

PATENT ASSIGNMENT

Electronic Version v1.1
 Stylesheet Version v1.1

SUBMISSION TYPE:	NEW ASSIGNMENT																				
NATURE OF CONVEYANCE:	ASSIGNMENT																				
CONVEYING PARTY DATA																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 70%;">Name</th> <th style="width: 30%;">Execution Date</th> </tr> </thead> <tbody> <tr><td>Sergey A. Lamansky</td><td>07/15/2010</td></tr> <tr><td>Terry L. Smith</td><td>07/15/2010</td></tr> <tr><td>Jun-Ying Zhang</td><td>07/15/2010</td></tr> <tr><td>Leslie A. Todero</td><td>07/19/2010</td></tr> <tr><td>Encai Hao</td><td>07/20/2010</td></tr> <tr><td>Ha T. Le</td><td>07/22/2010</td></tr> <tr><td>Ding Wang</td><td>07/07/2010</td></tr> <tr><td>Fei Lu</td><td>09/01/2010</td></tr> <tr><td>Shoichi Masuda</td><td>07/05/2010</td></tr> </tbody> </table>		Name	Execution Date	Sergey A. Lamansky	07/15/2010	Terry L. Smith	07/15/2010	Jun-Ying Zhang	07/15/2010	Leslie A. Todero	07/19/2010	Encai Hao	07/20/2010	Ha T. Le	07/22/2010	Ding Wang	07/07/2010	Fei Lu	09/01/2010	Shoichi Masuda	07/05/2010
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RECEIVING PARTY DATA																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 20%;">Name:</td><td>3M INNOVATIVE PROPERTIES COMPANY</td></tr> <tr><td>Street Address:</td><td>P.O. BOX 33427</td></tr> <tr><td>City:</td><td>SAINT PAUL</td></tr> <tr><td>State/Country:</td><td>MINNESOTA</td></tr> <tr><td>Postal Code:</td><td>55133-3427</td></tr> </table>		Name:	3M INNOVATIVE PROPERTIES COMPANY	Street Address:	P.O. BOX 33427	City:	SAINT PAUL	State/Country:	MINNESOTA	Postal Code:	55133-3427										
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CORRESPONDENCE DATA																					
<p>Fax Number: (657)736-3733</p> <p><i>Correspondence will be sent via US Mail when the fax attempt is unsuccessful.</i></p> <p>Phone: 651-733-1500</p> <p>Email: amzontelli@mmm.com</p> <p>Correspondent Name: 3M INNOVATIVE PROPERTIES COMPANY</p> <p>Address Line 1: PO BOX 33427</p> <p>Address Line 4: ST. PAUL, MINNESOTA 55133-3427</p>																					

CH \$40.00 12765014

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PATENT
REEL: 024931 FRAME: 0482

ATTORNEY DOCKET NUMBER:	66081US002
NAME OF SUBMITTER:	Angela M. Zontelli
<p>Total Attachments: 12</p> <p>source=Assignment_Signed_66081US002#page1.tif</p> <p>source=Assignment_Signed_66081US002#page2.tif</p> <p>source=Assignment_Signed_66081US002#page3.tif</p> <p>source=Assignment_Signed_66081US002#page4.tif</p> <p>source=Assignment_Signed_66081US002#page5.tif</p> <p>source=Assignment_Signed_66081US002#page6.tif</p> <p>source=Assignment_Signed_66081US002#page7.tif</p> <p>source=Assignment_Signed_66081US002#page8.tif</p> <p>source=Assignment_Signed_66081US002#page9.tif</p> <p>source=Assignment_Signed_66081US002#page10.tif</p> <p>source=Assignment_Signed_66081US002#page11.tif</p> <p>source=Assignment_Signed_66081US002#page12.tif</p>	

ASSIGNMENT OF APPLICATION

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

OLED LIGHT EXTRACTION FILMS HAVING INTERNAL NANOSTRUCTURES AND EXTERNAL MICROSTRUCTURES

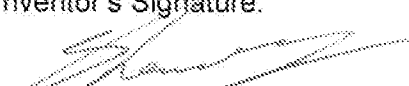


- ☐ for which an application for a United States Patent is being filed contemporaneously herewith;
- ☒ for which an application for a United States Patent identified as U.S. Patent Application No. **12/765,014**; was filed on **April 22, 2010**
- ☐ which application is identified as PCT International Patent Application No. ; filed ;




Now, therefore, for good and valuable consideration, receipt of which is acknowledged, I/we have agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly-owned subsidiary of 3M COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by me or made jointly with others (provided any such improvement is made during, or within one year after the termination of, my employment with 3M COMPANY and any of its existing or future subsidiaries), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by me/us had this assignment and transfer not been made;


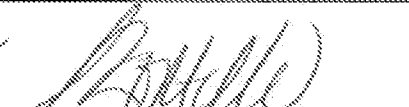
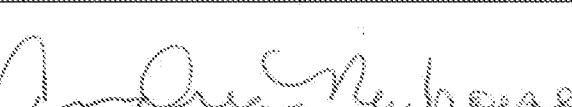
I/We do further agree for myself/ourselves and for my/our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as I/we lawfully may, that may be deemed necessary by said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries; and

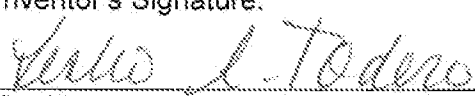
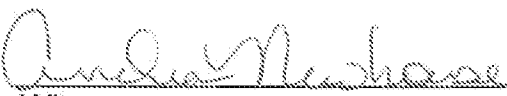

I/We do hereby authorize and request the Commissioner of Patents to issue any and all Letters Patent which may be granted upon any of the said applications, to said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

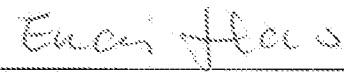


In witness whereof, I/we have signed my/our name(s) on the day and year set forth below.

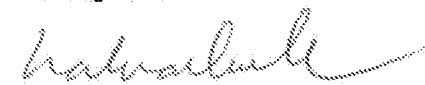
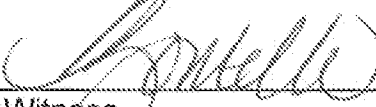
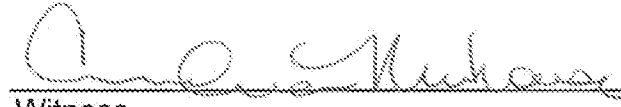
Given Name (first and middle [if any]): Sergey A.		Family Name or Surname: Lamansky	
Inventor's Signature: 		Date: 7/5/2010	
Residence: Apple Valley, Minnesota		Country: USA	Citizenship: Russian Federation
Witness 		Witness 	

Given Name (first and middle [if any]): Terry L.		Family Name or Surname: Smith	
Inventor's Signature: 		Date: 7/15/2010	
Residence: Roseville, Minnesota		Country: USA	Citizenship: United States of America
Witness 		Witness 	

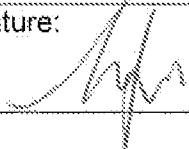

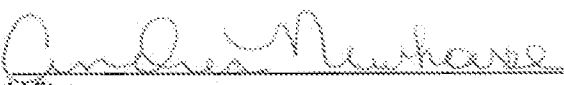
Given Name (first and middle [if any]): Jun-Ying		Family Name or Surname: Zhang	
Inventor's Signature: 		Date: 07/15/2010	
Residence: Woodbury, Minnesota		Country: USA	Citizenship: Great Britain
Witness 		Witness 	

Given Name (first and middle [if any]): Leslie A.		Family Name or Surname: Todero	
Inventor's Signature: 		Date: 07/19/2010	
Residence: West Saint Paul, Minnesota		Country: USA	Citizenship: United States of America
Witness:  Andrew Neuhause		Witness:  Kim Elstrom	

Given Name (first and middle [if any]): Encai		Family Name or Surname: Hao	
Inventor's Signature: 		Date: 07/20/2010	
Residence: Woodbury, Minnesota		Country: USA	Citizenship: People's Republic of China
Witness:  Andrew Neuhause		Witness:  Andrew Neuhause	

Given Name (first and middle [if any]): Ha T.		Family Name or Surname: Le	
Inventor's Signature: 		Date: 07/22/2010	
Residence: Saint Paul, Minnesota		Country: USA	Citizenship: United States of America
Witness:  Andrew Neuhause		Witness:  Andrew Neuhause	

Given Name (first and middle [if any]): Ding	Family Name or Surname: Wang	
Inventor's Signature:	Date:	
Residence: Austin, Texas	Country: USA	Citizenship: People's Republic of China
<div style="display: flex; justify-content: space-between;"> <div>_____ Witness</div> <div>_____ Witness</div> </div>		

Given Name (first and middle [if any]): Fei	Family Name or Surname: Lu	
Inventor's Signature: 	Date: 9/1/2010	
Residence: Woodbury, Minnesota	Country: USA	Citizenship: People's Republic of China
<div style="display: flex; justify-content: space-between;"> <div> _____ Witness</div> <div> _____ Witness</div> </div>		

Given Name (first and middle [if any]): Shoichi	Family Name or Surname: Masuda	
Inventor's Signature:	Date:	
Residence: Tokyo, Japan	Country: Japan	Citizenship: Japan
<div style="display: flex; justify-content: space-between;"> <div>_____ Witness</div> <div>_____ Witness</div> </div>		

ASSIGNMENT OF APPLICATION

Whereas I/we, the below named inventor(s), with residence and citizenship as indicated below, have made an invention in

OLED LIGHT EXTRACTION FILMS HAVING INTERNAL NANOSTRUCTURES AND EXTERNAL MICROSTRUCTURES

- ☐ for which an application for a United States Patent is being filed contemporaneously herewith;
- ☒ for which an application for a United States Patent identified as U.S. Patent Application No. 12/765,014; was filed on April 22, 2010
- ☐ which application is identified as PCT International Patent Application No. ; filed ;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, I/we have agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly-owned subsidiary of 3M COMPANY, and a corporation of Delaware, having its principal office at Saint Paul, Minnesota, its successors and assigns, the entire right, title, and interest in and to the said invention and application, and in and to any division or continuation (in whole or in part) of said application, and in and to any and all improvements in the said invention made by me or made jointly with others (provided any such improvement is made during, or within one year after the termination of, my employment with 3M COMPANY and any of its existing or future subsidiaries), and in and to any and all Letters Patent, reexaminations, reissues, or extensions thereof, of the United States of America and countries foreign thereto (including the right to apply for Letters Patent, Utility Models, or Inventors' Certificates in foreign countries in its own name and to claim any priority rights for such foreign applications to which such applications are entitled under international conventions, treaties, or otherwise), which have been or may be granted thereon or on any divisional, continuation (in whole or in part), renewal, reexamination, reissue, or other or further application based in whole or in part upon the said invention or improvements thereon, to be held and enjoyed as fully and exclusively as they would have been by me/us had this assignment and transfer not been made;

I/We do further agree for myself/ourselves and for my/our heirs, executors, and administrators, to execute and deliver without further consideration any further applications, assignments, and documents, and to perform such other acts as I/we lawfully may, that may be deemed necessary by said Company, its successors, assigns, and nominees, fully to secure its right, title, and interest as aforesaid and to obtain or maintain Letters Patent, Utility Models, or Inventors' Certificates in any and all countries; and

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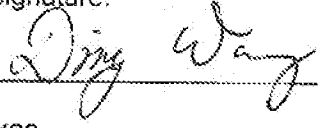

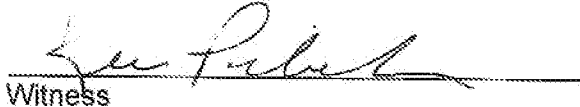
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Residence: Roseville, Minnesota	Country: USA	Citizenship: United States of America
Witness		Witness

Given Name (first and middle [if any]): Jun-Ying	Family Name or Surname: Zhang	
Inventor's Signature:	Date:	
Residence: Woodbury, Minnesota	Country: USA	Citizenship: Great Britain
Witness		Witness

Given Name (first and middle [if any]): Leslie A.		Family Name or Surname: Todero	
Inventor's Signature:		Date:	
Residence: West Saint Paul, Minnesota		Country: USA	Citizenship: United States of America
<div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%;"> _____ Witness </div> <div style="width: 45%;"> _____ Witness </div> </div>			

Given Name (first and middle [if any]): Encal		Family Name or Surname: Hao	
Inventor's Signature:		Date:	
Residence: Woodbury, Minnesota		Country: USA	Citizenship: People's Republic of China
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Residence: Woodbury, Minnesota		Country: USA	Citizenship: People's Republic of China
Witness		Witness	

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Inventor's Signature:		Date:	
Residence: Tokyo, Japan		Country: Japan	Citizenship: Japan
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Inventor's Signature:	Date:	
Residence: Apple Valley, Minnesota	Country: USA	Citizenship: Russian Federation
 _____ Witness		
 _____ Witness		

Given Name (first and middle [if any]): Terry L.	Family Name or Surname: Smith	
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Given Name (first and middle [if any]): Encal		Family Name or Surname: Hao	
Inventor's Signature:		Date:	
Residence: Woodbury, Minnesota		Country: USA	Citizenship: People's Republic of China
<div style="display: flex; justify-content: space-between; margin-top: 20px;"> <div style="width: 45%; border-top: 1px solid black; text-align: center;">Witness</div> <div style="width: 45%; border-top: 1px solid black; text-align: center;">Witness</div> </div>			

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Inventor's Signature:	Date:	
Residence: Austin, Texas	Country: USA	Citizenship: People's Republic of China
<div style="display: flex; justify-content: space-between;"> <div>_____ Witness</div> <div>_____ Witness</div> </div>		

Given Name (first and middle [if any]): Fei	Family Name or Surname: Lu	
Inventor's Signature:	Date:	
Residence: Woodbury, Minnesota	Country: USA	Citizenship: People's Republic of China
<div style="display: flex; justify-content: space-between;"> <div>_____ Witness</div> <div>_____ Witness</div> </div>		

Given Name (first and middle [if any]): Shoichi	Family Name or Surname: Masuda	
Inventor's Signature: <i>Shoichi Masuda</i>	Date: <i>July 5, 2010</i>	
Residence: Tokyo, Japan	Country: Japan	Citizenship: Japan
<div style="display: flex; justify-content: space-between;"> <div><i>Niddu Minami</i> _____ Witness</div> <div><i>John A. [Signature]</i> _____ Witness</div> </div>		