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Transmutation of minor actinides in AP1000 reactor

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Clean energy is most desirable in the world without any problem; nuclear energy can fill the thirst of energy with lower problems. Waste disposal and radiotoxicity is the most challenge issue in nuclear power generation. It is suggested to transmute spent nuclear fuel and especially minor actinide due to it is high contribution of radiotoxicity. We transmute the Np-237 in the LWR AP1000 reactor. We simulate the reactor and the minor actinide materials using mcnp5 code. We got promised and good results to recommend realizing this issue.

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Country or International Organization

Sudan

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