505390574 03/24/2019

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
JOHN H. LIENHARD	12/10/2018
KISHOR GOVIND NAYAR	01/11/2019
RONAN K. MCGOVERN	03/13/2019
BADER AL-ANZI	01/09/2019

RECEIVING PARTY DATA

Name:	Massachusetts Institute of Technology	
Street Address:	77 Massachusetts Avenue	
City:	Cambridge	
State/Country:	MASSACHUSETTS	
Postal Code:	02139	

PROPERTY NUMBERS Total: 2

Property Type	Number
Application Number:	16117471
PCT Number:	US2018048932

CORRESPONDENCE DATA

Fax Number: (617)401-3687

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: 6174012460
Email: bob@mxlegal.com
Correspondent Name: ROBERT SAYRE

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Address Line 2: 1 BROADWAY, 14TH FLOOR

Address Line 4: CAMBRIDGE, MASSACHUSETTS 02142

ATTORNEY DOCKET NUMBER:	MIT-19893	
NAME OF SUBMITTER:	ROBERT J. SAYRE	
SIGNATURE:	/Robert J. Sayre, Reg. No. 42,124/	
DATE SIGNED:	ED: 03/24/2019	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

PATENT 505390574 REEL: 048681 FRAME: 0796

Total Attachments: 6 source=mit-19893_ex_dec_and_ast#page1.tif source=mit-19893_ex_dec_and_ast#page2.tif source=mit-19893_ex_dec_and_ast#page3.tif source=mit-19893_ex_dec_and_ast#page4.tif source=mit-19893_ex_dec_and_ast#page5.tif

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mit-19893

COMBINED DECLARATION AND ASSIGNMENT

Declaration

As the below-named inventors, we hereby declare that this declaration is directed to United

States application number 16/117,471, filed on August 30, 2018.

The above-identified application was made or authorized by each of us. We believe that

we are the original joint inventors of a claimed invention in the application. We hereby

acknowledge that any willful false statement made in this declaration is punishable under 18

U.S.C. 1001 by fine or imprisonment of not more than five (5) years, or both.

If the inventors are named as applicants for this application or if our authorization is

otherwise needed, we hereby appoint the Patent Practitioner(s) associated with Customer No.

72531 as our attorney(s) or agent(s), and to transact all business in the United States Patent and

Trademark Office connected therewith for the above-referenced application.

The signature provided at the end of this document attests to both this declaration and the

assignment, below.

Assignment

WHEREAS, We, John H. Lienhard, Kishor Govind Nayar, Ronan K. McGovern, and

Bader Al-Anzi, all currently or previously employed by or associated with Massachusetts Institute

of Technology, made certain new and useful inventions and improvements for which We filed an

application for Letters Patent of the United States on August 30, 2018, which application was

assigned U.S. patent application serial number 16/117,471 and is entitled, HYBRID REVERSE

OSMOSIS ELECTRODIALYSIS SYSTEMS FOR BRINE CONCENTRATION;

AND WHEREAS, Massachusetts Institute of Technology, a corporation organized and

existing under and by virtue of the laws of the State/Commonwealth of Massachusetts, and having

an office and place of business at 77 Massachusetts Avenue, Cambridge, Massachusetts 02139

(hereinafter "Assignee"), is desirous of acquiring the entire right, title and interest in and to said

inventions, improvements and application, and in and to the Letters Patent to be obtained therefore;

NOW, THEREFORE, to all whom it may concern, be it known that for good and valuable

consideration, the receipt and sufficiency whereof is hereby acknowledged, We have sold,

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assigned, and transferred, and by these presents do sell, assign and transfer unto the Assignee, its

successors or assigns, the entire right, title and interest for all countries in and to all inventions and

improvements disclosed in the aforesaid application, and in and to the application, all related

provisionals and non-provisionals to which priority is claimed in this application or that claim

priority to this application, divisions, continuations, continuations-in-part, or renewals thereof, all

Letters Patent that may be granted there from, and all reissues or extensions of such patents, and

in and to any and all applications that have been or shall be filed in any foreign countries for Letters

Patent on the inventions and improvements, including an assignment of all rights under the

provisions of the International Convention (including PCT Application No. US2018/048932), and

all Letters Patent of foreign countries that may be granted there from; and we do hereby authorize

and request the Commissioner of Patents and Trademarks to issue any and all United States Letters

Patent for the aforesaid inventions and improvements to the Assignee as the assignee of the entire

right, title and interest in and to the same, for the use of the Assignee, its successors and assigns.

AND, for the consideration aforesaid, we do hereby agree that we and our executors and

legal representatives will make, execute and deliver any and all other instruments in writing

including any and all further application papers, affidavits, assignments and other documents, and

will communicate to the Assignee, its successors and representatives all facts known to us relating

to the improvements and the history thereof and will testify in all legal proceedings and generally

do all things that may be necessary or desirable more effectually to secure to and vest in the

Assignee, its successors or assigns the entire right, title and interest in and to the improvements,

inventions, applications, Letters Patent, rights, titles, benefits, privileges and advantages hereby

sold, assigned and conveyed, or intended so to be.

AND, furthermore, we covenant and agree with the Assignee, its successors and assigns,

that no assignment, grant, mortgage, license or other agreement affecting the rights and property

herein conveyed has been made to others by us and that full right to convey the same as herein

expressed is possessed by us.

PATENT

REEL: 048681 FRAME: 0799

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IN TESTIMONY WHEREOF, I have hereunto set my hand this day of
() cameting , , , , 2018.
STATE OF MAGACHUSETT
COUNTY OF MANAGEROUS
On this 10 4th day of 12 (contact), 2018 before me personally appeared John H. Lienhard to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.
[SEAL] **SEAL Second Color Second Public Seal Se
ALEXANDRA C. CABRAL Notary Public COMMONWEAUTHOF MASSACHUSETTS My Commission Expires June 13, 2025



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		F, I have hereunto set my hand this	11	day of
JANUAK Y	, 2018, 2019	KAN		

Kishor Govind Nayar

parto

STATE OF Massochusetts

COUNTY OF Middlesex

On this ______ day of _______, 2018 before me personally appeared Kishor Govind Nayar to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

STEPHANIE P DRAKES
Notary Public
COMMONWEALTH OF MASSACHUSETTS
My Commission Expires
Mey 2, 2025

Notary Public

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IN TESTIMONY WHEREOF, I have hereunto set my hand this $\frac{13^{+4}}{12}$ day of
<u>March</u> , 2018; 2019
Lonan Melgoven
Ronan K. McGovern
STATE OF Massachusetts
COUNTY OF Middlesex
On this 13 day of MALCH , 2018 before me personally appeared Ronan
K. McGovern to me known and known to me to be the person described in and who executed the
foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the
uses and purposes therein set forther
[SEAL] Commission 2012
Notary Public

IN TESTIMONY WHEREOF, I have hereunto set my hand this ______ day of _______ 2018.

Bader Al-Anzi

STATE OF _______

On this ______ day of _______, 2018 before me personally appeared Bader Al-Anzi to me known and known to me to be the person described in and who executed the foregoing instrument, and he/she duly acknowledged to me that he/she executed the same for the uses and purposes therein set forth.

Notary Public

PATENT REEL: 048681 FRAME: 0803

RECORDED: 03/24/2019

Dacket his mit-19893 Serial Number 16/117-471 Filling Date: August 30, 2018