

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ZHUHAI COSMX BATTERY CO., LTD.,
Petitioner

v.

NINGDE AMPEREX TECHNOLOGY LIMITED,
Patent Owner

Case IPR2025-00432
U.S. Patent No. 11,575,148

**PETITIONER'S OBJECTIONS TO EVIDENCE SUBMITTED
IN PATENT OWNER'S RESPONSE**

Petitioner Zhuhai CosMX Battery Co., Ltd. (“Petitioner”) hereby objects to certain evidence submitted by Ningde Amperex Technology Limited (“Patent Owner”) in its Patent Owner’s Response (Paper 21) in the above-captioned proceeding. In accordance with 37 C.F.R. § 42.64(b)(1), these objections are being timely filed and served within five (5) business days of service.

I. EXHIBIT 2031

Exhibit 2031 is described as the Declaration of Samuel P. Gido, Ph.D., dated February 22, 2023, IPR2023-00587. Petitioner objects to Exhibit 2031 under FRE 402 and/or 403 as irrelevant and/or more prejudicial than probative, as it relates to a different proceeding about a different patent. Petitioner further objects to Exhibit 2031 as hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein.

II. EXHIBIT 2032

Exhibit 2032 is described on Patent Owner’s Exhibit List as CosMX Proposed Construction of Claim Terms, *Ningde Amperex Tech. Ltd. v. Zhuhai CosMX Battery Co.*, No. 2:24-cv-00728-JRG. Petitioner objects to Exhibit 2004 under FRE 402 and/or 403 as irrelevant and/or more prejudicial than probative.

III. EXHIBIT 2033

Exhibit 2033 is described on Patent Owner’s Exhibit List as Deposition Transcript of Samuel P. Gido, Ph.D., dated November 13, 2025, IPR2025-00432.

Petitioner maintains and reiterates the objections made on the record during the deposition.

IV. EXHIBIT 2034

Exhibit 2034 is described on Patent Owner's Exhibit List as Supplemental Declaration of Dean R. Wheeler, Ph.D. Petitioner objects to Exhibit 2034, including specifically to the extent it includes subject matter that is not permitted pursuant to FRE 602 and/or 702-703, including without limitation, to the extent that the declaration presents as "facts" information that is outside the personal knowledge of the declarant and/or to the extent that the testimony is not based on sufficient facts or data or the product of reliable principles and methods reliably applied in this case. *See, e.g.*, Exhibit 2034, ¶¶ 122-123, 128-140, 142-145, 147, 153, 157-158, 165, 190-191, 253, 256. Petitioner further objects to the portions of Exhibit 2034 that cite an exhibit objected to herein or previously.

V. EXHIBIT 2035

Exhibit 2035 is described on Patent Owner's Exhibit List as Valadoula Deimede and Costas Elmasides, Separators for Lithium-Ion Batteries: A Review on the Production Processes and Recent Developments, *Energy Technol.* 2015, 3, 453–468). Petitioner objects to Exhibit 2035 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2035 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of

any matter asserted therein. Petitioner further objects to Exhibit 2035 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

VI. EXHIBIT 2036

Exhibit 2036 is described on Patent Owner's Exhibit List as Hyun-Seok Jeong et al., Effect of phase inversion on microporous structure development of Al₂O₃/poly(vinylidene fluoridehexafluoropropylene)-based ceramic composite separators for lithium-ion batteries, Journal of Power Sources 195 (2010) 6116–6121. Petitioner objects to Exhibit 2036 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2036 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2036 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

VII. EXHIBIT 2037

Exhibit 2037 is described on Patent Owner's Exhibit List as Muhammad Rehman Asghar et al., A Review on Inorganic Nanoparticles Modified Composite Membranes for Lithium-Ion Batteries: Recent Progress and Prospects, Membranes 2019, 9, 78; doi:10.3390/membranes9070078. Petitioner objects to Exhibit 2037 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2037

as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2037 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

VIII. EXHIBIT 2038

Exhibit 2038 is described on Patent Owner's Exhibit List as Marie-Francine Lagadec et al., Characterization and performance evaluation of lithium-ion battery separators, Nature Energy, 4 (2019); <https://doi.org/10.1038/s41560-018-0295-9>. Petitioner objects to Exhibit 2038 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2038 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2038 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

IX. EXHIBIT 2039

Exhibit 2039 is described on Patent Owner's Exhibit List as Kwang Man Kim et al., Characterization of poly(vinylidene fluoride-co-hexafluoropropylene)-based polymer electrolyte filled with TiO₂ nanoparticles, Polymer 43 (2002) 3951–3957. Petitioner objects to Exhibit 2039 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2039 as containing hearsay under FRE 801 and

FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2039 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

X. EXHIBIT 2040

Exhibit 2040 is described on Patent Owner's Exhibit List as Wenjing Lu et al., Porous membranes in secondary battery technologies, Chem. Soc. Rev., 2017, 46, 2199). Petitioner objects to Exhibit 2040 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2040 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2040 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XI. EXHIBIT 2041

Exhibit 2041 is described on Patent Owner's Exhibit List as Shuhua Liu, et al., Effect of grinding time on the particle characteristics of glass powder, Powder Technology 295, 133-141 (2016). Petitioner objects to Exhibit 2041 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2041 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to

Exhibit 2041 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative..

XII. EXHIBIT 2042

Exhibit 2042 is described on Patent Owner's Exhibit List as Laser diffraction for particle sizing – Anton Paar, available at: <https://wiki.anton-paar.com/en/laser-diffraction-for-particle-sizing> (last accessed on July 30, 2025). Petitioner objects to Exhibit 2042 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2042 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2042 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XIII. EXHIBIT 2043

Exhibit 2043 is described on Patent Owner's Exhibit List as W. Pabst & E. Gregorova, Characterization of particles and particle systems, ICT Prague (2007). Petitioner objects to Exhibit 2043 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2043 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2043 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XIV. EXHIBIT 2044

Exhibit 2044 is described on Patent Owner's Exhibit List as *Various types of chambers for "STAR BURST"*, <https://www.sugino.com/en/column/sbs-technical-chamber/> (accessed on November 25, 2025). Petitioner objects to Exhibit 2044 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2044 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2044 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XV. EXHIBIT 2045

Exhibit 2045 is described on Patent Owner's Exhibit List as Declaration of Quinn Horn, Ph.D., dated October 21, 2025, *Ningde Amperex Tech. Ltd. v. Zhuhai CosMX Battery Co.*, No. 2:24-cv-00728-JRG. Petitioner objects to Exhibit 2045 as hearsay under FRE 801 and FRE 802.

XVI. EXHIBIT 2046

Exhibit 2046 is described on Patent Owner's Exhibit List as KISUMA™ 5 Product Sheet. Petitioner objects to Exhibit 2046 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2046 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2046

under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XVII. EXHIBIT 2047

Exhibit 2047 is described on Patent Owner's Exhibit List as U.S. Patent No. 10,774,229 B2 to Maeda. Petitioner objects to Exhibit 2047 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2047 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2047 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XVIII. EXHIBIT 2048

Exhibit 2048 is described on Patent Owner's Exhibit List as U.S. Patent No. 10,793,748 to Yamamoto et al. Petitioner objects to Exhibit 2048 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2048 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2048 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XIX. EXHIBIT 2049

Exhibit 2049 is described on Patent Owner's Exhibit List as Russel Paterson et al., *IUPAC-NIST Solubility Data Series 70. Solubility of Gases in Glassy Polymers*, Journal of Physical and Chemical Reference Data 28, 1255 (1999); <https://doi.org/10.1063/1.556050>. Petitioner objects to Exhibit 2049 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2049 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2049 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XX. EXHIBIT 2050

Exhibit 2050 is described on Patent Owner's Exhibit List as Alpha Aluminum Oxide Data Sheet. Petitioner objects to Exhibit 2050 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2050 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2050 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XXI. EXHIBIT 2051

Exhibit 2051 is described on Patent Owner's Exhibit List as *Pore Size Distribution*, <https://micromeritics.com/pore-sizedistribution/> (accessed on November 25, 2025). Petitioner objects to Exhibit 2051 under FRE 901 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2051 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2051 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XXII. EXHIBIT 2052

Exhibit 2052 is described on Patent Owner's Exhibit List as Kim Min et al., *Preparation of a Trilayer Separator and Its Application to Lithium-Ion Batteries*, J. Power Sources (2010) 8302-8305. Petitioner objects to Exhibit 2052 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2052 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2052 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XXIII. EXHIBIT 2053

Exhibit 2053 is described on Patent Owner's Exhibit List as Ohji et al., *Advanced Processing and Manufacturing Technologies for Structural and Multifunctional Materials*, The American Ceramic Society (2008). Petitioner objects to Exhibit 2053 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2053 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2053 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

XXIV. EXHIBIT 2054

Exhibit 2054 is described on Patent Owner's Exhibit List as Takemura et al., *A Powder Particle Size Effect on Ceramic Powder Based Separator for Lithium Rechargeable Battery*, J. Power Sources (2005) 779-783. Petitioner objects to Exhibit 2054 under FRE 901 as lacking authentication. Petitioner further objects to Exhibit 2054 as containing hearsay under FRE 801 and FRE 802 to the extent that Patent Owner intends to rely on it to prove the truth of any matter asserted therein. Petitioner further objects to Exhibit 2054 under FRE 401, 402, and 403 as irrelevant to the validity of the '148 Patent and/or more prejudicial than probative.

Respectfully submitted,

LEE & HAYES, P.C.

/James D. Stein/

James D. Stein
Registration No. 63,782
Lead Counsel for Petitioner

Date: December 3, 2025

CERTIFICATE OF SERVICE (37 C.F.R. §§ 42.6(e)), 42.105(a))

I certify that the above-captioned **PETITIONER'S OBJECTIONS TO EVIDENCE SUBMITTED IN PATENT OWNER'S RESPONSE** was served in its entirety upon the Patent Owner on December 3, 2025, by email to the following addresses:

Christopher TL Douglas (Reg. No. 56,950) christopher.douglas@alston.com Alston & Bird LLP	Madeline Byrd (Reg. No. 78,522) maddy.byrd@alston.com Alston & Bird LLP
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Respectfully submitted,

LEE & HAYES, P.C.

/James D. Stein/

James D. Stein
Registration No. 63,782
Lead Counsel for Petitioner

Date: December 3, 2025