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## **The Proceedings of the South Dakota Academy of Science**

Since its beginning in 1915, the South Dakota Academy of Science has been a forum for the promotion of scientific teaching, research, and service in the state of South Dakota. The South Dakota Academy of Science meets each year for the purpose of conducting annual business, presenting awards, and facilitating the interchange of ideas, information, and results from scientists and students of science. The minutes of the annual meeting and the abstracts and full papers of presentations are published annually in the Proceedings of the South Dakota Academy of Science, which is uploaded to the Academy website ([www.sdaos.org](http://www.sdaos.org)). Although presentation at the annual meeting is strongly encouraged, each year a limited number of full papers may be considered for publication that have not been presented. The Instructions for Authors can be viewed at [www.sdaos.org](http://www.sdaos.org).

This volume contains the minutes of the annual meeting which was held at Dakota State University, October 28 and 29, 2022, and various reports. Additionally, it contains the full papers, either presented at the annual meeting or submitted for publication without being presented, and abstracts of oral presentations. This year there were no posters. The meeting was held both virtually and in person.

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