505737961 10/23/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE: NEW ASSIGNMENT NATURE OF CONVEYANCE: ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JOHN NUNAN	09/26/2019
DAVID MOSER	10/10/2019
CHAD ALLTIZER	10/01/2019

RECEIVING PARTY DATA

Name:	UMICORE AG & CO. KG	
Street Address:	RODENBACHER CHAUSSEE 4	
City:	HANAU-WOLFGANG	
State/Country:	GERMANY	
Postal Code:	63457	

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15983246

CORRESPONDENCE DATA

Fax Number: (202)263-4329

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.

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SMITH, GAMBRELL & RUSSELL, LLP **Correspondent Name:** Address Line 1: 1055 THOMAS JEFFERSON STREET

Address Line 2: SUITE 400

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ATTORNEY DOCKET NUMBER:	034166 R 299	
NAME OF SUBMITTER: DENNIS C. RODGERS		
SIGNATURE: /Dennis C. Rodgers/		
DATE SIGNED: 10/23/2019		

Total Attachments: 3

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> **PATENT** REEL: 050806 FRAME: 0982 505737961

A18133-US-DP 034166 R 299

Inventors-to-Assignee

ASSIGNMENT

This assignment agreement is applicable to an invention entitled:

HYDROCARBON TRAP CATALYST

and v	vhich is found in (check one)::
	A patent application for this invention, executed by the ASSIGNOR(S) concurrently with this assignment (U.S. Application No);
	U.S. Patent Application No. <u>15/983,246</u> , filed <u>May 18, 2018</u> ;
	A U.S. Patent Application based on PCT International Application No filed on _ (U.S. Application No);
	PCT International Application No; and/or
	U.S. Patent No, issued _ (date).
The F	PATENT PROPERTY assigned under this agreement is (check one):
	U.S. Patent Property only: The entire right, title and interest for the United States and its territorial possessions in and to the invention identified above, any and all improvements thereof, the right to claim priority including the right to claim priority to any earlier patent applications for said invention, and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuation, division, continuation-in-part, extension, conversion to 35 U.S.C. 111(a), or substitute thereof, and any reissue, reexamination, or extension of said Letters Patent, and the right to sue and recover for any past infringement, the right to file and/or prosecute any applications for said invention as Applicant, and the right to have said Letters Patent issue with the Assignee as named Applicant, or
	Worldwide Patent Property: The entire right, title and interest for the United States and its territorial possessions and in all foreign countries in and to the invention identified above, any and all improvements thereof, and any legal equivalent thereof in a foreign country, the right to claim priority including the right to claim priority to any earlier patent applications for said invention, and, in and to, all Letters Patent to be obtained for said invention by the above application or any continuation, division, continuation-in-part, extension, conversion to 35 U.S.C. 111(a), or substitute thereof, and any relssue, reexamination, or extension of said Letters Patent, and all rights under all International Conventions for the Protection of Industrial Property, and the right to sue and recover for any past infringement, and where applicable, the right to file and/or prosecute any applications for said invention as Applicant and/or the right to have said Letters Patent issue with the Assignee as named Applicant.

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034166 R 299

Inventors-to-Assignee

The following ASSIGNEE is the recipient of the PATENT PROPERTY:

UMICORE AG & CO. KG Rodenbacher Chaussee 4 Hanau-Wolfgang, GERMANY 63457

This ASSIGNEE is (check one):

An Individual;

A Partnership;

A Corporation/Entity of Germany (specify state or country); or

(other)

In consideration of the premises hereof, and other good and valuable consideration, receipt of which is acknowledged, the ASSIGNOR(S) hereby sell, assign and transfer to the ASSIGNEE, its successors, assigns, and legal representatives, the PATENT PROPERTY.

As to all U.S. Patent Property assigned under this agreement, the ASSIGNOR(S) hereby authorize and request the Director of the U.S. Patent & Trademark Office to issue said Letters Patent and any reissue or extension thereof to the ASSIGNEE.

The ASSIGNOR(S) hereby agree that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment.

Further, the ASSIGNOR(S) hereby agree to communicate to said ASSIGNEE, its successors, assigns, and legal representatives, any facts known to the ASSIGNOR(S) respecting said invention, promptly provide upon request all pertinent facts and documents relating to said invention and said Letters Patent and legal equivalents as may be known and accessible to ASSIGNOR(s), testify in any interference, derivation, post grant review, inter partes review, litigation, or legal proceeding relating to the PATENT PROPERTY, sign all lawful papers, execute all divisional, continuation, continuation-in-part, substitute, renewal, reexamination and reissue applications, execute all necessary assignment papers to cause any and all Letters Patent to be issued to said ASSIGNEE, make all rightful oaths and generally do everything necessary or desirable to aid said ASSIGNEE, its successors, assigns, and legal representatives, to obtain and enforce proper protection for said invention.

The ASSIGNOR(S) authorize any attorneys and agents of record and/or who have a power of attorney in this application to check any appropriate boxes and to insert the Serial Number and filling date in this document after it has been executed.

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IN WITNESS WHEREOF, the below designated ASSIGNOR(S) and ASSIGNEE have executed this ASSIGNMENT:

ASSIGNOR	
Signature: Joh & Num	Date: 9/26/2019
Name: <u>John NUNAN</u>	, ,
Signature:	Date: 10 10 19
Name: <u>David MOSER</u>	
Signature: And Alle	Date: 10-1-19
Name: <u>Chad ALLTIZER</u>	
	•
ASSIGNEE AND SA	
Signature:	Date: 21.10,2019
Name: i.V. Dr. Stefan Retzow Senior IP Manager	acting in official capacity on behalf of UMICORE AG & CO. KG
Signature:	Date:0
Name: i. V: Dr. Ralf Muley Senior IP Manager	_ acting in official capacity on behalf of UMICORE AG & CO. KG

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