

NIELS BOHR INSTITUTE UNIVERSITY OF COPENHAGEN

To: Practice Committee, University of Copenhagen

Re: Case 74,

Concerning the paper, “Flux-induced topological superconductivity in full-shell nanowires”, published in Science, March 2020.



Dear Practice Committee,

We are writing in response to a request for comments on the Expert Panel report submitted July 15, 2023 to the Practice Committee. We wish to express our sincere gratitude to the Expert Panel—Sophie Gueron, Pertti Hakonen, and Allan McDonald—for the immense amount of work they invested and their thoughtful consideration in addressing the complaint filed by Jake Yeston on behalf of Sergey Frolov and Vincent Mourik.

We are pleased to see that the Expert Panel’s report exonerates us of scientific misconduct and questionable research practices, and finds that the main conclusions of the paper are supported by the full data, which they examined.

The Expert Panel reviewed in impressive detail the complete body of the experimental and theoretical data relevant to our paper, examining over eleven thousand experimental runs on more than 80 devices, and concluded that the subset of data presented in the paper, and the conclusions we drew, were consistent with the entire body of data. That is, that we did not “cherry-pick” an unrepresentative subset of data, giving a misimpression to readers or reviewers. The question of cherry picking unrepresentative data was the core issue that Jake Yeston expressed in his complaint to the Practice Committee. That concern has now been addressed and answered by the Expert Panel.

The Expert Panel commented more broadly about the state of experimental mesoscopic physics in general, that experimentalists do not yet have enough control over fabrication methods that all devices work as designed. This circumstance typically forces experimentalists to reject devices that do not function properly in one way or another, often without understanding precisely why. Here the Panel found that we did this selection process in a thoughtful and reasonable manner, consistent with community standards.

In their report the Expert Panel gave five recommendations, which we address below:

1. The Expert Panel requested that the criteria used to select acceptable nanowire devices as well as a summary of the success rates and number of successful devices should be made accessible to the scientific community. We are pleased to do so and have prepared a document containing the information that the

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Panel recommends including, which we will convey to the journal and post online. The document is enclosed for information.

2. The Expert Panel requested that the full set of Coulomb blockade data files should be uploaded to the Zenodo data repository, along with an additional description of dataset selection and analysis. These data files are prepared and will be uploaded to Zenodo.

3. The Expert Panel recommended that the nanoelectronics and low-dimensional electron system community should maintain high and open standards on reporting sample fabrication details. We are in complete agreement and hope that journal editors and referees will work constructively with the scientific community towards this end.

4. The Expert Panel recommended that prescreening of data should be done in a fully documented and transparent manner. Again, we are in agreement.

5. The Expert Panel encouraged journal editors to make it more clear to readers which parts of the published material have been peer reviewed. We are in complete agreement and hope this practice will be more widespread in scientific journals.

The additional ‘specific recommendations’ regarding our paper have already been addressed in point 1 and 2, above.

Finally, considering that the Expert Panel explicitly responded to Jake Yeston’s complaints and found no misconduct or questionable practice, and found that our conclusions were supported by the full body of data, we respectfully request that the Practice Committee recommend to Science that the Editorial Expression of Concern placed on our paper be lifted, and the matter concluded as quickly as possible.

On behalf of all authors,

Sincerely,



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