

MATERIALS AND STRUCTURES SYMPOSIUM (C2)
New Materials and Structural Concepts (4)

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MATERIALS SELECTION FOR NEUTRON REFLECTORS IN NUCLEAR FUSION REACTOR
SYSTEMS

Abstract

Neutron radiation is a significant problem with certain types of nuclear fusion reactions. The high-energy neutron byproducts can cause long-term damage to shielding equipment as well as vital components of the nuclear fusion system itself. Before nuclear fusion is seen as a viable candidate for space propulsion, this issue must be addressed. This report analyzes the types of neutron radiation issues, as well as materials that can potentially mitigate the neutron bombardment over a long period of time.