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To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents or copy thereof.

1. Name of conveying party(ies):  
JOEL N. SCHULMAN  
DAVID H. CHOW  
  
Additional name(s) of conveying party(ies) attached?  Yes  No

2. Name and address of receiving party(ies)  
Name: HRL LABORATORIES, LLC  
Internal Address: \_\_\_\_\_  
\_\_\_\_\_

3. Nature of conveyance:  
 Assignment  Merger  
 Security Agreement  Change of Name  
 Other \_\_\_\_\_  
  
01/19/2005  
01/20/2005  
Execution Date: \_\_\_\_\_

Street Address: 3011 Malibu Canyon Road  
\_\_\_\_\_  
City: Malibu State: CA Zip: 90265  
Additional name(s) & address(es) attached?  Yes  No

4. Application number(s) or patent number(s):  
If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_  
A. Patent Application No.(s) 10/970,359  
\_\_\_\_\_

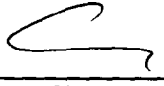
B. Patent No.(s) \_\_\_\_\_  
\_\_\_\_\_  
Additional numbers attached?  Yes  No

5. Name and address of party to whom correspondence concerning document should be mailed:  
Name: TOPE MCKAY & ASSOCIATES  
Internal Address: \_\_\_\_\_  
\_\_\_\_\_  
Street Address: \_\_\_\_\_  
23852 Pacific Coast Highway #311  
City: Malibu State: CA Zip: 90265

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:  
\_\_\_\_\_

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9. Signature.  
  
CARY TOPE-MCKAY  04/06/2005  
Name of Person Signing Signature Date  
Total number of pages including cover sheet, attachments, and documents: 7

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Mail documents to be recorded with required cover sheet information to:  
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Washington, D.C. 20231

**PATENT**  
**REEL: 016475 FRAME: 0516**

Attorney Docket: HRL012-1

HRL Docket: 990106-1

Invention Title: **TYPE II INTERBAND HETEROSTRUCTURE BACKWARD DIODES**

### ASSIGNMENT

WHEREAS, I, Joel N. Schulman of 1832 Lookout Road, Malibu, California 91320, United States of America (hereinafter "Assignor") have invented certain new and useful improvements in **TYPE II INTERBAND HETEROSTRUCTURE BACKWARD DIODES** (hereinafter "Invention") for which an application for a United States Patent was filed on October 20, 2004, Application Number 10/970,359 and/or for which Assignors are making or have made a foreign application for intellectual or industrial property protection under the appropriate body of law corresponding to that foreign jurisdiction.

### AND

WHEREAS, HRL Laboratories, LLC, a limited liability company organized and existing under the laws of the State of Delaware, United States of America and having a place of business at 3011 Malibu Canyon Road, Malibu, California, United States of America, (hereinafter "Assignee"), is desirous of acquiring the entire right, title, and interest in the Invention within the United States of America and its territorial possessions, and in all foreign countries in which intellectual or industrial property protection may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt whereof is hereby acknowledged, I, the Assignor desire to and do hereby assign, sell, and transfer unto Assignee the full and exclusive right to the Invention in the United States of America and its territorial possessions and in all foreign countries, as well as, the entire right, title and interest in and to any and all intellectual or industrial property rights including, but not limited to, Patents, designs, utility models, and inventor certificates which may be granted therefore in the United States of America and its territorial possessions and in all foreign countries, I hereby authorize and request the U.S. Patent Offices and the equivalent offices at foreign countries, to issue to the Assignee, any and all applicable intellectual or industrial property rights in the Invention, for the Assignee's sole use and benefit; and for the use and benefit of his legal representatives, to the full end of the term for which United States and foreign Patents or the like may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

I further covenant and agree with the Assignee that I have a full and unencumbered title to the invention hereby assigned, which title I warrant unto the Assignee, and I further agree that I will, without demanding any further consideration therefore, at the request and at the expense of the Assignee, do all lawful and just acts, including the execution and acknowledgment of instruments, that may be or become necessary for obtaining, sustaining, extending, reissuing or reexamining United States and foreign Patents or the like for the Invention, and for maintaining and perfecting the Assignee's right to the Invention and any and all intellectual or industrial property rights in it, particularly in cases of interference, conflict, opposition and litigation.

IN TESTIMONY WHEREOF, I have hereunto set my hand.

Executed this 19 day of January, 2005,  
at Malibu, CA

  
(Signature)

Attorney Docket: HRL012-1

HRL Docket: 990106-1

Invention Title: TYPE II INTERBAND HETEROSTRUCTURE BACKWARD DIODES

### ASSIGNMENT

WHEREAS, I, David H. Chow of 3940 Greenwood Street, Newbury Park, California 91320, United States of America (hereinafter "Assignor") have invented certain new and useful improvements in TYPE II INTERBAND HETEROSTRUCTURE BACKWARD DIODES (hereinafter "Invention") for which an application for a United States Patent was filed on October 20, 2004, Application Number 10/970,359 and/or for which Assignors are making or have made a foreign application for intellectual or industrial property protection under the appropriate body of law corresponding to that foreign jurisdiction.

### AND

WHEREAS, HRL Laboratories, LLC, a limited liability company organized and existing under the laws of the State of Delaware, United States of America and having a place of business at 3011 Malibu Canyon Road, Malibu, California, United States of America, (hereinafter "Assignee"), is desirous of acquiring the entire right, title, and interest in the Invention within the United States of America and its territorial possessions, and in all foreign countries in which intellectual or industrial property protection may be granted therefor.

NOW, THEREFORE, for good and valuable consideration, the receipt whereof is hereby acknowledged, I, the Assignor desire to and do hereby assign, sell, and transfer unto Assignee the full and exclusive right to the Invention in the United States of America and its territorial possessions and in all foreign countries, as well as, the entire right, title and interest in and to any and all intellectual or industrial property rights including, but not limited to, Patents, designs, utility models, and inventor certificates which may be granted therefore in the United States of America and its territorial possessions and in all foreign countries, I hereby authorize and request the U.S. Patent Offices and the equivalent offices at foreign countries, to issue to the Assignee, any and all applicable intellectual or industrial property rights in the Invention, for the Assignee's sole use and benefit; and for the use and benefit of his legal representatives, to the full end of the term for which United States and foreign Patents or the like may be granted, as fully and entirely as the same would have been held by me had this assignment and sale not been made.

I further covenant and agree with the Assignee that I have a full and unencumbered title to the invention hereby assigned, which title I warrant unto the Assignee, and I further agree that I will, without demanding any further consideration therefore, at the request and at the expense of the Assignee, do all lawful and just acts, including the execution and acknowledgment of instruments, that may be or become necessary for obtaining, sustaining, extending, reissuing or reexamining United States and foreign Patents or the like for the Invention, and for maintaining and perfecting the Assignee's right to the Invention and any and all intellectual or industrial property rights in it, particularly in cases of interference, conflict, opposition and litigation.

IN TESTIMONY WHEREOF, I have hereunto set my hand.

Executed this 20<sup>th</sup> day of January, 2005,  
at Malibu, CA.

  
(Signature)