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Japan's Promotion Measures for the Development of Quantum Industries

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Biography

Dr. Daisuke KAWAKAMI graduated from Kyoto University and completed master's program in chemistry, Graduate School of Science, Kyoto University in 1993. He joined Toray Industries, Inc., and was assigned to Fibers & Textiles Research Laboratory in 1993. He received Ph.D. in engineering from Graduate School of Organic Engineering, Faculty of Engineering, Tokyo Institute of Technology in 2008. He has been the vice president of Toray Industries (America), Inc. since 2016. After serving as Director for Life Innovation Business Strategy Planning Department from 2016 to 2023, he was appointed as Deputy Director General for Science, Technology and Innovation Policy, Cabinet Office, in 2023.

Abstract

Japan has so far formulated the strategy that describes the vision and goals that should be realized through quantum technology, as well as policies and implementation plans for the practical and industrialization of quantum technology to achieve these goals. On the other hand, against the background of the remarkable progress in quantum technology, the situation surrounding Japan has been changing drastically, with each country formulating national strategies and international collaboration becoming more active. To respond quickly to this change, Japan hass developed a new document titled "Promotion Measures for the Development of Quantum Industries," in April this year. This is a report of measures to strengthen and complement the Japan's three strategies toward the 2030 goals.

In this report, a new perspective, “Globalization” is added to the three existing perspectives, “Collaboration”, “Incubation”, and “Accessibility”. We have strengthened our efforts based on these four perspectives in an integrated manner.

We believe that we are entering a phase of utilizing quantum technology and international collaboration between like-minded countries as the key for further development. To further promote such international collaboration, we have sorted out various issues that we are facing and have clarified points that need to be strengthened.

We have also been strengthening Quantum Technology Innovation Hubs, consisting of 11 research centers in Japan. One of the strengthened hubs, G-QuAT, was set up as a department in AIST in July 2023 and will be fully launched after the completion of the main building in March 2025. In G-QuAT, various types of quantum computers will be actively developed through international competition and collaboration. The government of Japan strongly supports G-QuAT by imposing budgets, 32 billion yen at FY2022 and 30 billion yen at FY2023.