

## PATENT ASSIGNMENT COVER SHEET

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<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT	
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT	
<b>CONVEYING PARTY DATA</b>		
	<b>Name</b>	<b>Execution Date</b>
	DAWEI YU	05/10/2017
	DOGAN PAKTUNC	05/11/2017
<b>RECEIVING PARTY DATA</b>		
<b>Name:</b>	Her Majesty The Queen In Right Of Canada As Represented By The Minister Of Natural Resources	
<b>Street Address:</b>	580 Booth Street	
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<b>State/Country:</b>	CANADA	
<b>Postal Code:</b>	K1A 0E4	
<b>PROPERTY NUMBERS Total: 1</b>		
<b>Property Type</b>	<b>Number</b>	
<b>Application Number:</b>	16499059	
<b>CORRESPONDENCE DATA</b>		
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<b>ATTORNEY DOCKET NUMBER:</b>	12320P0152US02	
<b>NAME OF SUBMITTER:</b>	STEPHEN F. SWINTON, JR.	
<b>SIGNATURE:</b>	/Stephen F. Swinton, Jr./	
<b>DATE SIGNED:</b>	09/30/2019	
<b>Total Attachments: 1</b>		
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**ASSIGNMENT**

File No.: 12320P00152US01

PATENT APPLICATION  
ASSIGNMENT

IN CONSIDERATION OF One Dollar (\$1.00), and other good and valuable consideration, the receipt of which is hereby acknowledged,

Dawei YU, whose full post office address is B12-109 Forward Avenue, Ottawa, Ontario K1Y 4M2, CANADA  
Dogan PAKTUNC, whose full post office address is 1429 York Mills Dr., Ottawa, Ontario K4A 2P2 CANADA

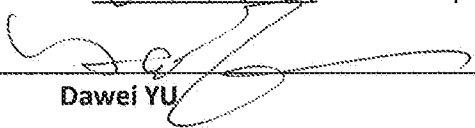
hereinafter the Inventors, said Inventors confirm that they assign, or have assigned, and transfer or have transferred to **HER MAJESTY THE QUEEN IN RIGHT OF CANADA AS REPRESENTED BY THE MINISTER OF NATURAL RESOURCES**, whose full post office address is 580 Booth Street, 16th Floor, Ottawa, Ontario K1A 0E4, Canada, all their right, title, and interest worldwide in and to the invention relating to

**CARBOTHERMIC DIRECT REDUCTION OF CHROMITE USING A  
CATALYST FOR THE PRODUCTION OF FERROCHROME ALLOY**

as described in U.S. provisional application filed May 02, 2017 and given U.S. Application Number 62/500,147 (hereinafter the Application), for such invention and to all the Inventors' corresponding right, title and interest in and to the invention disclosed in the said Application, and to all rights arising therefrom for all designated states, and further confirms that the said assignment has from at least May 02, 2017 been of full force and effect in relation to all designated states, in respect of all rights in and to the said invention, to the Inventors' corresponding right to claim priority from the said Application, and in any patent or patents which may issue for the said invention, including all divisions, continuations, reissues, re-examinations, renewals, extensions, counterparts, substitutes, and extensions thereof, and all rights of priority resulting from the filing of such applications and granting of such patents.

THE UNDERSIGNED hereby authorizes the firm of **SHAPIRO COHEN LLP** whose full post office address in Canada is Suite 830, 555 Legget Drive, Ottawa, ON K2K 2X3 (P.O. Box 13002, Kanata, ON K2K 0E2 to correct errors in this Assignment, or to insert any further identification or other information necessary or desirable to make this Assignment suitable for recordal.

SIGNED AT Ottawa, this 10<sup>th</sup> day of May, 2017

  
Dawei YU

  
Witness Samira Sokhanvaram

SIGNED AT Ottawa, this 11 day of May, 2017

  
Dogan PAKTUNC

  
Witness Samira Sokhanvaram