

Paper by team claiming to have achieved superconductivity at room temperature retracted

September 29 2022, by Bob Yirka



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Editors at the journal *Nature* have retracted a paper by a team that claimed to have achieved superconductivity at room temperature. Published in 2020, the paper described work by a combined team from the University of Rochester and the University of Nevada, announcing that they had reached superconductivity at room temperature with a material made of sulfur, carbon and hydrogen under extreme pressure.

When the paper was first published, the team received congratulations from peers around the world. There was even talk of a Nobel prize. But soon, some in the physics community began to question the work, suggesting that, based on the configuration of their experiments, it would be impossible to achieve superconductivity. One team asked for unprocessed data from the experiments and were met with a refusal. That led *Nature* to add a disclaimer to the paper. Further investigation by other teams led to more probing questions about how the work was conducted. When one team found an issue with the resistance data, *Nature* added a "matters arising" article to the original paper.

Then, when the [editors](#) at *Nature* questioned the way that background subtraction was applied during experiments, they found that the team had used a nonstandard procedure that did not include an explanation of how it worked. This led to the retraction.

In their retraction, the *Nature* editors note that their decision to retract the paper was due to the failure to disclose details of the nonstandard procedure. They further note that the authors of the paper continue to stand behind their work, the methods used, and their conclusions. They also note that all of the authors listed on the original paper have stated that they do not agree with the retraction.

When asked about the [retraction](#) by members of the press, Dias (the paper's lead author) responded by pointing out that the paper had not been retracted due to questions about whether the team had achieved [superconductivity](#) at [room temperature](#), but because of their methodology. He further added that he and his team plan to resubmit their work with the nonstandard procedure explained and the raw data that was requested.

More information: Elliot Snider et al, Retraction Note: Room-temperature superconductivity in a carbonaceous sulfur hydride, *Nature*

(2022). [DOI: 10.1038/s41586-022-05294-9](https://doi.org/10.1038/s41586-022-05294-9)

Elliot Snider et al, RETRACTED ARTICLE: Room-temperature superconductivity in a carbonaceous sulfur hydride, *Nature* (2020). [DOI: 10.1038/s41586-020-2801-z](https://doi.org/10.1038/s41586-020-2801-z)

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