07-16-2002

To the Honorable Commissioner of Patents and Tradements: Please record the attached original documents or copy thereof.  1. Name of conveying party(ies):  University of lowa  7-/2-6-7  Additional name(s) of conveying party(s) attached? Yes   No  3. Nature of conveying party(s) attached? Yes   No  3. Nature of conveying party(s) attached? Yes   No  3. Nature of conveyance:   Assignment   Merger     Security Agreement   Change of Name     Other   Confirmatory License     Other   Confirmatory License     City: Arlington   State: VA Zip: 22230     Additional name(s) & address(s) 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)   10/014,925   B. Patent No.(s)     S. Name and address of party to whom correspondence concerning document should be mailed:   Name   Robin Clay Fritsch   Change of the General Counsel     Internal Address:   4201 Wilson Boulevard     Street Address:   4201 Wilson Boulevard     S. Deposit account number:   Street Address:   4201 Wilson Boulevard     S. Deposit account number:   Street Address:   4201 Wilson Boulevard     S. Deposit account number:     S. Deposit account numbe	Form PTO-1595 RECO (Rev. 03/01)  OMB No. 0651-0027 (exp. 5/31/2002)  Tab settings ⇔ ⇔ ♥ ▼	U.S. DEPARTMENT OF COMMERCE U.S. Patent and Trademark Office
1. Name of conveying party(ies):  University of lowa  7 - / 7 - 6 Z  Additional name(s) of conveying party(ies) attached? Yes No  3. Nature of conveyance:  Assignment		
Additional name(s) of conveying party(ses) attached? ves No  3. Nature of conveyance:	Name of conveying party(ies):	Name and address of receiving party(ies)     Name: National Science Foundation
Additional name(s) of conveying party(ses) attached?   Yes   No    3. Nature of conveyance:   Assignment   Change of Name   City: Arlington   State: VA Zip: 22230    Execution Date:   O3/05/02   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:   B. Patent No.(s)   B. Patent No.(s)   B. Patent No.(s)   B. Patent No.(s)   D3/05/05   Concerning document should be mailed:   Name:   Robin Clay Fritsch   City: Arlington   State: VA Zip: 22230   Street Address:   4201 Wilson Boulevard   Authorized to be charged to deposit account   Street Address:   4201 Wilson Boulevard   4201 Wil	University of lowa /-/2 - U	Internal Address: Office of the General Counsel
Assignment	Additional name(s) of conveying party(ies) attached? Yes	
Security Agreement Change of Name Other Confirmatory License  City: Arlington State: VA Zip: 22230  Additional name(s) & address(s) 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) 10/014,925 B. Patent No.(s)  Additional numbers attached? Yes No  5. Name and address of party to whom correspondence concerning document should be mailed: Name: Robin Clay Fritsch Suite 1265  City: Arlington State: VA Zip: 22230  Do Not use this space  Po Not use this space  Signature.  Robin Clay Fritsch Name of Person Signing  Signature  Street Address: 4201 Wilson Boulevard  Signature  Additional number of applications and patents involved:  Additional number of applications and patents involved:  Authorized to be charged to deposit account  Authorized to be charged to deposit account  Po Not use this space  9. Signature.  Robin Clay Fritsch Name of Person Signing	3. Nature of conveyance:	
Other Confirmatory License  Other Confirmatory License  City: Arlington State: VA Zip: 22230  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) 10/014.925  B. Patent No.(s)  Additional numbers attached? Yes No  5. Name and address of party to whom correspondence concerning document should be mailed:  Name: Robin Clay Fritsch  Suite 1265  City: Arlington State: VA Zip: 22230  DO NOT USE THIS SPACE  9. Signature.  Robin Clay Fritsch  Name of Person Signing  Signature  Signature  Signature  Signature  City: Arlington State: VA Zip: Date		Street Address: 4201 Wilson Boulevard
O3/05/02  Additional name(s) & address(es) attached? Yes No  A 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) 10/014,925  B. Patent No.(s)  Additional numbers attached? Yes No  5. Name and address of party to whom correspondence concerning document should be mailed:  Name: Robin Clay Fritsch  Office of the General Counsel Internal Address:  Suite 1265  Do Not Use THIS SPACE  9. Signature.  Robin Clay Fritsch  Name of Person Signing  Additional name(s) & address(es) attached? Ne Not on the patents involved: Note of the application is:  Additional name(s) & address(es) attached? Ne Note Note of patents involved: Note of the application is:  Additional name(s) & address(es) attached? Note Note of patents involved: Note of the application is:  B. Patent No.(s)  6. Total number of applications and patents involved: Note of patents involved		ame
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) 10/014,925  B. Patent No.(s)  Additional numbers attached? Yes No  5. Name and address of party to whom correspondence concerning document should be mailed:  Name: Robin Clay Fritsch  Office of the General Counsel Internal Address: Suite 1265  Suite 1265  City: Arlington State: VA Zip: 22230  Do NOT USE THIS SPACE  9. Signature.  Robin Clay Fritsch  Name of Person Signing  Additional name(s) & address(es) attached? New No.  Additional name(s) & address(es) attached? New No.  Additional name(s) & address(es) attached? New No.  No.  Additional name(s) & address(es) attached? New No.  No.  Additional name(s) & address(es) attached? New No.  No.  No.  Additional name(s) & address(es) attached? No.  No.  No.  No.  Additional name(s) & address(es) attached? No.  No.  No.  No.  Additional name(s) & address(es) attached? No.  No.  No.  No.  No.  Additional name(s) & address(es) attached? No.  No.  No.  No.  No.  Additional name(s) & address(es) attached? No.  No.  No.  No.  No.  No.  Additional name(s) & address(es) attached? No.  No.  No.  No.  Additional name(s) & address(es) attached? No.  No.  No.  No.  No.  Additional name(s) & address(es) attached? No.  No.  No.  Additional name(s) & address(es) attached? No.  No.  No.  Additional name(s) & address(es) attached?  No.  No.  No.  Additional name(s) & address(es) attached?  No.  Additional number attached?  No.  No.  Additional number attached?  No.  Additional number of applications and patents involved:  A. Total fee (37 CFR 3.41)	03/05/02	City: Arlington State: VA Zip: 22230
If this document is being filed together with a new application, the execution date of the application is:	Execution Date:	Additional name(s) & address(es) attached? Yes V No
5. Name and address of party to whom correspondence concerning document should be mailed:  Name: Robin Clay Fritsch  Office of the General Counsel Internal Address: Suite 1265  Suite 1265  Street Address: 4201 Wilson Boulevard  City: Arlington State: VA Zip: 22230  Do Not Use THIS SPACE  9. Signature.  Robin Clay Fritsch  Name of Person Signing  6. Total number of applications and patents involved: 10	If this document is being filed together with a new application, the execution date of the application is:  A. Patent Application No.(s) 10/014,925  B. Patent No.(s)	
Total fee (37 CFR 3.41)\$ 0.00		
Suite 1265	concerning document should be mailed:	. 0.00
Suite 1265  Authorized to be charged to deposit account  8. Deposit account number:  City: Arlington State: VA Zip: 22230  DO NOT USE THIS SPACE  9. Signature.  Robin Clay Fritsch Name of Person Signing  Authorized to be charged to deposit account  8. Deposit account number:  Authorized to be charged to deposit account  8. Deposit account number:  Signature:  Signature:  Date	Office of the General Counsel	
Street Address: 4201 Wilson Boulevard  City: Arlington State: VA Zip: 22230  DO NOT USE THIS SPACE  9. Signature.  Robin Clay Fritsch Signature Signature  Name of Person Signing Signature		Authorized to be charged to deposit account
9. Signature.  Robin Clay Fritsch Name of Person Signing  DO NOT USE THIS SPACE   All All All All All All All All All A	Street Address:4201 Wilson Boulevard	8. Deposit account number:
9. Signature.  Robin Clay Fritsch  Name of Person Signing  Signature  Date	City: Arlington State: VA Zip: 22230	
Robin Clay Fritsch  Name of Person Signing  Signature  Date	DO NOT USE THIS SPACE	
Name of Person Signing	Robin Clay Fritsch  Robin Clay Fritsch	
	Name of Person Signing	

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

Commissioner of Patents & Trademarks, Box Assignments Washington, D.C. 20231

License to the United States Government

Content-type: text/html Fax this to (301) 480-0272

39/12901-00-0032 License to the United States Government

Invention Title: Unipolar Spin Diode and Transistor

Inventor(s): Michael E Flatte, Giovanni Vignale, , , , , , , , ,

Patent or Application Serial No.: 10/014,925

U.S. Filing/Issue Date: 10/26/01

Grant/Contract Identification Number(s): ECS00556

Foreign Applications filed/intended in (countries):

The invention identified above is a Subject Invention under 35 U.S.C. 200, et seq., and the Standard Patent Rights clause at 37 CFR 401.14 or FAR 52.227-11, which are included among the terms of the aboveidentified grant/contract award from the United States Government. This document is confirmatory of:

- 1. The nonexclusive, nontransferable, irrevocable, paid-up license to practice or have practiced for or on behalf of the United States the invention described in any patent application and in any and all divisions, continuations, and continuations in part, and in any and all patents and re-issues granted thereon throughout the world; and
- 2. All other rights acquired by the Government by reason of the above identified grant/contract award and the laws and regulations which are applicable to the award.

The Government is hereby granted an irrevocable power to inspect and make copies of the above-identified patent application. Signed this Name of Grantee/Contractor Official)

**Executive Director and Secretary** 

UNIVERSITY OF IOWA (Organization)

At Oakdale Research Campus, #214 TIC, Towa City IA 52242 (Business Address)

3/5/2002