UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

INNOSCIENCE (ZHUHAI) TECHNOLOGY COMPANY, LTD.,
AND
INNOSCIENCE AMERICA, INC.,
Petitioner,

v.

EFFICIENT POWER CONVERSION CORPORATION,
Patent Owner.

Case No. IPR2023-01383
U.S. Patent 8,404,508

PETITIONER'S UPDATED EXHIBIT LIST

Further to 37 C.F.R. § 42.63(e), Petitioner hereby submits a current listing of its exhibits to counsel for Patent Owner. Exhibit 1054 was filed on P-TACTS and served via email to counsel of record for the Patent Owner.

Exhibits	**Description**
Ex. 1001	U.S. Patent No. 8,404,508 to Lidow et al. ("the '508 patent")
Ex. 1002	Prosecution History of the '508 patent (downloaded from Public PAIR)
Ex. 1003	Declaration of Dr. James Richard Shealy, Ph.D. ("Shealy")
Ex. 1004	Japanese Patent Application Publication No. JPH11261053A to Yoshida, published September 24, 1999 ("*Yoshida*"), including certified English translation and certification
Ex. 1005	International Publication No. WO 2005/057624 to Beach, published June 23, 2005 ("*Beach*")
Ex. 1006	U.S. Patent No. 7,238,560 to Sheppard et al., published July 3, 2007 ("*Sheppard*")
Ex. 1007	U.S. Patent Application Publication No. 2006/0273347 to Hikita et al., published December 7, 2006 ("*Hikita-347*")
Ex. 1008	U.S. Patent Application Publication No. 2008/0079023 to Hikita et al., published April 3, 2008 ("*Hikita-023*")
Ex. 1009	U.S. Patent Application Publication No. 2007/0007547 to Beach, published January 11, 2007 ("*Beach-547*")
Ex. 1010	X. Hu et al., "Enhancement mode AlGaN/GaN HFET with selectively grown *pn* junction gate," Electronics Letters, vol. 36, no. 8, April 2000, pp. 753-754 ("*Hu*")
Ex. 1011	Excerpts from Sorab K. Ghandhi, "VLSI Fabrication Principles" (2d ed. 1994) ("*Ghandhi*")
Ex. 1012	C. S. Suh et al., "p-GaN/AlGaN/GaN Enhancement-Mode HEMTs," 2006 64th Device Research Conference, June 2006, pp. 163-164 ("*Suh*")
Ex. 1013	Japanese Patent Application Publication No. JP 2007-066979A to Iwatani et al., published March 15, 2007 ("*Iwatani*"), including certified English translation and certification
Ex. 1014	S.-H. Jang et al., "High-quality GaN/Si(111) epitaxial layers grown with various $Al_{0.3}Ga_{0.7}N$/GaN superlattices as intermediate layer by MOCVD," Journal of Crystal Growth, vol. 253, nos. 1-4, June 2003, pp. 64-70 ("*Jang*")

Ex. 1015	E. Feltin et al., "Crack-Free Thick GaN Layers on Silicon (111) by Metalorganic Vapor Phase Epitaxy," Physical Status Solidi A., vol. 188, no. 2, November 2001, pp. 531-535 ("*Feltin*")
Ex. 1016	U.S. Patent No. 5,223,724 to Green, published June 29, 1993 ("*Green*")
Ex. 1017	U.S. Patent No. 6,211,000 to Spikes et al., published April 3, 2001 ("*Spikes*")
Ex. 1018	U.S. Patent No. 5,225,360 to Shim et al., published July 6, 1993 ("*Shim*")
Ex. 1019	U.S. Patent Application Publication No. 2005/0133818 to Johnson et al., published June 23, 2005 ("*Johnson*")
Ex. 1020	U.S. Patent Application Publication No. 2007/0228416 to Chen et al., published October 4, 2007 ("*Chen*")
Ex. 1021	M. Shimizu et al., "p-Type InGaN Cap Layer for Normally Off Operation in AlGaN/GaN Heterojunction Field Effect Transistors," Japanese Journal of Applied Physics, vol. 47, no. 4, April 2008, pp. 2817-2819 ("*Shimizu*")
Ex. 1022	U.S. Patent Application Publication No. 2009/0042344 to Ye et al., published February 12, 2009 ("*Ye*")
Ex. 1023	U.S. Patent No. 6,316,793 to Sheppard et al., published November 13, 2001 ("*Sheppard-793*")
Ex. 1024	U.S. Patent Application Publication No. 2008/0073652 to Sugimoto et al., published March 27, 2008 ("*Sugimoto*")
Ex. 1025	C.-F. Zhu et al., "Effects of Rapid Thermal Annealing on the Structural Properties of GaN Thin Films," IEEE Transactions on Electron Devices, vol. 48, no. 6, June 2001, pp. 1225-1230 ("*Zhu*")
Ex. 1026	Excerpts from Stephen A. Campbell, "The Science and Engineering of Microelectronic Fabrication" (2d ed. 1994) ("*Campbell*")
Ex. 1027	A.R. Woll et al., "GaN Nucleation and Growth on Sapphire (0001): Incorporation and Interlayer Transport," Physical Review Letters, vol. 83, no. 21, November 1999, pp. 4349-4352 ("*Woll*")
Ex. 1028	J.A. Smart et al., "AlGaN/GaN heterostructures on insulating AlGaN nucleation layers," Applied Physics Letters, vol. 75, no. 3, July 1999, pp. 388-390 ("*Smart*")
Ex. 1029	Y. Liu et al., "Demonstration of undoped quaternary AlInGaN/GaN heterostructure field-effect transistor on sapphire substrate," Applied Physics Letters, vol. 86, May 2005, 223510 ("*Liu*")

Ex. 1030	O. Ambacher et al., "Pyroelectric properties of Al(In)GaN/GaN hetero- and quantum well structures," Journal of Physics: Condensed Matter, vol. 14, March 2002, 3399-3434 ("*Ambacher*")
Ex. 1031	Taiwanese Patent Application Publication No. TW200414540 A to Sheu et al., published August 1, 2004 ("*Sheu*"), including certified English translation and certification
Ex. 1032	Japanese Patent Application Publication No. JP 2007109830A to Mizutani et al., published April 26, 2007 ("*Mizutani*"), including certified English translation and certification
Ex. 1033	U.S. Patent No. 6,897,514 to Kouznetsov et al., published May 24, 2005 ("*Kouznetsov*")
Ex. 1034	U.S. Patent Application Publication No. 2006/0006500 to Piner et al., published January 12, 2006 ("*Piner*")
Ex. 1035	V. Kumar et al., "Field-Plated 0.25-μm Gate-Length AlGaN/GaN HEMTs With Varying Field-Plate Length," IEEE Transactions on Electron Devices, vol. 53, no. 6, June 2006, pp. 1477-1480 ("*Kumar*")
Ex. 1036	W. Saito et al. "Design and Demonstration of High Breakdown Voltage GaN High Electron Mobility Transistor (HEMT) Using Field Plate Structure for Power Electronics Applications," Japanese Journal of Applied Physics, vol. 43, no. 4B, April 2004, pp. 2239-2242 ("*Saito*")
Ex. 1037	U.S. Patent Application Publication No. 2006/0060895 to Hikita et al., published March 23, 2006 ("*Hikita-895*")
Ex. 1038	Email exchange between Petitioner and Board, Board email dated January 9, 2024.
Ex. 1039	Complainant's Opening Claim Construction Brief, *In the Matter of Certain Semiconductor Devices, and Methods of Manufacturing Same and Products Containing the Same*, ITC Investigation No. 337-TA-1366, dated Sept. 22, 2023
Ex. 1040	Exhibit prepared by Dr. Shealy at Deposition
Ex. 1041	Second Declaration of Dr. James Richard Shealy, Ph.D. ("ShealySupp")
Ex. 1042	H. Kim et al., "Effects of SiN Passivation and High-Electric Field on AlGaN–GaN HFET Degradation," IEEE Electron Device Letters, vol. 24, no. 7, July 2003, pp. 421-423 ("*Kim*")
Ex. 1043	B. Green et al., "The Effect of Surface Passivation on the Microwave Characteristics of Undoped AlGaN/GaN HEMT's,"

	IEEE Electron Device Letters, vol. 21, no. 6, June 2000, pp. 268-270 ("*Green*")
Ex. 1044	V. Kaper et al., "High-Power Monolithic AlGaN/GaN HEMT Oscillator," IEEE Journal of Solid-State Circuits, vol. 38, no. 9, September 2003, pp. 1457-1461 ("*Kaper*")
Ex. 1045	W. Wang et al., "Performance Enhancement by Using the n+-GaN Cap Layer and Gate Recess Technology on the AlGaN–GaN HEMT Fabrication," IEEE Electron Device Letters, vol. 26, no. 1, January 2005, pp. 5-7 ("*Wang*")
Ex. 1046	U.S. Patent Application Publication No. 2008/0296618 to Suh et al., published December 4, 2008 ("*Suh*")
Ex. 1047	R. Thompson et al., "Improved Fabrication Process for Obtaining High Power Density AlGaN/GaN HEMTs," IEEE GaAs Digest, November 2003, pp. 298-300 ("*Thompson*")
Ex. 1048	Gorowitz et al., "Methods of Metal Patterning and Etching," 1987 ("*Gorowitz*")
Ex. 1049	George G. Collins et al., "Process Control of the Chlorobenzene Single-Step Liftoff Process with a Diazo-Type Resist," IBM Journal of Research and Development, vol. 26, no. 5, September 1982, pp. 596-604 ("*Collins*")
Ex. 1050	J. Liang et al., "Improved Bi-Layer Lift-off Process for MEMS Applications," Microelectronic Engineering, vol. 26, issues 5-6, May 2008 ("*Liang*")
Ex. 1051	Walker et al., "Handbook of Metal Etchants," 1991 ("*Walker*")
Ex. 1052	E. Harvard et al., "Performance of AlGaN/GaN High-Electron Mobility Transistors With AlSiN Passivation," IEEE Transactions on Electron Devices, vol. 58, No. 1, January 2011 ("*Harvard*")
Ex. 1053	ITC Investigation No. 337-TA-1366 hearing transcript, March 1, 2024
Ex. 1054	Email from Trials, November 1, 2024

Dated: November 27, 2024

By: /Kara A. Specht/
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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing **Petitioner's Updated Exhibit List and Exhibit 1054** were served on November 27, 2024, via email directed to counsel of record for the Patent Owner at the following:

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