

Docket No. 54789USA1A

PATENT ASSIGNMENT REC	L.	
To: The Commissioner of Patents and Tra 10159	3800	<u>و</u>
Please record the attached original document or copy thereot.		<u> </u>
Submission Type:	Conveyance Type:	. <b>4</b> = 0
New		25.5
Resubmission (Non-Recordation):	Assignment	
Document ID#		25 <b>25</b> 10
Correction of PTO Error: Reel # Frame #	Other:	y and a
Corrective Document: Reel # Frame #		
Name of conveying party(ies) Execution Date	Name and address of receiving	ισ nartv(ies):
(Month/Day/Year)	Traine and address of receive	.g party (100).
Geoffrey P. Morris 11/10/99	3M Innovative Properties Co	mnanv
Jacqeline C. Rolfs 11/10/99	P.O. Box 33427	
Leo A. Meyer 11/5/99	St. Paul, Minnesota 55133-34	<b>1</b> 27
Robert S. Moshrefzadeh 11/11/99	50, 2 au, 11111165000 55255	· <b>-</b> /
Hsin-Hsin Chou 11/8/99		
Billy J. Tompkins 11/8/99	,	
Thomas N. Davis 11/8/99	9/154429	
Additional names of conveying party(ies) attached?	9/154421	
☐ Yes ⊠ No	1	
Application number or patent number:		
This document is being filed with a new patent application	n on	
This document is to be recorded against the following pate	ent application or patent: 09/311	909
Patent Cooperation Treaty (PCT):		
Enter PCT application number only if a U.S. Application Nun	iber has <u>not</u> been assigned:	
Name and address of party to whom correspondence conc		iled:
Name: William D. Miller, Phone Number: 651/733-664	9	
Office of Intellectual Property Counsel	-	
3M Innovative Properties Company		
P.O. Box 33427		
St. Paul, Minnesota 55133-3427		
Number of Properties:		
	umber of properties involved	1
Fee Amount:	uniber of properties involved	•
	operties Listed (37 CFR 3.41)	X \$40.00
ree Amount for Tre	speriles Listed (57 CFR 5.41)	2κ φτο.σο
Mathad of Doumants	Deposit Account No. <u>13-3723</u>	= \$40.00
Method of Payment: ⊠ Charge to  Authorization to charge addi		- 540.00
DO NOT USE TH		
DO NOT USE 1H.	IS SPACE	
Statement and signature		
To the best of my knowledge and belief, the foregoing information		
true copy of the original document. Charges to deposit account	nt are authorized, as indicated he	rein.
1. 1511 ( M. A.		
William D. Miller WWL Juput	November 12, 199	99
Printed Name of Attorney Signature /	Date	www.ining.com
Pages:		
Total number of pages of the attached conveyance do	ocument including any attachmen	nts 12

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents & Trademarks, Box Assignments, Washington, D.C. 20231
q:3mipco forms and samples\assignment recordation cover sheet.doc 4/28/99

00000198 133723 09756429 01/25/2001 DBYRNE 40.00 CH 01 FC:581

#### ASSIGNMENT

Whereas we, the below named inventors, with residences and citizenships as indicated below; have made an invention in

### GLASS MICROSPHERES FOR USE IN REAR PROJECTION SCREEN DISPLAYS AND **METHODS**

and have executed an application for Letters Patent of the United States of America based thereon; which application is identified in the United States Patent and Trademark Office as U.S. Application Serial No. 09/311,909, filed May 14, 1999;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, we have individually and jointly agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly owned subsidiary of MINNESOTA MINING AND MANUFACTURING 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 us or any of us or made jointly with others (provided any such improvement is made during, or within one year after the termination of, the employment by Minnesota Mining and Manufacturing Company and any of its existing or future subsidiaries of whichever of us, solely or jointly with one or more others, has made the same), 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 us or any of us had this assignment and transfer not been made,

We do further agree for ourselves and for 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 we lawfully may, that may be deemed necessary by the 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 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 the said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

Geoffrey P. Morris
Residence:

Residence: White Bear Lake, MN

Citizenship: USA

STATE OF MINNESOTA )

COUNTY OF RAMSEY
On this \_\_\_\_\_\_\_ day of Mucmber 1997, before me personally appeared the above-named Geoffrey P. Morris, personally known by me, and known by me to be the person described in and who executed the foregoing instrument, and who acknowledged that said person executed the same as said person's free act and deed, on the day and year aforesaid.

PATRICIA L. SAMES ROTARY PUBLIC - MINNESOTA WASHINGTON COUNTY My Comm. Expires Jan. 31,

Patricia Dames

**Notary Public** 

	Darqueline C	<b>つし</b> (///>	o. 54789USA1A
(	Incqueline C. Rolfs Residence: River Falls, W	0	
STATE OF MINNESOTA )	Citizenship: USA		
) ss.	d the foregoing instrument, as	n by me, and known in the modern of the mode	by me to be the
(SATIRICIA L. SAMES )	Patricia 1	Souls	
WASHINGTON COUNTY			Notary Public
my collin. Explanation and the same and the	Leo Meyer Residence: St. Paul, MN Citizenship: USA		
STATE OF MINNESOTA ) ) ss.			
COUNTY OF RAMSEY ) On this 5 day	of November	19 <u>9</u> , before	e me personally
appeared the above-named Leo Mey described in and who executed the for the same as said person's free act and	egoing instrument, and who a	cknowledged that said	o be the person person executed
Scapatricia L. Sames	Patricia &	ame	
MOTARY PUBLIC - MINNESOTA WASHINGTON COUNTY My Comm. Expires Jan. 31, 2000			Notary Public
	Robert S. Moshrefzadeh		
	Residence: Oakdale, MN Citizenship: USA		
STATE OF MINNESOTA )	•		•
COUNTY OF RAMSEY () On this // day	of Movember	19 <b>99</b> , befor	e me personally
appeared the above-named Robert S. person described in and who execute executed the same as said person's fre	Moshrefzadeh, personally kno d the foregoing instrument, a	own by me, and knowr nd who acknowledged	by me to be the
PATRICIA L. SAMES \$	Satricia &	Mulh	
MOTARY PUBLIC - MINNESOTA WASHINGTON COUNTY My Cornm. Expires Jan. 31, 2000	inviving of	100000	Notary Public

		Him Lan Chore	Docket No. 54789USA1A
		Hsin-Hsin Chou	
		Residence: Woodbury, MN	
		Citizenship: USA	
STATE OF MINNESOTA	. )	•	
	) ss.		
COUNTY OF RAMSEY	)		
On this $8^{79}$	day	of Muember	1999 before me personally
	Hsin-Hsin	Chou, personally known by me, an	d known by me to be the person
		egoing instrument, and who acknow	
		deed, on the day and year aforesaid.	
•			
S-RATRICIA L. SAMES	<b>.</b>	Patricia Isar	uls
WASHINGTON COUNTY	<b>§</b>		Notary Public
My Comm. Expires Jan, 31, 2000	, <b>{</b>		2 · · · · · · · · · · · · · · · · · · ·
***************************************	•		
		Billy J. Tompkins	
		Residence: Russelville, AL	
		Citizenship: USA	
STATE OF ALABAMA	)		
	) ss.		
COUNTY OF	_ )		
On this	dav	of	_ 19, before me personally
		mpkins, personally known by me, ar	nd known by me to be the person
described in and who execu	uted the for	egoing instrument, and who acknow	dedged that said person executed
the same as said person's fi	ree act and	deed, on the day and year aforesaid.	rougou chair said porson checutou
•		, y y	
(Seal)			_

Notary Public

	Thomas N.	Davis		
	Residence:	Fayette, AL		
	Citizenship	USA		
STATE OF ALABAMA )	-			
) ss.				
COUNTY OF)				
On this da	y of		19	_, before me personally
appeared the above-named Thomas 1	N. Davis, perso	nally known by	me, and knov	wn by me to be the persor
described in and who executed the fo				that said person executed
the same as said person's free act and	i deed, on the d	ay and year afo	resaid.	
(Seal)				
(SCAI)	<del></del>			Notary Public

### ASSIGNMENT

Whereas we, the below named inventors, with residences and citizenships as indicated below; have made an invention in

# GLASS MICROSPHERES FOR USE IN REAR PROJECTION SCREEN DISPLAYS AND METHODS

and have executed an application for Letters Patent of the United States of America based thereon; which application is identified in the United States Patent and Trademark Office as U.S. Application Serial No. 09/311,909, filed May 14, 1999;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, we have individually and jointly agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly owned subsidiary of MINNESOTA MINING AND MANUFACTURING 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 us or any of us or made jointly with others (provided any such improvement is made during, or within one year after the termination of, the employment by Minnesota Mining and Manufacturing Company and any of its existing or future subsidiaries of whichever of us, solely or jointly with one or more others, has made the same), 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 us or any of us had this assignment and transfer not been made,

We do further agree for ourselves and for 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 we lawfully may, that may be deemed necessary by the 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 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 the said 3M Innovative Properties Company, as the assignee of the entire right, title, and interest therein.

		Geoffrey P. 1	Morris				
		Residence: Citizenship:	White Bea	r Lake, MN			
STATE OF MINNESOTA	_	•					
COUNTY OF RAMSEY	) ss. )						
On thisappeared the above-named person described in and where executed the same as said p	ho executed	the foregoing	g instrumen	it, and who	ackno	wledged that	e personally ne to be the said person
(Seal)						No	otary Public

m-j/061198

	Jacqueline C. Rolfs Residence: River Falls, WI Citizenship: USA
STATE OF MINNESOTA )	· · · · · · · · · · · · · · · · · · ·
COUNTY OF RAMSEY )	
appeared the above-named Jacqueline person described in and who executed	of
(Seal)	Nices Public
	Notary Public
	Leo Meyer Residence: St. Paul, MN Citizenship: USA
STATE OF MINNESOTA ) ss.	
COUNTY OF RAMSEY )	
	er, personally known by me, and known by me to be the person going instrument, and who acknowledged that said person executed
(Seal)	Notary Public
appeared the above-named Robert S. M. person described in and who executed	Robert S. Moshrefzadeh Residence: Oakdale, MN Citizenship: USA  of
(Seal)	Notary Public

	Hsin-Hsin Chou
	Residence: Woodbury, MN
	Citizenship: USA
STATE OF MINNESOTA )	F. 2.2.2
) s	S.
COUNTY OF RAMSEY )	
On this	day of 19, before me personally
appeared the above-named Hs	in-Hsin Chou, personally known by me, and known by me to be the personal
described in and who executed	the foregoing instrument, and who acknowledged that said person executed
the same as said person's free a	act and deed, on the day and year aforesaid.
and the same person s need	ist and dood, on the day and year aforesaid.
(Seal)	
	Notary Public
	·
	0.4 1
	Belly Gall Voryline
	Residence: Russelville, AL
	Citizenship: USA
STATE OF ALABAMA )	
) s	S.
COUNTY OF Marion )	
On this 8th	day of November 1999, before me personally
appeared the above-named Bill	y J. Tompkins, personally known by me, and known by me to be the person
lescribed in and who executed	the foregoing instrument, and who acknowledged that said person executed
he same as said person's free a	ct and deed, on the day and year aforesaid.
• • • • • • • • • • • • • • • • • • •	,
•	
•	$(\mathcal{O}, \Lambda, \mathcal{O}, \Lambda)$
Seal)	Barbara Lelley
	Notary Public

		Thomas N.	Davis				
		Residence: Citizenship:	Fayette, AL USA				
STATE OF ALABAMA	) ) ss.	•					
COUNTY OF	_ )	,					
On thisappeared the above-named described in and who exect the same as said person's f	d Thomas N. cuted the fore	Davis, person going instrun	nally known by nent, and who	y me, and acknowle	known	by me to	be the person
(Seal)						N	otary Public

### **ASSIGNMENT**

Whereas we, the below named inventors, with residences and citizenships as indicated below; have made an invention in

## GLASS MICROSPHERES FOR USE IN REAR PROJECTION SCREEN DISPLAYS AND METHODS

and have executed an application for Letters Patent of the United States of America based thereon; which application is identified in the United States Patent and Trademark Office as U.S. Application Serial No. 09/311,909, filed May 14, 1999;

Now, therefore, for good and valuable consideration, receipt of which is acknowledged, we have individually and jointly agreed to assign and transfer and do hereby assign and transfer unto the 3M INNOVATIVE PROPERTIES COMPANY, a wholly owned subsidiary of MINNESOTA MINING AND MANUFACTURING 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 us or any of us or made jointly with others (provided any such improvement is made during, or within one year after the termination of, the employment by Minnesota Mining and Manufacturing Company and any of its existing or future subsidiaries of whichever of us, solely or jointly with one or more others, has made the same), 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 us or any of us had this assignment and transfer not been made.

We do further agree for ourselves and for 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 we lawfully may, that may be deemed necessary by the 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 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 the said 3M Innovative Properties Company, as the assignce of the entire right, title, and interest therein.

		Geoffrey P.			
		Residence:	White Bear Lake, l	MN	
		Citizenship:	USA		
STATE OF MINNESOTA	)	-			
	) ss.				
COUNTY OF RAMSEY	)				
On this	day	of		19	, before me personally
appeared the above-named person described in and whe executed the same as said p	Geoffrey F no executed	P. Morris, pe the foregoing	rsonally known by g instrument, and w	me, and k ho acknow	nown by me to be the ledged that said person
(Seal)					
(Cour)					Notary Public

3M Office of Intellectual Property Counsel, P.O. Box 33427, St. Paul, Minnesota 55133-3427 U.S.A.

m-j/061198

	Jacqueline C. Rolfs Residence: River Falls, WI Citizenship: USA	
STATE OF MINNESOTA )	Citizenship. USA	•
COUNTY OF RAMSEY ) ss.		
On this day appeared the above-named Jacquelin person described in and who executed executed the same as said person's free	e C. Rolfs, personally known by me I the foregoing instrument, and who	acknowledged that said person
(Seal)		Notary Public
	Leo Meyer Residence: St. Paul, MN	
STATE OF MINNESOTA ) ) ss.	Citizenship: USA	
On this day	of	19 , before me personally
appeared the above-named Leo Mey described in and who executed the for the same as said person's free act and	er, personally known by me, and kn egoing instrument, and who acknowle	nown by me to be the person
(Seal)		Notary Public
STATE OF MINNESOTA )  ) ss.  COUNTY OF RAMSEY )  On this day appeared the above-named Robert S. I person described in and who executed executed the same as said person's free	Moshrefzadeh, personally known by n I the foregoing instrument, and who	acknowledged that said person
(Seal)		Notary Public

		Hsin-Hsin Chou	
		Residence: Woodbury, MN	
		Citizenship: USA	
STATE OF MINNESOTA		Chizensing. Obit	
	) ss.		
COUNTY OF RAMSEY	) 55. \		
	,		
On this	day	y of Chou, personally known by me, a	19, before me personally
appeared the above-named	i Hsin-Hsin	i Chou, personally known by me, a	nd known by me to be the person
		regoing instrument, and who ackno	
he same as said person's f	ree act and	deed, on the day and year aforesaid	I.
,		,, ,	
(Seal)		•	
Sear			Note: Dublic
			Notary Public
		Billy J. Tompkins	
		Residence: Russelville, AL	
		Citizenship: USA	
STATE OF ALABAMA	`	Citizensinp. OBA	
COUNTY OF	) ss.		
COUNTY OF	_ )		
On this	day	y of	19 before me personally
inneared the above-named	Billy I To	mnkins personally known by me	and known by me to be the person
lescribed in and who exec	nted the for	regoing instrument, and who ackno	wledged that said person executed
ne same as sam person s i	ree act and	deed, on the day and year aforesaid	1.
Seal)			
•			Notary Public

		Thomas	2. Dave	۵	
		Thomas N. Davis			
		Residence: Fayett	e, AL		
		Citizenship: USA			
STATE OF ALABAMA	)	-			
	) ss.				
COUNTY OF Marion	_ )			•	
On this $8^{tt}$	day	of November	~	19 99, before	e me personally
appeared the above-name	d Thomas N	Davis, personally k	nown by me, and	known by me	to be the persor
described in and who exec					
the same as said person's					-
-		•			
•"•					
		0.1	Q _ 00		
(Seal)		Barbara	Delley		
-					Notary Public
•			U	•	

m-j/061198