

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

WESTERN DIGITAL TECHNOLOGIES, INC.,
Petitioner,

v.

GODO KAISHA IP BRIDGE 1,
Patent Owner.

Case No. IPR2024-01494
Patent No. 11,968,909

NOTICE OF FILING PATENT OWNER'S DEMONSTRATIVE EXHIBITS

LISTING OF EXHIBITS

Exhibit	Description
2001	Kittel, C., <i>Introduction to Solid State Physics</i> , 6th Edition, 1986, pgs. 13-15, 18, 23 (“Kittel”)
2002	Duke, C.B., <i>Tunneling in Solids</i> , Solid State Physics: Advances in Research and Applications, 1969, pgs. 1, 6-7, 34-35, 78-79 (“Duke”)
2003	Definition of “ferromagnetism,” Oxford English Reference Dictionary, Second Edition, pg. 513 (“Oxford English Reference Dictionary”)
2004	“Ferromagnetism,” The New Encyclopaedia Britannica: Volume 4, 15th Edition, 2003, pgs. 748-749 (“Britannica”)
2005	Zhu, J.G., et al., <i>Magnetic tunnel junctions</i> , Materials today, Volume 9, Number 11, November 2006, pgs. 36-45 (“Zhu”)
2006	Wulfhekel, W., et al., <i>Single-crystal magnetotunnel junctions</i> , Applied Physics Letters, Volume 78, Number 4, January 2001, pgs. 509-511 (“Wulfhekel”)
2007	Hard disk Market – Global Industry Analysis and Forecast (2025-2032), https://www.maximizemarketresearch.com/marketreport/global-hard-disk-market/63888/
2008	Yuasa citations, https://scholar.google.com/citations?view_op=view_citation&hl=en&user=kb5EQcsAAAAJ&citation_for_view=kb5EQcsAAAAJ:3fE2CSJlr18C
2009	Yuasa citations 2, https://scholar.google.com/citations?view_op=view_citation&hl=en&user=kb5EQcsAAAAJ&citation_for_view=kb5EQcsAAAAJ:kNdYIxmWkoC
2010	Wang, S.X., et al., <i>Magnetic Information Storage Technology</i> (Academic Press 1999) (Chapter 6)
2011	RESERVED

Exhibit	Description
2012	Parkin, S.P, et al., <i>Giant tunneling magnetoresistance at room temperature with MgO (100) tunnel barriers</i> , Nature Materials, 3 (2004), 862-867
2013	Transcript of Deposition of Jeffrey Bokor, Ph.D. (June 24, 2025)
2014	Transcript of Deposition of Jeffrey Bokor, Ph.D. (June 25, 2025)
2015	Djayaprawira, D., et al., <i>230% room-temperature magnetoresistance in CoFeB/MgO/CoFeB magnetic tunnel junctions</i> , Applied Physics Letters, 86(9) (2005)
2016	Yuasa, S., et al., <i>High Tunnel Magnetoresistance at Room Temperature in Fully Epitaxial Fe/MgO/Fe Tunnel Junctions due to Coherent Spin-Polarized Tunneling</i> , Japanese Journal of Applied Physics, 43(4B), (2004) L588
2017	Yuasa, S., et al., <i>Giant room-temperature magnetoresistance in single crystal Fe/MgO/Fe magnetic tunnel junctions</i> , Nature Materials, 3(12) (2004), 868-871
2018	Statutory Disclaimer Under 37 C.F.R. § 1.321(a)
2019	Marrows, C.H., <i>Spin-polarised currents and magnetic domain walls</i> , Advances in Physics, 52(8), (2005) 585-713
2020	Tsymbal, E., et al., <i>Handbook of Spin Transport and Magnetism</i> , 2012
2021	Nagamine, Y, et. al., <i>Ultralow resistance-area product of $0.4 \Omega (\mu\text{m})^2$ and high magnetoresistance above 50% in CoFeB/MgO/CoFeB magnetic tunnel junctions</i> , Applied Physics Letters, 89 (2006), 16507
2022	Nakatani, T., et al., <i>Read sensor technology for ultrahigh density magnetic recording</i> , MRS Bulletin, Materials Research Society, 43(2), (2018) 106-111
2023	Jiang, B., et al., <i>Tunneling magnetoresistive devices as read heads in hard disk drives</i> , Journal of Magnetism and Magnetic Materials, 571 (2023) 170546

Exhibit	Description
2024	The 23rd (FY2022) Japan Society of Applied Physics Achievement Award Recipients (with English translation), The Japan Society of Applied Physics, https://www.jsap.or.jp/outstanding-achievementaward/recipients/recipients23
2025	JSAP Outstanding Achievement Award Recipients, The Japan Society of Applied Physics, https://www.jsap.or.jp/english/awards/outstanding-achievementaward/recipients
2026	2021 New Fellows, IEEE Japan Council, https://ieeelp.org/en/kaiin/fellow/fellow21.html
2027	JST owned patent wins Future Creative Invention Prize at the National Invention Award 2021, Japan Science and Technology Agency, https://www.jst.go.jp/report/2021/210525_e.html
2028	Dr. Shinji Yuasa profile, https://www.jst.go.jp/impact/sahashi/en/system/index.html
2029	AIST wins three Science and Technology Awards in the 2016 Minister of Education, Culture, Sports, Science and Technology Commendation for Science and Technology, https://www.aist.go.jp/aist_j/news/prize/pr20160412_3.html
2030	Yuasa, S., <i>Magnetoresistance and Spin-Transfer Torque in Magnetic Tunnel Junctions</i> , IEEE Transactions on Magnetics, IEEE Magnetics Society Distinguished Lecturers for 2012, Vol. 48, No. 1, 2012
2031	Shinji Yuasa – IEEE Magnetics Society, https://ieeemagnetics.org/contact/shinji-yuasa#biography
2032	AIST: 20th Tsukuba Prize winner, https://www.aist.go.jp/aist_j/news/prize/itemid025-000077.html
2033	Announcing the winners for “Tsukuba Prize,” “Esaki Leona Prize,” and “Tsukuba Encouragement Prize”: Ibaraki Prefectural Science and Technology Promotion Foundation (with English translation), https://www.tsukuba-sci.com/cms/?p=9853

Exhibit	Description
2034	AIST: 34th Inoue Harunari Prize, https://www.aist.go.jp/aist_j/news/prize/itemid025-000082.html
2035	RESERVED
2036	RESERVED
2037	Saito, Y. et al. <i>Correlation between barrier width, barrier height, and dc bias voltage dependences on the magnetoresistance ratio in Ir-Mn exchange biased single and double tunnel junctions</i> , Jpn J. Appl. Phys. 39, L1035–L1038 (2000)
2038	Maat, S., et al., <i>Physics and Design of Hard Disk Drive Magnetic Recording Read Heads</i> , Handbook of Spintronics, 2014
2039	Soukup, R.J., <i>Hot Electron Transport in Vacuum Deposited Thin Film Emission Diodes</i> , University of Minnesota, Ph.D., Physics, solid state, 1969, pgs. 1-209 (“Soukup-Dissertation”)
2040	U.S. Patent Application Publication No. 2006/0003185 A1
2041	J. C. Slonczewski, <i>Conductance and exchange coupling of two ferromagnets separated by a tunneling barrier</i> , Phys. Rev. B 39, 6995-7002 (1989)
2042	RESERVED
2043	RESERVED
2044	RESERVED
2045	RESERVED
2046	RESERVED
2047	RESERVED
2048	RESERVED
2049	RESERVED

Exhibit	Description
2050	RESERVED
2051	RESERVED
2052	RESERVED
2053	Declaration of Caroline A. Ross, Ph.D.
2054	<i>Curriculum Vitae</i> of Caroline A. Ross, Ph.D.
2055	U.S. Application No. 10/824835 File History (Partial)
2056	Citations to Butler: https://scholar.google.com/scholar?hl=en&as_sdt=0%2C22&q=Butler+et+al.%2C+Spin-dependent+tunneling+conductance+of+Fe%7CMgO%7CFe+sandwiches%2C+63+Phys.+Rev.+B+054416+%282001%29&btnG=
2057	Citations to Soukup: https://scholar.google.com/scholar?hl=en&as_sdt=0%2C22&q=Soukup+et+al.%2C+Voltage-Current+Characteristics+for+Electrical+Conduction+Through+Thin+MgO+Films%2C+41+J.+Appl.+Phys.+3229-+3236+%281970%29&btnG=
2058	Errata to EX2013 - Deposition of Jeffrey Bokor, Ph.D. (June 24, 2025)
2059	Errata to EX2014 - Deposition of Jeffrey Bokor, Ph.D. (June 25, 2025)
2060-2071	RESERVED
2072	EX2024 - The 23rd (FY2022) Japan Society of Applied Physics Achievement Award Recipients (with English translation), The Japan Society of Applied Physics, https://www.jsap.or.jp/outstanding-achievementaward/recipients/recipients23 with Amended Certification of Translation [SUPPLEMENTAL EVIDENCE - NOT FILED]
2073	Certified English Translation of EX2029 - AIST wins three Science and Technology Awards in the 2016 Minister of Education, Culture,

Exhibit	Description
	Sports, Science and Technology Commendation for Science and Technology, <i>available at</i> https://www.aist.go.jp/aist_j/news/prize/pr20160412_3.html [SUPPLEMENTAL EVIDENCE - NOT FILED]
2074	Certified English Translation of EX2032 - AIST, “Winner of the 20th Tsukuba Award,” <i>available at</i> https://www.aist.go.jp/aist_j/news/prize/itemid025-000077.html [SUPPLEMENTAL EVIDENCE - NOT FILED]
2075	Certified English Translation of EX2034 - AIST: 34th Inoue Harunari Prize, <i>available at</i> https://www.aist.go.jp/aist_j/news/prize/itemid025-000082.html [SUPPLEMENTAL EVIDENCE - NOT FILED]
2076	RESERVED
2077	RESERVED
2078	Declaration of Dara Del Rosario [SUPPLEMENTAL EVIDENCE - NOT FILED]
2079	Transcript of October 24, 2025 Board Conference Call
2080	RESERVED
2081	RESERVED
2082	RESERVED
2083	RESERVED
2084	RESERVED
2085	Transcript of Deposition of Jeffrey Bokor, Ph.D. (Oct. 30, 2025)
2086	Transcript of Deposition of Jeffrey Bokor, Ph.D. (October 31, 2025)
2087	Sur-Reply Declaration of Caroline A. Ross, Ph.D.
2088	Errata to EX2085 - Deposition of Jeffrey Bokor, Ph.D. (Oct. 30, 2025)

Exhibit	Description
2089	Errata to EX2086 - Deposition of Jeffrey Bokor, Ph.D. (Oct. 31, 2025)
2090	Patent Owner's Demonstrative Exhibits

Pursuant to 37 CFR § 42.6(e)(4)(ii), and the Board's Hearing Order, Patent Owner herewith submits the following Exhibit:

Exhibit	Description
2090	Patent Owner's Demonstrative Exhibits

Respectfully submitted,
Godo Kaisha IP Bridge I

Date: January 21, 2026

/Jason W. Balich/
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CERTIFICATE OF SERVICE UNDER 37 C.F.R. § 42.6 (e)(4)

I certify that on January 21, 2026, a copy of the foregoing document, including any exhibits filed therewith, is being served via electronic mail, as previously consented to by Petitioner, upon the following:

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Date: January 21, 2026

/Dara Del Rosario/
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