

PATENT ASSIGNMENT COVER SHEET

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SUBMISSION TYPE:	NEW ASSIGNMENT
NATURE OF CONVEYANCE:	ASSIGNMENT
CONVEYING PARTY DATA	
Name	Execution Date
Tsuyoshi SUZUKI	03/26/2019
Katsuyuki NAKADA	03/26/2019
Shinto ICHIKAWA	03/25/2019
RECEIVING PARTY DATA	
Name:	TDK Corporation
Street Address:	2-5-1, Nihonbashi, Chuo-ku
City:	Tokyo
State/Country:	Japan
Postal Code:	103-6128
PROPERTY NUMBERS Total: 1	
Property Type	Number
Application Number:	16364905
CORRESPONDENCE DATA	
Fax Number:	(703)836-2787
<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>	
Phone:	703-836-6400
Email:	email@oliff.com
Correspondent Name:	JAMES A. OLIFF
Address Line 1:	OLIFF PLC
Address Line 2:	P.O. BOX 320850
Address Line 4:	ALEXANDRIA, VIRGINIA 22320-4850
ATTORNEY DOCKET NUMBER:	185943
NAME OF SUBMITTER:	ELLEN MCDOWELL
SIGNATURE:	/Ellen Z. McDowell/ for James A. Oliff
DATE SIGNED:	03/26/2019
Total Attachments: 2	
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source=6487673_1#page2.tif	

ASSIGNMENT

Whereas, I/we,

<u>Name</u>	<u>Address</u>
1) Tsuyoshi SUZUKI	c/o TDK Corporation, 2-5-1, Nihonbashi, Chuo-ku, Tokyo 103-6128 Japan
2) Katsuyuki NAKADA	c/o TDK Corporation, 2-5-1, Nihonbashi, Chuo-ku, Tokyo 103-6128 Japan
3) Shinto ICHIKAWA	c/o TDK Corporation, 2-5-1, Nihonbashi, Chuo-ku, Tokyo 103-6128 Japan

hereinafter called assignor(s), have invented certain improvements in
MAGNETORESISTIVE EFFECT ELEMENT

and executed an application for Letters Patent of the United States of America therefor on even date herewith unless otherwise indicated below:

filed on March 26, 2019, Serial No. 16/364,905; and

Whereas

TDK Corporation
2-5-1, Nihonbashi,
Chuo-ku, Tokyo 103-6128 Japan

(assignee), desires to acquire the entire right, title and interest in the application and invention, and to any United States patents to be obtained therefor;

NOW THEREFORE, be it known that, for good and valuable consideration from assignee, the receipt of which is hereby acknowledged, I/WE, as assignor(s), have sold, assigned, transferred, and set over, and do hereby sell, assign, transfer, and set over unto the assignee, its lawful successors and assigns, MY/OUR entire right, title, and interest in and to this invention and this application, and all divisions, and continuations thereof, and all Letters Patent of the United States which may be granted thereon, and all reissues thereof, and I/WE hereby authorize and request the Commissioner of Patents and Trademarks of the United States to issue all Letters Patent for this invention to assignee, its successors and assigns, in accordance with the terms of this Assignment;

AND, I/WE HEREBY further covenant and agree that I/WE will, without further consideration, communicate with assignee, its successors and assigns, any facts known to ME/US respecting this invention and testify in any legal proceeding, sign all lawful papers when called upon to do so, execute and deliver all papers that may be necessary or desirable to perfect the title to this invention in said assignee, its successors and assigns, execute all divisional, continuation, and reissue applications, make all rightful oaths and generally do everything possible to aid assignee, its successors and assigns, to obtain and enforce proper patent protection for this invention in the United States, it being understood that any expense incident to the execution of such papers shall be borne by the assignee, its successors and assigns.

In the event that the patent application filing date or serial number is not known at the time this Assignment is executed, I/WE hereby grant permission to the attorneys of record in the patent application to fill in the filing date and/or serial number above, and to record this Assignment after such information is added.

<u>INVENTORS</u>	<u>DATE SIGNED</u>
1): <u>Tsuyoshi SUZUKI</u> Name: <u>Tsuyoshi SUZUKI</u>	<u>2019.3.26</u>
2): <u>Katsuyuki NAKADA</u> Name: <u>Katsuyuki NAKADA</u>	<u>2019.3.26</u>
3): <u>Shinto ICHIKAWA</u> Name: <u>Shinto ICHIKAWA</u>	<u>2019.3.25</u>

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US Application No.						
Your Ref.						
Our Ref.		FP18-1050-00US-TDK				
Notes: references in the list are only attached where necessary. (Please refer to the status column.)						
DOCUMENT(S) CITED IN THE SPECIFICATION						
Cite No.	Country	Publication/ Patent [CODE]	Document Number	Translation	Corresponding Document(s)	Status
1			Hiroaki Sukegawa, Yoshio Miura, Shingo Muramoto, Seiji Mitani, Tomohiko Niizeki, Tadakatsu Ohkubo, Kazutaka Abe, Masafumi Shirai, Koichiro Inomata, and Kazuhiro Hono, "Enhanced tunnel magnetoresistance in a spinel oxide barrier with cation-site disorder", PHYSICAL REVIEW B 86, 2 November 2012, p184401-1-p184401-5	-		
OTHER(S)						
Cite No.	Country	Publication/ Patent [CODE]	Document Number	Translation	Corresponding Document(s)	Status
2	WO	Patent Appln. Laid-Open[-]	2016/158867	Corres. Doc	Cite No.5,6	
3	WO	Patent Appln. Laid-Open[-]	2016/158849	Corres. Doc	Cite No.7	
4			Hiroaki Sukegawa, Huixin Xiu, Tadakatsu Ohkubo, Takao Furubayashi, Tomohiko Niizeki, Wenhong Wang, Shinya Kasai, Seiji Mitani, Koichiro Inomata, and Kazuhiro Hono, "Tunnel magnetoresistance with improved bias voltage dependence in lattice-matched Fe/spinel MgAl ₂ O ₄ /Fe(001) junctions", Applied Physics Letters 96, 27 May 2010, p212505-1-p212505-3	-		
5	US	Patent Appln. Laid-Open[-]	2018/0083186	-		
6	US	Patent Appln. Laid-Open[-]	2019/0036016	-		
7	US	Patent Appln. Laid-Open[-]	2018/0068681	-		

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