

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
ROBERT A. BUHRMAN	10/28/2016
MINH-HAI NGUYEN	12/06/2016
CHI-FENG PAI	12/07/2016
DANIEL C. RALPH	11/11/2016
RECEIVING PARTY DATA	
Name:	CORNELL UNIVERSITY
Street Address:	395 PINE TREE ROAD, SUITE 310
City:	ITHACA
State/Country:	NEW YORK
Postal Code:	14850
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	15327017
CORRESPONDENCE DATA	
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<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
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ATTORNEY DOCKET NUMBER:	078554-8058.US03
NAME OF SUBMITTER:	CORTNEY GOLLANDS
SIGNATURE:	/Cortney Gollands/
DATE SIGNED:	04/17/2017
Total Attachments: 8	
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ASSIGNMENT

WHEREAS, We, **ROBERT A. BUHRMAN**, a US citizen, residing at 1372 Ellis Hollow Road, Ithaca, New York, 14850, **MINH-HAI NGUYEN**, a US citizen, residing at 301 Graduate Drive, Ithaca, New York, 14850, and **CHI-FENG PAI**, a US citizen, residing at 2250 N. Triphammer Road, Apt. K3E, Ithaca, New York, 14850, and **DANIEL C. RALPH**, a US citizen, residing at 301 Old Gorge Road, Ithaca, New York, 14850, have invented certain new and useful improvements in **CIRCUITS AND DEVICES BASED ON ENHANCED SPIN HALL EFFECT FOR EFFICIENT SPIN TRANSFER TORQUE**, for which an application in the United States Receiving Office for the PCT was filed as PCT International Application No. **PCT/US2015/041039** on **July 17, 2015**; claiming priority to U.S. Provisional Application No. **62/026,012** on **July 14, 2014**;

AND WHEREAS, **Cornell University**, with its principal place of business at **Center for Technology Licensing ("CTL") at Cornell University, 395 Pine Tree Road, Suite 310, Ithaca, New York 14850 USA**, is entitled to acquire the entire right, title and interest in and to the said improvements and the said Application:

NOW, THEREFORE, for good and valuable consideration, including salary or payment for the making of inventions, or employee benefits, the receipt of which is hereby acknowledged, we, the said inventors, do hereby acknowledge that we have sold, assigned, transferred and set over, and by these presents do hereby sell, assign, transfer and set over, unto the said **Cornell University**, its successors, legal representatives and assigns, the entire right, title and interest throughout the world in, to and under the said improvements, and the said application and all divisions, renewals, and continuations thereof, and all Letters Patent of the United States which may be granted thereon and all reissues and extensions thereof, and all rights of priority under International Conventions and applications for Letters Patent which may hereafter be filed for said improvements in any country or countries foreign to the United States, and all Letters Patent which may be granted for said improvements in any country or countries foreign to the United States and all extensions, renewals and reissues thereof; and we hereby authorize and request the Commissioner of Patents of the United States, and any Official of any country or countries foreign to the United States, whose duty it is to issue patents on applications as aforesaid, to issue all Letters Patent for said improvements to the said **Cornell University**, its successors, legal representatives and assigns, in accordance with the terms of this instrument.

AND WE HEREBY covenant and agree that we will communicate to the said **Cornell University**, its successors, legal representatives, and assigns, any facts known to us respecting said improvements and testify in any legal proceeding, sign all lawful papers, execute all divisional, continuing, and reissue applications, make all rightful oaths and generally do everything possible to aid the said **Cornell University**, its successors, legal representatives, and assigns, to obtain and enforce proper patent protection for said improvements in all countries.

Witness Signature Option



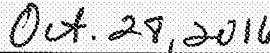
Robert A. Buhrman



Date



First Witness Signature



Date

Catherine Long

First Witness Printed Name

Elnectina Sneed 10.28.16

Second Witness Signature

Date

Elnectina Sneed

Second Witness Printed Name

Notary Option

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this _____ day of _____, 2016

Robert A. Buhrman

STATE OF _____ :

COUNTY OF _____ :

This _____ day of _____, 2016, before me personally came the above-named _____, to me personally known as the individual who executed the same of his/her own free will for the purposes therein set forth.

Notary Public

Commission expires on _____.

ASSIGNMENT

VIETNAMESE
MHN 12/6/2016

WHEREAS, We, **ROBERT A. BUHRMAN**, a US citizen, residing at 1372 Ellis Hollow Road, Ithaca, New York, 14850, **MINH-HAI NGUYEN**, a ~~US~~ citizen, residing at 301 Graduate Drive, Ithaca, New York, 14850, and **CHI-FENG PAI**, a US citizen, residing at 2250 N. Triphammer Road, Apt. K3E, Ithaca, New York, 14850, and **DANIEL C. RALPH**, a US citizen, residing at 301 Old Gorge Road, Ithaca, New York, 14850, have invented certain new and useful improvements in **CIRCUITS AND DEVICES BASED ON ENHANCED SPIN HALL EFFECT FOR EFFICIENT SPIN TRANSFER TORQUE**, for which an application in the United States Receiving Office for the PCT was filed as PCT International Application No. **PCT/US2015/041039** on **July 17, 2015**; claiming priority to U.S. Provisional Application No. **62/026,012** on **July 14, 2014**;

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Witness Signature Option

Robert A. Buhrman

Date

First Witness Signature

Date

Witness Signature Option

[Signature]

Minh-Hai Nguyen

12/06/2016

Date

[Signature]

First Witness Signature

12/06/2016

Date

Craig W. Wiggers

First Witness Printed Name

[Signature]

Second Witness Signature

12/6/2016

Date

Kacey Aguilano

Second Witness Printed Name

Notary Option

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this _____ day of _____, 2016

Minh-Hai Nguyen

STATE OF _____:

COUNTY OF _____:

WITNESSES

This _____ day of _____, 2016, before me personally came the above-named _____, to me personally known as the individual who executed the same of his/her own free will for the purposes therein set forth.

Notary Public

Commission expires on _____.

No. 1, Sec. 4, Roosevelt Rd., Taipei 10617, Taiwan

6764-04-PC

C.F.P. 12/07/2016

ASSIGNMENT

C.F.P. 12/07/2016 Taiwan

WHEREAS, We, **ROBERT A. BUHRMAN**, a US citizen, residing at 1372 Ellis Hollow Road, Ithaca, New York, 14850, **MINH-HAI NGUYEN**, a US citizen, residing at 301 Graduate Drive, Ithaca, New York, 14850, and **CHI-FENG PAI**, a ~~US~~ citizen, residing at ~~2250 N. Triphammer Road, Apt. K3E, Ithaca, New York, 14850,~~ and **DANIEL C. RALPH**, a US citizen, residing at 301 Old Gorge Road, Ithaca, New York, 14850, have invented certain new and useful improvements in **CIRCUITS AND DEVICES BASED ON ENHANCED SPIN HALL EFFECT FOR EFFICIENT SPIN TRANSFER TORQUE**, for which an application in the United States Receiving Office for the PCT was filed as PCT International Application No. **PCT/US2015/041039** on **July 17, 2015**; claiming priority to U.S. Provisional Application No. **62/026,012** on **July 14, 2014**;

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Witness Signature Option

Robert A. Buhrman Date

First Witness Signature Date

130077033.1

Witness Signature Option

Chi-Feng Pai 12/07/2016.
Chi-Feng Pai Date

Chun-Ting Wu 12/07/2016
First Witness Signature Date

CHUN-TING WU
First Witness Printed Name

Tian-Yue Chen 12/07/2016
Second Witness Signature Date

TIAN-YUE CHEN
Second Witness Printed Name

~~Notary Option~~ witness.

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this _____ day of _____, 2016

Chi-Feng Pai

STATE OF _____:

COUNTY OF _____:

This _____ day of _____, 2016, before me personally came the abovenamed _____, to me personally known as the individual who executed the same of his/her own free will for the purposes therein set forth.

Notary Public

Commission expires on _____.

Witness Signature Option

Daniel C. Ralph

11/11/16

Daniel C. Ralph

Date

Carl Frauck

11/11/16

First Witness Signature

Date

Carl Frauck

First Witness Printed Name

[Signature]

11/11/16

Second Witness Signature

Date

Jonathan Fuller

Second Witness Printed Name

Notary Option

IN TESTIMONY WHEREOF, I hereunto set my hand and seal this _____ day of _____, 2016

Daniel C. Ralph

STATE OF _____ :

COUNTY OF _____ :

This _____ day of _____, 2016, before me personally came the above-named _____, to me personally known as the individual who executed the same of his/her own free will for the purposes therein set forth.

Notary Public

Commission expires on _____.