

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. IPR2024-01093
Patent No. 8,723,164

PATENT OWNER'S PRELIMINARY SUPPLEMENTATION

EXHIBIT LIST

Exhibit No.	Document Description
EX2001	Declaration of Dr. Marc Sims
EX2002	Dictionary definition of “matrix” from online version for A Dictionary of Chemistry (6th ed.), Oxford University Press (2008), available from https://www.oxfordreference.com/display/10.1093/acref/9780199204632.001.0001/acref-9780199204632-e-2628?rskey=JZee15&result=2921 (last access Oct. 25, 2024)
EX2003	Dictionary definition of “matrix” from Merriam-Webster’s Collegiate Dictionary (11th ed.), Merriam-Webster, Incorporated (2007)
EX2004	Dictionary definition of “matrix” from Cambridge Advanced Learner’s Dictionary, Cambridge University Press (2003)
EX2005	Samsung Proposed Claim Constructions for the Terms and Phrases Identified for Construction per Local Patent Rule 4-2 in Pictiva Displays Int’l Ltd. v. Samsung Electronics Co. Ltd., et al., Case No. 2:23-cv-000495 (E.D. Tex. Oct. 22, 2024)
EX2006	Harald Gross et al., High Power Efficiencies at Record Lifetimes: NOVALED’s PIN-OLEDs, FPD Yokohama 2005 (obtained from IPR2024-01095)
EX2007	B.C. Krummacher et al., General method to evaluate substrate surface modification techniques for light extraction enhancement of organic light emitting diodes, 100 J. Appl. Phys. 054702 (2006)
EX2008	Chelsea M. Hess et al., Dielectric Dependence of Single-Molecule Photoluminescence Intermittency: Nile Red in

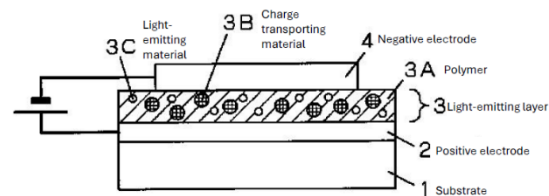
	Poly(vinylidene fluoride), 118 J. Phys. Chem. 8905-8913 (2014)
EX2009	E. H. Martin & J. Hirsch, Charge Transport and Carrier Mobilities in Insulating Polymers, 4 J. Non-Crystalline Solids 133-137 (1970)
EX2010	Ying Wang et al., Hole mobility and conductance of iridium complex doped NPB emission layers for organic light-emitting diodes, 244 Synthetic Metals 61-65 (2018)
EX2011	WO2002/074015 to Thompson & Forrest (“Thompson WO”)
EX2012	Dictionary definition of “matrix” from A Dictionary of Chemistry (5th ed.), Oxford University Press (2004)
EX2013	Dictionary definition of “matrix” from Chambers Dictionary of Science and Technology, Chambers (2007)
EX2014	Federal Court Management Statistics for U.S. District Courts, available from https://www.uscourts.gov/statistics/table/na/federal-courtmanagement-statistics/2024/06/30-1
EX2015	Samsung Invalidity Contentions in Pictiva Displays Int’l Ltd. v. Samsung Electronics Co. Ltd., et al., Case No. 2:23-cv-000495 (E.D. Tex. Jun. 11, 2024)
EX2016	Declaration of Dr. E. Fred Schubert in Pictiva Displays Int’l Ltd. v. Samsung Electronics Co. Ltd., et al., Case No. 2:23-cv-000495 (E.D. Tex. Nov. 12, 2024) on behalf of real parties-in-interest
EX2017	2024-12-09 Email from Samsung to Pictiva re “IPR2024-01095 – Stipulation”
EX2018	Deposition Transcript of Dr. Schubert with Ex. 1 of the deposition (Schubert Declaration) and Ex. 9 of the deposition (Sugiura reference)

I. Petitioner's Belatedly Filed Stipulation Demonstrates Sharp Practice

Only after Pictiva used its limited word allotment to address *Fintiv* factors and fearing that its petition could fail under the compelling merits standard did Samsung belatedly offer a stipulation. *See* EX2017 (stipulation offered nearly two weeks after sur-reply). The Board should consider Petitioner's apparent disregard of fair play when making its institution decision.

II. The Testimony of Samsung's Expert, Dr. Schubert, Confirms that Samsung Has Not Made Out a *Prima Facie* Case

The Petition and the preliminary Reply both ignore Samsung's proposed construction for "matrix material" in the district court even after Pictiva noted those constructions. There, Samsung argues that the claimed first, second and third matrix materials are "part of the same matrix," with "matrix" meaning "a continuous phase of the mixture of matrix materials." EX2005 at 17, 16. When asked what "continuous phase" means in Samsung's definition of "matrix," its expert testified that "[c]ontinuous phase means that there are *no regions ... in which we have phase separation.*" EX2018, 112:8-14. In his view, "continuous phase" also means "we have the *three matrix materials present* throughout--*continuously throughout the matrix.*" *Id.* Sugiura's light-emitting layer 3, shown as phase separated 3B and 3C dispersed in 3A, does not meet that requirement. EX2001, ¶49 (Sugiura's mixture has "microscopic phase separation").



When questioned whether Sugiura's 3B and 3C are matrix materials, Dr. Schubert first claimed that he could "not foreclose the possibility..." (EX2018, 113:16-114:12), but conceded later that the figure "does not include a continuous phase of" 3A, 3B and 3C (the alleged matrix materials) as required by Samsung's construction:

If these little circles contain only one matrix material, then I would say that *this is not a matrix* because it does not include a continuous phase of matrix materials. But rather agglomerations of materials as expressed by the circle features or circular features. *Id.*, 114:13-21.

Because Samsung defines "matrix materials" in terms of "matrix," if there is no matrix, there are no matrix materials. Dr. Schubert's testimony therefore confirms that Sugiura does not disclose three matrix materials. Furthermore, when asked if dopants dispersed in another material are matrix materials, Dr. Schubert answered that it would depend on "if we have a mixture of materials." *Id.*, 115:14-23. Given this acknowledgement that dispersing dopants in a host material does not necessarily form a "mixture of materials," Petitioner should have, but did not analyze, why Choulis' and Thompson's dopant-host compositions each are "a mixture of materials" and produce a "continuous phase" under Samsung's constructions. Dr. Schubert's testimony confirms that the Petition has not presented sufficient evidence to show that the combinations each disclose three matrix materials.

Dated: December 25, 2024

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify, pursuant to 37 C.F.R. section 42.6, that on December 25, 2024, a complete copy of the foregoing document **PATENT OWNER'S PRELIMINARY SUPPLEMENTATION and EXHIBITS 2017-2018** were served by electronic mail, as agreed to by the parties, upon the following:

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