

## PATENT ASSIGNMENT

Electronic Version v1.1  
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT												
NATURE OF CONVEYANCE:	ASSIGNMENT												
CONVEYING PARTY DATA													
<table border="1"> <thead> <tr> <th>Name</th> <th>Execution Date</th> </tr> </thead> <tbody> <tr> <td>Dean A Evans</td> <td>01/21/2009</td> </tr> <tr> <td>Anatoly Gluschenko</td> <td>12/08/2008</td> </tr> <tr> <td>Victor Yu Reshetnyak</td> <td>11/11/2008</td> </tr> <tr> <td>Gary Cook</td> <td>12/08/2008</td> </tr> </tbody> </table>		Name	Execution Date	Dean A Evans	01/21/2009	Anatoly Gluschenko	12/08/2008	Victor Yu Reshetnyak	11/11/2008	Gary Cook	12/08/2008		
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<table border="1"> <tr> <td>Name:</td> <td>Government of the United States, as represented by the Secretary of the Air Force</td> </tr> <tr> <td>Street Address:</td> <td>2240 B Street</td> </tr> <tr> <td>Internal Address:</td> <td>AFMCLO/JAZm Bldg. 11, Rm. D-18</td> </tr> <tr> <td>City:</td> <td>Wright-Patterson, AFB</td> </tr> <tr> <td>State/Country:</td> <td>OHIO</td> </tr> <tr> <td>Postal Code:</td> <td>45433</td> </tr> </table>		Name:	Government of the United States, as represented by the Secretary of the Air Force	Street Address:	2240 B Street	Internal Address:	AFMCLO/JAZm Bldg. 11, Rm. D-18	City:	Wright-Patterson, AFB	State/Country:	OHIO	Postal Code:	45433
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CORRESPONDENCE DATA													
<p>Fax Number: 9372553733  <i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 937-255-2838        Email: afmclo.jaz.patents@wpafb.af.mil        Correspondent Name: DEPARTMENT OF THE AIR FORCE        Address Line 1: AFMC LO/JAZ        Address Line 2: BLdg 11, Room D18        Address Line 4: WRIGHT-PATTERSON AFB, OHIO 45433-7109</p>													
ATTORNEY DOCKET NUMBER:	AFD 961B												
NAME OF SUBMITTER:	Charles R. Figer, Jr.												

CH \$40.00 13731157

Total Attachments: 5

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**PATENT**

**REEL: 029545 FRAME: 0878**

### ASSIGNMENT

WHEREAS I, Dean R. Evans, while employed by the Government of the United States, made jointly with Gary Cook, Anatoly Gluschenko, and Victor Yu Reshetnyak an invention entitled Nanoparticle Doped Hybrid Photorefractives, described in an application for Letters Patent of the United States having Application Serial number 12/214,294, filed June 12, 2008;

WHEREAS, the conditions under which the joint invention was made are such as to entitle the Government under paragraph 1(a) of Executive Order 10096, to my entire right, title and interest therein, including foreign rights; and

NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the premises and other valuable consideration, I have sold, assigned, and transferred, and by these presents do sell, assign, and transfer unto the Government of the United States, as represented by the Secretary of the Air Force, my entire right, title and interest throughout the world in and to the aforesaid joint invention described in the aforesaid application for Letters Patent of the United States, and any and all applications for patent and patents in any and all countries foreign to the United States, and all Letters Patent issuing thereon and any continuations, continuations-in-part, divisions, and reissues or extensions thereof; and all priority resulting from the filing of the aforesaid application for patent in the United States; I hereby authorize and request any official whose duty it is to issue patents to issue any patent thereon to the United States of America, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made; and I hereby agree to execute any and all applications for Letters Patent, and to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that I shall not be subject to any out-of-pocket expense relative to such action.

Dean R. Evans 21 Jan 2009  
(signature of inventor) (date)

SUBSCRIBED AND ACKNOWLEDGED before me this 21<sup>st</sup> day of January, 2008, at the city of WPAFB in the County of Greene and State of Ohio

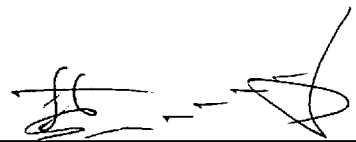
Amelia Carpenter  
Notary Public

AMELIA CARPENTER  
Notary Public  
My Commission Expires July 18, 2009

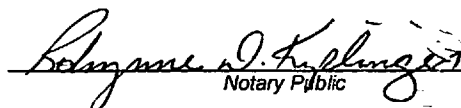
## ASSIGNMENT

WHEREAS I, Anatoly Gluschenko, a professor of the University of Colorado at Colorado Springs, while performing work for the Government of the United States, made jointly with Gary Cook, Dean R. Evans, and Victor Yu Reshetnyak an invention entitled Nanoparticle Doped Hybrid Photorefractives, described in an application for Letters Patent of the United States having Application Serial number 12/214,294, filed June 12, 2008;

NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the premises and other valuable consideration, I have sold, assigned, and transferred, and by these presents do sell, assign, and transfer unto the Government of the United States, as represented by the Secretary of the Air Force, my entire right, title and interest throughout the world in and to the aforesaid joint invention described in the aforesaid application for Letters Patent of the United States, and any and all applications for patent and patents in any and all countries foreign to the United States, and all Letters Patent issuing thereon and any continuations, continuations-in-part, divisions, and reissues or extensions thereof, subject to the reservation by the University of Colorado of a license to which the University may be entitled under an agreement with the U.S. Government in which the invention was made; and all priority resulting from the filing of the aforesaid application for patent in the United States; I hereby authorize and request any official whose duty it is to issue patents to issue any patent thereon to the United States of America, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made; and I hereby agree to execute any and all applications for Letters Patent, and to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that I shall not be subject to any out-of-pocket expense relative to such action.

 Dec. 8, 2008  
(signature of inventor) (date)

SUBSCRIBED AND ACKNOWLEDGED before me this 8<sup>th</sup> day of December 2008, at the city of Colorado Springs in the County of El Paso and State of Colorado.

  
Notary Public

# ASSIGNMENT

WHEREAS I, Victor Yu Reshetnyak, a professor of the University of Kyiv, while performing work for the Government of the United States, made jointly with Gary Cook, Dean R. Evans, and Anatoly Gluschenko an invention entitled Nanoparticle Doped Hybrid Photorefractives, described in an application for Letters Patent of the United States having Application Serial number 12/214,294, filed June 12, 2008;

NOW, THEREFORE, to all whom it may concern, be it known that for and in consideration of the premises and other valuable consideration, I have sold, assigned, and transferred, and by these presents do sell, assign, and transfer unto the Government of the United States, as represented by the Secretary of the Air Force, my entire right, title and interest throughout the world in and to the aforesaid joint invention described in the aforesaid application for Letters Patent of the United States, and any and all applications for patent and patents in any and all countries foreign to the United States, and all Letters Patent issuing thereon and any continuations, continuations-in-part, divisions, and reissues or extensions thereof, subject to the reservation by the University of Kyiv of a license to which the University may be entitled under an agreement with the U.S. Government in which the invention was made; and all priority resulting from the filing of the aforesaid application for patent in the United States; I hereby authorize and request any official whose duty it is to issue patents to issue any patent thereon to the United States of America, as represented by the Secretary of the Air Force, and his successors, as assignee of my entire right, title and interest in and to the same, for the sole use for the full term or terms for which said patents and any continuations, continuations-in-part, divisions and reissues or extensions thereof are, or may be, granted as fully and entirely as the same would have been held by me had this Assignment not been made; and I hereby agree to execute any and all applications for Letters Patent, and to furnish all data and documents and to execute any papers which may be necessary or convenient for the preparation, filing, or prosecution of such applications, except it is understood that I shall not be subject to any out-of-pocket expense relative to such action.

Victor Yu Reshetnyak November 11, 2008  
(signature of inventor) (date)

SUBSCRIBED AND ACKNOWLEDGED before me this 11 day of November 2008, at the city of Kyiv in the County of \_\_\_\_\_ and State of Ukraine

[Signature]  
Notary Public

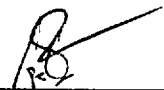
## ASSIGNMENT

Application Title: Nanoparticle Doped Hybrid Photorefractives  
Inventor: Gary Cook et al.  
Contractor: Universal Technology Corporation  
Contract Number: E33615-03-D-5801  
Appl. No. / Filing Date: 12/214,294 filed June 12, 2008 (Docket No. AFD 961)

The undersigned Inventor in recognition of their obligation as employee of the Contractor to assign inventions to the Contractor, and pursuant to the obligations of the Contractor to the Government of the United States under the above contract, hereby assigns to the United States of America, as represented by the Secretary of the Air Force, their entire right, title, and interest throughout the world in and to each invention disclosed and claimed in the above U.S. patent application, made jointly with Dean R. Evans, Anatoly Gluschenko, and Victor Yu Reshetnyak, and any substitution, division, or continuation of such patent application, subject to the reservation to the Contractor of any license to which the Contractor may be entitled under the above contract.

The Inventor agrees to assist the Contractor and the Government, upon request, by furnishing any available information and documents, performing all acts, and doing all things which may be reasonably necessary to prepare, file and prosecute such applications and make this assignment effective.

The Contractor joins in and agrees to this assignment and, except for the reservation of any license under the above contract, relinquishes and assigns to the United States of America as represented by the Secretary of the Air Force their entire right, title, and interest throughout the world in and to such inventions, and further agrees to furnish to the Government, upon request, any available information and documents necessary for the preparation, filing, and prosecution of such applications, for patent.

  
\_\_\_\_\_  
(signature of inventor) 12/2/08  
(date)

SUBSCRIBED AND ACKNOWLEDGED before me this 8<sup>th</sup> day of December, 2008, at the city of Dayton in the County of Greene and State of Ohio

  
\_\_\_\_\_  
Notary Public

AMELIA CARPENTER  
Notary Public, State of Ohio  
My Commission Expires July 18, 2009

FOR THE CONTRACTOR

Contractor: Universal Technology Corporation

By:   
(Signature of officer or agent)

Date: 12 October 2009

Printed Name: ALAN M JANISZEWSKI

Title: VP for Materials & Manufacturing

Business Address: 1270 North Fairfield Road  
Dayton OH 45432-2600