

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
Stylesheet Version v1.2

EPAS ID: PAT5550725

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
HARRY E. RUDA	04/04/2018
IGOR SAVELYEV	05/13/2019
MARINA BLUMIN	04/03/2018
CHRISTINA SOUZA	04/05/2018
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO
<b>Street Address:</b>	100 COLLEGE STREET, SUITE 413
<b>Internal Address:</b>	BANTING INSTITUTE
<b>City:</b>	TORONTO, ONTARIO
<b>State/Country:</b>	CANADA
<b>Postal Code:</b>	M5G 1L5
<b>PROPERTY NUMBERS Total: 1</b>	
<b>Property Type</b>	<b>Number</b>
<b>Application Number:</b>	16428701
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	
<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>	713-623-4844
<b>Email:</b>	psdocketing@pattersonsheridan.com, DCrucitti@pattersonsheridan.com
<b>Correspondent Name:</b>	PATTERSON & SHERIDAN, LLP/CISC
<b>Address Line 1:</b>	24 GREENWAY PLAZA
<b>Address Line 2:</b>	SUITE 1600
<b>Address Line 4:</b>	HOUSTON, TEXAS 77046-2472
<b>ATTORNEY DOCKET NUMBER:</b>	1011779US02 (105342)
<b>NAME OF SUBMITTER:</b>	DEBBIE A. CRUCITTI
<b>SIGNATURE:</b>	/Debbie A. Crucitti/
<b>DATE SIGNED:</b>	05/31/2019
<b>Total Attachments: 10</b>	

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source=Assignment\_1\_Inventors\_to\_University\_of\_Toronto#page10.tif

## ASSIGNMENT

WHEREAS,

**RUDA, Harry** , whose full post office address is  
21 Brookfield Road, Toronto, ON M2P 1B1, Canada  
**SAVELIEV, Igor** , whose full post office address is  
145-16 Elgin Street, Thornhill, ON L3T 4T4, Canada  
**BLUMIN, Marina** , whose full post office address is  
76 Donisi Avenue, Vaughan, ON L4J 6G4, Canada and  
**SOUZA, Christina** , whose full post office address is  
40 Brendwin Road, Toronto, ON M6N 4V7

hereinafter referred to as the "Assignors", of an invention relating to and entitled:

**"Template-Based Epitaxial Growth of III-V materials on Silicon for Next Generation Photonic Integrated Circuits"**

hereinafter referred to as the "Invention", as fully set forth and described in an application for Letters Patent identified as:

Country	Serial Number	Filing Date	Title
U.S.A.	15/660,916	July 26, 2017	<b>"Template-Based Epitaxial Growth of Lattice Mismatched Materials on Silicon"</b>

hereinafter referred to as the "Application";

AND WHEREAS, **THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO**, hereinafter referred to as the "Assignee", whose full post office address is **Banting Institute, 100 College Street, Suite 413, Toronto, Ontario M5G 1L5, Canada**, has acquired from the Assignors, the Assignors' entire right, title and interest in and to the invention, in all countries of the world, including the Assignors' rights to the Application, and all related applications and patents thereon, including any and all, international, national and regional phase applications based on the Application, and other counterpart applications in all countries, and any and all substitutes, divisionals, continuations and continuations-in-part, and any Letters Patent that may be obtained therefor, and in any and all reissues, extensions, renewals and reexaminations of such applications and patents, including the right to claim priority to the Application, and to all related applications and patents thereon filed by the Assignors or Assignee, including the benefit of any right of priority provided by the International Convention for the Protection of Industrial Property, as amended, or by any convention which may henceforth be substituted for it, and the benefit of any right of priority provided by any convention

or treaty under domestic or foreign law, and to invoke and claim any such right of priority without further written or oral authorization from the Assignors,

NOW THEREFORE, in consideration of the sum of One Dollar (\$1.00) and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Assignors confirm it has, as of "July 26, 2017" sold, assigned, transferred and set over, and for greater certainty, does hereby sell, assign, transfer and set over to the Assignee, its successors, assigns, or legal representatives, its entire right, title and interest for Canada, the United States and all other countries throughout the World in and to the Invention, together with its entire right, title and interest in and to the Applications and any and all Letters Patent that may issue for the Invention, including any and all divisions, reissues, continuations and extensions of the Applications, to the full end of the term for which each said Letters Patent may be granted, and including any right to claim priority based on the Applications, the same to be held and enjoyed as fully and completely as the same would have been held and enjoyed by the Assignors had this Assignment not been made;

The Assignors hereby confirm that the Application was made or was authorized to be made by himself or herself and that the Assignors believe himself or herself to be the original inventor or joint inventor of a claimed invention in the Application.

AND the Assignors, on behalf of itself and its executors and administrators, does hereby covenant and agree to do all such lawful acts and things and to execute without further consideration such further lawful assignments, documents, assurances, applications and other instruments as may reasonably be required by the Assignee, its successors, assigns, or legal representatives, to obtain any and all Letters Patent for the Invention and vest the same in the Assignee, its successors, assigns, or legal representatives.

The Assignors authorize and empower **PATTERSON + SHERIDAN LLP**, whose complete address is **300 North Greene St. Suite 2050, Greensboro, NC 27401** to insert on this Assignment any further identification, to prepare any translation which may be necessary or desirable in order to comply with the rules for recordation of this document in any country and to correct any clerical error in this assignment.

The Commissioner of Patents & Trademarks is hereby authorized and requested to issue any Letters Patent for the Application, and all related applications thereon, to the Assignee, for its sole use and benefit; and for the use and benefit of its successors and assigns, to the full end of the term for which Letters Patent may be granted, as fully and entirely as the same would have been held by the Assignors had this Assignment and sale not been made

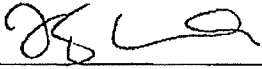

If a provision of this Assignment is or becomes illegal, invalid or unenforceable in any jurisdiction, that shall not affect the validity or enforceability in that jurisdiction of any other provision of this Assignment, or the validity or enforceability in other jurisdictions of that or any other provision of this Assignment.

The Assignors hereby acknowledge that any willful false statement made in this assignment/declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

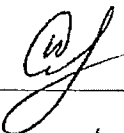
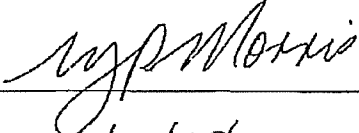
For the purpose of all legal proceedings this Assignment will be deemed to have been performed in the Province of Ontario and will be governed by and construed in accordance with the laws of the Province of Ontario and the laws of Canada applicable therein.

The Parties confirm their express wish that this Assignment be drawn up in the English language. *Les parties confirment leur volonté expresse que cette cession soit rédigée en langue anglaise.*

EXECUTED at \_\_\_\_\_ (city), \_\_\_\_\_ (country).

	Witness
<u>RUDA, Harry</u>	<u>MILDRED MORRIS</u>
Name	Name
<u></u>	<u></u>
Signature	Signature
<u>April 4 / 2018</u>	<u>April 4, 2018</u>
Date	Date

EXECUTED at \_\_\_\_\_ (city), \_\_\_\_\_ (country).

	Witness
<u>SAVELIEV, Igor</u>	<u>MILDRED MORRIS</u>
Name	Name
<u></u>	<u></u>
Signature	Signature
<u>April 10 / 2018</u>	<u>10/4/18</u>
Date	Date

EXECUTED at \_\_\_\_\_ (city), \_\_\_\_\_ (country).

Witness

BLUMIN, Marina

MILDRED MORRIS

Name

Name

*Blumin*

*MJ Morris*

Signature

Signature

04.03.2018

April 4, 2018

Date

Date

EXECUTED at \_\_\_\_\_ (city), \_\_\_\_\_ (country).

Witness

SOUZA, Christina

MILDRED MORRIS

Name

Name

*C Souza*

*MJ Morris*

Signature

Signature

APRIL 05, 2018

10/4/18

Date

Date

ACKNOWLEDGEMENT

The Assignee hereby accepts the assignment. EXECUTED at Toronto (city),  
Canada (country).

This 11th day of April, 2018.

THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO

  
Signature

Stéphane Lévesque, Ph.D.  
Name Patents, Innovations & Partnerships Office

\_\_\_\_\_  
Title

The signatory is duly authorized by the Office of  
the Vice-President Research and Innovation of  
The Governing Council of the University of Toronto  
to sign the said document.

DECLARATION OF WITNESS

I, R. Smole, whose full post office address is  
618-3341 Bloor Street, Toronto, ON M8X 1G3, Canada hereby  
declare that I was personally present and did see Stéphane Lévesque of  
THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO who is personally known to me to be  
the person named in the above assignment duly sign and execute the same.

Declared at Toronto (city), Canada (country).

This 11th day of April, 2018.

R. Smole  
Signature of Witness:

## ASSIGNMENT

WHEREAS,

RUDA, Harry , whose full post office address is

21 Brookfield Road, Toronto, ON M2P 1B1, Canada

SAVELYEV, Igor, whose full post office address is

145-18 Elgin Street, Thornhill, ON L3T 4T4, Canada

BLUMIN, Marina , whose full post office address is

78 Donist Avenue, Vaughan, ON L4J 6G4, Canada and

SOUZA, Christina , whose full post office address is

40 Brendwin Road, Toronto, ON M6N 4V7

hereinafter referred to as the "Assignors", of an invention relating to and entitled:

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Integrated Circuits"**

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or treaty under domestic or foreign law, and to invoke and claim any such right of priority without further written or oral authorization from the Assignors;

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AND the Assignors, on behalf of itself and its executors and administrators, does hereby covenant and agree to do all such lawful acts and things and to execute without further consideration such further lawful assignments, documents, assurances, applications and other instruments as may reasonably be required by the Assignee, its successors, assigns, or legal representatives, to obtain any and all Letters Patent for the invention and vest the same in the Assignee, its successors, assigns, or legal representatives.

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The Parties confirm their express wish that this Assignment be drawn up in the English language.  
*Les parties confirment leur volonté expresse que cette cession soit rédigée en langue anglaise.*

EXECUTED at \_\_\_\_\_ (city), \_\_\_\_\_ (country).

Witness

RUDA, Harry  
Name

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Date

EXECUTED at Toronto (city), Canada (country).

Witness

SAVELYEV, Igor  
Name

CARLOS FERNANDES  
Name

[Signature]  
Signature

[Signature]  
Signature

13, May 2019  
Date

13 MAY 2019  
Date

EXECUTED at Toronto (city), Canada (country).  
Witness

BLUMIN, Marina  
Name

[Signature]  
Signature

13, May, 2019  
Date

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

EXECUTED at \_\_\_\_\_ (city), \_\_\_\_\_ (country).  
Witness

SOUZA, Christina  
Name

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Name

\_\_\_\_\_  
Signature

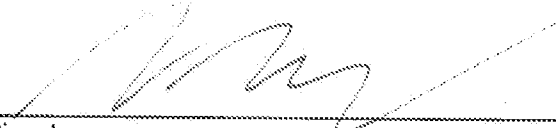
\_\_\_\_\_  
Date

ACKNOWLEDGEMENT

The Assignee hereby accepts the assignment. EXECUTED at Toronto (city), Canada (country).

This 17<sup>th</sup> day of May

THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO

  
Signature

**Stéphane Lévesque, Ph.D.**  
Patents, Innovations & Partnerships Office

Name

The signatory is duly authorized by the Office of the Vice-President Research and Innovation of The Governing Council of the University of Toronto to sign the said document.

Patent Portfolio Manager  
Title

DECLARATION OF WITNESS

I, Lecasse Ambrose, whose full post office address is

3133 Cambourne Crescent, Mississauga, ON, L5V 5E8 hereby

declare that I was personally present and did see Stéphane Lévesque of

THE GOVERNING COUNCIL OF THE UNIVERSITY OF TORONTO who is personally known to me to be the person named in the above assignment duly sign and executed the same.

Declared at Toronto (city), Canada (country).

This 17<sup>th</sup> day of May, 2019.

  
Signature of Witness: