506136334 07/02/2020 PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT6183061

SUBMISSION TYPE:		NEW ASSIGNMENT	
NATURE OF CONVEYANCE:		ASSIGNMENT	
CONVEYING PARTY	DATA		
		Name	Execution Date
DAVID DIXON			11/02/2017
EDOUARD ASSELIN			11/02/2017
OSCAR OLVERA OLMEDO			11/17/2017
ZIHE REN			12/04/2017
AHMAD GHAHREMAN			11/16/2017
Name: Street Address: City:	#103 -	INIVERSITY OF BRITISH COLUMBIA 6190 AGRONOMY ROAD OUVER, BRITISH COLUMBIA	
State/Country:	CANA	DA	
Postal Code:	V6T 1	V6T 1Z3	
PROPERTY NUMBEI	RS Total:	1	
Property Typ	e	Number]
Application Number		16748553	

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:	(650)327-3400
Email:	phillips@bozpat.com
Correspondent Name:	BOZICEVIC, FIELD & FRANCIS LLP
Address Line 1:	201 REDWOOD SHORES PKWY
Address Line 2:	SUITE 200
Address Line 4:	REDWOOD CITY, CALIFORNIA 94065

ATTORNEY DOCKET NUMBER:	SMAR-086CON
NAME OF SUBMITTER:	RUDY J. NG
SIGNATURE:	/Rudy J. Ng, Reg. No. 56,741/
DATE SIGNED:	07/02/2020
Total Attachments: 11	· ·

source=SMAR-086 - 15-080 PCT (PCTCA2016050444) corrected Confirmatory Assignment with inventor and UBC initials#page1.tif source=SMAR-086 - 15-080 PCT (PCTCA2016050444) corrected Confirmatory Assignment with inventor and UBC initials#page2.tif source=SMAR-086 - 15-080 PCT (PCTCA2016050444) corrected Confirmatory Assignment with inventor and UBC initials#page3.tif source=SMAR-086 - 15-080 PCT (PCTCA2016050444) corrected Confirmatory Assignment with inventor and UBC initials#page4.tif source=SMAR-086 - 15-080 PCT (PCTCA2016050444) corrected Confirmatory Assignment with inventor and UBC initials#page5.tif source=SMAR-086 - 15-080 PCT (PCTCA2016050444) corrected Confirmatory Assignment with inventor and UBC initials#page6.tif source=SMAR-086 - 15-080 PCT (PCTCA2016050444) corrected Confirmatory Assignment with inventor and UBC initials#page7.tif source=SMAR-086 - 15-080 PCT (PCTCA2016050444) corrected Confirmatory Assignment with inventor and UBC initials#page8.tif source=SMAR-086 - 15-080 PCT (PCTCA2016050444) corrected Confirmatory Assignment with inventor and UBC initials#page9.tif source=SMAR-086 - 15-080 PCT (PCTCA2016050444) corrected Confirmatory Assignment with inventor and UBC initials#page10.tif source=SMAR-086 - 15-080 PCT (PCTCA2016050444) corrected Confirmatory Assignment with inventor and UBC initials#page11.tif

WHEREAS, the undersigned, whose full name and post office address is:

David Dixon 6716 London Drive, Delta, British Columbia Canada V4K 1Z3 Edouard Asselin 4644 Lancelot Court **Richmond**, British Columbia Canada V7C 4S2 Oscar Olvera comeda Olmedo 20 East 59th Avenue 70-1-1218 Burnday St. Vom Vancouver, British Columbia Canada V7C 452 V6E 1P5 04-00 F7 Nov 2017-Zihe Ren c/o The University of British Columbia - Industry Liaison Office #103 - 6190 Agronomy Road Vancouver, British Columbia Canada V6T 1Z3 Ahmad Ghahremaninezhad 1387 Crossfield Avenue Kingston, Ontario Canada K7P 0E7 (each the "Assignor"), has invented certain new and useful inventions relating to: PROCESS FOR LEACHING METAL SULFIDES WITH REAGENTS HAVING THIOCARBONYL

FUNCTIONAL GROUPS

(collectively, the "Inventions") as set out in US Patent Application no. 62/149,015 and PCT Patent Application No. PCT/CA2015000160 (the "Patent Applications"). PCT/CA2016/050444

AND WHEREAS, each Assignor has agreed to sell and has sold, assigned and transferred all of his right, title and interest in and to the Inventions and all patent rights throughout the world in connection therewith, including any Letters Patent which may be granted in connection with the Inventions, to

File No. 16838-1 Assignment PATEN^{7ge 1 of 5} REEL: 053108 FRAME: 0045

WHEREAS, the undersigned, whose full name and post office address is:

David Dixon 6716 London Drive, Delta, British Columbia Canada V4K 1Z3

Edouard Asselin 4644 Lancelot Court Richmond, British Columbia Canada V7C 4S2

Oscar Olvera **Changes** Olmedo 20 East 59th Avenue D-1-1218 Burnoby St Vinn Vancouver, British Columbia Canada V7E 452 V6E 1PS 0400 Nov 2017-

Zihe Ren c/o The University of British Columbia – Industry Liaison Office #103 – 6190 Agronomy Road Vancouver, British Columbia Canada V6T 1Z3

Ahmad Ghahremaninezhad 1387 Crossfield Avenue Kingston, Ontarlo Canada K7P 0E7

(each the "Assignor"),

has invented certain new and useful inventions relating to:

PROCESS FOR LEACHING METAL SULFIDES WITH REAGENTS HAVING THIOCARBONYL FUNCTIONAL GROUPS

(collectively, the "Inventions") as set out In US Patent Application no. 62/149,015 and PCT Patent Application No. PCT/CA2015000160 (the "Patent Applications"). PCT/CA2016/050444

AND WHEREAS, each Assignor has agreed to sell and has sold, assigned and transferred all of his right, title and interest in and to the Inventions and all patent rights throughout the world in connection therewith, including any Letters Patent which may be granted in connection with the Inventions, to

File No. 16838-1 Assignment Page 1 of 5

PATENT REEL: 053108 FRAME: 0046

WHEREAS, the undersigned, whose full name and post office address is:

David Dixon / 10 Jun 2020 6716 London Drive. Delta, British Columbia Canada V4K 228 4 W 7

Edouard Asselin 4644 Lancelot Court Richmond, British Columbia Canada V7C 4S2

Oscar Olvera dina Olmedo 20 East 59" Avenue DH-1218 Burndyy St. Vor Vancouver, British Columbia Canada V7C-452 V6E 1.PS Objoc A Nov 2017-

Zihe Ren c/o The University of British Columbia – Industry Liaison Office #103 – 6190 Agronomy Road Vancouver, British Columbia Canada V6T 123

Ahmad Ghahremaninezhad 1387 Crossfield Avenue Kingston, Ontario Canada K7P 0E7

(each the "Assignor"),

has invented certain new and useful inventions relating to:

PROCESS FOR LEACHING METAL SULFIDES WITH REAGENTS HAVING THIOCARBONYL FUNCTIONAL GROUPS

(collectively, the "Inventions") as set out in US Patent Application no. 62/149,015 and PCT Patent Application No. PCT/CA2015000160 (the "Patent Applications").

AND WHEREAS, each Assignor has agreed to sell and has sold, assigned and transferred all of his right, title and interest in and to the inventions and all patent rights throughout the world in connection therewith, including any Letters Patent which may be granted in connection with the Inventions, to

File No. 16838-1 Assignment PATENT^{e 1 of 5} REEL: 053108 FRAME: 0047

WHEREAS, the undersigned, whose full name and post office address is:

David Dixon 6716 London Drive, Delta, British Columbia Canada V4K 123

Edouard Asselin 4644 Lancelot Court Richmond, British Columbia Canada V7C 4S2

Oscar Olvera Change Olmedo 20 East 59" Avenue 204-1218 Burnoby St. Vom Vancouver, British Columbia Canada V7C 452 VGE 1P5 Choo A Nuv 2017-

Zihe Ren c/o The University of British Columbia – Industry Liaison Office #103 – 6190 Agronomy Road Vancouver, British Columbia Canada V6T 1Z3

Ahmad Ghahremaninezhad 1387 Crossfield Avenue Kingston, Ontario Canada K7P 0E7

(each the "Assignor"),

has invented certain new and useful inventions relating to:

PROCESS FOR LEACHING METAL SULFIDES WITH REAGENTS HAVING THIOCARBONYL FUNCTIONAL GROUPS

(collectively, the "Inventions") as set out in US Patient Application no. 62/149,015 and PCT Patent Application No. PCT/CA2015000160 (the "Patient Applications"). PCT/CA2016/050444

AND WHEREAS, each Assignor has agreed to sell and has sold, assigned and transferred all of his right, title and interest in and to the Inventions and all patent rights throughout the world in connection therewith, including any Letters Patent which may be granted in connection with the Inventions, to

File No. 16838-1 Assignment Page 1 of 5 PATENT REEL: 053108 FRAME: 0048

WHEREAS, the undersigned, whose full name and post office address is:

David Dixon 6716 London Drive, Delta, British Columbia Canada V4K 1Z3

Edouard Asselin 4644 Lancelot Court Richmond, British Columbia Canada V7C 4S2

Oscar Olvera dameda Olmcolo 20 Cast 59" Avenue DH - 1218 Burnolog St Vom Vancouver, British Columbia Canada V7C-452 V6E 1P5 Orpol A Nuv 2017-

Zihe Ren c/o The University of British Columbia – Industry Liaison Office #103 – 6190 Agronomy Road Vancouver, British Columbia Canada V6T 1Z3

Ahmad Ghahremaninezhad 1387 Crossfield Avenue Kingston, Ontario Canada K7P 0E7

(each the "Assignor"),

has invented certain new and useful inventions relating to:

PROCESS FOR LEACHING METAL SULFIDES WITH REAGENTS HAVING THIOCARBONYL FUNCTIONAL GROUPS

(collectively, the "Inventions") as set out in US Patent Application no. 62/149,015 and PCT Patent Application No. PCT/CA2015000160 (the "Patent Applications").

AND WHEREAS, each Assignor has agreed to sell and has sold, assigned and transferred all of his right, title and interest in and to the Inventions and all patent rights throughout the world in connection therewith, including any Letters Patent which may be granted in connection with the Inventions, to

File No. 16838-1 Assignment PATEN^{Page 1 of 5} REEL: 053108 FRAME: 0049

WHEREAS, the undersigned, whose full name and post office address is:

David Dixon 6716 London Drive, Delta, British Columbia Canada V4K 1Z3

Edouard Asselin 4644 Lancelot Court Richmond, British Columbia Canada V7C 4S2

Oscar Olvera Concolo 20 East 59th Avenue DH - 1218 Burnaby St. Von Vancouver, British Columbia Canada V7C 452 VGE 1P5 OGOO (7 Nov 2017-

Zihe Ren c/o The University of British Columbia – Industry Liaison Office #103 – 6190 Agronomy Road Vancouver, British Columbia Canada V6T 1Z3

Ahmad Ghahremaninezhad 1387 Crossfield Avenue Kingston, Ontario Canada K7P 0E7

(each the "Assignor"),

has invented certain new and useful inventions relating to:

PROCESS FOR LEACHING METAL SULFIDES WITH REAGENTS HAVING THIOCARBONYL FUNCTIONAL GROUPS

(collectively, the "Inventions") as set out in US Patent Application no. 62/149,015 and PCT Patent Applications").

PCT/CA2016/050444 Taken June 1 2020 AND WHEREAS, each Assignor has agreed to sell and has sold, assigned and transferred all of his right, title and interest in and to the Inventions and all patent rights throughout the world in connection therewith, including any Letters Patent which may be granted in connection with the Inventions, to

> File No. 16838-1 Assignment Page 1 of 5

PATENT REEL: 053108 FRAME: 0050

WHEREAS, the undersigned, whose full name and post office address is:

David Dixon 6716 London Drive. **Delta, British Columbia** Canada V4K 173 Edouard Asselin 4644 Lancelot Court Richmond, British Columbia Canada V7C 4S2 Oscar Olvera **Charlin** Charles 20 Cast 59" Avenue (1)4 - 1218 (Maxwey St. 1997) Vancouver, British Columbia Canada V7C 452 V6E (175 - 44-00) (P. NeV (2017) Zihe Ren c/o The University of British Columbia – Industry Liaison Office #103 – 6190 Agronomy Road Vancouver, British Columbia Canada V6T 1Z3 Ahmad Ghahremaninezhad

1387 Crossfield Avenue Kingston, Ontario Canada K7P OE7

(each the "Assignor"),

has invented certain new and useful inventions relating to:

PROCESS FOR LEACHING METAL SULFIDES WITH REAGENTS HAVING THIOCARBONYL FUNCTIONAL GROUPS

(collectively, the "Inventions") as set out in US Patent Application no. 62/149,015 and PCT Patent Application No. PCT/CA2015000160 (the "Patent Applications"). PCT/CA2016/050444

A.G. S.N. 192020

AND WHEREAS, each Assignor has agreed to sell and has sold, assigned and transferred all of his right, title and interest in and to the inventions and all patent rights throughout the world in connection therewith, including any Letters Patent which may be granted in connection with the Inventions, to

> File No. 16838-1 Assignment PATENT OF 1 of 5 REEL: 053108 FRAME: 0051

The University of British Columbia c/o The University of British Columbia – Industry Liaison Office #103 – 6190 Agronomy Road Vancouver, British Columbia Canada V6T 1Z3

(the "Assignee");

NOW THEREFORE, in consideration of the foregoing, and other good and valuable consideration, the receipt and sufficiency of which is hereby acknowledged, the Assignor hereby confirms that the Assignor has sold, assigned, transferred, and set over unto the Assignee, and unto the Assignee's successors and assigns, all right, title and interest, for all countries and regions throughout the world, in and to:

- (a) the Inventions; the Patent Application; all patents and patent applications relating to the Inventions including divisionals, continuations, continuations-in-part, international applications, national phase entry applications, renewals and reissues; all rights relating to the Inventions and all patent applications and patents relating thereto arising under any intellectual property treaty including the Paris Convention for the Protection of Industrial Property and the Patent Cooperation Treaty; all rights of priority resulting from the filing of any of the foregoing; and all patents issuing on or from any of the foregoing; and
- (b) all right to recover damages, including royalties, for any past, present or future infringement of any patent application or patent identified in the preceding paragraph (a);

(collectively, the "Patent Rights").

As part of the foregoing:

The Assignor will, at the Assignee's (or its successor's or assign's, as the case may be) request and expense, promptly (i) assist with, execute and deliver all applications, declarations, verifications, responses, submissions, assignments and further documents relating to any and all Inventions, (ii) take all lawful oaths and (iii) do all such things, as may be requested by the Assignee (or the Assignee's successor's or assign's, as the case may be) from time to time and at any time, to enable the Assignee or the Assignee's nominees to procure, perfect, enforce, defend and maintain any and all of the Patent Rights.

For greater certainty, each of the terms "including", "include" and "includes", when used in this assignment, is not limiting whether or not non-limiting language (such as "without limitation", "without limiting the foregoing", "but not limited to" or words of similar import) is used with reference thereto.

File No. 16838-1 Assignment PATEN^{9ge 2 of 5} REEL: 053108 FRAME: 0052 IN WITNESS WHEREOF the Assignor has caused this confirmatory assignment to be duly executed.

EXECUTED BY David Dixon at	City or Town)				
and in the	(on) of totting				
in Canada, this day of <u>NOUWARY</u> , 2017.					
hland X 197					
Davie Dixon					
STATEMENT OF WITNESS					
On this $2nd$ day of NoV , 2017, before m	an norconally appeared David Divon				
known to me to be the individual identified above who	executed the foregoing instrument.				
Witness Address:	#205-2675 AlderSt-				
Witness bignature	Janceyre, BC				
Laurie maleth	<u>V/24 252 ·</u>				
Type or Print Name	(home address)				
8	 Monte and the second secon second second sec				
EXECUTED BY Edouard Asselin at VANC	niλ W/ (City or Town)				
in Canada Athis 2nd day of Normber, 2017.	201. X. Y. M. J. Y. C. 				
in Canaday this Z day of November 2017.					
-Edbuprd Assein					
•					
STATEMENT OF WIT	<u>NESS</u>				
On this and day of Nov 2017, before me	, personally appeared Edouard Asselin				
known to me to be the individual identified above who e					
Manual Martin St. 1 2 8 8 8 5					
Witness Address:	#305-2625AlderSt-				
Witness Address: Witness Signature	<u>#205-2625AlderSt- Vancouver, PC</u> ando, V6H-252				
Witness Stenature Laurie McRech	<u>#305-2675Alde</u> St- <u>Vancoure</u> BC anodo <u>V6A 252</u>				
from the second s	<u># 305-2625 Alder St- Vancouver PC</u> Canado V6H 2S2 (home address)				
Witness Stenature Laurie McRech	<u># 305-2625 Alder</u> <u>Vancouver</u> <u>PC</u> anado <u>V6H 252</u> (tome address) File No. 16838-1				
Witness Stenature Laurie McRech	<u>Ancourer</u> <u>VANCOURE</u> <u>V6A 252</u> (home address) File No. 16838-1 Assignment PATENIPG 3 of 5				

	(7 Nov 2017 Apo		
	$\alpha \rho^{\phi}$		
	EXECUTED BY Oscar Olvera Olmedge at 🛛 🖄	City or Town)	
	in Canada, this $\underline{\mathcal{M}}_{day}$ of $\underline{\mathcal{M}}_{\mathcal{U}\mathcal{A}\mathcal{B}\mathcal{C}}$, 2017.		
	A		
	Oscar Olvera Omeda CMOD RANU 2017 STATEMENT OF WI		
onp guit	On this <u>174</u> day of <u>NOV</u> , 2017, before a Omedo known to me to be the individual identific instrument. Witness Address:	me, personally appeared Oscar Olvera ed above who executed the foregoing	
XW	Witness Address: Witness Signature	#103-6190 Agronomy Rd. Vancouver BC	
	LAULIE NGRESS	Vielt 252 '	
	Type or Print Name		
		(wolk add ress)	
	EXECUTED BY Zihe Ren at Vanconer. BC in Canada, this 4 day of Recorder, 2017.	<pre> (City or Town)</pre>	
	Zihe Ren		
	STATEMENT OF WI	TNESS	
ſ		, personally appeared Zihe Ren known to	
	Witness Address: Witness Signature	6190 Aconomy Rd Vancouver BC.	
	Laurie M92eth Type or Print Name	Canada	
		File No. 16838-1	

File No. 16838-1 Assignment PATENTage 4 of 5 REEL: 053108 FRAME: 0054

EXECUTED BY Ahmad Ghahreman at Kingston, DN (City or Town) in Canada, this 16 day of NOV 2017. Ahmad Ghahreman STATEMENT OF WITNESS 2017, before me, personally appeared Ahmad On this / day of AU, Ghahreman known to me to be the individual identified above who executed the foregoing instrument. Journ to No 157 1.4000 I. I) Princh ONT. HRIDER'S LICENCE Witness Address: ess Signature Lawyer, Notary Public, Commissioner, etc. **Douglas F. Caldwell** Caldwell and Moore Type or Print Name 260 Barrie Street Kingston, ON K7L 3K7 EXECUTED BY The University of British Columbia at Valer Card and more (City or Town) in Canada, this 19 day of December, 2017. Brett Sharp Associate Director, University - Industry Liaison Office STATEMENT OF WITNESS day of (), 2017, before me, personally appeared Brett Sharp known On this to me to be the individual identified above who executed the foregoing instrument on behalf of tile University of British Columbia. Witness Address: ignature rie Mazeth Type or Print Name File No. 16838-1

Assignment

PATENT ge 5 of 5

REEL: 053108 FRAME: 0055

RECORDED: 07/02/2020