PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT

CONVEYING PARTY DATA

Name	Execution Date
TAKAHIRO HANYU	12/06/2019
DAISUKE SUZUKI	12/06/2019
HIDEO OHNO	12/10/2019
TETSUO ENDOH	12/24/2019

RECEIVING PARTY DATA

Name:	TOHOKU UNIVERSITY
Street Address:	1-1, KATAHIRA 2-CHOME, AOBA-KU,
City:	SENDAI-SHI, MIYAGI
State/Country:	JAPAN
Postal Code:	980-8577

PROPERTY NUMBERS Total: 1

Property Type	Number
Application Number:	16339818

CORRESPONDENCE DATA

Fax Number: (571)395-8753

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Correspondent Name: WESTERMAN, HATTORI, DANIELS & ADRIAN, LL

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ATTORNEY DOCKET NUMBER:	P190357US00
NAME OF SUBMITTER:	SADAO KINASHI
SIGNATURE:	/Sadao Kinashi/
DATE SIGNED:	12/26/2019
	This document serves as an Oath/Declaration (37 CFR 1.63).
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Total Attachments: 4

PATENT REEL: 051368 FRAME: 0272 source=P190357US00_Combined_Decl_Assign_1_12-26-2019#page1.tif source=P190357US00_Combined_Decl_Assign_1_12-26-2019#page2.tif source=P190357US00_Combined_Decl_Assign_2_12-26-2019#page1.tif source=P190357US00_Combined_Decl_Assign_2_12-26-2019#page2.tif

PATENT REEL: 051368 FRAME: 0273

Combined Declaration and Assignment for Utility Patent and Design Patent Applications

DECLARATION

As a below named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled

Insert Title:	DATA NONVO	WRITING CLATILE FL	 FOR	VARIABLE-RESISTANCE	MEMORY	ELEMENT	AND

the application of which is attached hereto unless the following is checked

was filed on <u>April 5, 2019</u> as United States Application Number <u>16/339,818</u> and was filed on <u>31 October 2017</u> as PCT International Application Number <u>PCT/JP2017/039342</u> and was amended on ______ (if applicable).

The above-identified application was made or authorized to be made by me.

I hereby acknowledge that any willful false statement made in this declaration is punishable under section 1001 of title 18 by fine or imprisonment of not more than 5 years, or both.

ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the adequacy and receipt of which is hereby acknowledged by the undersigned inventor(s) (hereinafter ASSIGNOR) by

Insert Assignee(s)
Name/Address:

TOHOKU UNIVERSITY

1-1, Katahira 2-chome, Aoba-ku, Sendai-shi, Miyagi

980-8577, Japan

(hereinafter ASSIGNEE), the undersigned ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest to the above-identified application (e.g., provisional or non-provisional) and all Letters Patent of the United States to be obtained therefore on said application or any continuation, divisional, substitute, reissue, reexamination, supplemental examination, inter partes review, post grant review, or other procedures thereof for the full term or terms for which the same may be granted.

The ASSIGNOR agrees to execute all papers necessary in connection with the application and any continuation, divisional, reissue, reexamination, supplemental examination, inter partes review, post grant review, or other procedures thereof and also to execute separate assignments in connection with such applications as the ASSIGNEE may deem necessary or expedient.

The ASSIGNOR agrees to execute all papers necessary in connection with any interference, litigation, or other legal proceeding which may be declared concerning this application or any continuation, divisional, reissue or reexamination, supplemental examination, inter partes review, post grant review, or other procedures thereof or Letters Patent or reissue patent issued thereon and to cooperate with the ASSIGNEE in every way possible in obtaining and producing evidence and proceeding with such interference, litigation, or other legal proceeding.

The ASSIGNOR sells, assigns and transfers to said ASSIGNEE the entire and exclusive right, title and interest to the application(s) and the invention(s) disclosed therein for the United States of America and all countries foreign to the United States and do hereby authorize said ASSIGNEE to apply for patents therefore in its own name in countries where such procedure is proper and to claim the priority right under the International Convention and agrees to execute all papers necessary in connection with applications for such patents and any continuation, divisional, substitute, reissue or

Docket No.:

reexamination, supplemental examination, inter partes review, post grant review, or other procedures thereof and also execute separate assignments in connection with such applications as the ASSIGNEE may deem necessary or expedient.

Hereby executed by the undersigned on the date opposite the undersigned name:

Note: Use an additional form for each additional inventor.

Legal Name		Date:	7) / - 0
of inventor ⇒	Takahiro Hanyu		Dec. 6,2019
Inventor's Signature ⇒	John John	· · · · · · · · · · · · · · · · · · ·	
Legal Name of inventor ⇔	Daisuke Suzuki	Date:	Dec. 6,2019
Inventor's Signature ⇔	Daisuka duzusu		
Legal Name of inventor ⇔	Hideo Ohno	Date:	Dec. 10, 2019
Inventor's Signature ⇔	Malole		
Legal Name of inventor ⇔	Tetsuo Endoh	Date:	
Inventor's Signature ⇒			
Legal Name of inventor ⇔	Market Color	Date:	
Inventor's Signature ⇔			
Legal Name of inventor ⇔		Date:	
Inventor's Signature ⇔			

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Combined Declaration and Assignment for Utility Patent and Design Patent Applications

DECLARATION

As a below named inventor, I hereby declare that:

I believe I am the original inventor or an original joint inventor of the subject matter which is claimed and for which a patent is sought on the invention entitled

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the application of which is attached hereto unless the following is checked

was filed on April 5, 2019 as United States Application Number 16/339,818 and was filed on 31 October 2017 as PCT International Application Number PCT/JP2017/039342 and was amended on ______ (if applicable).

The above-identified application was made or authorized to be made by me.

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ASSIGNMENT

FOR GOOD AND VALUABLE CONSIDERATION, the adequacy and receipt of which is hereby acknowledged by the undersigned inventor(s) (hereinafter ASSIGNOR) by

Insert Assignce(s)
Name/Address:

TOHOKU UNIVERSITY

1-1, Katahira 2-chome, Aoba-ku, Sendai-shi, Miyagi

980-8577, Japan

(hereinafter ASSIGNEE), the undersigned ASSIGNOR hereby sells, assigns and transfers to ASSIGNEE the entire and exclusive right, title and interest to the above-identified application (e.g., provisional or non-provisional) and all Letters Patent of the United States to be obtained therefore on said application or any continuation, divisional, substitute, reissue, reexamination, supplemental examination, inter partes review, post grant review, or other procedures thereof for the full term or terms for which the same may be granted.

The ASSIGNOR agrees to execute all papers necessary in connection with the application and any continuation, divisional, reissue, reexamination, supplemental examination, inter partes review, post grant review, or other procedures thereof and also to execute separate assignments in connection with such applications as the ASSIGNEE may deem necessary or expedient.

The ASSIGNOR agrees to execute all papers necessary in connection with any interference, litigation, or other legal proceeding which may be declared concerning this application or any continuation, divisional, reissue or reexamination, supplemental examination, inter partes review, post grant review, or other procedures thereof or Letters Patent or reissue patent issued thereon and to cooperate with the ASSIGNEE in every way possible in obtaining and producing evidence and proceeding with such interference, litigation, or other legal proceeding.

The ASSIGNOR sells, assigns and transfers to said ASSIGNEE the entire and exclusive right, title and interest to the application(s) and the invention(s) disclosed therein for the United States of America and all countries foreign to the United States and do hereby authorize said ASSIGNEE to apply for patents therefore in its own name in countries where such procedure is proper and to claim the priority right under the International Convention and agrees to execute all papers necessary in connection with applications for such patents and any continuation, divisional, substitute, reissue or

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reexamination, supplemental examination, inter partes review, post grant review, or other procedures thereof and also execute separate assignments in connection with such applications as the ASSIGNEE may deem necessary or expedient.

Hereby executed by the undersigned on the date opposite the undersigned name:

Legal Name of inventor ⇒	Takabira Hanus	Date:	
of mychan ~	Takahiro Hanyu		
Inventor's Signature ⇔			
Legal Name of inventor ⇒	Daisuke Suzuki	Date:	
Inventor's Signature ⇒			
Legal Name of inventor ⇔	Hideo Ohno	Date:	
Inventor's Signature ⇔			
Legal Name of inventor ⇒	Tetsuo Endoh	Date:	24, Dec. 2019
Inventor's Signature ⇔	Tetsur Endeh	***************************************	
Legal Name of inventor ⇔		Date:	
Inventor's Signature ⇒			
Legal Name of inventor ⇔		Date:	
Inventor's Signature ⇒			

Note: Use an additional form for each additional inventor.