

國立聯合大學電子工程系

歷年著作目錄

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論文發表 (Journal Papers)

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A1.	ECS J. Solid State Sci. Technol. , 2025 , 14 101001 The Stabilization by Morphotropic Phase Boundary with a MoO _x Cap on Hf _{1-x} Zr _x O ₂ Dielectrics Ding-Yeong Wang , Kuei-Chih Lin, Cheng-Li Lin, Jer Chyi Wang, Chun-Yao Tou, and Pi-Chun Juan*
A2.	Materials Chemistry and Physics 328 (2024) 129985 Mechanisms of electrical transition using a conformal MoO _x cap on Mo-doped VO ₂ thermochromics Ding-Yeong Wang , Chia-Ming Yang, Jun-Yu Su, and Pi-Chun Juan*
A3.	Rev. Sci. Instrum. 95, 035111 (2024) Realization of a Composite Ferroelectric Characterization Test System Using a Modified Constant Current Method and a Modified Virtual Ground Method Ding-Yeong Wang *
A4.	ACS Appl. Mater. Interfaces 2023 , 15, 36, 42868–42880 Defect-Rich SnO ₂ Nanofiber as an Oxygen-Defect-Driven Photoenergy Shield against UV Light Cell Damage Chun-Yen Lai, Chia-Fei Liu, Tzu-Ling Lin, Mei-Yu Chen, Yu-Cheng Huang, Her-Hsiung Huang, Chung-Li Dong, Ding-Yeong Wang , Ping-Hung Yeh*, and Wen-Wei Wu*
A5.	ECS J. Solid State Sci. Technol. 2023 , 12 065004 The Feasibility of Tungsten-Doped VO ₂ Films on Soda-Lime Glass with Low Thermal Budget by High Density Plasma Source for Smart Windows Ding-Yeong Wang , Kuei-Chih Lin, Yong-Chang Chen, and Pi-Chun Juan*
A6.	J. Appl. Phys. , 2023 , 133, 055001 The stress release of morphological change on thermochromic properties of nitrogen-incorporated VO ₂ thin films Ding-Yeong Wang , Kuei-Chih Lin, Cheng-Li Lin, Chih-Yi Lin, and Pi-Chun Juan*
A7.	Global Challenges , September 2020 , 2000041 Enhancement in the Detection Ability of Metal Oxide Sensors Using Defect-Rich Polycrystalline Nanofiber Devices Chun-Yen Lai, Yu-Ting Lin, Hung-Kun Hsu, Ding-Yeong Wang , Wen-Wei Wu*, and Ping-Hung Yeh*
A8.	IEEE Journal of the Electron Devices Society , Volume 8, February 2020 , Page(s): 163-169 Size-Dependent Switching Properties of Spin-Orbit Torque MRAM With Manufacturing-Friendly 8-Inch Wafer-Level Uniformity. Shakh Ziaur Rahaman*, I-Jung Wang, Ding-Yeong Wang , Chi-Feng Pai, Yu-Chen Hsin, Shan-Yi Yang, Hsin-Han Lee, Yao-Jen Chang, Yi-Ching Kuo, Yi-Hui Su, Guan-Long Chen, Fang-Ming Chen, Jeng-Hua Wei, Tuo-Hung Hou, Shyh-Shyuan Sheu, Chih-I Wu, and Duan-Lee Deng

A9.	<u>Electron Device Letters, IEEE, Volume 39, NO. 9, SEPTEMBER 2018, Page(s): 1306-1309</u> Pulse-Width and Temperature Effect on the Switching Behavior of an Etch-Stop-on-MgO-Barrier Spin-Orbit Torque MRAM Cell Shakh Ziaur Rahaman*, I-Jung Wang, Tian-Yue Chen, Chi-Feng Pai, Ding-Yeong Wang, Jeng-Hua Wei, Hsin-Han Lee, Yu-Chen Hsin, Yao-Jen Chang, Shan-Yi Yang, Yi-Ching Kuo, Yi-Hui Su, Yu-Sheng Chen, Keh-Ching Huang, Chih-I Wu, and Duan-Li Deng
A10.	<u>IEEE Transactions on Electron Devices, Volume 64, Issue 11, July. 2017, Page(s): 4492 - 4495</u> On the Hardware Implementation of MRAM Physically Unclonable Function Yu-Sheng Chen*, Ding-Yeong Wang, Yu-Chen Hsin, Kai-Yu Lee, Guan-Long Chen, Shan-Yi Yang, Hsin-Han Lee, Yao-Jen Chang, I-Jung Wang, Pei-Hua Wang, Chih-I Wu, and D. D. Tang
A11.	<u>Electron Device Letters, IEEE Volume 35, Issue 7, July. 2014, Page(s):738 – 740</u> Scaling properties of Step-etch perpendicular MTJ with dual-CoFeB/MgO interfaces Cheng-Wei Chien*, Ding-Yeong Wang, Sheng-Huang Huang, Kuei-Hung Shen, Shan-Yi Yang, Jia-Hong Shyu, Chiung-Yu Lo, Keng-Ming Kuo, Young-Shying Chen, Yung-Hung Wang, Tzu-Kun Ku, and Duan-Li Deng
A12.	<u>Electron Device Letters, IEEE Volume 34, Issue 2, Feb. 2013, Page(s):241 – 243</u> Evidences of Reactive-Ion-Etching-Induced Damages to the Ferromagnet of Perpendicular Magnetic Tunnel Junctions Cheng-Wei Chien*, Ding-Yeong Wang, Kuei-Hung Shen, Sheng-Huang Huang, Keng-Ming Kuo, Shan-Yi Yang, Yung-Hung Wang, Tzu-Kun Ku, and Duan-Li Deng
A13.	<u>IEEE Trans. on VLSI Systems, VOL. 16, no. 3 pp. 277~288, Mar. 2008</u> Write disturbance modeling and testing for MRAM. C.L. Su, C.W. Tsai, C.W. Wu*, C.C. Hung, Y.S. Chen, D.Y. Wang, Y.J. Lee, and M.J. Kao
A14.	<u>Appl. Phys. Lett. 93, 2008, 092504</u> Reduction in critical current density for spin torque transfer switching with composite free layer Cheng-Tyng Yen*, Wei-Chuan Chen, Ding-Yeong Wang, Yuan-Jen Lee, Chih-Ta Shen, Shan-Yi Yang, Ching-Hsiang Tsai, Chien-Chung Hung, Kuei-Hung Shen, Ming-Jinn Tsai, and Ming-Jer Kao
A15.	<u>IEEE TRANSACTIONS ON MAGNETICS,43(6), p.2785~2787 (2007)</u> Improvement of transport properties in magnetic tunneling junctions by capping materials C.T. Shen*, C.T. Yen, W.C. Chen, S.Y. Yang, Y.H. Wang, Y.J. Lee, D.Y. Wang, C.C. Hung, K.H. Shen, M.J. Kao, and M.J. Tsai
A16.	<u>Appl. Phys. Lett., 2007,90, 032503</u> Improvement of switching characteristics of toggle magnetic random access memory with dual polarity write pulse scheme. Y.J. Lee*, C.C. Hung, D.Y. Wang, C.T. Yen, W.C. Chen, S.Y. Yang, K.H. Shen, Y.H. Wang, Y.H. Chen, M.J. Kao, and M.J. Tsai.

A17.	<u>Electrochimica Acta, Volume 52, Issue 8, 10 February 2007, Pages 2920-2926</u> Metal nanocrystals as charge storage nodes for nonvolatile memory devices P.H. Yeh, L.J. Chen*, P.T. Liu, <u>D.Y. Wang</u> , and T.C. Chang
A18.	<u>J. Nanoscience and Nanotechnology, Vol.7, No.1, January 2007, pp. 339-343</u> Nonvolatile memory devices with NiSi ₂ /CoSi ₂ nanocrystals P.H. Yeh, L.J. Chen*, P.T. Liu, <u>D.Y. Wang</u> , and T.C. Chang
A19.	<u>Journal of the Electrochemical Society, 2005, Vol. 152, No. 8, pp. G678–G683</u> Basic Characteristics of Pt/SrBi ₂ Ta ₂ O ₉ /HfO ₂ /Si Structure Using Layer-By-Layer Crystallization <u>Ding-Yeong Wang</u> , and Chun-Yen Chang*
A20.	<u>Japanese Journal of Applied Physics Vol. 44, No. 4A, 2005, pp.1857-1861</u> Switching Current Study: Hysteresis Measurement of Ferroelectric Capacitors using Current–Voltage Measurement Method. <u>Ding-Yeong Wang</u> , and Chun-Yen Chang*
A21.	<u>Japanese Journal of Applied Physics Vol. 43, No. 9A, 2004, pp.6225-6228</u> Triangular Current: Method for Measuring Hysteresis Loops of Ferroelectric Capacitors <u>Ding-Yeong Wang</u> , and Chun-Yen Chang*
A22.	<u>Japanese Journal of Applied Physics Vol. 43, No. 7A, 2004, pp.4263-4266</u> Direct Measurement of Electrical Hysteresis of Micron-Sized Pb(Zr, Ti)O ₃ Capacitors using the Constant Current Method <u>Ding-Yeong Wang</u> , and Chun-Yen Chang*
A23.	<u>Electron Device Letters, IEEE Volume 24, Issue 9, Sept. 2003, Page(s):553 - 555</u> High-performance Pt/SrBi ₂ Ta ₂ O ₉ /HfO ₂ /Si structure for nondestructive readout memory Chao-Hsin Chien*, <u>Ding-Yeong Wang</u> , Ming-Jui Yang, Lehn, P., Ching-Chich Leu, Shioh-Huey Chuang, Tiao-Yuan Huang, and Chun-Yen Chang
A24.	<u>Jpn. J. Appl. Phys. Vol. 42 (2003) pp.2756-2758</u> Low-Pressure Crystallization of Sol–Gel-Derived PbZr _{0.52} Ti _{0.48} O ₃ Thin Films at Low Temperature for Low-Voltage Operation <u>Ding-Yeong Wang</u> , Chao-Hsin Chien*, Chun-Yen Chang, Ching-Chich Leu, Jung-Yen Yang, Shioh-Huey Chuang, and Tiao-Yuan Huang

PUBLICATIONS (Conferences)

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B1.	<u>The 6th Symposium on Nano-Device Circuits and Technologies, SNDCT 2026, pp. 57, B11500010.</u> Investigation of the Electrical Properties of the Ferroelectric Tunnel Junctions with the TiN/Al₂O₃/HZO/TiN/Ti Structures. Ding-Yeong Wang*, Wei-Ren Liao, Pei-Ching Huang, Pi-Chun Juan, Ta-Chun Cho, Zheng-En Yang, Hong-Qi Liao, and Yu-Ching Liu.
B2.	<u>The 5th Symposium on Nano-Device Circuits and Technologies, SNDCT 2025, pp. 72, BB11400017</u> Observation of Ferroelectric Capacitive Memory-Like Property of the TiN/IGZO/HZO/TiN/Ti Metal-Ferroelectric-Semiconductor Capacitor Zheng-En Yang, Pi-Chun Juan, Ta-Chun Cho, Pei-Ching Huang, and Ding-Yeong Wang*
B3.	<u>ISPlasma2024/IC-PLANTS2024/APSPT-13</u> A huge switching response of thermochromic Mo-doped VO₂ using a semiconductive MoOX cap prepared by plasma-enhanced atomic layer deposition Sheng-Chi Chen, Pi-Chun Juan*, Hsuan-Yu Lin, Jun-Yu Su, and Ding-Yeong Wang
B4.	<u>ISPlasma2022/IC-PLANTS2022, 09P-01</u> The role of Oxygen Vacancy on Thermochromic Transition of W-Doped VO₂ Films Explained by Current-Variable Hall Technique Ding-Yeong Wang, and Pi-Chun Juan*
B5.	<u>VLSI Technology, Systems and Applications, 2020. VLSI-TSA 2020. International Symposium on, April 2020, Page(s): 56 – 57</u> Low-environmental-interference & highly-sensitive TMR biosensor for in-vitro diagnosis application Yi-Ching Kuo*, Hsin-Han Lee, Ding-Yeong Wang, Yao-Jen Chang, Shan-Yi Yang, Yu-Chen Hsin, I-Jung Wang, Guan-Long Chen, Yi-Hui Su, SK Ziaur Rahaman, Fang-Ming Chen, Jeng-Hua Wei, Pei-Jer Tzeng, Shyh-Shyuan Sheu, Wei-Chung Lo, Shih-Chieh Chang, and Chih-I Wu
B6.	<u>VLSI Technology, Systems and Applications, 2020. VLSI-TSA 2020. International Symposium on, April 2020, Page(s): 104 – 105</u> Fabrication and device characterization of large linear dynamic range tunnel magnetoresistance (TMR) sensors for system applications Fang-Ming Chen*, I-Jung Wang, Ding-Yeong Wang, Shan-Yi Yang, Yu-Chen Hsin, Yao-Jen Chang, Hsin-Han Lee, Guan-Long Chen, Yi-Ching Kuo, Yi-Hui Su, Sk. Ziaur Rahaman, Jeng-Hua Wei, Sih-Han Li, Shyh-Shyuan Sheu, Wei-Chung Lo, Shih-Chieh Chang, and Chih-I Wu

B7.	<u>Electron Devices Meeting, 2019. IEDM '19. International, MRAM Poster Session #18</u> A statistical study of the reliability of SOT MRAM cell structures by thermal baking <u>Ding-Yeong Wang*</u>, I-Jung Wang, Jeng-Hua Wei, Shakh Ziaur Rahaman, Shan-Yi Yang, Yao-Jen Chang, Yu-Chen Hsin, Hsin-Han Lee, Yi-Ching Kuo, Yi-Hui Su, Guan-Long Chen, Fang-Ming Chen, Shyh-Shyuan Sheu, Wei-Chung Lo, Chih-I Wu, and Duan-Li Deng
B8.	<u>Electron Devices Meeting, 2019. IEDM '19. International, MRAM Poster Session #20</u> Stability of Spin-Orbit-Torque Magnetic Random Access Memory with Voltage Controlled Magnetic Anisotropy Effect S. Z. Rahaman*, I-J. Wang, H.-H. Lee, <u>D. Y. Wang</u>, C.-F. Pai, S.-Y. Yang, Y.-C. Hsin, Y.-J. Chang, Y.-C. Kuo, Y.-H. Su, G.-L. Chen, F.-M. Chen, J.-H. Wei, S.-S. Sheu, W.-C. Lo, C.-I. Wu, and D.-L. Deng
B9.	<u>Electron Devices Meeting, 2019. IEDM '19. International, MRAM Poster Session #22</u> On the patterning of Spin-orbit torque (SOT) MRAM cell on Tungsten Y.-J. Chang*, S.-Y. Yang, Y.-C. Hsin, I.-J. Wang, Y.-C. Kuo, J.-H. Wei, S. Z. Rahaman, <u>D.-Y. Wang</u>, H.-H. Lee, Y.-H. Su, G.-L. Chen, F.-M. Chen, S.-S. Sheu, W.-C. Lo, C.-I. Wu, L.-X. Ye, T.-H. Wu, and D.-L. Deng
B10.	<u>VLSI Technology, Systems and Applications, 2019. VLSI-TSA 2019. International Symposium on, April 2019, Poster Session #T309</u> A Large Dynamic Range Current Sensor Using Magnetic Tunnel Junction on 8" Si process line <u>Ding-Yeong Wang</u> *, I-Jung Wang, Chih-Sheng Lin, Jian-Wei Su, Hsin-Han Lee, Yu-Chen Hsin, Shan-Yi Yang, Yao-Jen Chang, Yi-Ching Kuo, Yi-Hui Su, Shakh Ziaur Rahaman, Guan-Long Chen, Sih-Han Li, Jeng-Hua Wei, Keh-Ching Huang, and Chih-I Wu
B11.	<u>Electron Devices Meeting, 2017. IEDM '17. International, MRAM Poster Session #29</u> Pulse-width and temperature effect on the switching behavior of a low-input resistance Spin-Orbit-Torque MRAM cell I.-J. Wang, S. Z. Rahaman*, C.-F. Pai, <u>D. Y. Wang</u>, Y.-C. Hsin, H.-H. Lee, Y.-J. Chang, G.-L. Chen, S.-Y. Yang, Y.-C. Kuo, Y.-H. Su, Y.-S. Chen, M.-J. Kao, C.-I. Wu, and D.-L. Deng
B12.	<u>VLSI Technology, Systems and Applications, 2017. VLSI-TSA 2017. International Symposium on, April 2017, T10</u> Hardware Implementation of Physically Unclonable Function (PUF) in Perpendicular STT MRAM <u>Ding-Yeong Wang*</u>, Yu-Chen Hsin, Kai-Yu Lee, Guan-Long Chen, Shan-Yi Yang, Hsin-Han Lee, Yao-Jen Chang, I-Jung Wang, Yi-Ching Kuo, Yu-Sheng Chen, Pei-Hua Wang, Chih-I Wu, and Duan-Li Deng
B13.	<u>Electron Devices Meeting, 2016. IEDM '16. International, MRAM Poster Session #21</u> Randomness Control of Bit Pattern for MRAM Physically Unclonable Function (PUF) Yu-Sheng Chen*, <u>Ding-Yeong Wang</u>, Yu-Chen Hsin, Kai-Yu Lee, Guan-Long Chen, Shan-Yi Yang, Hsin-Han Lee, Yao-Jen Chang, I-Jung Wang, Pei-Hua Wang, Chih-I Wu, and Duan-Li Deng

B14.	<u>VLSI Technology, Systems and Applications, 2015. VLSI-TSA 2015. International Symposium on, April 2015, TR34</u> A Complementary Magnetic Field Sensor Using Magnetic Tunnel Junction Ding-Yeong Wang*, Keng-Ming Kuo, Cheng-Wei Chien, Shan-Yi Yang, Sheng-Huang Huang, Jia-Hong Shyu, Kuei-Hung Shen, Tzu-Kun Ku, and Ming-Jinn Tsai
B15.	<u>VLSI Technology, Systems and Applications, 2015. VLSI-TSA 2015. International Symposium on, April 2015, TR35</u> Back-hopping Phenomenon in Perpendicular Magnetic Tunnel Junctions Sheng-Huang Huang*, Kuei-Hung Shen, Cheng-Wei Chien, Shan-Yi Yang, Jia-Hong Shyu, Ding-Yeong Wang, Keng-Ming Kuo, Tzu-Kun Ku, and D. Deng
B16.	<u>VLSI Technology, Systems and Applications, 2014. VLSI-TSA 2014. International Symposium on, April 2014, TR32</u> Scaling properties of perpendicular MTJ with dual-CoFeB/MgO interfaces and Step-etch structure Cheng-Wei Chien*, Ding-Yeong Wang, Sheng-Huang Huang, Kuei-Hung Shen, Shan-Yi Yang, Jia-Hong Shyu, Keng-Ming Kuo, Young-Shying Chen, Yung-Hung Wang, Tzu-Kun Ku, and Duan-Li Deng
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B18.	<u>Electron Devices Meeting, 2012. IEDM '12. International, 11-13 Dec. 2012 Page(s):1 - 4</u> Impact of stray field on the switching properties of perpendicular MTJ for scaled MRAM Yung-Hung Wang*, Sheng-Huang Huang, Ding-Yeong Wang, Kuei-Hung Shen, Cheng-Wei Chien, Keng-Ming Kuo, Shan-Yi Yang, and Duan-Li Deng
B19.	<u>IEEE International Magnetism Conference, BS-07, 20120508</u> Study of perpendicular magnetic anisotropy in MgO/CoFeB/MgO films. K.H. Shen*, S.Y. Yang, C.T. Yen, K.M. Kuo, S.H. Huang, D.Y. Wang, C.W. Chien, Y.H. Wang, and T.K. Ku
B20.	<u>Annual Conference on Magnetism and Magnetic Materials, EE-11, pp.333, 20111030</u> Sidewall effects on magnetic anisotropy of CoFeB K.H. Shen*, S.Y. Yang, C.T. Yen, K.M. Kuo, S.H. Huang, D.Y. Wang, Y.H. Wang, and T.K. Ku
B21.	<u>Annual Conference on Magnetism and Magnetic Materials, 20101118</u> Magnetic Tunnel Junction with [Co/Pt] Perpendicular Magnetization Films Y.H. Wang*, D.Y. Wang, S.Y. Yang, C.T. Yen, C.H. Tsai, T.K. Ku, and M.J. Kao
B22.	<u>Joint MMM/Intermag Conference, ET-04, pp.1-4, 20090507</u> Annealing effects of spin-transfer MTJ with composite free layers. Y.H. Wang*, C.T. Yen, D.Y. Wang, C.T. Shen, M.J. Kao, S.Y. Yang, and K.H. Shen

B23.	<u>IEEE International Magnetism Conference, HD-03,pp.1344-1345,20080508</u> Spin-Polarized Current Induced Switching of Composite Free Layers. C.T. Yen*, W.C. Chen, <u>D.Y. Wang</u> , C.T. Shen, S.Y. Yang, C.H. Tsai, Y.J. Lee, C.C. Hung, K.H. Shen, M.J. Kao, and Y.S. Chen
B24.	<u>IEEE International Magnetism Conference, GT-14,pp.1263-1264,20080508</u> Shape dependence of current-induced magnetization switching. C.H. Tsai*, Y.J. Lee, <u>D.Y. Wang</u> , W.C. Chen, C.T. Yen, C.T. Shen, S.Y. Yang, C.C. Hung, K.H. Shen, and M.J. Kao
B25.	<u>磁學暨磁性技術研討會, MAI-1,pp.A-42,20070730</u> 磁性記憶體中熱效應對於翻轉特性的影響 Y.J. Lee*, C.C. Hung, <u>D.Y. Wang</u> , and M.J. Kao
B26.	<u>VLSI Technology, Systems and Applications, 2007. VLSI-TSA 2007. International Symposium on, April 2007</u> A novel 1T2UMTJ toggle MRAM with high read/write bandwidth interface M.C. Wang*, J.R. Tsai, C.C. Hung, Y.S. Chen, C.P. Chang, C.S. Lin, C.C. Wang, K. L. Su, Y. J. Lee, <u>D.Y. Wang</u> , K.H. Shen, M.J. Tsai, and M.J. Kao
B27.	<u>2nd Taiwan International Conference on Spintronics (TICS) pp. 127-144, 2006</u> Effect of Capping Layer on Switching and Magnetoresistance in CoFeB Magnetic Tunnel Junction Yung-Hung Wang*, Cheng-Tyng Yen, Wei-Chuan Chen, Shan-Yi Yang, Yuan-Jen Lee, <u>Ding-Yeong Wang</u> , Chih-Ta Shen, Kuei-Hung Shen, Young-Shying Chen, Chien-Chung Hung, Ming-Jer Kao, and Ming-Jinn Tsai.
B28.	<u>Extended Abstracts of the 2006 International Conference on SSDM, pp.998-999, 2006</u> Characteristics Improvement of Phase Change Memory with Programming Pulse Width Der-Sheng Chao*, Chain-Ming Lee, Yi-Chan Chen, Philip H. Yen, <u>Ding-Yeong Wang</u> , Ming-Jung Chen, Shen-Chuan Lo, Hong-Hui Hsu, Wen-Han Wang, Fred Chen, Yen Chuo, Chenhsin Lien, Ming-Jer Kao, and Ming-Jinn Tsai
B29.	<u>Electron Devices Meeting, 2006. IEDM '06. International, 11-13 Dec. 2006 Page(s):1 - 4</u> Adjacent-Reference and Self-Reference Sensing Scheme with Novel Orthogonal Wiggle MRAM Cell C.C. Hung*, Y.S. Chen, <u>D.Y. Wang</u> , Y.J. Lee, W.C. Chen, Y.H. Wang, C.T. Yen, S.Y. Yang, K.H. Shen, C.P. Chang, C.S. Lin, K.L. Su, H.C. Cheng, Y.J. Wang, D.D.L. Tang, M.J. Tsai, and M.J. Kao
B30.	<u>Extended Abstracts of the 2003 International Conference on SSDM, pp.648-649, 2003</u> Pt/SrBi ₂ Ta ₂ O ₉ /HfO ₂ /Si Structure for 1T Ferroelectric Random Access Memory <u>Ding-Yeong Wang</u> , Chao-Hsin Chien*, Ming-Jui Yang, Peer Lehnen, Ching-Chieh Leu, Shioh-Huey Chuang, Tiao-Yuan Huang, and Chun-Yen Chang

Patent (Taiwan)	
C1.	名稱：用於磁場感測之穿隧磁阻裝置 發明人：郭耿銘, 王丁勇 狀態：獲證 證書號數：TWI633321 獲證日：2018 年 09 月 04 日
C2.	名稱：生物分子磁感測器 發明人：李欣翰, 陳佑昇, 王丁勇, 辛毓真 狀態：獲證 證書號數：TWI624661 獲證日：2018 年 06 月 19 日
C3.	名稱：物理性不可複製功能電路、磁阻式可變電阻裝置與物理性不可複製功能電路之控制方法 發明人：鄧端理, 陳佑昇, 王丁勇 狀態：獲證 證書號數：TWI624835 獲證日：2018 年 06 月 08 日
C4.	名稱：用於感測外部磁場之磁場感測器 發明人：郭耿銘, 王丁勇, 王泳弘 狀態：獲證 證書號數：TWI468715 獲證日：2016 年 02 月 05 日
C5.	名稱：用於感測外部磁場之磁場感測器 發明人：郭耿銘, 王丁勇, 王泳弘 狀態：獲證 證書號數：TWI468715 獲證日：2016 年 02 月 05 日
C6.	名稱：三軸磁場感測器、製作磁場感測結構的方法與磁場感測電路 發明人：陳永祥, 郭耿銘, 王丁勇, 簡政尉 狀態：獲證 證書號數：TWI513993 獲證日：2016 年 02 月 02 日
C7.	名稱：上固定型垂直磁化穿隧磁阻元件 發明人：王泳弘, 沈桂弘, 王丁勇, 楊姍意 狀態：獲證 證書號數：TWI514373 獲證日：2016 年 02 月 02 日

C8.	名稱：應用穿隧式磁電阻器之磁場感測方法及磁場感測裝置 發明人：王丁勇，陳永祥，郭耿銘 狀態：獲證 證書號數：TWI431301 獲證日：2014 年 04 月 07 日
C9.	名稱：磁性隨機存取記憶體 發明人：王丁勇，李元仁，洪建中 狀態：獲證 證書號數：TWI415124 獲證日：2013 年 12 月 02 日
C10.	名稱：磁自旋翻轉記憶胞結構 發明人：陳威全，顏誠廷，王丁勇 狀態：獲證 證書號數：I346335 獲證日：2011 年 08 月 13 日
C11.	名稱：磁性記憶體及其資料讀取電路 發明人：陳永祥，王丁勇 狀態：獲證 證書號數：I336079 獲證日：2011 年 02 月 10 日

Patent (China)	
D1.	名稱：可變電阻裝置、物理性不可複製功能電路與控制方法 發明人：鄧端理，陳佑昇，王丁勇 狀態：獲證 證書號數：ZL201710367962.4 獲證日：2020 年 09 月 14 日
D2.	名稱：用於磁場感測的穿隧磁阻裝置 發明人：郭耿銘，王丁勇 狀態：獲證 證書號數：ZL201310208477.4 獲證日：2020 年 03 月 17 日
D3.	名稱：三軸磁場感測器、製作磁場感測結構的方法與感測電路 發明人：陳永祥，郭耿銘，王丁勇，簡政尉 狀態：獲證 證書號數：ZL201310208477.4 獲證日：2017 年 06 月 02 日
D4.	名稱：磁性隨機存取存儲器 發明人：王丁勇，李元仁，洪建中 狀態：獲證 證書號數：ZL200710149763.2 獲證日：2011 年 12 月 14 日

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E1.	Patent Name : Biomolecule magnetic sensor Inventors : Hsin-Han Lee, Yu-Sheng Chen, Ding-Yeong Wang , Yu-Chen Hsin Status : Application granted Patent Number : US 10,725,126B2 Patent Certification Date : 2020-07-28
E2.	Patent Name : Puf circuit and magnetoresistive device and control method thereof Inventors : Duan-Lee Tang, Yu-Sheng Chen, Ding-Yeong Wang Status : Application granted Patent Number : US 10,090,033B2 Patent Certification Date : 2018-10-02
E3.	Patent Name : Tunneling magneto-resistor device for sensing a magnetic field Inventors : Keng-Ming Kuo, Ding-Yeong Wang Status : Application granted Patent Number : US 9,810,748B2 Patent Certification Date : 2017-11-07
E4.	Patent Name : Tunneling magneto-resistor device for sensing a magnetic field Inventors : Keng-Ming Kuo, Ding-Yeong Wang , Yung-Hung Wang Status : Application granted Patent Number : US 9,207,290B2 Patent Certification Date : 2015-12-08
E5.	Patent Name : 3-Axis magnetic field sensor, method for fabricating magnetic field sensing structure and magnetic field sensing circuit Inventors : Young-Shying Chen, Keng-Ming Kuo, Ding-Yeong Wang , Cheng-Wei Chien Status : Application granted Patent Number : US 9,069,033B2 Patent Certification Date : 2015-06-30
E6.	Patent Name : Magnetic field sensing methods and magnetic field sensing apparatuses using tunneling magneto-resistor devices Inventors : Ding-Yeong Wang , Young-Shying Chen, Keng-Ming Kuo Status : Application granted Patent Number : US 8,816,683B2 Patent Certification Date : 2014-08-26
E7.	Patent Name : Magnetic memory element utilizing spin transfer switching Inventors : Wei-Chuan Chen, Cheng-Tyng Yen, Ding-Yeong Wang Status : Application granted Patent Number : US 8,026,562B2 Patent Certification Date : 2011-09-27

E8.	Patent Name : Magnetic random access memory Inventors : Ding-Yeong Wang, Yuan-Jen Lee, Chien-Chung Hung Status : Application granted Patent Number : US 7,872,904B2 Patent Certification Date : 2011-01-18
E9.	Patent Name : Magnetic memory element utilizing spin transfer switching Inventors : Wei-Chuan Chen, Cheng-Tyng Yen, Ding-Yeong Wang Status : Application granted Patent Number : US 7,829,964B2 Patent Certification Date : 2010-11-09
E10.	Patent Name : Data reading circuit of toggle magnetic memory Inventors : Young-Shying Chen, Ding-Yeong Wang Status : Application granted Patent Number : US 7,646,635B2 Patent Certification Date : 2010-01-12