| Intermediate Builde Bu | FORM PTO-1619<br>Expires 06/30/99                                | A  | 04 -   | 09-1999  |  |                                    | U.S. Department of Cemmerce<br>Patentian Trasametric Office |
|---|--|--|--|--|--|------------------------------------|---|
| RECORDATION FORM COVER SHEE         PATENTS ONLY         To: The Commissioner of Patients and Trademarks. Please record the attached original document(s) or copyliest;         Submission Type       Conveyance Type         New       Assignment       Security Agreement         Besubmission (Non-Recordation)       License       Change of Name         Document ID#       Merger       Other       Security Agreement         Correction of PTO Error       Frame #       0007       Departmental File       Securit Place         Conveying Party(ies)       Mark if additional names of conveying parties attached       Meetger       Month Day Year         Name (line 1)       The United States of America as represented by the U.S. Dept. of Energy       Of 108 99         Name (line 2)       Second Party       Mark if additional names of receiving parties attached         Name (line 2)       Mark if additional names of receiving parties attached       Merger receiving parties attached         Name (line 2)       Securition       Securition representative in a table at a segment in the integer state due as assignment in a table at a segment in a segment in a table at a segment in the integer set at a segment in the integer set at a segment in the integer set at a set at a set at a segment in the integer set at a set  | OMB 0651-0027  |  |  |  |  | EC                                 | E RATEN   |
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| T0: The Commissioner of Patients and Trademarks: Please record the attached original dodument(s) or cocylest)         Submission Type         New         Resubmission (Non-Recordation)         Document ID#         Correction of PTO Error         Reel #       9101         Frame #       Merger         Correction of PTO Error         Reel #       9101         Frame #       Departmental File         Second Party       Second Party         Name (line 1)       The United States of America as represented by the U.S. Dept. of Energy         Name (line 1)       Execution         Name (line 2)       Mark if additional names of receiving parties attached         Receiving Party       Mark if additional names of receiving parties attached         If document to be recorded is an asgenrent and the domination and the assegnrent and the domination assegnrent and the domination and the assegnrent and the domination and the assegnrent and the domination assegnrent and the domination and the assegnrent and the dominatis assegnrent and the dominatis assegnrent and   | $(1-) - \Omega$  | A MOOT   |  |  |  |                                    |   |
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| Document ID#   Correction of PTO Error   Reel #   Frame #   Other   Corrective Document   Frame #   Document ID#   Frame #   O087   Departmental File   Second Party   Name (line 1)   Name (line 2)   Second Party   Name (line 1)   Name (line 2)   Second Party   Name (line 1)   Name (line 2)   Second Party   Name (line 2)   Receiving Party   Name (line 2)   Name (line 2)   States (line 1)   Name (line 2)   Address (line 1)   P. O. Box 616   Address (line 3)   Aiken   South Carolina   29802   City   State/Country   Zip Code   Domestic Representative Name and Address   Enter for the first Receiving Party only.   Name   Address (line 3)   Aiken   South Carolina   29802   City   State (line 3)   Address (line 4)   FOR OFFICE USE ONLY   | New New  |  |  |  |  | curity Ag                          | reement   |
| Reil#       Frame #       U.S. Government<br>(for Use ONLY by U.S. Government<br>Recit#         Reil#       9101       Frame #       0087         Departmental File       Secret File         Conveying Party(ies)       Mark if additional names of conveying parties attached<br>Name (line 1)       Execution<br>Month Day Year         Name (line 1)       The United States of America as represented by the U.S. Dept. of Energy       01 08 99         Name (line 1)       Mark if additional names of receiving parties attached       Execution<br>Month Day Year         Name (line 2)       Mark if additional names of receiving parties attached       Execution<br>Month Day Year         Name (line 1)       Mark if additional names of receiving parties attached       If document to be recorded<br>is an assignment and the<br>receiving party is not<br>wortglicbary Year         Name (line 2)       Mark if additional names of receiving parties attached       If document to be recorded<br>is an assignment and the<br>receiving party is not<br>wortglicbary Year         Address (line 1)       D. Box 616       Generation<br>State/Country       Zip Code         Domestic Representative Name and Address       Enter for the first Receiving Party only.       Name         Name       City       State/Country       Zip Code         Domestic Representative Name and Address       Enter for the first Receiving Party only.       Name         Address (line 1)       Addr   |  |  | —  [   | License  |  | ange of l                          | Name  |
| Corrective Document       (For Use ONLY by US. Government Agencies)         Plant Private (line 1)       Frame # 0087       Departmental File       Secret File         Conveying Party(ies)       Mark if additional names of conveying parties attached       Execution         Name (line 1)       The United States of America as represented by the U.S. Dept. of Energy       01 08 99         Name (line 2)       Execution       Execution         Name (line 2)       Mark if additional names of receiving parties attached       Execution         Name (line 1)       Westinghouse Savannah River Company       If document to be recorded to domestic in the United States, an appointment of a domestic         Name (line 2)       States, an appointment of a domestic       representative is attached.         Address (line 1)       P. O. Box 616       Cleaving Party is not domestic         Address (line 2)       Aiken       South Carolina       28802         City       State       State       Code         Domestic Representative Name and Address       Enter for the first Receiving Party only.       Address (line 1)         Address (line 1)       Code       Code       Code         Domestic Representative Name and Address       Enter for the first Receiving Party only.       Address (line 4)         Address (line 4)       FOR OFFICE USE ONLY       FOR OF  |  |  | <u> </u>   | Merger   | harmon and a second                                  |                                    |   |
| Conveying Party(ies)       Mark if additional names of conveying parties attached       Exception         Name (line 1)       The United States of America as represented by the U.S. Dept. of Energy       01 08 99         Name (line 2)       Second Party       01 08 99         Name (line 2)       Evecution       Evecution         Name (line 2)       Evecution       Evecution         Name (line 2)       Mark if additional names of receiving parties attached       Evecution         Name (line 2)       Mark if additional names of receiving parties attached       If document to be recorded is an assignment and the receiving parties attached         Name (line 2)       Mark if additional names of receiving parties attached       If document to be recorded is an assignment and the receiving parties is and the receiving part is not         Address (line 1)       P. O. Box 616       Outbacked is an assignment forn         Address (line 2)       State/Country       Zip Code         Domestic Representative Name and Address       Enter for the first Receiving Party only.         Name       Cily       State/Country       Zip Code         Address (line 2)       Address (line 4)       FOR OFFICE USE ONLY       Vide/1999 MkUYEH         Address (line 4)       FOR OFFICE USE ONLY       Vide/1999 MkUYEH       Vide/1999 MkUYEH  | Corrective Do  | cument   |  | (F   | or Use ONLY by U.S                                   | 6. Governm                         | ent Agencies)   |
| Name (line 1)       The United States of America as represented by the U.S. Dept. of Energy       01       08       99         Name (line 2)  |  |  |  | if additional name   |  |                                    |   |
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| Name (line 2)       Mark if additional names of receiving parties attached         Receiving Party       Mark if additional names of receiving parties attached         Name (line 1)       Westinghouse Savannah River Company       If document to be recorded is an assignment and the receiving parties attached.         Name (line 2)       Mark if additional names of receiving parties attached.       If document to be recorded is an assignment and the receiving party is not domiced in the United States, an appointment of a domesic representative is attached.         Address (line 1)       P. O. Box 616       Gomesic Capresentative is attached.         Address (line 3)       Aiken       South Carolina       29802         City       State/Country       Zip Code         Domestic Representative Name and Address       Enter for the first Receiving Party only.         Name   |  |  |  |  | · · · · ·  |                                    | Execution<br>Montat Day Year                                |
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| Name (line 1)       Westinghouse Savannah River Company   | Receiving Part   | У  |  | Mark if addition   | al names of recei                                    | ving partie                        |   |
| Name (line 2)       domicled in the United States, an appointment of a domestic representative is attached.         Address (line 1)       P. O. Box 616       representative is attached.         Address (line 2)       address (line 3)       atken         Address (line 3)       Aiken       South Carolina       29802         City       State/Country       Zip Code         Domestic Representative Name and Address       Enter for the first Receiving Party only.         Name  | Name (line 1)  | Westinghouse Save  | annah River C                                      | ompany   |  | ]                                  | is an assignment and the                                    |
| Address (line 1)       P. O. Box 616       of a domestic<br>representative is attached.<br>(Designation must be a<br>separate document from<br>Assignment.)         Address (line 2)  | Name (line 2)  |  | <u></u>  |  |  | ]                                  | domiciled in the United                                     |
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| City       State/Country       Zip Code         Domestic Representative Name and Address       Enter for the first Receiving Party only.         Name   | Address (line 3)   | Aiken  |  | South Carolina   |  | 29802                              |   |
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| Address (line 2)         Address (line 3)         Address (line 3)         Address (line 4)         04/08/1999 DHGUYEN 00000130 5783152         01 FC 581   | Name   |  |  |  |  |                                    |   |
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| Address (line 4) FOR OFFICE USE ONLY  | Address (line 2)   |  |  |  |  |                                    |   |
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| 04/08/1999 DHGUYEN 00000130 5783152<br>01 FC:581 40.00 DP   | Address (line 4)   |  |  |  |  |                                    |   |
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| FORM PTO-1619B<br>Expires 06/30/99<br>OMB 0651-0027                  |  | Page 2   | U.S. Department of Commerce<br>Patent and Trademark Office<br>PATENT |
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| Correspondent Nam  | ne and Address                                   | Area Code and Telephone Number   | 864-271-1592   |
| Name DORI  | TY & MANNING, P.A.                               |  |  |
| Address (line 1) P.O.  | Box 1449   |  |  |
| Address (line 2) Greer   | ville, SC 29602-1449                             | )  |  |
| Address (line 3)   |  |  |  |
| Address (line 4)   |  |  |  |
|  | r the total number of p<br>ding any attachments. | bages of the attached conveyance docun   | ment # 2   |
| •  | application number or th                         | mber(s) Mark if add<br>e Patent Number (DO NOT ENTER BOTH n                                  | itional numbers attached<br>umbers for the same property).           |
| Patent Appli   | cation Number(s)                                 | 5,783,152  |  |
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| If this document is being filed to<br>signed by the first named exec |  | Application, enter the date the patent application w   | as Month Day Year  |
|  | lication number                                  | PCT PCT  | PCT PCT  |
| Number of Properti   | es<br>Enter the total                            | number of properties involved.   | 1  |
| Fee Amount   | Fee Amount for                                   | Properties Listing (37 CFR 3.41):  | <b>40.00</b>   |
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|  |  | the foregoing information is true and con<br>nal document. Charges to deposit accou          |  |
| J. BENNETT MUL   | LINAX  | A. 12 Mulher   | March 30, 1999   |
| Name of Person S   | Signing  | Signature  | Date   |

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PATENT REEL: 9857 FRAME: 0973

## ASSIGNMENT AND CONFIRMATORY LICENSE

## **"THIN-FILM FIBER OPTIC HYDROGEN AND TEMPERATURE** Title: SENSOR SYSTEM"

| Inventor:           | Stanley E. Nave           |                        |
|---------------------|---------------------------|------------------------|
| Serial No:          | 03/824,063                | Patent No.: 5,783,152  |
| Filing Date:        | 03/24/97                  | Issue Date: 07/21/1998 |
| <b>Contract No.</b> | :DE-AC09-89-SR18035       | Waiver No.:            |
| <b>Contractor:</b>  | Westinghouse Savannah Riv | er Company             |

Foreign application filed in or intended to be filed in (countries):

A class waiver of Government rights in the above-identified invention has been granted by the U.S. Department of Energy (DOE) to Westinghouse Savannah River Company (WSRC), effective October 22, 1993.

Assignment: The United States Government, as represented by the DOE (the Assignor), owner of the enture right, title and interest in and to said invention assigns and transfers to WSRC (the Assignee) the entire right, title and interest in and to said invention, and all domestic and foreign patent applications and resulting patents, in whole or in part based thereon, subject to a paid-up license to the U.S. Government and such other rights required to be retained and reserved for the U.S. Government described below. In addition, WSRC takes title subject to the requirements of the terms and conditions of DOE Contract No. DE-AC09-96SR18500.

<u>License</u>: This document also confirms the paid-up license reserved to the U.S. Government mentioned in the preceding paragraph.

The rights reserved by the U.S. Government are the following:

(1)Government License and Inspection Rights:

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The Government retains an irrevocable, nonexclusive nontransferable, paid-up license to practice or have practiced the above-identified invention, related patent applications and patents throughout the world by or on behalf of the Government (including any Government agency).

The Government is granted the irrevocable power to inspect and make copies of the above-identified patent application and any related application or patent as defined above, including any parent, continuation, continuation-in-part or division of it. It is understood and agreed that this license does not preclude the Government from asserting rights under the provisions of said Contract or of any other agreement between the Government and the Assignee, or any other rights of the Government with respect to the above-identified invention.

APPROVED AND GRANTED on behalf of the Government of the United States on this  $\frac{34}{2}$  day of \_\_\_\_\_\_\_, 199  $\frac{2}{7}$ .

UNITED STATES DEPARTMENT OF ENERGY

(Assignor Paul A. Gottlieb

Assistant General Counsel for Technology Transfer and Intellectual Property

Witness:

APPROVED, ACEPTED AND CONSENTED TO this 6th day of gauge, 1999.

## WESTINGHOUSE SAVANNAH RIVER COMPANY

read B. Kaster

Murray B. Baxter Intellectual Property Counsel

CORPORATE SEAL

I hereby certify that this correspondence and any referenced attachment and fee are being deposited with the United States Postal service as first class mail in an envelope addressed to: Assistant Commissioner for Patents and Trademarks, Box Assignments, Washington, D.C. 20231, on

| March 30, 1999   |
|--|
| CHRISTINE P. STANFIELD                                 |
| (Typed or printed name of person mailing paper or fee) |
| Christine P. Stonfield                                 |
| (Signature of person mailing paper or fee)             |