

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

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| SUBMISSION TYPE: | NEW ASSIGNMENT |
| NATURE OF CONVEYANCE: | ASSIGNMENT |
| CONVEYING PARTY DATA | |
| Name | Execution Date |
| HUA YANG | 03/04/2019 |
| STEFAN ZEISLER | 02/28/2019 |
| PAUL SCHAFFER | 03/01/2019 |
| RECEIVING PARTY DATA | |
| Name: | TRIUMF |
| Street Address: | 4004 WESBROOK MALL |
| City: | VANCOUVER, BC |
| State/Country: | CANADA |
| Postal Code: | V6T 2A3 |
| PROPERTY NUMBERS Total: 1 | |
| Property Type | Number |
| Application Number: | 17040652 |
| CORRESPONDENCE DATA | |
| Fax Number: | (604)681-4081 |
| <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> | |
| Phone: | 6046693432 |
| Email: | mail@patentable.com |
| Correspondent Name: | OYEN WIGGS GREEN & MUTALA LLP |
| Address Line 1: | 480 - THE STATION, 601 WEST CORDOVA STREET |
| Address Line 4: | VANCOUVER, BC, CANADA V6B 1G1 |
| ATTORNEY DOCKET NUMBER: | T047 0122/JAM |
| NAME OF SUBMITTER: | JENNIFER ANNE MARLES, REG NO 66114 |
| SIGNATURE: | /JenniferAMarles/ |
| DATE SIGNED: | 09/02/2022 |
| Total Attachments: 7 | |
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ASSIGNMENT OF INVENTIONS AND RELATED PATENT RIGHTS

WHEREAS THE FOLLOWING PERSON OR PERSONS:

**Andrew Kyle Henderson Robertson
Hua Yang
Stefan Zeisler
Paul Schaffer**

each an Assignor, is the inventor or a co-inventor if more than one Assignor is named, of certain inventions or improvements (the "Invention(s)") described and/or claimed in United States provisional patent application No. **62/647,933** filed **3/26/2018** entitled **SYSTEM, APPARATUS, AND METHOD FOR SEPARATING ACTINIUM AND RADIUM ISOTOPES FROM IRRADIATED THORIUM METAL** (the "Application(s)");

AND WHEREAS, **TRIUMF**, a joint venture of The Governors of The University of Alberta, The University of British Columbia, The Governors of the University of Calgary, Carleton University, University of Guelph, McMaster University, University of Manitoba, Universite de Montreal, Queen's University, University of Regina, Simon Fraser University, The Governing Council of the University of Toronto, York University, and The University of Victoria and such other universities who have become or may become full member universities, established pursuant to a contract governed by the laws of the Province of British Columbia (the "Assignee"), whose address is **4004 Wesbrook Mall, Vancouver, BC V6T 2A3** wishes to own the entire worldwide right, title, and interest in and to: the Invention(s), the Application(s), and all patents which may be granted on or as a result thereof in all countries;

In consideration of ONE (\$1.00) DOLLAR and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, each Assignor, does hereby, sell, assign, transfer, and set over to the Assignee the entire worldwide right, title, and interest in and to:

- the Invention(s);
- the Application(s);
- all national phase applications arising from the Application(s);
- all continuations, divisions, renewals of, or substitutes for the Application(s);
- the right to file counterparts to the Application(s) in all countries and regions;
- the right to claim priority from the Application(s) in all countries and regions;
- each and every additional application that claims any part of the Invention(s);
- each and every additional application that is in any way based on or claims priority from or corresponds to the Application(s);
- all patents which may be granted on or as a result thereof;
- any reissue or reissues of such patents;
- all causes of action and rights to bring suit for past, present, and future infringement thereof and all claims for and rights to collect damages, profits, and all other remedies and relief in respect thereof, including other compensation in respect of pre-grant activities; and
- all future improvements to the Invention(s);

the same to be held and enjoyed by the Assignee, its successors, assigns, nominees, or legal representatives, to the full end of the term or terms for which such patents respectively may be granted, reissued, or extended, as fully and entirely as the same would have been held and enjoyed by the Assignor(s), had this Assignment, sale, and transfer not been made. If there are two or more Assignors, the sale, assignment, and transfer is made both jointly and severally.

Each Assignor hereby covenants that he or she: has full right to convey the entire interest herein assigned; has not encumbered the rights and properties transferred by this Assignment in any manner; has not executed and will not execute any agreement to transfer any rights in the Invention(s) and/or the Application(s) to anyone other than the Assignee; and has not executed and will not execute any agreement that is otherwise in conflict herewith.

Each Assignor promises that he or she shall:

- each time a request is made and without undue delay, execute and deliver all such papers as may be necessary or desirable to perfect the title to the Invention(s), the Application(s), and the patents in the Assignee, its successors, assigns, nominees, or legal representatives;
- each time a request is made and without undue delay execute and deliver such additional papers the Assignee considers to be necessary or desirable for use in: prosecution of the applications; interference proceedings involving the applications or patents; oppositions involving the applications or patents; applications to reissue or re-examine the patents; or filing additional applications to protect the Inventions in any country;
- communicate to the Assignee, or its nominees, all known facts respecting the Invention(s), the Application(s), and said patents and assist in the ascertainment of facts and the production of evidence relating to the Invention(s), the Application(s), or the patents;
- testify in any legal proceedings;
- sign all lawful papers;
- execute all disclaimers and divisional, continuing, reissue, and foreign applications;
- make all rightful oaths; and
- generally to do everything possible to aid the Assignee, its successors, assigns, nominees, and legal representatives to obtain and enforce for its or their own benefit, proper patent protection for the Invention(s) in all countries;

all at the expense, however, of the Assignee or its successors, assigns, nominees, or legal representatives.

Each Assignor hereby irrevocably designates and appoints the Assignee and its duly authorized officers and agents, and their successors, as his or her agents and attorneys-in-fact, to act on the Assignor(s)'s behalf and instead of the Assignor(s), to execute and file applications to patent the Invention(s) in all countries, and to do all other proper lawfully permitted acts to further the assignment, prosecution, and issuance of patents for the Inventions with the same legal force and effect as if executed by the Assignor(s). This power of attorney shall be deemed coupled with an interest and is irrevocable.

Each of Assignor hereby authorizes and requests any official of any country or countries whose duty it is to issue patents on applications to issue to the Assignee, its successors, assigns, nominees, or legal representatives all patents for the invention(s) in accordance with the terms of this Assignment.

Declarations of Assignor(s) for United States

Each Assignor hereby declares that:

1. The above-identified Application(s) was made or authorized to be made by me;
2. I believe that I am the original inventor or an original joint inventor of a claimed invention in the Application(s); and
3. I hereby acknowledge that any willful false statement made in this Declaration is punishable under 18 U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

Each Assignor authorizes Oyen Wiggs Green & Mutala LLP to insert the application serial number and filing date in the text above when such information becomes available.

EXECUTED at _____ this _____ day of _____ 20 _____
(place of signature)

Andrew K. H. Robertson

Witnessed by: _____

Printed Name: _____

EXECUTED at Richmond, BC this 4 day of March 20 19
(place of signature)

Hua Yang

Witnessed by: Randall Smith

Printed Name: Randall Smith

EXECUTED at Vancouver, BC this 28th day of February 20 19
(place of signature)

[Signature]

Stefan Zeisler

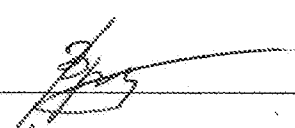
Witnessed by: Matthew Hanna

Printed Name: Matthew Hanna

EXECUTED at Vancouver this 1st day of March 20 19
(place of signature)



Paul Schaffer

Witnessed by: 

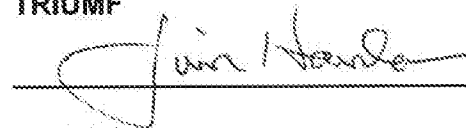
Printed Name: VALERY RADCHENKO

STATEMENT OF ACCEPTANCE

The foregoing Assignment is hereby accepted by the Assignee:

TRIUMF

By:

A handwritten signature in dark ink, appearing to read "Jim Hanlon", is written over a horizontal line.

Name: Jim Hanlon

Title: Chief Administrative Officer