FORM PTO-1619A Consider of Connector Patent and Trademark Office Patent and Trademarks: Please record the attached original document(s) or copy(lee). Conveying Party New					
Patent and Tradomark Office PATENT To: The Commission of Processing of Patents and Tradomarks. Please record the attached original document(s) or copy(les). Submission (Non-Recordation) Conveyance Type					
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City State/Country Zip Code Domestic Representative Name and Address Enter for the first Receiving Party only. Name Address (line 1) Address (line 2) Address (line 3) Address (line 4) FOR OFFICE USE ONLY	Name (line 1) U. S. Department of Energy Name (line 2)	M	ark if additional r	names of receiv	If document to be recorded is an assignment and the receiving party is not domiciled in the United States, an appointment of a domestic representative is attached. (Designation must be a separate document from
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Public burden reporting for this collection of information is estimated to average approximately 30 minutes per Cover Sheet to be recorded, including time for reviewing the document and gathering the data needed to complete the Cover Sheet. Send comments regarding this burden estimate to the U.S. Patent and Trademark Office, Chief Information Officer, Washington,
D.C. 20231 and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Paperwork Reduction Project (0651-0027), Washington, D.C. 20503. See OMB

FORM PTO-1619B Expires 06/30/99 OMB 0651-0027	Page 2	U.S. Department of Commerce Patent and Trademark Office PATENT
Correspondent Name and Addres	S Area Code and Telephone Number	202-586-2810
Name Betty A. Winchester		
Address (line 1) MS 6F-067 (FORSTL), GC-62		
Address (line 2) United States Department of En	nergy	
Address (line 3) 1000 Independence Avenue, S.	w.	
Address (line 4) Washington, D. C. 20585-0162		
Pages Enter the total number of including any attachmen	f pages of the attached conveyance documents.	ent # 2
Patent Application Number(s 09/994823 If this document is being filed together with a new was	the Patent Number (DO NOT ENTER BOTH numbers fo	t Number(s)
Patent Cooperation Treaty (PCT) Enter PCT application number only if a U.S. Application Number has not been assigned.		PCT PCT
Number of Properties Enter the t	otal number of properties involved.	1
Method of Payment: E	ount for Properties Listed (37 CFR 3.41): \$ nclosed Deposit Account	40.00
Deposit Account (Enter for payment by deposit account or	if additional fees can be charged to the account.) Deposit Account Number: # Authorization to charge additional fees:	01-2752 Yes V No

Statement and Signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Betty A. Winchester

Name of Person Signing

JUN 19

Signature Date

FORM PTO-1619C Expires 06/30/99 OMB 0651-0027

RECORDATION FORM COVER SHEET CONTINUATION PATENTS ONLY

U.S. Department of Commerce Patent and Trademark Office PATENT

Conveying P	arty(ies) Mark if additional names of conveying parties atta	iched Execution Date Month Day Year
Name (line 1)	BARANWAL, Rita	11/06/2001
Name (line 2)		Execution Date Month Day Year
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Name (line 2)		Execution Date Month Day Year
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Address (line 1)		(Designation must be a separate document from
Address (line 2)		Assignment.)
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Name (line 1)		If document to be recorded is an assignment and the receiving party is not
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Address (line 2)		Assignment.)
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	e Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same ent Application Number(s) Patent Number	
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09/994,823 DOE Case S-94,534

AP00-004

U.S. DEPARTMENT OF ENERGY PATENT ASSIGNMENT

	isiano , citizen of the United States residing in Pittsburgh ,		
County of Allegheny			
	, citizen of the United States residing in,		
	, State of <u>Texas</u>		
and I Rita Baranwal	, citizen of the United States residing in Glenshaw		
	, State of		
	Forming Method for Producing Near Net-Shape Refractory Metal Carbides*, for which we are about		
• • • • • • • • • • • • • • • • • • • •	Letters Patent identified as S-94,534 and; executed by us on October 19, 2001		
and; November 6, 2001	; and November 12, 2001.		
	t of the United States desires to acquire the entire right, title and interest in and to the said invention		
and in and to any Letters Patent where			
	whom it may concern, be it known that for and in consideration of the sum of One Dollar to us in		
•	Inited States, and for other good and valuable consideration, the receipt of which is hereby		
-	do sell, assign, and transfer unto the said Government of the United States, as represented by the		
	and/or its assigns, the entire right, title, and interest in and to the said invention and in and to any		
	nay be granted thereon as well as reissues and extensions of said Letters Patent, the same to be		
	nent of the United States to the full end of the term or terms for which Letters Patent are or may be		
granted, reissued, or extended, as full	y and entirely as the same would have been held or enjoyed by us had this assignment not been		
made.			
-	and deliver unto the Government of the United States, or to the United States Department of		
• • • • • • • • • • • • • • • • • • • •	ts, affidavits, renewal, divisional and reissue applications, statements, or other instruments in such		
	contents as may be required by the United States Department of Energy, or its duly authorized		
•	osecution or conduct of any and all applications, before as well as after the issuance of any Letters		
	or settlement of any interferences or other actions or proceedings that said applications may		
	ne involved, and we agree that we will aid the Government of the United States in every way in		
protecting the invention as may be rec	quested by the United States Department of Energy, except that any expenses arising through		
extending such assistance will be paid	d for by proper arrangement with the Government of the United States.		
WITNESS:	INVENTOR:		
- 19 PS	Marc N. Palmisian L. Talian (SEAL)		
(Signature of Witness)	(Signature of Inventor)		
	Date		
WITNESS:	INVENTOR:		
KANG Makulenas	10 29 01 Kevin J. Jakubenas / (SEAL)		
(Signature of (Witness)	(Signature of Inventor)		
J	Date (0/29/200)		
	INIVERSITOR:		
WITNESS:	INVENTOR: 6/0/ Rita Baranwal 11/2 247 (SEAL)		
(Signature of Witness) Rita Baranwal (Signature of Inventor) (SEAI			
(=.g.,			
	Date		

AP00-004 DOE Case S-94,534

Approved and consented to this	DEA , 20 0/,
ATTEST:	
(SEAL)	UCICON
	(Signature of Corporate Officer)
	By W. C. Rogers, Bechtel Bettis, Inc.
•	Its President (Title of Corporate Officer)
Accepted for the Benefit of the Government of the United States.	_
	UNITED STATES DEPARTMENT OF ENERGY
witness: Dalai	ByAssistant General Counsel for Technology Transfer
	and Intellectual Property

RECORDED: 06/19/2002