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Mankind and Civilization and Nuclear Energy

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Abstract

It is considered that the nuclear science and technology will grow up to constitute a fundamental pillar supporting civilization.

The history of science and technology can be understood as a long way to unveil the unforeseeable world though it is too small to look into, too big to catch whole sight or hidden in veil. Upon this understanding, nuclear science and technology treats the interaction between radiation and material which starts from the microscopic quantum world then extends to big world like cosmos which is governed mainly by quantum energy.

With the interactions, it is considered that 1) energy is produced, 2) material is converted and new one is produced, 3) new technology can be brought to civilization and 4) latent information and laws of physics can be learned. As equipment to facilitate these interactions, we have 1) energy related nuclear fission reactors and would have nuclear fusion reactors, and 2) non-energy related particle accelerators and lasers. This would be an essential view to broadly understand the whole picture of nuclear development from the aspect a comprehensive nuclear science and technology.

If we confine our discussion on the nuclear energy system, it is highly recommended to develop nuclear energy system which fulfills the conditions of long lasting resources and environmental protection simultaneously utilizing the assets of nuclear fission reaction.