

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SAMSUNG ELECTRONICS CO. LTD.,
SAMSUNG ELECTRONICS AMERICA, INC.,
SAMSUNG SEMICONDUCTOR, INC., and
SAMSUNG AUSTIN SEMICONDUCTOR, LLC,

Petitioners

v.

CHIEN-MIN SUNG,

Patent Owner

IPR2024-00533
U.S. Patent No. 8,974,270

**PATENT OWNER'S OBJECTIONS TO PETITIONERS' REPLY
EVIDENCE PURSUANT TO 37 C.F.R. § 42.64(b)(1)**

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Patent Trial and Appeal Board
U.S. Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

Submitted Electronically via PTACTS

Pursuant to the Federal Rules of Evidence and 37 C.F.R. § 42.64, Patent Owner Chien-Min Sung (“Patent Owner”) timely objects to evidence submitted by Petitioners Samsung Electronics Co. Ltd., Samsung Electronics America, Inc., Samsung Semiconductor, Inc., and Samsung Austin Semiconductor, LLC (“Petitioners”) with their Reply (Paper 25). Patent Owner serves Petitioners with these objections to provide notice that Patent Owner may move to exclude the challenged exhibits under 37 C.F.R. § 42.64(c) unless Petitioners cure the defects identified in the challenged exhibits below.

Exhibit 1037 – “Single Diamond Dressing Characteristics of CMP

Polyurethane Pad,” *Key Engineering Materials* Vol 329 (2007) pp 151-156

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document for lack of foundation, including authentication under Fed. R. Evid. 901(a), because Petitioner has not “produced sufficient evidence to support a finding that the item is what the proponent claims it is[],” at least because this is not a self-authenticating document.

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403 at least because it is unused in Petitioner’s Reply.

Exhibit 1038 – U.S. Patent No. 9,138,862 (“’862 Patent”) Patent Owner

objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403 at least because it is unused in Petitioner’s Reply.

Exhibit 1039 – U.S. Patent No. 9,724,802 (“’802 Patent”)

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403.

Exhibit 1040 – EX2011 in IPR2024-00535 Declaration of Ming-Yi Tsai

(EX2011 in ’802 Patent)

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly

prejudicial, confusing or a waste of time under Fed. R. Evid. 403 at least because it is unused in Petitioner's Reply.

Exhibit 1041 – EX2011 in IPR2024-00534 Declaration of Ming-Yi Tsai
(EX2011 in '862 Patent)

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403 at least because it is unused in Petitioner's Reply.

Exhibit 1042 – “PCD Pad Conditioners for Low Pressure Chemical
Mechanical Planarisation of Semiconductors” *Int. J. Abrasive Technology*,
Vol. 1, Nos. 3/4, 2008

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document for lack of foundation, including authentication under Fed. R. Evid. 901(a), because Petitioner has not “produced sufficient evidence to support a finding that the item is what the proponent claims it is.”

Patent Owner objects to this exhibit as needlessly cumulative of other evidence under Fed. R. Evid. 403.

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403.

Exhibit 1043 – “Novel Diamond Conditioner Dressing Characteristics of CMP Polishing Pad,” *International Journal of Machine Tools & Manufacture* 49 (2009) 722–729

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document for lack of foundation, including authentication under Fed. R. Evid. 901(a), because Petitioner has not “produced sufficient evidence to support a finding that the item is what the proponent claims it is.”

Patent Owner objects to this document as being inadmissible as incomplete and unfair under Fed. R. Evid. 106, and confusing, misleading and highly prejudicial under Fed. R. Evid. 403 because it does not reflect the entirety of Dr. Tsai’s opinions.

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402.

Exhibit 1044 – “Dressing Behaviors of PCD Conditioners on CMP Polishing Pads” *Advanced Materials Research* Vols 76-78 (2009) pp 201-206

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document for lack of foundation, including authentication under Fed. R. Evid. 901(a), because Petitioner has not “produced sufficient evidence to support a finding that the item is what the proponent claims it is.”

Patent Owner objects to this exhibit as needlessly cumulative of other evidence under Fed. R. Evid. 403.

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403.

Exhibit 1045 – “Mosaic Diamond Pad Conditioners for Improved CMP Performance” *ECS Transactions*, 27 (1) 575-580 (2010)

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document for lack of foundation, including authentication under Fed. R. Evid. 901(a), because Petitioner has not “produced

sufficient evidence to support a finding that the item is what the proponent claims it is.”

Patent Owner objects to this exhibit as needlessly cumulative of other evidence under Fed. R. Evid. 403.

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403.

Exhibit 1046 – “The Black Pad with Graphite Impregnation for CMP” ECS Transactions, 27 (1) 581-586 (2010)

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document for lack of foundation, including authentication under Fed. R. Evid. 901(a), because Petitioner has not “produced sufficient evidence to support a finding that the item is what the proponent claims it is.”

Patent Owner objects to this exhibit as needlessly cumulative of other evidence under Fed. R. Evid. 403.

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403.

Exhibit 1047 – “The CMP by Polishing with GiP Dressed by BODD”

Advanced Materials Research Vols 126-128 (2010) pp 1013-1018

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document for lack of foundation, including authentication under Fed. R. Evid. 901(a), because Petitioner has not “produced sufficient evidence to support a finding that the item is what the proponent claims it is.”

Patent Owner objects to this exhibit as needlessly cumulative of other evidence under Fed. R. Evid. 403.

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403.

Exhibit 1048 – “Organic diamond disk versus brazed diamond disk for dressing a chemical–mechanical polishing pad” Diamond & Related Materials 23 (2012) 144–149

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b). Patent Owner objects to this exhibit as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402.

Patent Owner objects to this document for lack of foundation, including authentication under Fed. R. Evid. 901(a) because Petitioner has not “produced sufficient evidence to support a finding that the item is what the proponent claims it is[.]” and because this is not a self-authenticating document.

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403.

Exhibit 1049 – “Development of a novel cooling system-assisted minimum quantity lubrication method for improvement of milling performance”

Journal of the Chinese Institute of Engineers, 2015, Vol. 38, No. 3, 322–331

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document for lack of foundation, including authentication under Fed. R. Evid. 901(a), because Petitioner has not “produced sufficient evidence to support a finding that the item is what the proponent claims it is.”

Patent Owner objects to this exhibit as needlessly cumulative of other evidence under Fed. R. Evid. 403.

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403.

Exhibit 1050 – Deposition of Dr. Tsai in IPR2024-00533, Vol I

Patent Owner objects to this document as being inadmissible as incomplete and unfair under Fed. R. Evid. 106, and confusing and misleading under Fed. R. Evid. 403 because it does not contain Dr. Tsai’s Errata Sheet and Acknowledgement.

Exhibit 1051 – Deposition of Dr. Tsai in IPR2024-00533, Vol II

Patent Owner objects to this document as being inadmissible as incomplete and unfair under Fed. R. Evid. 106, and confusing and misleading under Fed. R. Evid. 403 because it does not contain Dr. Tsai’s Errata Sheet and Acknowledgement.

Exhibit 1052 – U.S. Patent Application Publication No. 2010/0248595 (“Dinh-Ngoc”)

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b).

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403.

Exhibit 1053 – U.S. Application No. 11/223,786 ('786 Application)

Patent Owner objects to this document as being inadmissible because it was filed belatedly without proper authorization under 37 C.F.R. § 42.123(b). Patent Owner objects to this exhibit as needlessly cumulative of other evidence under Fed. R. Evid. 403.

Patent Owner objects to this document as being irrelevant under Fed. R. Evid. 401 and thus inadmissible under Fed. R. Evid. 402, or as being unfairly prejudicial, confusing or a waste of time under Fed. R. Evid. 403.

Dated: April 4, 2025

/s/ Alex Chan

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CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on April 4, 2025, the foregoing document is being served via electronic mail upon the following counsel of record for Petitioner:

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