PATENT ASSIGNMENT

Electronic Version v1.1 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
Paul R. Ohodnicki	07/01/2013
Congjun . Wang	06/28/2013
Mark A. Andio	07/01/2013

RECEIVING PARTY DATA

Name:	U.S. Department of Energy
Street Address:	1000 Independence Avenue, S.W.
Internal Address:	GC-62, 6F-048
City:	Washington
State/Country:	DISTRICT OF COLUMBIA
Postal Code:	20585-0162

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	13927223

CORRESPONDENCE DATA

Fax Number: 2025867127

Correspondence will be sent via US Mail when the fax attempt is unsuccessful.

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Correspondent Name: Katherine Baldwin

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Address Line 2: GC-62, 6F-048

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ATTORNEY DOCKET NUMBER:	S-130,906
NAME OF SUBMITTER:	Katherine Baldwin
Signature:	/Katherine Baldwin/

502505121 REEL: 031258 FRAME: 0119

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Date:	09/23/2013
Total Attachments: 4 source=S-130906-ExecutedAssignment#pa source=S-130906-ExecutedAssignment#pa source=S-130906-ExecutedAssignment#pa source=S-130906-ExecutedAssignment#pa	ge2.tif ge3.tif

PATENT REEL: 031258 FRAME: 0120

U.S. Department of Energy Patent Assignment Form

Whereas, I/we, Paul R. Ohodnicki; Congjun Wang; Mark A. Andio

have invented certain new and useful improvements in :
PLASMONIC TRANSPARENT CONDUCTING METAL OXIDE NANOPARTICLES
AND FILMS FOR OPTICAL SENSING APPLICATIONS

, for which I/we have/will file an application for United States Letters Patent, identified

as: U.S. Application No. 13/927,223, filed June 26, 2013 (DOE No. S-130,906) and:

WHEREAS, the Government of the United States desires to acquire the entire right, title, and interest in and to said invention and in and to any Letters Patent wherever they may be issued thereon;

NOW, THEREFORE, to all whom it may concern, be it known that good and valuable consideration, the receipt of which is hereby acknowledged, we by these presents do sell, assign, and transfer unto the said Government of the United States, as represented by the United States Department of Energy, and/or its assigns, the entire right, title, and interest in and to the said invention and in and to any and all Letters Patent wherever they may be granted thereon as well as reissues and extensions of said Letters Patent are or may be granted, reissued, or extended, as fully and entirely as the same would have been held or enjoyed by us had this assignment not been made.

I/We agree to make, execute, and deliver unto the Government of the United States, or to the United States Department of Energy, any and all papers, documents, affidavits, renewal, divisional and reissue applications, statements, or other instruments in such usual or other forms, terms and contents as may be required by the United States Department of Energy, or its duly authorized representative, in or incident to the prosecution or conduct of any and all applications, before as well as after the issuance of any Letters thereon, or in the adjustment or settlement of any interferences or other actions or proceedings that said applications may encounter or in which they may become involved and we agree that we will encounter or in which they may become involved and we agree that we will aid the Government of the United States in every way in protecting the inventions as may be requested by the United States Department of Energy or its assigns, except that any expenses arising through extending such assistance will be paid for by proper arrangement with the Government of the United States.

Inventor:			
Full name of Inventor:			
Inventor's signature:	Pal H. Ohnoli	Date	7/11/3
Address:	3943 Bonita Drive, Alison Park, PA 15101		
Witness to Signature:			
Full name of Witness:	Jessica Mae Sosenko	1	
Witness' Signature:	Jeccica Mae Sosento	Date	7-1-13
	g: Ų.S. Application No. 13/927,223, filed June 26, 2013 (
	CONDUCTING METAL OXIDE NANOPARTICLES AND FILE		
			,
Inventor:	0 1 14		
Full name of Inventor:	Congjun Wang		
Inventor's signature:	Com My	Date	06/28/2013
Address:	2965 ONeill Drive, Bethel Park, PA 15102		
Witness to Signature:			
Full name of Witness:	Jessira Mae Sosento		
Witness' Signature:	Jossica Mas Sossento	Date	6-28-13
Assignment to DOE regarding	g: U.S. Application No. 13/927,223, filed June 26, 2013 (DOE No.	S-130,906)
PLASMONIC TRANSPARENT C APPLICATIONS	CONDUCTING METAL OXIDE NANOPARTICLES AND FILM	AS FOR C	OPTICAL SENSING

Inventor:		
Full name of Inventor:	Mark A. Andio	
Inventor's signature:	Mach Penfei	Date 7-1-13
Address:	195 Dell Avenue, Apt. 302, Pittsburgh, PA	15216
Witness to Signature	:	
Full name of Witness:	Jessica Mac Sosenko	
	Charles In Charles	
Witness' Signature: (Jessica Mae Sosento	Date <u>7-1-13</u>
Accianment to DOE regarding	g: U.S. Application No. 13/927,223, filed June 26, 2013 (D	•
-	g: 0.3; Application No. 13/92/,223, filed June 26, 2013 (b CONDUCTING METAL OXIDE NANOPARTICLES AND FILM	
APPLICATIONS	CONDUCTING METAL OVIDE MANOLARTICLES VIND FIRM	2 FOR OF HERE SENSING
Contractor Approval	and Consent:	
Full Name:	KEVIN SCOTT DONOVAN	
Signature:	KEVIN SCOTT DONOVAN	Date 7/1/13
Title:	PROGRAM MANAGER	•
Organization:	URS RES. 4 ENGR. SVCS.	

Witness to Signature:

Full name of Witness: LEAT ALYSON BOWER

Witness' Signature: Leat Alyson Bower

Witness' Signature: Leat Alyson Bower

Date 7/1/3

Assignment to DOE regarding: U.S. Application No. 13/927,223, filed June 26, 2013 (DOE No. 5-130,906)

PLASMONIC TRANSPARENT CONDUCTING METAL OXIDE NANOPARTICLES AND FILMS FOR OPTICAL SENSING APPLICATIONS

Government Acceptance:				
Accepted for the Benefit of the Government of the United States.				
Full Name:	John T. Lucas			
Signature:		Date	9/23/13	
Title:	Assistant General Counsel for Tech	nolo g	y Transfer	
	and Intellectual Property		•	
Witness to Signature:				
Full name of Witness:	Notherine Raldwin			
Witness' Signature:	Walle Bolde	Date	9-43 2013	
Acceptance of assignment to DOE regarding: U.S. Application No. 13/927,223, filed June 26, 2013 (DOE No. S-130,906)				
PLASMONIC TRANSPARENT CONDUCTING METAL OXIDE NANOPARTICLES AND FILMS FOR OPTICAL SENSING APPLICATIONS				