

1. Record Nr.	UNINA9910502620903321
Autore	Cheng Songbai
Titolo	Safety of Sodium-Cooled Fast Reactors : Particle-Bed-Related Phenomena in Severe Accidents // by Songbai Cheng, Ruicong Xu
Pubbl/distr/stampa	Singapore : , : Springer Nature Singapore : , : Imprint : Springer, , 2021
ISBN	981-16-6116-2
Edizione	[1st ed. 2021.]
Descrizione fisica	1 online resource (313 pages)
Disciplina	621.4834
Soggetti	Nuclear physics Thermodynamics Nuclear engineering Security systems Electric power-plants Nuclear Physics Nuclear Energy Security Science and Technology Power Stations
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di contenuto	Chapter 1 Introduction -- Chapter 2 Molten-pool Mobility.-Chapter 3 Molten-pool Sloshing Motion.-Chapter 4: Debris Bed Formation Behavior -- Chapter 5 Debris Bed Self-Leveling Behavior -- Chapter 6 Conclusion and Future Prospect.
Sommario/riassunto	This book highlights the advances and trends in the safety analysis of sodium-cooled fast reactors, especially from the perspective of particle bed-related phenomena during core disruptive accidents. A sodium-cooled fast reactor (SFR) is an optimized candidate of the next-generation nuclear reactor systems. Its safety is a critical issue during its R&D process. The book elaborates on research progresses in particle bed-related phenomena in terms of the molten-pool mobility, the molten-pool sloshing motion, the debris bed formation behavior, and the debris bed self-leveling behavior. The book serves as a good reference for researchers, professionals, and postgraduate students

interested in sodium-cooled fast reactors. Knowledge provided is also useful for those who are engaging in severe accident analysis for lead-cooled fast reactors and light water reactors.
