

October 24, 2022

VIA EDGAR

U.S. Securities and Exchange Commission
Division of Corporation Finance
Office of Manufacturing
100 F Street, N.E.
Washington, DC 20549-3720

Attn: Erin Donahue
Erin Purnell

**Re: Amprius Technologies, Inc.
Registration Statement on Form S-1
Filed September 30, 2022
File No. 333-267691**

Ladies and Gentlemen:

On behalf of our client, Amprius Technologies, Inc. (“**Amprius**” or the “**Company**”), we submit this letter in response to comments from the staff (the “**Staff**”) of the Securities and Exchange Commission (the “**Commission**”) contained in its letter dated October 18, 2022, relating to the above referenced Registration Statement on Form S-1 submitted to the Commission on September 30, 2022 (the “**Registration Statement**”). We are concurrently filing via EDGAR Amendment No. 1 to the Registration Statement (“**Amendment No. 1**”).

In this letter, we have recited the comments from the Staff in italicized, bold type and have followed each comment with the Company’s response. Except for page references appearing in the headings and Staff comments below (which are references to the Registration Statement submitted on September 30, 2022), all page references herein correspond to the page of Amendment No. 1.

Form S-1 filed on September 30, 2022

General

- 1. We note your registration statement on Form S-1 (File No. 333-267683) is currently under review and that we issued comments on October 18, 2022. To the extent applicable, please make the changes we have requested in our other comment letter to this registration statement as well.***

The Company acknowledges the Staff’s comment and respectfully advises the Staff that, to the extent applicable, it has made the changes requested in the other comment letter to the Registration Statement.

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If you have any questions or comments regarding this letter and the responses set forth above, please direct the questions to me or Austin March at mbaudler@wsgr.com or 650-320-4597 and amarch@wsgr.com or 512-338-5410, respectively.

Respectfully Submitted,

/s/ Mark Baudler

Mark Baudler

Wilson Sonsini Goodrich & Rosati, P.C.

cc: Dr. Kang Sun, Amprius Technologies, Inc.
Sandra Wallach, Amprius Technologies, Inc.
Michael Danaher, Wilson Sonsini Goodrich & Rosati, P.C.