

To create future technologies for rubber industry.

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Abstract

Through numerous inventions such as the discovery of sulfur vulcanization by Goodyear, the discovery of carbon reinforcement of rubber by Mote, and the discovery of vulcanization accelerators by Oenslager, vulcanized rubber products have been produced and utilized by people for over 100 years. Rubber products have become an indispensable part of our lives. While the performance of rubber products has improved greatly in the past, they are still evolving. New rubber products will continue to be developed and further performance improvement will be required in the future. More detailed research into the mechanisms of rubber performance will also continue.

In addition to improving the performance of rubber products, future research and development will also be required to achieve carbon neutrality and sustainability. To meet these various requirements, AI-based development is now being conducted.

Here, I will introduce examples of research and development conducted in the Japanese rubber industry. Then, I discuss what is needed to develop future technologies that will improve the rubber products performance. An overview of the activities of the Rubber Society of Science and Technology, Japan will also be presented. And the International Rubber Conference, which is planned to be held in Japan in 2026, will be introduced.