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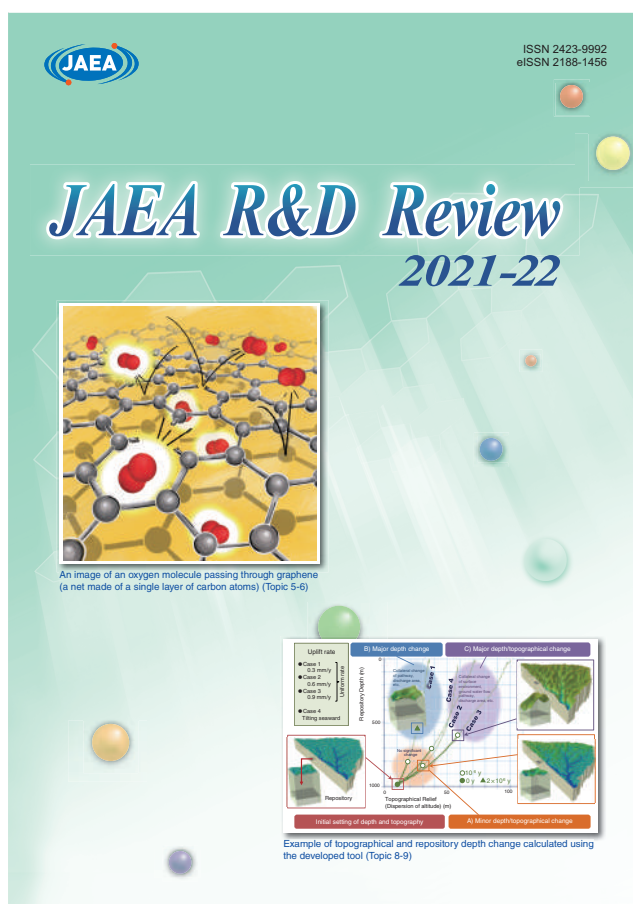
About the Cover Design

The cover design depicts white hexagons that are similar to a tortoise-shell pattern. This represents the ancient Japanese symbol of the desire for long life. Coincidentally, this is also the shape of the core fuel assemblies in the high-temperature engineering test reactor, “HTTR”.

The top left figure shows an image of an oxygen molecule passing through graphene (a net made of a single layer of carbon atoms). The bottom right figure shows an example of topographical and repository depth change calculated using the developed tool.

Synchrotron radiation experiments and computer simulations have revealed that only high-speed oxygen molecules existing in the atmosphere can permeate graphene, which is a single-layer net consisting of carbon atoms. This research is expected to be applied to the development of protective films to prevent rust and food corrosion. Further details can be found on page 62 in Chapter 5, Topic 5-6.

Topography and repository depth changes were calculated for multiple uplift rate settings. There are several patterns for changes in topography and repository depth. An estimation of the pattern to which the calculation result is close can be used to judge the impact to be focused on in safety assessment. Further details can be found on page 88 in Chapter 8, Topic 8-9.



Other Publications

Industrially applicable patented technology and know-how within the intellectual property owned by JAEA can be found on “JAEA Technology Seeds”.

The activity status of the whole agency, including CSR, can be found in the annual report, “Japan Atomic Energy Agency 2021 (Business Report FY2020)”.