506708793 06/10/2021

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
JEONG-SUN MOON	11/17/2020
RYAN G. QUARFOTH	11/17/2020
KANGMU LEE	11/17/2020

RECEIVING PARTY DATA

Name:	HRL LABORATORIES,LLC	
Street Address:	3011 MALIBU CANYON RD	
City:	MALIBU	
State/Country:	CALIFORNIA	
Postal Code:	90265	

PROPERTY NUMBERS Total: 3

Property Type	Number
Application Number:	62937470
Application Number:	16951518
PCT Number:	US2020061121

CORRESPONDENCE DATA

Fax Number: (323)266-0373

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: 3239342300

Email: la_mail@la.ladas.com
Correspondent Name: LADAS & PARRY LLP

Address Line 1: 4525 WILSHIRE BOULEVARD, SUITE 240

Address Line 4: LOS ANGELES, CALIFORNIA 90010

ATTORNEY DOCKET NUMBER:	631994-4
NAME OF SUBMITTER:	MAVIS S. GALLENSON
SIGNATURE: /Mavis S. Gallenson 32,464/	
DATE SIGNED: 06/10/2021	

Total Attachments: 6

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PATENT 506708793 REEL: 056501 FRAME: 0581

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PATENT REEL: 056501 FRAME: 0582

Our Ref: 632379-9 B-9932NP

ASSIGNMENT

WHEREAS: Jeong-Sun MOON 14217 Shawnee Ct. Residing at Moorpark, CA 93021 WHEREAS: Ryan G. QUARFOTH Residing at: 233 S Barrington Ave, Apt. 209 Los Angeles, CA 90049 WHEREAS: Kangmu LEE Residing at: 6020 Seabluff Drive, Unit 428 Playa Vista, CA 90094 (hereinafter referred to as ASSIGNORS), have invented inventions (hereinafter referred to as INVENTION) disclosed at least in part in the following list: U.S. Provisional Patent Application Number: 62/937,470 filed on November 19, 2019, and entitled ELECTRICALLY-CONTROLLABLE 3D OPTICAL WAVEGUIDE SWITCH MODELING WITH PHASE CHANGE MATERIALS; U.S. Patent Application Number: 16/951,518 , filed on 11/18/2020 , and entitled ELECTRICALLY-CONTROLLABLE 3D OPTICAL WAVEGUIDE SWITCH WITH PHASE CHANGE MATERIALS; U.S. Patent Number: ______, filed on ______, and entitled

U.S. PCT Number PCT/US2020/061121 filed on 11/18/2020, and entitled ELECTRICALLY-CONTROLLABLE 3D OPTICAL WAVEGUIDE SWITCH MODELINGWITH PHASE CHANGE MATERIALS.

WHEREAS: HRL Laboratories, LLC

a Limited Liability Company formed under the laws of the State of Delaware, United States of America, having its principal place of business at:

3011 Malibu Canyon Road Malibu, California 90265

(hereinafter referred to as ASSIGNEE), is desirous of acquiring the entire right, title and interest in, to and under said INVENTION and in, to and under Letters Patent and similar legal protection to be obtained for said INVENTION in the United States and in any and all foreign countries,

NOW, THEREFORE, TO ALL WHOM IT MAY CONCERN: Be it known that ASSIGNORS, for good and valuable consideration, hereby sell, assign and transfer to ASSIGNEE the full and exclusive right, title and interest to said INVENTION in the United States and its territorial

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PATENT REEL: 056501 FRAME: 0583

HRL Ref: 190115-NP Our Ref: 632379-9 B-9932NP

possessions and in all foreign countries, including the right to the above patents and applications, the right to claim priority under any applicable provisions of the International Convention and the Patent Cooperation Treaty, the right to seek relief and recover all damages present and past for infringement of said INVENTION and patents protecting said invention, the right to all Letters Patent and similar legal protection in the United States and its territorial possessions and in any and all foreign countries for said INVENTION and the right to any conversion, continuation, continuation-in-part, division, renewal, substitute and reissue thereof for the full term or terms for which the same may be granted for said patents and said applications.

ASSIGNORS hereby covenant that no assignment, sale, agreement or encumbrance has been or will be made or entered into which would conflict with this assignment and sale.

ASSIGNORS further covenant that ASSIGNEE will, upon its request, be provided promptly with all pertinent facts and documents relating to said applications, patents, said INVENTION, assignments related to said applications, patents, and said INVENTION, and said Letters Patent and legal equivalents in the United States and in foreign countries for said INVENTION as may be known and accessible to ASSIGNORS and will testify as to the same in any interference or litigation related thereto and will promptly execute and deliver to ASSIGNEE or its legal representatives, any and all papers, instruments and affidavits required to apply for, obtain, maintain, issue and enforce said applications, patents, said INVENTION, and said Letters Patent and said equivalents thereof in any foreign country.

ASSIGNORS, hereby authorize and request the Attorney named in the Declaration and/or Power of Attorney executed for this INVENTION, or the Attorney filing a patent application for said INVENTION to insert the filing dates, titles, application numbers and patent numbers in this assignment for said INVENTION.

This assignment is to be interpreted under and governed by the laws of the State of California, in the United States of America, without regard to conflicts of law provisions. The exclusive jurisdiction for a legal proceeding regarding this assignment shall be in the State or Federal courts of California, and ASSIGNORS and ASSIGNEE expressly agree that jurisdiction and venue are proper in these courts and expressly submit to the jurisdiction of and agree to accept service of process of these courts in connection with any action in such courts to resolve any dispute arising hereunder.

ASSIGNORS and ASSIGNEE hereby irrevocably waive and agree not to assert in any suit, action, or proceeding, any claim that it is not personally subject to the jurisdiction of any such court, that such suit, action, or proceeding is brought in an inconvenient forum or that the venue of such suit, action or proceeding is improper. Each party hereby irrevocably waives personal service of process and consents to process being served in any such suit, action or proceeding by mailing a copy thereof (certified or registered mail, return receipt requested, or any foreign equivalent of such mail service if the address in effect for notices is in a foreign country or territory) to such party at the address in effect for notices to it under this assignment and agrees that such service shall constitute good and sufficient service of process and notice thereof. Nothing contained herein shall be deemed to limit in any way any right to serve process in any manner permitted by law.

ASSIGNORS agree not to take any action, or to assist or request any third party in challenging or opposing ASSIGNES's rights granted hereunder. ASSIGNORS further acknowledge that

Page 2 of 3

Our Ref: 632379-9 B-9932NP

ASSIGNEE's patent counsel does not represent ASSIGNORS personally and acknowledge that ASSIGNORS have the right to seek independent counsel.

Subscribed and executed a	n Maliby of	
on <u>Nov.</u> /		
Inves	ntor: Jeong-Sun/MOON	
Subscribed and executed a	at	
on	, 2020.	
Inver	ntor: Ryan G. QUARFOTH	
Subscribed and executed a	at	
on	, 2020.	
Inver	ntor: Kangmu LEE	
	Trucing in a susur	
Subscribed and executed a	ıt	
on	, 2020.	
Assig	gnee:	
	HRL Laboratories, LLC	
	Jewel L. Miller or	
	George R. Rapacki	

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Subscribed and executed at	
on <u></u>	, 2020.
Inventor:	
	Jeong-Sun MOON
ubscribed and executed at	os Angeles, CA
onNovember 17, 2020	, 2020.
	/Ryan G. Quarfoth/ Ryan Quarfoth Ryan G. QUARFOTH
	Ryan G. QUARFOTH
ubscribed and executed at	
on	, 2020.
Inventor:	
	Kangmu LEE
ubscribed and executed at	
on	
Assignee:	
*	HRL Laboratories, LLC
	Jewel L. Miller or George R. Rapacki

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on		, 2020.	
	Inventor:	<u> </u>	
		Jeong-Sun MOON	*******
ubscribed and	executed at		
on		, 2020.	
	Inventor:		
		Ryan G. QUARFOTH	
ibscribed and	executed at Play	/a Vista, CA	
on <u>11/17</u>		, 2020.	
Inventor:	/Kangmu Lee/	بالمعاولة والمعاولة	
		Kangmu LEE	********
on		,2020.	
	Assignee:		
		HRL Laboratories, LLC	•
		Jewel L. Miller or	
		George R. Rapacki	

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	Inventor:	I S S S S S S S S S S S S S S S S S S S
		Jeong-Sun MOON
Subscribed and ex-	ecuted at	
on		
	Inventor:	
		Ryan G. QUARFOTH
Subscribed and ex	ecuted at	
on		
	Inventor:	
		Kangmu LEE
Subscribed and ex	ecuted at	takewood Co.
on <u>Nove</u>	nber 16	
	Assignee:	
		HRL Laboratories, LLC /

George R. Rapacki