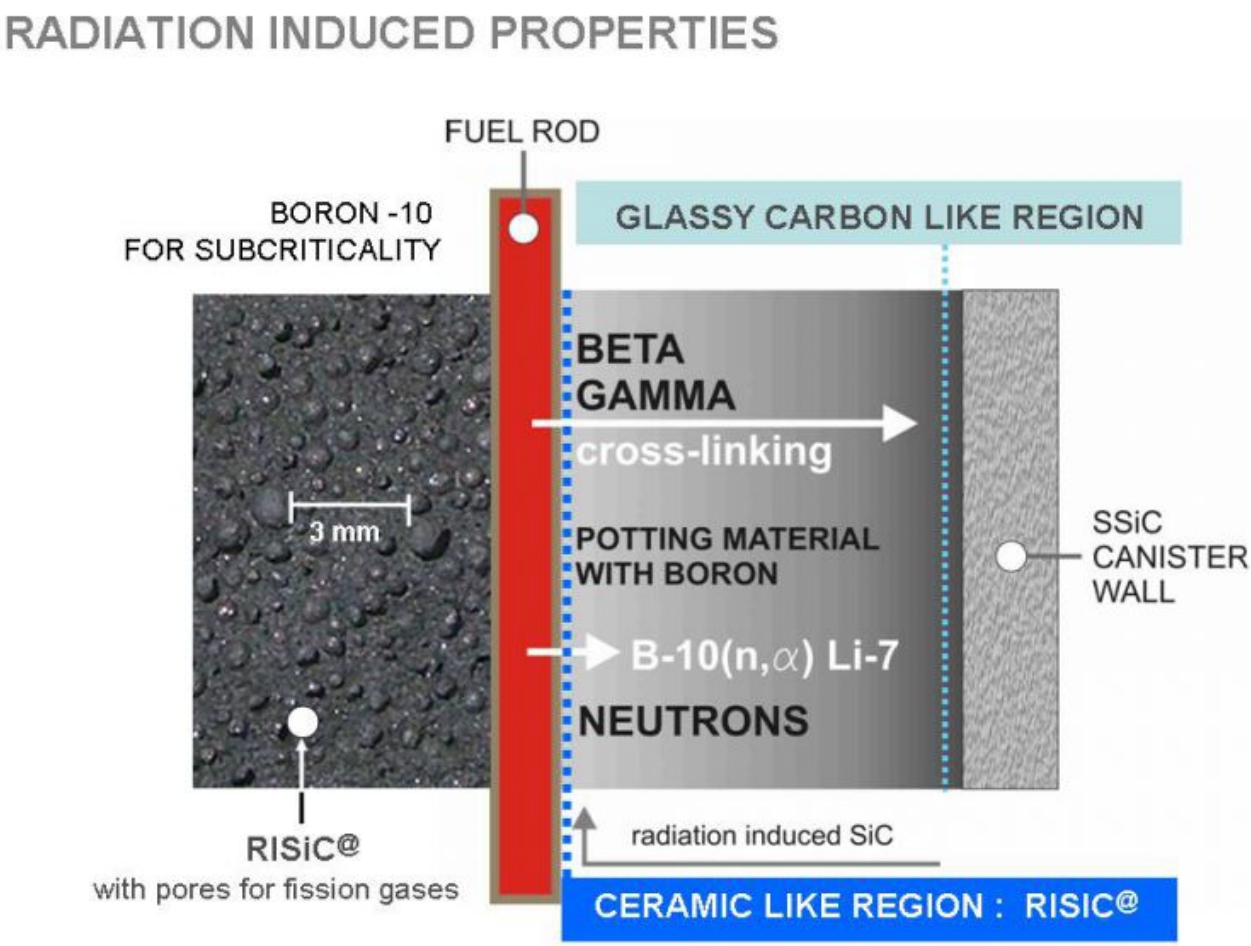
RADIATION INDUCED PROPERTIES: RISiC@



To avoid sophisticated techniques for generating the protection layer, we developed a rather brutal method which, however, gives some additional positive effects.

The free space between waste and SSiC barrier is filled with a **potting material**.

A special cast composite is under development which gains its desired properties under the influence of radiation and heat emitted by the waste.

The material composition contains additional **boron.**

The capture of slow neutrons in BORON–10 near the fuel rods generates a high LET radiation (high-energy alpha particles and Lithium-7 nuclei).

This radiation provides the necessary activation energy to transform the mixture of raw materials in a product with **locally ceramic-like properties.**

We call it: **RADIATION INDUCED SILICON CARBIDE: RISiC**[@] (trade mark)

Beta and Gamma radiation with lower linear energy transfer, but longer range, transform the potting material in **glassy-carbon like regions**, also at the inner surface of the SSiC barrier.