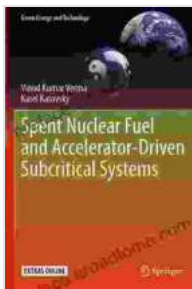


# Spent Nuclear Fuel And Accelerator Driven Subcritical Systems: Green Energy And...

Spent nuclear fuel (SNF) is a radioactive waste product of nuclear power plants. It is composed of uranium, plutonium, and other radioactive elements. SNF is currently stored at nuclear power plants in dry casks or wet pools. However, these storage methods are not permanent and there is a need to develop a long-term solution for SNF. One potential solution is to use SNF as fuel in accelerator driven subcritical systems (ADSs).



## Spent Nuclear Fuel and Accelerator-Driven Subcritical Systems (Green Energy and Technology)

★★★★☆ 4 out of 5

Language : English  
File size : 10711 KB  
Text-to-Speech : Enabled  
Screen Reader : Supported  
Enhanced typesetting : Enabled  
Print length : 282 pages



## Accelerator Driven Subcritical Systems

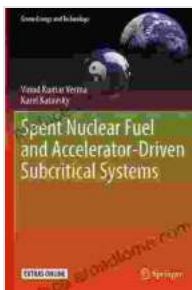
ADSs are nuclear reactors that use a particle accelerator to drive a nuclear chain reaction. The particle accelerator produces a beam of protons that are fired at a target made of SNF. The protons interact with the SNF and cause the fission of uranium and plutonium atoms. The fission process releases energy that is used to generate electricity.

ADSs have a number of advantages over conventional nuclear reactors. First, ADSs are more efficient than conventional reactors. This is because ADSs can use SNF as fuel, which is a waste product that would otherwise have to be disposed of. Second, ADSs are safer than conventional reactors. This is because ADSs operate at a much lower power level than conventional reactors and the nuclear chain reaction is controlled by the particle accelerator. Third, ADSs produce less waste than conventional reactors. This is because ADSs burn up the SNF that is used as fuel and do not produce any long-lived radioactive waste.

## Green Energy

ADSs have the potential to be a major source of green energy. This is because ADSs can use SNF as fuel, which is a waste product that would otherwise have to be disposed of. ADSs also produce less waste than conventional nuclear reactors and do not produce any long-lived radioactive waste. This makes ADSs a more environmentally friendly option than conventional nuclear reactors.

Spent nuclear fuel and accelerator driven subcritical systems have the potential to be a major source of green energy. ADSs are more efficient, safer, and cleaner than conventional nuclear reactors. This makes ADSs a promising option for the future of nuclear energy.



## Spent Nuclear Fuel and Accelerator-Driven Subcritical Systems (Green Energy and Technology)

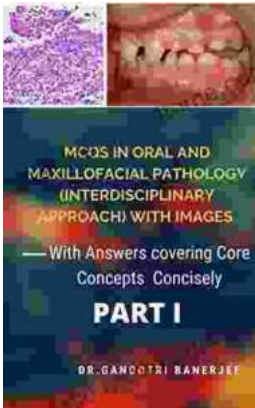
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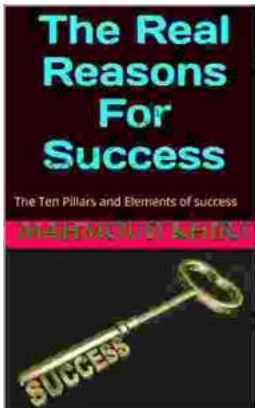
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