

PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1
 Stylesheet Version v1.2

EPAS ID: PAT5097862

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
ELENI KYRIAKIDOU	03/28/2018
TODD J. TOOPS	04/03/2018
JAE-SOON CHOI	03/27/2018
MICHAEL J. LANCE	03/26/2018
JAMES E. PARKS II	08/16/2018
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:	15906606
CORRESPONDENCE DATA	
Fax Number:	(865)574-0381
<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:	(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:	3729.1
NAME OF SUBMITTER:	KAREN E. VANCE
SIGNATURE:	/KE Vance/
DATE SIGNED:	08/17/2018

Total Attachments: 7

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Docket No. 3729.1

ASSIGNMENT

WHEREAS, we the below-named inventors whose residences and post office are as stated below, have invented certain new and useful improvements in

EXHAUST TREATMENT CATALYSTS WITH ENHANCED HYDROTHERMAL STABILITY AND LOW-TEMPERATURE ACTIVITY

(hereinafter referred to as "Subject Invention") for which are described in United States Patent Application No. 15/906,606 filed on February 27, 2018, 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 the entire right, title and interest of the undersigned in the Subject Invention and to any Letters Patent that may be granted therefor in the United States of America and in any and all foreign countries.

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 to ASSIGNEE 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 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.

Full name of inventor: **Eleni Kyriakidou**

Signature: Kyriakidou Date: 03/28/2018

Residence: 4124 Deer Lakes Drive, Amherst, New York 14228

Full name of inventor: **Todd J. Toops**

Signature: _____ Date: _____

Residence: 417 Sundown Road, Knoxville, Tennessee 37934

Full name of inventor: **Jae-Soon Choi**

Signature: _____ Date: _____

Residence: 11639 Cassidy Lane, Knoxville, Tennessee 37934

Full name of inventor: **Michael J. Lance**

Signature: _____ Date: _____

Residence: 608 Mountain Pass Lane, Knoxville, Tennessee 37923

Full name of inventor: **James E. Parks, II**

Signature: _____ Date: _____

Residence: 1912 Breezy Ridge Trail, Knoxville, Tennessee 37922

Full name of inventor: **Eleni Kyriakidou**

Signature: _____ Date: _____

Residence: 4124 Deer Lakes Drive. Amherst, New York 14228

Full name of inventor: **Todd J. Toops**

Signature: _____  Date: 4/3/2018

Residence: 417 Sundown Road, Knoxville, Tennessee 37934

Full name of inventor: **Jae-Soon Choi**

Signature: _____ Date: _____

Residence: 11639 Cassidy Lane, Knoxville, Tennessee 37934

Full name of inventor: **Michael J. Lance**

Signature: _____ Date: _____

Residence: 608 Mountain Pass Lane, Knoxville, Tennessee 37923

Full name of inventor: **James E. Parks, II**

Signature: _____ Date: _____

Residence: 1912 Breezy Ridge Trail, Knoxville, Tennessee 37922

Full name of inventor: **Eleni Kyriakidou**

Signature: _____ Date: _____

Residence: 4124 Deer Lakes Drive, Amherst, New York 14228

Full name of inventor: **Todd J. Toops**

Signature: _____ Date: _____

Residence: 417 Sundown Road, Knoxville, Tennessee 37934

Full name of inventor: **Jae-Soon Choi**

Signature: *J. Choi* Date: MAR. 27, 2018

Residence: 11639 Cassidy Lane, Knoxville, Tennessee 37934

Full name of inventor: **Michael J. Lance**

Signature: _____ Date: _____

Residence: 608 Mountain Pass Lane, Knoxville, Tennessee 37923

Full name of inventor: **James E. Parks, II**

Signature: _____ Date: _____

Residence: 1912 Breezy Ridge Trail, Knoxville, Tennessee 37922

Full name of inventor: **Eleni Kyriakidou**

Signature: _____ Date: _____

Residence: 4124 Deer Lakes Drive, Amherst, New York 14228

Full name of inventor: **Todd J. Toops**

Signature: _____ Date: _____

Residence: 417 Sundown Road, Knoxville, Tennessee 37934

Full name of inventor: **Jae-Soon Choi**

Signature: _____ Date: _____

Residence: 11639 Cassidy Lane, Knoxville, Tennessee 37934

Full name of inventor: **Michael J. Lance**

Signature: Michael J. Lance Date: 3/26/2018

Residence: 608 Mountain Pass Lane, Knoxville, Tennessee 37923

Full name of inventor: **James E. Parks, II**

Signature: _____ Date: _____

Residence: 1912 Breezy Ridge Trail, Knoxville, Tennessee 37922

Full name of inventor: **Eleni Kyriakidou**

Signature: _____ Date: _____

Residence: 4124 Deer Lakes Drive, Amherst, New York 14228

Full name of inventor: **Todd J. Toops**

Signature: _____ Date: _____

Residence: 417 Sundown Road, Knoxville, Tennessee 37934

Full name of inventor: **Jae-Soon Choi**

Signature: _____ Date: _____

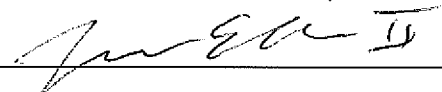
Residence: 11639 Cassidy Lane, Knoxville, Tennessee 37934

Full name of inventor: **Michael J. Lance**

Signature: _____ Date: _____

Residence: 608 Mountain Pass Lane, Knoxville, Tennessee 37923

Full name of inventor: **James E. Parks, II**

Signature:  Date: 8/16/2018

Residence: 1912 Breezy Ridge Trail, Knoxville, Tennessee 37922

RECORDATION FORM COVER SHEET
PATENTS ONLY

To the Director of the U.S. Patent and Trademark Office: Please record the attached documents or the new address(es) below.

1. Name of conveying party(ies)

Eleni Kyriakidou James E. Parks, II
Todd J. Toops
Jae-Soon Choi
Michael J. Lance

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of conveyance/Execution Date(s):

Execution Date(s) 08/16/2018

- ☒ Assignment ☐ Merger
☐ Security Agreement ☐ Change of Name
☐ Joint Research Agreement
☐ Government Interest Assignment
☐ Executive Order 9424, Confirmatory License
☐ Other _____

2. Name and address of receiving party(ies)

Name: UT-Battelle, LLC

Internal Address: 4500N, MS-6258

Street Address: One Bethel Valley Road

City: Oak Ridge

State: TN

Country: USA Zip: 37831-6258

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application or patent number(s):

☐ This document is being filed together with a new application.

A. Patent Application No.(s)

B. Patent No.(s)

15/906,606

Additional numbers attached? ☐ Yes ☒ No

5. Name and address to whom correspondence concerning document should be mailed:

Name: Edna I. Gergel

Internal Address: UT-Battelle, LLC

Street Address: One Bethel Valley Road

4500N, MS-6258

City: Oak Ridge

State: TN Zip: 37831-6258

Phone Number: (865) 574-0393

Fax Number: (865) 574-0381

Email Address: gergelei@ornl.gov

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 1.21(h) & 3.41) \$40.00

- ☐ Authorized to be charged by credit card
☒ Authorized to be charged to deposit account
☐ Enclosed
☐ None required (government interest not affecting title)

8. Payment Information

a. Credit Card Last 4 Numbers _____
Expiration Date _____

b. Deposit Account Number 13-1958

Authorized User Name Karen E. Vance

9. Signature:

/Edna I. Gergel/

08/17/2018

Signature

Date

Edna I. Gergel, Reg. No. 50819

Name of Person Signing

Total number of pages including cover sheet, attachments, and documents:

7

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

RECORDED: 08/17/2018

PATENT
REEL: 047317 FRAME: 0716