504011985 09/19/2016

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT	
NATURE OF CONVEYANCE:	ASSIGNMENT	

CONVEYING PARTY DATA

Name	Execution Date
PHILIPPE C. ADELL	09/19/2016
HARRY A. ATWATER	09/19/2016

RECEIVING PARTY DATA

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PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	15256442

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ATTORNEY DOCKET NUMBER:	CTJPL.014A	
NAME OF SUBMITTER:	KYU S. MIN	
SIGNATURE:	/Kyu Min/	
DATE SIGNED:	09/19/2016	
	This document serves as an Oath/Declaration (37 CFR 1.63).	

Total Attachments: 4

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PATENT 504011985 REEL: 039784 FRAME: 0281

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COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))

Application Data Sheet filed previously or concurrently

Docket No.: CTJPL.014A Page 1 of 4

Title: OPTICAL SYSTEMS AND METHODS OF CHARACTERIZING HIGH-K DIELECTRICS

Inventors: Philippe C. Adell and Harry A. Atwater

Declaration

This Declaration is directed to the application identified above that:

Was filed **September 2, 2016** as U.S. or International Application No. 15/256,442 and incorporating any amendments made thereto prior to the signature date of this Declaration.

As a named inventor, I declare that:

The above-identified application was made or authorized to be made by me.

I believe that I am the original inventor or an original joint inventor in the application.

I hereby acknowledge that any willful false statement made in this declaration is punishable under 18 USC 1001 by fine or imprisonment of not more than five (5) years, or both.

I have reviewed and understand the contents of the above-identified application, including the claims, as amended by any amendment.

I acknowledge the duty to disclose information which is material to patentability as defined in 37 CFR 1.56.

Assignment from Inventors

WHEREAS, above-identified inventors (individual(s) hereinafter "ASSIGNOR") invented certain new and useful improvements, technology, inventions, developments, ideas, ornamental designs, or discoveries, and hereby assign or are under an obligation to assign to the below identified Assignee the above-titled application (collectively hereinafter referred to as the "Work") for which an application for Letters Patent in the United States (identified above) has been prepared for filing with the United States Patent and Trademark Office (hereinafter the "Application").

AND WHEREAS, California Institute of Technology, with its principal place of business at 1200 E. California Boulevard, MC 6-32, Pasadena, CA 91125 (hereinafter the "ASSIGNEE"), desires to acquire the entire right, title, and interest in and to the Application and the Work.

NOW, THEREFORE, for good and valuable consideration of which receipt is hereby acknowledged, ASSIGNOR hereby acknowledges that ASSIGNOR has sold, assigned, transferred and set over, and by these presents does hereby sell, assign, transfer and set over, unto said ASSIGNEE, its successors, legal representatives and assigns, the entire right, title, and interest throughout the world in the Application and the Work, including all Patent Properties filed or issued upon the Application and the Work; where "Patent Properties" include, but are not limited to:

all provisional applications relating thereto (including but not limited to U.S. Provisional Application Nos. 62/213753, filed September 3, 2015; and 62/237146, filed October 5, 2015);

all nonprovisional applications claiming priority to aforementioned provisional(s) and/or the present Application, including, all divisions, continuations, continuations-in-part, and reissues, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof; and

all rights of priority under International Conventions and any related Letters Patent which may hereafter be granted or filed in any country or countries foreign to the United States, all extensions, renewals and reissues thereof.

COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))

Application Data Sheet filed previously or concurrently

Docket No.: CTJPL.014A Page 2 of 4

Title: OPTICAL SYSTEMS AND METHODS OF CHARACTERIZING HIGH-K DIELECTRICS

Inventors: Philippe C. Adell and Harry A. Atwater

ASSIGNOR hereby acknowledges the ASSIGNEE as the Applicant for all aforementioned Patent Properties, and authorizes and requests the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all related Letters Patent to the ASSIGNEE, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND ASSIGNOR DOES HEREBY sell, assign, transfer, and convey to ASSIGNEE, its successors, legal representatives, and assigns all claims for damages and all remedies arising out of any violation of the rights assigned hereby that may have accrued prior to the date of assignment to ASSIGNEE, or may accrue hereafter, including, but not limited to, the right to sue for, collect, and retain damages for past infringements of said Letters Patent before or after issuance.

AND ASSIGNOR DOES HEREBY covenant and agree that ASSIGNOR will communicate to said ASSIGNEE, its successors, legal representatives and assigns, any facts known to ASSIGNOR respecting the Work, and testify in any legal proceeding, assist in the preparation of any other Patent Property relating to the Application and the Work or any improvements made thereto, sign/execute all lawful papers, authorize the filling of and execute and make all rightful oaths and/or declarations in connection with the Application and the Work including any improvements made thereto, any patent applications filled therefrom, and any continuing application filled from any of the aforementioned applications, and generally do everything possible to aid the ASSIGNEE, its successors, legal representatives and assigns, to obtain and enforce proper patent protection for the Work in all countries.

COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e)) Application Data Sheet filed previously or concurrently		
Docket No.: CTJPL.014A	Page 3 of 4	
TITIO: OPTICAL SYSTEMS AND METHODS OF CHARACTERIZING HIGH-K DIELECTRICS		
nventors: Philippe C. Adell and Harry A. Atwater		
Legal Name of Inventor: Philippe C. Adell IN TESTIMONY WHEREOF, I hereunto set my han 20 Signature:	d and seal this Aday of	
Signature bel	tore a Notary is desirable but not required.	
A NOTARY PUBLIC OR OTHER OFFIC VERIFIES ONLY THE IDENTITY OF DOCUMENT TO WHICH THIS CERTIFI TRUTHFULNESS, ACCURACY, OR VALIDI	THE INDIVIDUAL WHO SIGNED THE CATE IS ATTACHED, AND NOT THE	
STATE OF CALIFORNIA ss.		
On, before me, appeared Philippe C. Adell who proved to me on the I whose name(s) is/are subscribed to the within instrumexecuted the same in his/her/their authorized capacity instrument the person(s), or the entity upon behalf of	nent, and acknowledged to me that he/she/they /(les), and that by his/her/their signature(s) on the which the person(s) acted, executed the instrument.	
I certify under PENALTY OF PERJURY under the law paragraph is true and correct.	s of the State of California that the foregoing	
WITNESS my hand and official seal.		
	Notary Signature	

[SEAL]

COMBINED DECLARATION & ASSIGNMENT (37 CFR 1.63(e))
Docket No.: CT.IPL 014A
Page 4 of 4 Title: OPTICAL SYSTEMS AND METHODS OF CHARACTERIZING HIGH-K DIELECTRICS
Inventors: Philippe C. Adell and Harry A. Atwater
Legal Name of Inventor: Harry A. Atwater IN TESTIMONY WHEREOF, I hereunto set my hand and seal this day of Sept. Signature before a Notary is desirable but not required.
A NOTARY PUBLIC OR OTHER OFFICER COMPLETING THIS CERTIFICATE VERIFIES ONLY THE IDENTITY OF THE INDIVIDUAL WHO SIGNED THE DOCUMENT TO WHICH THIS CERTIFICATE IS ATTACHED, AND NOT THE TRUTHFULNESS, ACCURACY, OR VALIDITY OF THAT DOCUMENT.
STATE OF CALIFORNIA
COUNTY OFss.
On, before me,, notary public, personally appeared Harry A. Atwater who proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument, and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(les), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.
I certify under PENALTY OF PERJURY under the laws of the State of California that the foregoing paragraph is true and correct.
WITNESS my hand and official seal.
[SEAL] Notary Signature
24168308
090716

PATENT REEL: 039784 FRAME: 0286

RECORDED: 09/19/2016