Changing the world by using hydrogen energy technologies from Kyushu University Ito Campus

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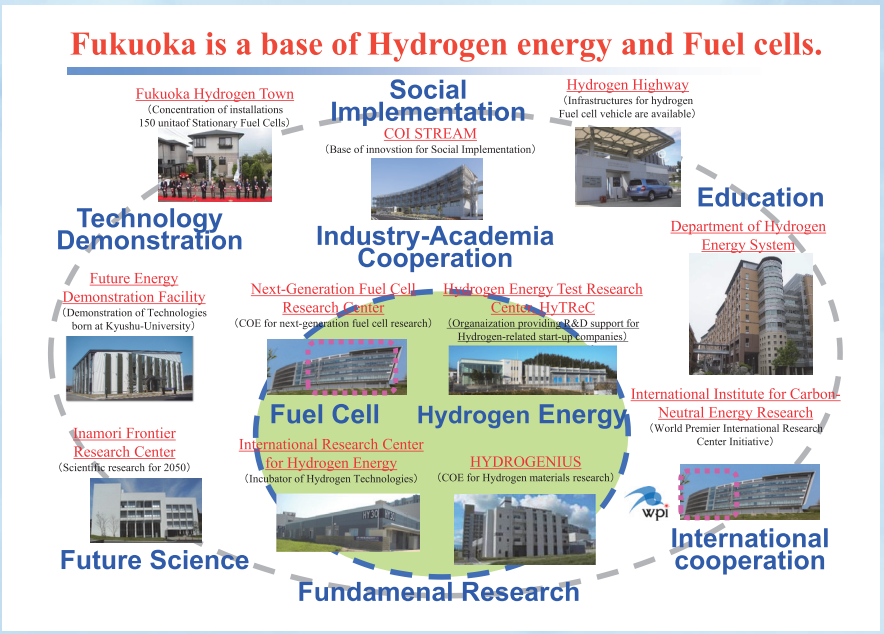
Hydrogen energy technology is expected to become a key technology in realizing a low-carbon society. Fuel cells for households have been commercialized in Japan since 2009. Furthermore, the commercialization of fuel cell vehicles have been started from 2015, the infrastructure construction are promoted too. However, hydrogen technology is still under development in terms of being a "practical" technology. Before we can realize the widespread use of hydrogen energy, it is necessary to solve several technological issues and to develop new alternative technologies. Hydrogen energy is a challenging field of research, because a research result that leads to a technical breakthrough has the potential to drastically change energy society. It is also an area where students and young researchers can make revolutionary contributions to the world of the future.

With the support from the Ministry of Education, Culture, Sports, Science and Technology (MEXT), the Ministry of Economy, Trade and Industry (METI), and the New Energy and Industrial Technology Development Organization (NEDO), Kyushu University provides education and conducts research in an integrated manner on the Ito Campus. We nurture specialists with advanced knowledge and skills in the field of hydrogen energy, and continue research ranging from basic science to collaborative research between industry and academia. These activities are carried out in a close cooperation with related research institutes such as the National Institute of Advanced Industrial Science and Technology, as well as local organizations, including the Fukuoka Strategy Conference for Hydrogen Energy. "The Demonstration Research on a Hydrogen-based Society through Collaboration among Industry, University, Government and Local Community" project have been launched from 2010. Under the auspices of this project, we have conducted demonstration research linked to both basic and industry-academia collaborative research.

This is a coordinated effort among industry, academia, government and the local community to build a research and education center for hydrogen energy, the only one of its kind in the world. Our purpose is to contribute to the realization of a low-carbon society by utilizing hydrogen energy technologies, while simultaneously supporting activities of the International Institute for Carbon-Neutral Research (I²CNER), Next-Generation Fuel Cell Research Center (NEXT-FC), Research Center for Hydrogen Industrial Use and Storage (Hydrogenius) and Center of Innovation Science and Technology based Radical Innovation and Entrepreneurship Program (COI STREAM). All these activities are now organized under the "Energy Research Platform" (Q-PIT: Kyushu University Platform of Inter/Transdisciplinary Energy Research), led and supported by our University President.



◎A Low-Carbon Society Based on Hydrogen Technologies