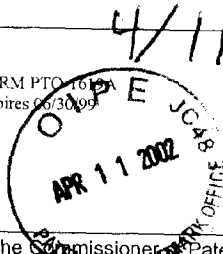


FORM PTO-101  
Expires 06/30/00



RECC

04-17-2002



102057424

U.S. Department of Commerce  
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PATENT

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PATENT  
REEL: 012782 FRAME: 0858

**Correspondent Name and Address**

Area Code and Telephone Number

(703) 243-6333

Name Millen, White, Zelano & Branigan, P.C.

Address (line 1) 2200 Clarendon Boulevard

Address (line 2) Suite 1400

Address (line 3) Arlington, VA 22201

Address (line 4)

**Pages**

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# 4

**Application Number(s) or Patent Number(s)**

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10/024,501

**Patent Number(s)**

If this document is being filed together with a new Patent Application, enter the date the patent application was signed by the first named executing inventor.

Month Day Year

**Patent Cooperation Treaty (PCT)**

Enter PCT application number only if a U.S. Application Number has not been assigned.

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Fee Amount for Properties Listed (37 CFR 3.41):

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No ☐

**Statement and Signature**

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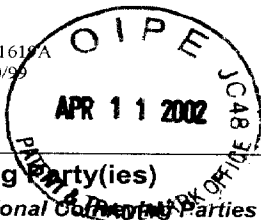
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Name of Person Signing

[Signature]  
Signature

April 5, 2002

Date



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Execution Date  
Month Day Year

Name (line 2)

Name (line 1)

Execution Date  
Month Day Year

Name (line 2)

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☐ Mark if additional names of receiving parties attached

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**Application Number(s) or Patent Number(s)**

☐ Mark if additional numbers attached

Enter either the Patent Application Number or the Patent Number (DO NOT ENTER BOTH numbers for the same property).

**Patent Application Number(s)**

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WHEREAS the below named inventor (if only one inventor is named below) of inventors (if plural inventors are named below) hereinafter referred to as the ASSIGNOR invented a certain improvement relating to

### Liquid-crystalline compounds

- ☐ for which an application for Letters Patent to be filed in the United States Patent and Trademark Office was executed on even date.  
☒ for which U.S. Application Serial No. 10/024,501 for Letters Patent was filed in the U.S. Patent and Trademark Office on 21.12.2001  
☐ for which an International Application was filed on \_\_\_\_\_ as \_\_\_\_\_, designating the United States

AND WHEREAS

**MERCK PATENTGESELLSCHAFT  
MIT BESCHRÄNKTER HAFTUNG**  
Darmstadt, Germany

hereinafter referred to as the ASSIGNEE, is desirous of acquiring the entire right, title, and interest in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted thereon, including any and all renewals, reissues, reexaminations and extensions thereof.



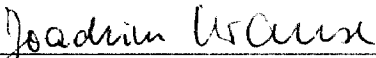
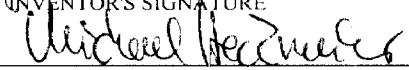
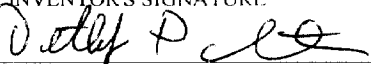
NOW, WITNESSETH that for good and valuable consideration, the receipt whereof is hereby acknowledged, ASSIGNOR hereby assigns, sells, and transfers to ASSIGNEE, its assigns and legal representatives, the entire and exclusive right, title and interest in and to said invention and application, including any and all divisions and continuations thereof, and any and all Letters Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, and in and to any and all priority and/or conventions rights or benefits accruing or to accrue with respect to the filing or securing of patents in the United States and/or any countries foreign thereto, SAID ASSIGNEE its assigns and legal representatives to have, hold, exercise, and enjoy said invention and application, including any and all divisions and continuations thereof, and any and all Letter Patent which may be granted therefor, including any and all renewals, reissues, reexaminations and extensions thereof, with all the rights, powers, privileges and advantages in anywise arising from or appertaining thereto, for and during the term or terms of any and all such Letters Patent when granted, including any and all renewals, reissues, reexaminations and extension thereof, for the use and benefit of ASSIGNEE and its assigns and legal representatives, in as simple and beneficial a manner to all intents and purposes as the ASSIGNOR might or could have held and enjoyed the same, if the assignment had not been made.

AND ASSIGNOR hereby agrees to execute all papers that may be necessary to file applications in the United States and foreign countries for said invention and to assign the same to said ASSIGNEE, its assigns and legal representatives and to execute any other papers that may be needed in connection with filing said applications and securing Letters Patents thereon.

AND ASSIGNOR authorizes and requests the Commissioner of Patents and Trademarks to issue a Letters Patent on said application, and on any and all divisions and continuations thereof, to ASSIGNEE, its assigns, and legal representatives, in accordance herewith.

The undersigned hereby grant(s) the law firm of Millen, White, Zelano & Branigan, P.C. the power to insert on this assignment any further identification which may be necessary or desirable in order to comply with the rules of the United States Patent and Trademark Office for recordation of this document.

IN TESTIMONY THEREOF this assignment is executed by ASSIGNOR

|  |  |          |
|--|--|----------|
| 201 FULL NAME OF SOLE INVENTOR OF FIRST NAMED INVENTOR | INVENTOR'S SIGNATURE   | DATE     |
| Peer Kirsch  |  | 25.03.02 |
| 202 FULL NAME OF SECOND JOINT INVENTOR                 | INVENTOR'S SIGNATURE   | DATE     |
| Florian Huber  |  | 25.03.02 |
| 203 FULL NAME OF THIRD JOINT INVENTOR                  | INVENTOR'S SIGNATURE   | DATE     |
| Joachim Krause   |  | 25.03.02 |
| 204 FULL NAME OF FOURTH JOINT INVENTOR                 | INVENTOR'S SIGNATURE   | DATE     |
| Michael Heckmeier                                      |  | 25.03.02 |
| 205 FULL NAME OF FIFTH JOINT INVENTOR                  | INVENTOR'S SIGNATURE   | DATE     |
| Detlef Pauluth   |  | 25.03.02 |
| 206 FULL NAME OF SIXTH JOINT INVENTOR                  | INVENTOR'S SIGNATURE   | DATE     |
| 207 FULL NAME OF SEVENTH JOINT INVENTOR                | INVENTOR'S SIGNATURE   | DATE     |
| 208 FULL NAME OF EIGHTH JOINT INVENTOR                 | INVENTOR'S SIGNATURE   | DATE     |
| 209 FULL NAME OF NINTH JOINT INVENTOR                  | INVENTOR'S SIGNATURE   | DATE     |
| 210 FULL NAME OF TENTH JOINT INVENTOR                  | INVENTOR'S SIGNATURE   | DATE     |
| 211 FULL NAME OF ELEVENTH JOINT INVENTOR               | INVENTOR'S SIGNATURE   | DATE     |
| 212 FULL NAME OF TWELFTH JOINT INVENTOR                | INVENTOR'S SIGNATURE   | DATE     |