

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG DISPLAY CO., LTD.,
Petitioner,

v.

PICTIVA DISPLAYS INTERNATIONAL LTD.,
Patent Owner.

Case No. IPR2024-01095

Patent No. 11,828,425

PETITIONER'S PRELIMINARY REPLY

TABLE OF EXHIBITS

Exhibit No.	Description
1001	U.S. Patent No. 11,828,425
1002	File History for U.S. Patent No. 11,828,425
1003	Declaration of Dr. Russell J. Holmes
1004	Certified Translation of International Patent Application Publication No. WO 2008/040323 A2 (“Diekmann”)
1005	International Patent Application Publication No. WO 2008/040323 A2 (“Diekmann”)
1006	Certified Translation of Japanese Patent Application Publication No. JP 2007-277631 A (“Suzuki”)
1007	Japanese Patent Application Publication No. JP 2007-277631 A (“Suzuki”)
1008	U.S. Patent Application Publication No. 2005/0146267 (“Lee”)
1009	U.S. Patent Application Publication No. 2006/0214892 (“Harada”)
1010	J.W. Ma et al., <i>Organic light-emitting diodes based on new n-doped electron transport layer</i> , Synthetic Metals 158 (2008) (“Ma”)
1011	U.S. Patent Application Publication No. 2003/0159910 (“Caldwell”)
1012	U.S. Patent Application Publication No. 2008/0211395 (“Koshihara”)
1013	M. A. Baldo et al., <i>Highly efficient phosphorescent emission from organic electroluminescent devices</i> , 395 Nature 151 (1998).
1014	M. A. Baldo et al., <i>Very high-efficiency green organic light-emitting devices based on electrophosphorescence</i> 75 Appl. Phys. Lett. 4–6 (1999)
1015	Chihaya Adachi et al., <i>Confinement of charge carriers and molecular excitons within 5-nm-thick emitter layer in organic electroluminescent devices with a double heterostructure</i> , 57 Appl. Phys. Lett. 531–533 (1990)
1016	Martin Pfeiffer et al., <i>Electrophosphorescent p-i-n organic light-emitting devices for very-high-efficiency flat-panel displays</i> , 22 Adv. Mater. 14 (2002)

Exhibit No.	Description
1017	L. S. Hung et al., <i>Enhanced electron injection in organic electroluminescence devices using an Al/LiF electrode</i> , 70 Appl. Phys. Lett., 152–154 (1997)
1018	Zugang Liu et al., <i>Improved electron injection in organic LED with lithium quinolate/aluminium cathode</i> , 128 Synthetic Metals 211–214 (2002)
1019	Gufeng He et al., <i>Very high-efficiency and low voltage phosphorescent organic light-emitting diodes based on a p-i-n junction</i> , 95 J. Appl. Phys., 5773–5777 (2004) (“He”).
1020	L. Moro et al, <i>Process and design of a multilayer thin film encapsulation of passive matrix OLED displays</i> , Proceedings of SPIE Vol. 5214 (2004)
1021	Anna B. Chwang et al., <i>Thin film encapsulated flexible organic electroluminescent displays</i> , 83 Appl. Phys. Lett. 413–415 (2003)
1022	V. Bulovic et al., <i>Transparent light-emitting devices</i> , 29 Nature 380 (1996)
1023	INTENTIONALLY LEFT BLANK
1024	U.S. Patent No. 6,879,319 (“Cok”)
1025	File History for U.S. Patent Application No. 13/139,514
1026	File History for U.S. Patent Application No. 15/651,508
1027	File History for U.S. Patent Application No. 16/790,198
1028	U.S. Patent Application Publication No. 2011/0260201 (“Klein”)
1029	Harald Gross et al., <i>High Power Efficiencies at Record Lifetimes: NOVALED’S PIN-OLEDs</i> , FPD Yokohama 2005
1030	Gufeng He et al., <i>High-efficiency and low-voltage p-i-n electrophosphorescent organic light-emitting diodes with double-emission layers</i> , 85 Appl. Phys. Lett. 3911–3913 (2004)
1031	A. G. Werner et al., <i>Pyronin B as a donor for n-type doping of organic thin films</i> , 82 Appl. Phys. Lett. 4495–4497 (2003)
1032	U.S. Patent No. 5,594,469 (“Freeman”)
1033	M. H. Lu et al., <i>High-efficiency top-emitting organic light-emitting devices</i> , 81 Appl. Phys. Lett. 3921–3923 (2002)

Exhibit No.	Description
1034	First Amended Complaint, <i>Pictiva Displays International Ltd. v. Samsung Electronics Co., Ltd., et al.</i> , Case No. 2:23-cv-00495, Dkt. #17 (E.D. Tex.Mar. 1, 2024)
1035	Docket Control Order, <i>Pictiva Displays International Ltd. v. Samsung Electronics Co., Ltd., et al.</i> , Case No. 2:23-cv-00495, Dkt. #40 (E.D. TexApr. 17, 2024)
1036	Declaration of Rachel Garland (Elsevier)

I. Petitioner Has Provided Sufficient Evidence of the Public Availability of the Ma Reference (EX1010)

As set forth in the Petition, the Ma reference (Ex. 1010) that Petitioner submitted was publicly available as of August 29, 2008, when it was published online in the journal Synthetic Metals. Petition at 13. Ma is a peer-reviewed journal article published by an established publisher of scientific journals, Elsevier Limited (“Elsevier”). Ex. 1010 at 810. Ma’s cover page states it was “Available online 29 August 2008” and provides a hyperlink with information confirming that this date signifies when a version of the article was made available online. *Id.*

Despite presenting no contrary evidence, Patent Owner asserts in its POPR that Petitioner has not shown Ma qualifies as a publicly available printed publication. POPR at 4-5, 29-31. Patent Owner’s arguments are meritless. First, the evidence presented in the Petition suffices under *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 18–20 (PTAB Dec. 20, 2019) (Precedential), “to establish a reasonable likelihood that [the reference] is a printed publication” at the institution stage. *See id.* at 19–20 (finding the copyright date on the face of a reference, its printing date and ISBN date, and the fact that it was a textbook from an established publisher “sufficient evidence to establish a reasonable likelihood that [the reference] is a printed publication”). Ma indicates its online publication date on its face (Petition at 5), bears a 2008 copyright, and was published by an established

publisher, Elsevier (Ma at 810 (“journal homepage: www.elsevier.com/locate/synmet”)).

Second, to allay any potential issue, Petitioner submits herewith, pursuant to the Board’s approval, a declaration from a records custodian of Elsevier confirming the public availability of the Ma reference as of August 29, 2008. The Declaration of Rachael Garland (Ex. 1036, “Garland Declaration”), Senior Publisher at Elsevier, explains that “[a]s part of its ordinary course of business, Elsevier, publishes and makes available technical articles.” Garland Decl. ¶ 6. “These publications are made available for public download through Elsevier’s digital library, ScienceDirect,” and “[t]he article and abstract from Science Direct shows the date of publication for the first online version.” *Id.* ¶¶ 6, 10. This date is populated through “persistent publication metadata that is embedded in the articles metadata” such that “[o]nce this publication metadata has been first calculated it is not changed.” *Id.* ¶ 10.

The Garland Declaration expressly confirms that the Ma reference that Petitioner submitted, which is the same as Ex. A to the Garland Declaration, “was available online on August 29, 2008.” *Id.* ¶¶ 8–11. *See, e.g., Voter Verified, Inc. v. Election Sys. & Software, Inc.*, 745 F. Supp. 2d 1237, 1245–46 (M.D. Fl. Sep. 29, 2010) (relying on declaration of “website ‘maintainer’” to hold a reference available on website-based digest a printed publication), *aff’d sub nom. Voter Verified, Inc. v. Premier Election Sols., Inc.*, 698 F.3d 1374, 1380–81 (Fed. Cir. 2012). The Garland

Declaration further confirms that, when Ma was published online on August 29, 2008, it was made available to the interested public for download through Elsevier's ScienceDirect digital library. Garland Decl. at ¶¶ 6–7. *See, e.g., Palo Alto Networks, Inc. v. Finjan, Inc.*, IPR2015-01979, Paper 62 at 28 (PTAB Mar. 15, 2017) (holding a reference “published in a journal or periodical . . . and distributed to subscribers” publicly accessible).

Moreover, “[w]hen there is an established publisher there is a presumption of public accessibility as of the publication date.” *VidStream LLC v. Twitter, Inc.*, 981 F.3d 1060, 1065 (Fed. Cir. 2020). Indeed, a journal article published by an established publisher of scientific journals is a quintessential printed publication. Here, Elsevier was a prominent publisher of scientific journals, including through its online digital library, ScienceDirect. *See, e.g., Blue Calypso LLC v. Groupon, Inc.*, 815 F.3d 1331, 1349 n.9 (Fed. Cir. 2016) (indexing is not “a necessary condition for a reference to be publicly accessible”); *NearMap US, Inc. v. Eagle View Technologies, Inc.*, IPR2022-01009, Paper 28 (Dec. 14, 2023), at 25-27 (citing *Voter Verified* and finding a Littleworth reference “publicly available before the critical date” based on factors including an “established publisher” which created “a presumption of public accessibility as of the publication date”). Accordingly, the evidence certainly establishes at least a reasonable likelihood that Ma qualifies as a printed publication.

II. The Board should not deny institution under 35 U.S.C. § 314(a) and *Fintiv*.

Petitioner respectfully submits that discretionary denial is not warranted for this patent challenge. The '425 patent is now asserted against Samsung Electronics in two matters, *Pictiva Displays International Ltd. v. Samsung Electronics Co., Ltd.*, Case No. 2:23-cv-00495 (E.D. Texas) (the “-495 matter”), and *Pictiva Displays International Ltd. et al., v. Samsung Elecs. Co., Ltd. et al.*, No. 2:24-cv-00532 (E.D. Texas) (“-532 matter”). Both cases remain in early stages, and there is uncertainty as to whether the -495 matter will continue.

Patent Owner argues for denial in view of -495 matter, in which trial is currently scheduled for August 4, 2025. Yet that lawsuit remains in an early stage, with limited discovery activity beyond initial contentions and discovery requests. Patent Owner’s argument on *Fintiv* factor three is that by the institution date, “the parties would have filed their joint claim construction statement and have invested in claim construction discovery.” POPR at 65. Yet no *Markman* hearing or claim construction ruling would have taken place, fact discovery would remain ongoing, and expert discovery would not have yet begun.

Additionally, Samsung has filed a motion to dismiss the -495 matter due to the plaintiff’s lack of standing, which remains pending. See -495 matter, Dkt. 62. Patent Owner also joined with an entity named Key Patent Innovations Ltd. to file a replacement lawsuit on July 12, 2024 (the -532 matter). That replacement lawsuit is

at an earlier stage than the -495 matter, with infringement contentions served on October 24, 2025, an initial scheduling conference held on November 7, 2025, and trial currently scheduled for May 4, 2026.

Petitioner also filed this IPR just three and a half months after service of infringement contentions on March 11, 2024, in a case with six asserted patents, demonstrating that Petitioner acted with diligence. Additionally, Patent Owner would need to narrow the asserted claims in advance of any trial, such that a trial could not resolve all of Petitioner's claim challenges. Finally, Petitioner submits that discretionary denial is inappropriate because the Petition presents compelling evidence of unpatentability, for the reasons shown in Section VIII of the Petition.

Petitioner will seek to apprise the Board of any material litigation developments before the institution deadline.

Date: November 20, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6, I hereby certify that the foregoing Petitioner's Preliminary Reply was served together with Exhibit 1036 by electronic mail on the following counsel of record for patent owner:

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Date: November 20, 2024

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