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Autore	Frost Brian R. T.
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Nota di contenuto	Front Cover; Nuclear Fuel Elements: Design, Fabrication and Performance; Copyright Page; Foreword; Table of Contents; Chapter 1. Introduction and Philosophy; The reactor operator's approach; The materials scientist's approach; The interdisciplinary approach; REFERENCES; Chapter 2. Fuel Types; Fuel origins; Fuel forms; Metal fuels; Metallic dispersion fuels; Liquid fuels; Fuel characterization; REFERENCES; Appendix: Phase diagrams; Chapter 3. Irradiation Behaviour of Fuels; Oxides; Carbides and nitrides; Dispersion fuels; Appendix: Burn-up and rating of nuclear fuels Chapter 4. Cladding and Duct MaterialsDesign considerations; Commonly used materials and their properties; Compatibility; Radiation effects; REFERENCES; Chapter 5. Fuel Element Design and Modelling; Some sources of data and codes; REFERENCES; Chapter 6. Fuel Element Performance Testing and Qualification; Strategies; Post-test examination; Commercialization; REFERENCES; Appendix: Suppliers of specialized equipment; Chapter 7. Experimental Techniques and Equipment; Out-of-pile; In-pile; Post-irradiation examination; REFERENCES; Chapter 8. Water Reactor Fuel Performance; PWR; BWR; HWR; Failure Failure mechanismsLicensing and regulation; 17 x 17 Fuel surveillance programme; REFERENCES; Chapter 9. Gas-cooled Reactor Fuel

Elements; Magnox; French gas-graphite; AGR; HTGR; Safety; REFERENCES; Chapter 10. Fast Reactor Fuel Elements; Introduction; Early reactors; Prototype reactors; REFERENCES; Chapter 11. Research and Test Reactor Fuel Elements; REFERENCES; Chapter 12. Unconventional Fuel Elements; Some Useful General References; Tabulation of Industrial Capabilities in the USA; Index

Sommario/riassunto

Nuclear Fuel Elements: Design, Fabrication and Performance is concerned with the design, fabrication, and performance of nuclear fuel elements, with emphasis on fast reactor fuel elements. Topics range from fuel types and the irradiation behavior of fuels to cladding and duct materials, fuel element design and modeling, fuel element performance testing and qualification, and the performance of water reactor fuels. Fast reactor fuel elements, research and test reactor fuel elements, and unconventional fuel elements are also covered. This volume consists of 12 chapters and begins with an overview

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Autore

Muduli Kamalakanta

Titolo

Blockchain Technology for Enhancing Supply Chain Performance and Reducing the Threats Arising from the COVID-19 Pandemic

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Soggetti

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A rigorous examination of the most recent advancements in blockchain technology (BCT) and artificial intelligence (AI)-enabled supply chain networks is provided in this book. The edited book brings together the perspectives of a number of authors who have presented their most

recent views on blockchain technology and its applications in a variety of disciplines. The submitted papers contribute to a better understanding of how blockchain technology can improve the efficacy of human activities during a pandemic, improve traceability and visibility in the automotive supply chain, support food safety and reliability through digitalisation of the food supply chain, and increase the performance of next-generation digital supply chains, among other things. The book attempts to address and prepare a way to address the complicated issues that supply chains are encountering as a result of the global pandemic.
