

文献综述

我国先进核燃料循环技术发展战略的一些思考

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摘要 从核裂变能可持续发展的角度,分析了各种核燃料循环方式的特点,指出了核燃料“一次通过”方式不符合核能可持续发展战略。为了充分利用铀资源并实现核废物的最少化,快堆燃料闭合循环是核裂变能可持续发展的根本出路。本文在介绍了国内外核燃料循环关键技术研究现状和发展趋势的基础上,探讨了我国核燃料循环科技的发展战略,并指出了为实现上述发展战略目标应采取的若干措施。

关键词 [核裂变能](#); [热堆燃料循环](#); [快堆燃料循环](#); [可持续发展](#)

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Some Strategic Considerations on the Development of Advance Nuclear Fuel Cycle Technologies in China

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Abstract The characteristics of the of different fuel cycle options are analyzed from the view point of sustainable development of nuclear fission energy. It is pointed out that the “once-through” option of fuel cycle does not comply with the sustainability of the nuclear energy development. For the sake of full utilization of uranium resources and the minimization of nuclear waste, the closed fuel cycle of fast breeder reactor is the fundamental way out for the sustainable development of nuclear fission energy. Based on the wide investigations on the present status and R&D trends of the key technologies of fuel cycle both at home and abroad, the strategy for developing China’s fuel cycle technologies is explored, some important measures to be taken for achieving the above strategic goal are suggested

Key words [nuclear fission energy](#) _ [thermal reactor fuel cycle](#) _ [fast reactor fuel cycle](#) _ [sustainable development](#)

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