the entire right, title and interest in and to any patent on the Invention and any reissue of a patent on the Invention: I hereby authorize and request the issuing authority to issue and deliver any and all patents on the foregoing including on said Applications in any and all countries, to said Assignee; the same to be held and enjoyed by the Assignee for its own use and behalf, and for the use and behalf of its successors and assigns, to the full end of the term or terms for which said patents may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment not been made, as the assignee of my entire right, title and interest therein, in accordance with this assignment;

IN ADDITION I hereby agree that upon request, and without any payment by said Assignee, other than the expenses incurred by the undersigned, to communicate to said Assignee its successors and its assigns, their respective representatives and agents any facts known to me respecting the foregoing including any facts respecting said Invention, including evidence for interference purposes or for other proceedings, whenever requested; testify in any interference, litigation, or other proceedings, sign and deliver, on request, all lawful

papers necessary or useful to vest or perfect the title of the Assignee, its successors and assigns relating to the foregoing including relating to the Invention, the Applications and the aforementioned patents, or necessary or useful to make any of the foregoing provisions effective, make all rightful oaths and generally aid the Assignee, its successors, assigns, and their respective representatives and agents to obtain and enforce proper patent protect for said Invention in all countries and likewise make these provisions binding upon my heirs, legal representatives, administrators and assigns,

Tel que convenu par le Cessionnaire et le Cédant, cette cession a été rédigée en anglais. As agreed by both the Assignee and the Assignor, this assignment has been drawn up in English.

These presents shall be governed by and construed in accordance with the applicable laws of the Province of Quebec and the laws of Canada applicable therein and the forum in relation to same shall be Quebec, Quebec, Canada.

SIGNED in triplicate at VARENNES QUEBEC CANADA
 (City) (Province / State) (Country)
 this 26th day of APRIL, 2019
 (Day) (Month) (Year) (The Assignor fills these blanks with the appropriate information as to the place and date of the Assignor's signature)

By the Assignor :

[Signature]
 (Signature of Assignor)

YOVAN JESTIN
 (Name of Assignor in printed letters)

Witness of Assignor's signature :

[Signature]
 (Signature of witness of Assignor's signature)

PRISALVE ERNOTTE
 (Name of witness in printed letters)

Acknowledged and accepted at Quebec City, Province of Quebec, Canada

By Institut national de la recherche scientifique :

[Signature]
 Mrs Josée Charest, Director
 Research and Technology Transfer Department

1^{er} mai 2019
 Date

Witness of INRS representative's signature:

[Signature]
 (Signature)

1^{er} mai 2019
 Date

Danielle Duroit
 (Name of witness of INRS representative's signature in printed letters)

ASSIGNMENT

WHEREAS I, the undersigned, Riccardo Piccoli, Postdoctoral researcher at INRS (hereinafter referred to as the "Assignor"), residing at Derech Yavne 50, Apt. 14.2, 7634323, Rehovot, Israel have, with others, made a certain invention known as « A method and a system for homodyne solid-state biased coherent detection of ultra-broadband terahertz pulses » (hereinafter referred to as the "Invention");

WHEREAS INSTITUT NATIONAL DE LA RECHERCHE SCIENTIFIQUE, whose full post office address is

490 rue de la Couronne, Quebec City, Quebec, G1K 9A9, Canada,

(hereinafter referred to as the "Assignee") is desirous of acquiring the entire right, title, and interest that I hold in and to said Invention, in and to any patent applications which may be filed in any and all countries in the world on said Invention, including divisional applications and continuation applications on the Invention and including any patent applications on the Invention in any foreign country under the provisions of the International Convention (hereinafter collectively the "Applications") and in and to any and all patents on the Invention obtained in any country in the world;

I hereby authorize and request my patent agent to insert missing information regarding any application covering the same invention when known here in parentheses (Country United States, Application number 62/930,771, filed November 5, 2019 ; Country United States, Application number 17/086,814, filed November 2, 2020 ; Country Canada, Application number 3,097,792, filed November 2, 2020) ;

NOW THEREFORE, in return for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged

- I the Assignor, do hereby confirm any assignment already made by me in favour of INRS in and to the Invention, its constituent parts, any Applications, and any patents on the Invention which may be obtained;
- And for more certainty I, the Assignor, do hereby sell, assign, transfer, and set over unto the Assignee, its successors and assigns, my entire right, title, and interest which I hold in and to said Invention, in any form or embodiment thereof, and in and to the above-described Applications; also the entire right, title and interest in and to any patent on the Invention and any reissue of a patent on the Invention. I hereby authorize and request the issuing authority to issue and deliver any and all patents on the foregoing including on said Applications in any and all countries, to said Assignee; the same to be held and enjoyed by the Assignee for its own use and behalf, and for the use and behalf of its successors and assigns, to the full end of the term or terms for which said patents may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment not been made, as the assignee of my entire right, title and interest therein, in accordance with this assignment;

IN ADDITION I hereby agree that upon request, and without any payment by said Assignee, other than the expenses incurred by the undersigned, to communicate to said Assignee its successors and its assigns, their respective representatives and agents any facts known to me respecting the foregoing including any facts respecting said Invention, including evidence for interference purposes or for

other proceedings, whenever requested; testify in any interference, litigation, or other proceedings, sign and deliver, on request, all lawful papers necessary or useful to vest or perfect the title of the Assignee, its successors and assigns relating to the foregoing including relating to the Invention, the Applications and the aforementioned patents, or necessary or useful to make any of the foregoing provisions effective, make all rightful oaths and generally aid the Assignee, its successors, assigns, and their respective representatives and agents to obtain and enforce proper patent protect for said Invention in all countries and likewise make these provisions binding upon my heirs, legal representatives, administrators and assigns,

Tel que convenu par le Cessionnaire et le Cédant, cette cession a été rédigée en anglais. As agreed by both the Assignee and the Assignor, this assignment has been drawn up in English.

These presents shall be governed by and construed in accordance with the applicable laws of the Province of Quebec and the laws of Canada applicable therein and the forum in relation to same shall be Quebec, Quebec, Canada.

SIGNED in triplicate at VARENNES QUEBEC CANADA
(City) (Province / State) (Country)

this 24 day of APRIL, 2019.
(Day) (Month) (Year) (The Assignor fills these blanks with the appropriate information as to the place and date of the Assignor's signature)

By the Assignor :

Riccardo Piccoli
(Signature of Assignor)

Witness of Assignor's signature :

Cristina Piccoli
(Signature of witness of Assignor's signature)

Riccardo Piccoli
(Name of Assignor in printed letters)

CRISTINA PICCOLI
(Name of witness in printed letters)

Acknowledged and accepted at Quebec City, Province of Quebec, Canada

By Institut national de la recherche scientifique :

Josée Charest
Mrs Josée Charest, Director
Research and Technology Transfer Department

1^{er} mai 2019
Date



Witness of INRS representative's signature:

Danielle Durolet
(Signature)

1^{er} mai 2019
Date

Danielle Durolet
(Name of witness of INRS representative's signature in printed letters)

ASSIGNMENT

WHEREAS I, the undersigned, Roberto Morandotti, Professor at INRS (hereinafter referred to as the "Assignor"), residing at 801 rue Sherbrooke Est, app. 807, Montréal, province of Québec, H2L 0B7, Canada have, with others, made a certain invention known as « *A method and a system for homodyne solid-state biased coherent detection of ultra-broadband terahertz pulses* » (hereinafter referred to as the "Invention");

WHEREAS INSTITUT NATIONAL DE LA RECHERCHE SCIENTIFIQUE, whose full post office address is

490 rue de la Couronne, Quebec City, Quebec, G1K 9A9, Canada,

(hereinafter referred to as the "Assignee") is desirous of acquiring the entire right, title, and interest that I hold in and to said Invention, in and to any patent applications which may be filed in any and all countries in the world on said Invention, including divisional applications and continuation applications on the Invention and including any patent applications on the Invention in any foreign country under the provisions of the International Convention (hereinafter collectively the "Applications") and in and to any and all patents on the Invention obtained in any country in the world;

I hereby authorize and request my patent agent to insert missing information regarding any application covering the same invention when known here in parentheses (Country United States, Application number 62/930,771); filed November 5, 2019,

Country United States, Application number 17/086,814, filed November 2, 2020;

Country Canada, Application number 3,097,792, filed November 2, 2020);

NOW THEREFORE, in return for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged

- I the Assignor, do hereby confirm any assignment already made by me in favour of INRS in and to the Invention, its constituent parts, any Applications, and any patents on the Invention which may be obtained;
- And for more certainty I, the Assignor, do hereby sell, assign, transfer, and set over unto the Assignee, its successors and assigns, my entire right, title, and interest which I hold in and to said Invention, in any form or embodiment thereof, and in and to the above-described Applications; also the entire right, title and interest in and to any patent on the Invention and any reissue of a patent on the Invention. I hereby authorize and request the issuing authority to issue and deliver any and all patents on the foregoing including on said Applications in any and all countries, to said Assignee; the same to be held and enjoyed by the Assignee for its own use and behalf, and for the use and behalf of its successors and assigns, to the full end of the term or terms for which said patents may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment not been made, as the assignee of my entire right, title and interest therein, in accordance with this assignment;

IN ADDITION I hereby agree that upon request, and without any payment by said Assignee, other than the expenses incurred by the undersigned, to communicate to said Assignee its successors and its assigns, their respective representatives and agents any facts known to me respecting the foregoing including any facts respecting said Invention, including evidence for interference purposes or for other proceedings, whenever requested; testify in any interference, litigation, or other proceedings, sign and deliver, on request, all lawful

papers necessary or useful to vest or perfect the title of the Assignee, its successors and assigns relating to the foregoing including relating to the Invention, the Applications and the aforementioned patents, or necessary or useful to make any of the foregoing provisions effective, make all rightful oaths and generally aid the Assignee, its successors, assigns, and their respective representatives and agents to obtain and enforce proper patent protect for said Invention in all countries and likewise make these provisions binding upon my heirs, legal representatives, administrators and assigns,

Tel que convenu par le Cessionnaire et le Cédant, cette cession a été rédigée en anglais. As agreed by both the Assignee and the Assignor, this assignment has been drawn up in English.

These presents shall be governed by and construed in accordance with the applicable laws of the Province of Quebec and the laws of Canada applicable therein and the forum in relation to same shall be Quebec, Quebec, Canada.

SIGNED in triplicate at VALENTIN QUEBEC CANADA
(City) (Province / State) (Country)
this 3rd day of MAY, 2018
(Day) (Month) (Year) (The Assignor fills these blanks with the appropriate information as to the place and date of the Assignor's signature)

By the Assignor :

[Signature]
(Signature of Assignor)

Witness of Assignor's signature :

Alessandro Tomasino
(Signature of witness of Assignor's signature)

ROBERTO MORANDI
(Name of Assignor in printed letters)

ALESSANDRO TOMASINO
(Name of witness in printed letters)

Acknowledged and accepted at Quebec City, Province of Quebec, Canada

By Institut national de la recherche scientifique :

[Signature]
Mrs Josée Charest, Director
Research and Technology Transfer Department

17 mai 2018
Date



Witness of INRS representative's signature:

[Signature]
(Signature)

17 mai 2019
Date

[Signature]
(Name of witness of INRS representative's signature in printed letters)

G14448-00175-GB
G14448-00231-GB
G14448-00232-GB

ASSIGNMENT

WHEREAS I, the undersigned, Luca Razzari, Professor à l'INRS), (ci-après désigné(e) sous le terme « Cédant »), demeurant à 172 Avenue Trenton, app C, Mont-Royal, province of Québec, H3P 1Z4, Canada have, with others, made a certain invention known as « A method and a system for homodyne solid-state biased coherent detection of ultra-broadband terahertz pulses » (hereinafter referred to as the "Invention");

WHEREAS INSTITUT NATIONAL DE LA RECHERCHE SCIENTIFIQUE, whose full post office address is
490 rue de la Couronne, Quebec City, Quebec, G1K 9A9, Canada,

(hereinafter referred to as the "Assignee") is desirous of acquiring the entire right, title, and interest that I hold in and to said Invention, in and to any patent applications which may be filed in any and all countries in the world on said Invention, including divisional applications and continuation applications on the Invention and including any patent applications on the Invention in any foreign country under the provisions of the International Convention (hereinafter collectively the "Applications") and in and to any and all patents on the Invention obtained in any country in the world;

I hereby authorize and request my patent agent to insert missing information regarding any application covering the same invention when known here in parentheses (Country United States, Application number 62/930,771, filed November 5, 2019;
Country United States, Application number 17/086,814, filed November 2, 2020 ;
Country Canada, Application number 3,097,792, filed November 2, 2020);

NOW THEREFORE, in return for good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged

- I the Assignor, do hereby confirm any assignment already made by me in favour of INRS in and to the Invention, its constituent parts, any Applications, and any patents on the Invention which may be obtained;
- And for more certainty I, the Assignor, do hereby sell, assign, transfer, and set over unto the Assignee, its successors and assigns, my entire right, title, and interest which I hold in and to said Invention, in any form or embodiment thereof, and in and to the above-described Applications; also the entire right, title and interest in and to any patent on the Invention and any reissue of a patent on the Invention. I hereby authorize and request the issuing authority to issue and deliver any and all patents on the foregoing including on said Applications in any and all countries, to said Assignee; the same to be held and enjoyed by the Assignee for its own use and behalf, and for the use and behalf of its successors and assigns, to the full end of the term or terms for which said patents may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment not been made, as the assignee of my entire right, title and interest therein, in accordance with this assignment;

IN ADDITION I hereby agree that upon request, and without any payment by said Assignee, other than the expenses incurred by the undersigned, to communicate to said Assignee its successors and its assigns, their respective representatives and agents any facts known to me respecting the foregoing including any facts respecting said Invention, including evidence for interference purposes or for other proceedings, whenever requested; testify in any interference, litigation, or other proceedings, sign and deliver, on request, all lawful

papers necessary or useful to vest or perfect the title of the Assignee, its successors and assigns relating to the foregoing including relating to the Invention, the Applications and the aforementioned patents, or necessary or useful to make any of the foregoing provisions effective, make all rightful oaths and generally aid the Assignee, its successors, assigns, and their respective representatives and agents to obtain and enforce proper patent protect for said Invention in all countries and likewise make these provisions binding upon my heirs, legal representatives, administrators and assigns,

Tel que convenu par le Cessionnaire et le Cédant, cette cession a été rédigée en anglais. As agreed by both the Assignee and the Assignor, this assignment has been drawn up in English.

These presents shall be governed by and construed in accordance with the applicable laws of the Province of Quebec and the laws of Canada applicable therein and the forum in relation to same shall be Quebec, Quebec, Canada.

SIGNED in triplicate at VARENNES QC CANADA
 (City) (Province / State) (Country)
 this 16 day of 06 2013
 (Day) (Month) (Year) (The Assignor fills these blanks with the appropriate information as to the place and date of the Assignor's signature)

By the Assignor :

[Signature]
 (Signature of Assignor)

Witness of Assignor's signature :

[Signature]
 (Signature of witness of Assignor's signature)

LUCA AZARZI
 (Name of Assignor in printed letters)

Riccardo Picoli
 (Name of witness in printed letters)

Acknowledged and accepted at Quebec City, Province of Quebec, Canada

By Institut national de la recherche scientifique :

[Signature]
 Mrs Josée Charest, Director
 Research and Technology Transfer Department

1^{er} mai 2013
 Date



Witness of INRS representative's signature:

[Signature]
 (Signature)

1^{er} mai 2013
 Date

Danielle Daubert
 (Name of witness of INRS representative's signature in printed letters)

ASSIGNMENT

WHEREAS I, the undersigned, Alessandro Tomasino, PhD student at INRS at the time of the invention (hereinafter referred to as the "Assignor"), residing at 3555 rue Berri, Montreal, province of Québec, H2L 4G4, Canada have, with others, made a certain invention known as « *A method and a system for homodyne solid-state biased coherent detection of ultra-broadband terahertz pulses* » (hereinafter referred to as the "Invention");

WHEREAS INSTITUT NATIONAL DE LA RECHERCHE SCIENTIFIQUE, whose full post office address is

490 rue de la Couronne, Quebec City, Quebec, G1K 9A9, Canada,

(hereinafter referred to as the "Assignee") is desirous of acquiring the entire right, title, and interest that I hold in and to said Invention, in and to any patent applications which may be filed in any and all countries in the world on said Invention, including divisional applications and continuation applications on the Invention and including any patent applications on the Invention in any foreign country under the provisions of the International Convention (hereinafter collectively the "Applications") and in and to any and all patents on the Invention obtained in any country in the world;

I hereby authorize and request my patent agent to insert missing information regarding any application covering the same invention when known here in parentheses (Country United States, Application number 62/930,771, filed November 5, 2019;
Country United States, Application number 17/086,814, filed November 2, 2020;
Country Canada, Application number 3,097,792, filed November 2, 2020);

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- I the Assignor, do hereby confirm any assignment already made by me in favour of INRS in and to the Invention, its constituent parts, any Applications, and any patents on the Invention which may be obtained;
- And for more certainty I, the Assignor, do hereby sell, assign, transfer, and set over unto the Assignee, its successors and assigns, my entire right, title, and interest which I hold in and to said Invention, in any form or embodiment thereof, and in and to the above-described Applications; also the entire right, title and interest in and to any patent on the Invention and any reissue of a patent on the Invention. I hereby authorize and request the issuing authority to issue and deliver any and all patents on the foregoing including on said Applications in any and all countries, to said Assignee; the same to be held and enjoyed by the Assignee for its own use and behalf, and for the use and behalf of its successors and assigns, to the full end of the term or terms for which said patents may be granted, as fully and entirely as the same would have been held and enjoyed by me had this assignment not been made, as the assignee of my entire right, title and interest therein, in accordance with this assignment;

IN ADDITION I hereby agree that upon request, and without any payment by said Assignee, other than the expenses incurred by the undersigned, to communicate to said Assignee its successors and its assigns, their respective representatives and agents any facts known to me respecting the foregoing including any facts respecting said Invention, including evidence for interference purposes or for

other proceedings, whenever requested; testify in any interference, litigation, or other proceedings, sign and deliver, on request, all lawful papers necessary or useful to vest or perfect the title of the Assignee, its successors and assigns relating to the foregoing including relating to the invention, the Applications and the aforementioned patents, or necessary or useful to make any of the foregoing provisions effective, make all rightful oaths and generally aid the Assignee, its successors, assigns, and their respective representatives and agents to obtain and enforce proper patent protect for said invention in all countries and likewise make these provisions binding upon my heirs, legal representatives, administrators and assigns,

Tel que convenu par le Cessionnaire et le Cédant, cette cession a été rédigée en anglais. As agreed by both the Assignee and the Assignor, this assignment has been drawn up in English.

These presents shall be governed by and construed in accordance with the applicable laws of the Province of Quebec and the laws of Canada applicable therein and the forum in relation to same shall be Quebec, Quebec, Canada.

SIGNED in triplicate at VARENNES QUEBEC CANADA
(City) (Province / State) (Country)
this 3rd day of MAY 2013
(Day) (Month) (Year) (The Assignor fills these blanks with the appropriate information as to the place and date of the Assignor's signature)

By the Assignor :

Alessandro Tomasino
(Signature of Assignor)

ALESSANDRO TOMASINO
(Name of Assignor in printed letters)

Witness of Assignor's signature :

James Van Howe
(Signature of witness of Assignor's signature)

James Van Howe
(Name of witness in printed letters)

Acknowledged and accepted at Quebec City, Province of Quebec, Canada

By Institut national de la recherche scientifique :

Josée Charest
Mrs Josée Charest, Director
Research and Technology Transfer Department

17 mai 2013
Date



Witness of INRS representative's signature:

Danielle Drouin
(Signature)

17 mai 2013
Date

Danielle Drouin
(Name of witness of INRS representative's signature in printed letters)

G14448-00175-GB

G14448-00231-GB

G14448-00232-GB