PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1 Stylesheet Version v1.2 EPAS ID: PAT4040336

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
HUIMIN LUO	08/02/2016
BRUCE A. MOYER	08/02/2016
SHENG DAI	08/02/2016

RECEIVING PARTY DATA

Name:	UT-Battelle, LLC
Street Address:	One Bethel Valley Road
Internal Address:	4500N, MS-6258
City:	Oak Ridge
State/Country:	TENNESSEE
Postal Code:	37831-6258

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15135753

CORRESPONDENCE DATA

Fax Number: (865)574-0381

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: (865) 574-0393
Email: vanceke@ornl.gov
Correspondent Name: EDNA I. GERGEL

Address Line 1: ONE BETHEL VALLEY ROAD

Address Line 2: 4500N, MS-6258

Address Line 4: OAK RIDGE, TENNESSEE 37831-6258

ATTORNEY DOCKET NUMBER:	3247.1 (UTB)
NAME OF SUBMITTER:	KAREN E. VANCE
SIGNATURE:	/KE Vance/
DATE SIGNED:	09/07/2016

Total Attachments: 3

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PATENT 503993679 REEL: 039657 FRAME: 0714

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PATENT REEL: 039657 FRAME: 0715

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	se record the attached documents or the new address(es) below.			
1. Name of conveying party(ies)	<u> </u>			
Huimin Luo	2. Name and address of receiving party(ies) Name: UT-Battelle, LLC			
Bruce A. Moyer Sheng Dai	Internal Address: 4500N, MS-6258			
A. Patent Application No.(s) 15/135,753	Street Address: One Bethel Valley Road City: Oak Ridge State: TN Country: USA Additional name(s) & address(es) attached? Yes No document is being filed together with a new application. B. Patent No.(s)			
Additional numbers at 5. Name and address to whom correspondence	tached? Yes No 6. Total number of applications and patents			
concerning document should be mailed:	involved: 1			
Name: Edna I. Gergel	7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00			
Internal Address: UT-Battelle, LLC	Authorized to be charged by credit card			
	Authorized to be charged to deposit account			
Street Address: One Bethel Valley Road	Enclosed			
4500N, MS-6258	None required (government interest not affecting title)			
City: Oak Ridge	8. Payment Information			
State: TN Zip:37831-6258	a. Credit Card Last 4 Numbers Expiration Date			
Phone Number: (865) 574-0393				
Fax Number: (865) 574-0381	b. Deposit Account Number 13-1958			
Email Address: gergelei@ornl.gov	Authorized User Name Karen E. Vance			
9 Signature:				
/Edna I. Gergel/ Signature				
Edna I. Gergel, Reg. No. 50819 Name of Person Signing	Total number of pages including cover sheet, attachments, and documents:			

Documents to be recorded (including cover sheet) should be faxed to (571) 273-0140, or mailed to:
Mail Stop Assignment Recordation Services, Director of the USPTO, P.O.Box 1450, Alexandria, V.A. 22313-1450

ASSIGNMENT

WHEREAS, we the below-named inventors whose residences are as stated below, have an interest in an invention entitled:

Methods for Liquid Extraction of Rare Earth Metals Using Ionic Liquids

(hereinafter referred to as "Subject Invention") for which are described in United States Patent Application No. 15/135,753 filed on April 22, 2016, and

WHEREAS, UT-BATTELLE, LLC, a limited liability company of the State of Tennessee, having an office at One Bethel Valley Road, P. O. Box 2008, Oak Ridge, Tennessee 37831-6258, hereinafter referred to as "ASSIGNEE," is desirous of acquiring our entire right, title and interest of the undersigned in the same;

NOW, THEREFORE, in accordance with the terms of our employment agreement with ASSIGNEE and for good and valuable consideration, the receipt of which is hereby acknowledged, we hereby assign and transfer to ASSIGNEE and its successors in interest our entire right, title and interest in the Subject Invention to all rights of priority thereto pursuant to the International Convention for the Protection of Industrial Property, and in any Letters Patent on the Subject Invention that may be granted in the United States of America and in any and all foreign countries, including any and all Letters Patent that are divisions, reissues, continuations, substitutions or extensions of any Letters Patent or patent applications therefor on the Subject Invention.

We hereby authorize and request the Commissioner of the United States Patent and Trademark Office and the officials of any and all foreign countries to issue any and all of said Letters Patent, when granted, to the ASSIGNEE.

Further, we hereby agree to communicate to said ASSIGNEE or its representatives any facts known to us respecting said Subject Invention, to testify in any legal proceedings, sign all lawful papers, execute all divisional, continuation, substitution, renewal and reissue applications, to execute all necessary assignment papers to cause any and all of said Letters Patent to be issued to said ASSIGNEE, and to make all rightful oaths and generally do everything possible to aid said ASSIGNEE and its representatives to obtain and enforce proper protection for said Subject Invention in the United States of America and in any and all foreign countries.

We further agree that the terms, covenants and conditions of this assignment shall inure to the benefit of ASSIGNEE, its successors, assigns, and legal representatives, and shall be binding on us, our heirs, legal representatives, and assigns.

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Name of Inventor:	Huimin Luo		. wie
Signature: Amin	up	Date: _	8216
Residence:	698 Brochardt Boulevard, Knox	ville, Te	nnessee 37934
Name of Inventor:	Bruce A. Moyer		
Signature: \(\sigma\)	Amily 1	Date: _	2-1-9-2016
Residence:	112 Westview Lane, Oak Ridge,	Tenness	see 37830
			*
Name of Inventor:	Sheng Dai		
Signature: 1200	<u>Cai</u>	Date:	8216
Residence:	698 Brochardt Boulevard, Knox	•	