

REC



102099350

To: The Honorable Commissioner of Patents and Trademarks
Please record the attached original document(s) or copy thereof.

1. Name of conveying party(ies)/(Execution Date)

Christopher C. Bowley 03/29/02
Marc Dudley Radcliffe 04/18/02
Prabhakara Satyauolu Rao 04/18/02
Philip Edwin Watson 05/01/02
Ikuko Ebihara 04/18/02
Gregory Edward Gilligan 04/18/02
Richard John Pokorny 04/18/02

5.20.02

Additional names of conveying party(ies) attached?
 Yes No

Name and address of receiving party(ies):

3M Innovative Properties Company
P.O. Box 33427
St. Paul, Minnesota 55133-3427

3. Nature of Conveyance:

Assignment Merger
 Security Agreement Change of Name
 Other: Correction of Assignee name Ikuko Ebihara
 A copy of the previously recorded assignment (Reel 012462, Frame 0330) and the previous Notice of Recordation is enclosed.

Additional names of receiving party(ies) attached?
 Yes No

4. Application number or patent number:

This document is being filed with a new patent application on: _____
 This document is to be recorded against the following patent application or patent: 09/957,724

Patent Cooperation Treaty (PCT):
Enter PCT application number only if a U.S. Application Number has not been assigned: _____

Additional Numbers Attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Bruce E. Black
Office of Intellectual Property Counsel
3M Innovative Properties Company
P.O. Box 33427
St. Paul, Minnesota 55133-3427

Phone Number:

6. Total number of applications and patents involved:

1

7. Total fee (37 CFR 3.41)

\$40.00

Enclosed
 Authorized to be charged to deposit account

8. Deposit Account Number: 13-3723

DO NOT USE THIS SPACE

9. Statement and Signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Bruce E. Black
Printed Name of Attorney/Agent
Registration No. 41,622

[Signature]
Signature

May 2, 2002
Date

Pages: Total number of pages including COVER SHEET, attachments and documents:

4

Mail documents to be recorded with required cover sheet information to:
Commissioner for Patents, Box Assignments, Washington, DC 20231

MKD
1.9.02

01-11-2002
101951384

Docket No. 56477US002

To: The Honorable Commissioner of Patents and Trademarks
Please record the attached original document(s) or copy thereof.

1. Name of conveying party(ies)/(Execution Date)

Christopher C. Bowley	11/8/01
Ebihara Ikuko	11/7/01
Gregory Edward Gilligan	11/7/01
Richard John Pokorny	11/7/01
Marc Dudley Radcliffe	11/7/01
Prabhakara Satyauolu Rao	11/7/01
Philip Edwin Watson	11/2/01

Additional names of conveying party(ies) attached?
 Yes No

Name and address of receiving party(ies):

3M Innovative Properties Company
P.O. Box 33427
St. Paul, Minnesota 55133-3427

3. Nature of Conveyance:

<input checked="" type="checkbox"/> Assignment	<input type="checkbox"/> Merger
<input type="checkbox"/> Security Agreement	<input type="checkbox"/> Change of Name
<input type="checkbox"/> Other:	<input type="checkbox"/>

If this is a request for correction of a previously recorded document, a copy of the previously recorded assignment and previous Notice of Recordation is enclosed.

Additional names of receiving party(ies) attached?
 Yes No

RECEIVED
JAN - 9 2002

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This document is being filed with a new patent application on: _____

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Patent Cooperation Treaty (PCT):
Enter PCT application number only if a U.S. Application Number has not been assigned: _____

Additional Numbers Attached? Yes No

5. Name and address of party to whom correspondence concerning document should be mailed:

Name: Bruce E. Black
Office of Intellectual Property Counsel
3M Innovative Properties Company
P.O. Box 33427
St. Paul, Minnesota 55133-3427

Phone Number: 651-736-3366

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41) \$40.00

Enclosed
 Authorized to be charged to deposit account

8. Deposit Account Number: 13-3723

DO NOT USE THIS SPACE

9. Statement and Signature

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document. Charges to deposit account are authorized, as indicated herein.

Bruce E. Black
Printed Name of Attorney/Agent
Registration No. 41,622

Bruce E. Black
Signature

Dec. 3, 2001
Date

Pages: Total number of pages including COVER SHEET, attachments and documents: _____

Mail documents to be recorded with required cover sheet information to:
Commissioner for Patents, Box Assignments, Washington, DC 20231

(Form PTO-1595 - Modified from PTO's Rev 03/01)
q:\3mipco forms and samples\assignment recordation cover sheet - inventors to company - new.doc 4/26/01

01/16/2002 DBYRNE 00000059 133723 09957724
01 FC:581 40.00 CH

PATENT
REEL: 012908 FRAME: 0451

ASSIGNMENT

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

CHOLESTERIC LIQUID CRYSTAL OPTICAL BODIES AND METHODS OF MANUFACTURE AND USE

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. 09/957,724, filed September 21, 2001;

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.

Christopher C. Bowley
Residence: Somerville, MA, USA
Citizenship: South African

STATE OF MASSACHUSETTS
COUNTY OF Suffolk

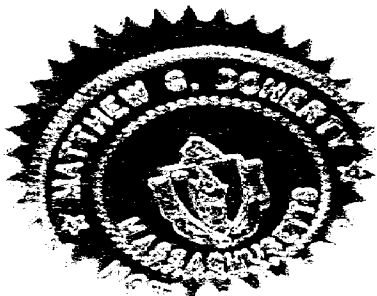
)
) ss.
)

On this 29th day of March, 2002, before me personally appeared the above-named Christopher C. Bowley, 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.

(Seal)

Matthew G. Doherty
Notary Public

MATTHEW G. DOHERTY
NOTARY PUBLIC
My Commission Expires May 14, 2004



Marc Dudley Radcliffe
Marc Dudley Radcliffe
Residence: Newport, MN, USA
Citizenship: United States of America

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 18th day of April, 2002, before me personally appeared the above-named Marc Dudley Radcliffe, 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.

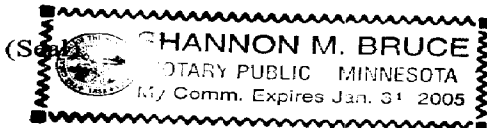


Shannon M. Bruce
Notary Public

Prabhakara S. Rao
Prabhakara Satyauolu Rao
Residence: Maplewood, MN, USA
Citizenship: United States of America

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 18th day of April, 2002, before me personally appeared the above-named Prabhakara Satyauolu Rao, 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.



Shannon M. Bruce
Notary Public

Philip Edwin Watson
Philip Edwin Watson
Residence: Oakdale, MN, USA
Citizenship: United States of America

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 1st day of May, 2002, before me personally appeared the above-named Philip Edwin Watson, 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.



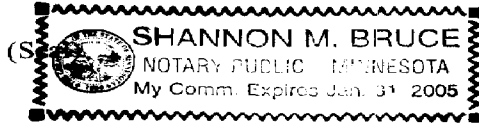
Shannon M. Bruce
Notary Public

Ikuko Ebihara

Ikuko Ebihara
Residence: St. Paul, MN, USA
Citizenship: Japanese

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 18th day of April, 2002, before me personally appeared the above-named Ikuko Ebihara, 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.



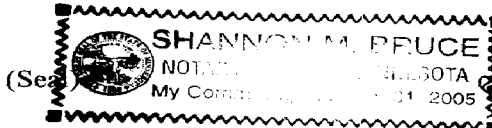
Shannon M. Bruce
Notary Public

Gregory E Gilligan

Gregory Edward Gilligan
Residence: Hastings, MN, USA
Citizenship: United States of America

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 18th day of April, 2002 before me personally appeared the above-named Gregory Edward Gilligan, 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.



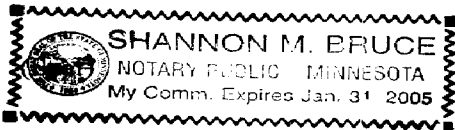
Shannon M. Bruce
Notary Public

Richard John Pokorny

Richard John Pokorny
Residence: Maplewood, MN, USA
Citizenship: United States of America

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 18th day of April, 2002 before me personally appeared the above-named Richard John Pokorny, 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.



Shannon M. Bruce
Notary Public

ASSIGNMENT

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

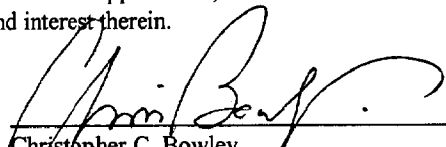
**CHOLESTERIC LIQUID CRYSTAL OPTICAL BODIES
AND METHODS OF MANUFACTURE AND USE**

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. 09/957,724, filed September 21, 2001;

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.



Christopher C. Bowley
Residence: Somerville, MA, USA
Citizenship: South African

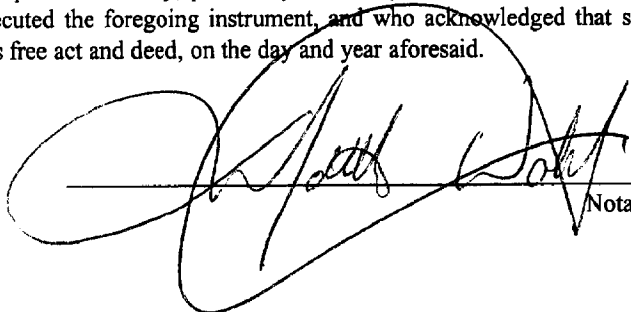
STATE OF MASSACHUSETTS)

COUNTY OF Suffolk)

ss.

On this 8th day of November, 2001, before me personally appeared the above-named Christopher C. Bowley, 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.

(Seal)



Notary Public

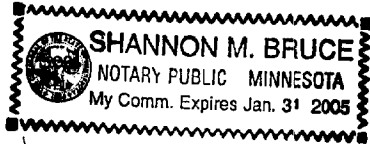
**MATTHEW G. DOHERTY
NOTARY PUBLIC
My Commission Expires May 14, 2004**

Ikuko Ebihara

Ebihara Ikuko
Residence: St. Paul, MN, USA
Citizenship: Japanese

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 7th day of November, 2001, before me personally appeared the above-named Ebihara Ikuko, 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.



Shannon M. Bruce

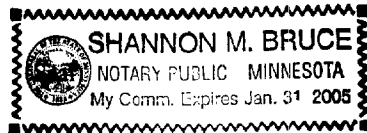
Notary Public

Gregory Edward Gilligan

Gregory Edward Gilligan
Residence: Hastings, MN, USA
Citizenship: United States of America

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 7th day of November, 2001, before me personally appeared the above-named Gregory Edward Gilligan, 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.



Shannon M. Bruce

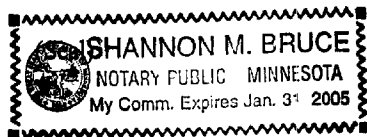
Notary Public

Richard John Pokorny

Richard John Pokorny
Residence: Maplewood, MN, USA
Citizenship: United States of America

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 7th day of November, 2001, before me personally appeared the above-named Richard John Pokorny, 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.



Shannon M. Bruce

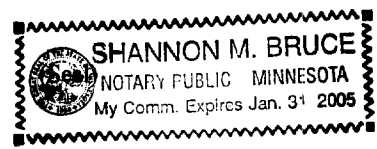
Notary Public

Marc Dudley Radcliffe

Marc Dudley Radcliffe
Residence: Newport, MN, USA
Citizenship: United States of America

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 7th day of November, 2001, before me personally appeared the above-named Marc Dudley Radcliffe, 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.

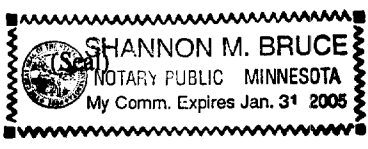


Shannon M. Bruce
Notary Public

Prabhakara Satyauolu Rao
Prabhakara Satyauolu Rao
Residence: Maplewood, MN, USA
Citizenship: United States of America

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 7th day of November, 2001, before me personally appeared the above-named Prabhakara Satyauolu Rao, 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.

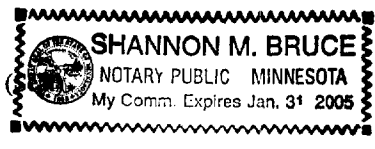


Shannon M. Bruce
Notary Public

Philip Edwin Watson
Philip Edwin Watson
Residence: Oakdale, MN, USA
Citizenship: United States of America

STATE OF MINNESOTA)
) ss.
COUNTY OF RAMSEY)

On this 2nd day of November, 2001, before me personally appeared the above-named Philip Edwin Watson, 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.



Shannon M. Bruce
Notary Public