CH \$40.00 133723 11192655

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1. Name of conveying party(les) Duncan, John E. O'Keefe, Michael W. Phillips, William E. October 7, 2005 Ma, Jiaying Destain, Patrick R. Additional name(s) of conveying party(les) attached? Yes ☑ No 3. Nature of conveyance: ☑ Assignment ☐ Government ☐ Change of Name ☐ Joint Research Agreement ☐ Other: 4. Application or patent number(s) ■ Application No(s). ■ Augustive Properties Company P.O. Box 33427 St. Paul, Minnesota 55133-3427 Additional name(s) of receiving party(les) attached? Yes ☑ No □ Yes ☑ No ■ This document is being filed together with a new application. B. Patent No(s).	
Duncan, John E. October 7, 2005 O'Keefe, Michael W. October 7, 2005 Phillips, William E. October 7, 2005 Ma, Jiaying October 7, 2005 Destain, Patrick R. October 6, 2005 Additional name(s) of conveying party(ies) attached? Yes No Nature of conveyance: Assignment	
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A. Patent Application No(s). B. Patent No(s). 11/192655	
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5. Name and address to whom correspondence concerning document should be mailed: Name: George W. Jonas Office of Intellectual Property Counsel 6. Total number of applications and patents involved: 1	
3M Innovative Properties Company	40.00
Authorized User Name: George W. Jonas	
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PATENT REEL: 018631 FRAME: 0113

Case No.: 61015US002

ASSIGNMENT OF APPLICATION

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

POLARIZING BEAM SPLITTER
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. 11/192655; was filed on July 29, 2005;
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:

IWe 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.

Witness Jack Light	Witness Witness	S
Amelia, Ohio	Country: USA	Citizenship: United States of America
Inventor's Signature:	Date: 10-07-05	
Given Name (first and middle [if any]): John E.	Family Name or Surname: Duncan	

PATENT REEL: 018631 FRAME: 0114

Given Name (first and middle [if any]);	Family Name or Surr	name:
Michael W.	O'Keefe	
Inventor's Signature	Date:	
MILWAN	10-7-0) (
Residence:	Country:	Citizenship:
Cincinnati, Ohio	USA	United States of America
Witness Witness	Witness	<u>G</u> —
Chan Name Wink and middle Fit and IV	I E	
Given Name (first and middle [if any]): William E.	Family Name or Surr Phillips	ame:
Inventor's Signature:	Date:	/
Walter Offitto	10/2/	25
Residence:	Country:	Citizenship:
Cincinnati, Ohio	USA	United States of America
Witness Witness	Witness (leften
Given Name (first and middle [if any]):	Family Name or Surn	ame:
Jiaying	Ma	
Inventor's Signature:	Date:	
Residence:	Country:	Citionalia
Maplewood, Minnesota	USA	Citizenship: People's Republic of China
Witness	Witness	
Given Name (first and middle [if any]): Patrick R.	Family Name or Surn Destain	ame:
Inventor's Signature:	Date: 0/06	
Residence: Loveland, Offic	Country: / USA	Citizenship: Belgium
	· · · · · · · · · · · · · · · · · · ·	
Withess	Witness	

PATENT REEL: 018631 FRAME: 0115

Given Name (first and middle [if any]): Michael W.	Family Name or Surname: O'Keefe	
Inventor's Signature:	Date:	
Residence: Cincinnati, Ohio	Country: USA	Citizenship: United States of America
Witness	Witness	
Given Name (first and middle [if any]): William E.	Family Name or Surname: Phillips	
Inventor's Signature:	Date:	
Residence: Cincinnati, Ohio	Country: USA	Cltizenship: United States of America
Witness	Witness	
Given Name (first and middle [if any]):	Family Name or Surname:	
Jiaying	Ma 	
Jiaying Inventor's Signature:	Ma Date: (0/07)	12005
Jiaying	Ma Date:	Citizenship: People's Republic of China
Jiaying Inventor's Signature: Residence:	Ma Date: (0/07) Country:	Citizenship:
Inventor's Signature: Residence: Maplewood, Minnesota Withess Withess	Ma Date: Country: USA Witness	Citizenship:
Inventor's Signature: Residence: Maplewood, Minnesota Withess Given Name (first and middle [if any]): Patrick R.	Ma Date: Country: USA	Citizenship:
Inventor's Signature: Residence: Maplewood, Minnesota Withess Given Name (first and middle [if any]):	Ma Date: Country: USA Witness Family Name or Surname:	Citizenship:
Inventor's Signature: Residence: Maplewood, Minnesota Withess Given Name (first and middle [if any]): Patrick R.	Ma Date: Country: USA Witness Family Name or Surname: Destain	Citizenship:
Jiaying Inventor's Signature: Residence: Maplewood, Minnesota Withess Given Name (first and middle [if any]): Patrick R. Inventor's Signature: Residence:	Ma Date: Country: USA Witness Family Name or Surname: Destain Date: Country:	Citizenship: People's Republic of China Citizenship:

PATENT REEL: 018631 FRAME: 0116_____

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Date: December 13, 2006

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Phone: 571-272-3350

Re: U.S. Application No. 11/192655

Fax No. 571-273-0140

From: George W. Jonas

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Our Case No.: 61015US002

Fax No. 651-736-3833

PATENT

REEL: 018631 FRAME: 0117

RECORDED: 12/13/2006