

About the Cover Design

The cover was designed with white hexagons similar to the pattern on a tortoise shell, which represents an ancient Japanese symbol of people's wish for longer lives. Coincidentally, this shape is also that of core fuel assemblies for the prototype fast breeder reactor "MONJU" and the high-temperature engineering test reactor "HTTR".

The top left figure shows results from the core-material melting and relocation (CMMR) test, and the bottom right figure shows the shape evolution and fission for two fermium isotopes, ^{254}Fm and ^{258}Fm .

The core-material melting and relocation (CMMR) test was conducted to understand the collapse, melting, and relocation of core materials during the TEPCO's Fukushima Daiichi NPS accident. A fuel assembly simulating the core structure of a boiling water reactor (BWR) were heated by high-temperature plasma (here, ZrO_2 pellets were installed, rather than fuel pellets). More details can be found on page 12 in Chapter 1, Topic 1-1.

The fission process for two fermium isotopes, ^{254}Fm and ^{258}Fm , proceeds by tracing the local minima on the potential energy surface. More details can be found on page 37 in Chapter 3, Topic 3-1.



About the activity status of the whole agency including CSR, please see the annual report "Japan Atomic Energy Agency 2019".

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