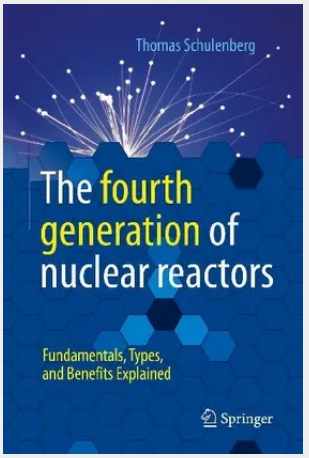
Schulenberg

The fourth generation of nuclear reactors

Fundamentals, Types, and Benefits Explained



This book is intended for readers who want to learn more about fourth-generation nuclear reactors without having to delve deeply into nuclear technology. These nuclear reactors are a number of visionary concepts for which special criteria have been set by the Generation IV International Forum with regard to safety, sustainability and economic efficiency. The book therefore describes, among other things, innovative water- and liquid-metal-cooled reactors, high-temperature and molten-salt reactors, and discusses their significance for the economy and society.

The author imparts relevant basic knowledge of nuclear technology and then uses some illustrative examples to show what future opportunities this fourth generation of nuclear reactors will offer, but also what challenges will be associated with it.

About the author

Prof. Dr. -Ing. Thomas Schulenberg studied physics and mechanical engineering and received his doctorate in the field of sodium-cooled reactors. During his fourteen-year industrial career, he developed gas turbines for conventional power plants. Since 2000, Prof. Schulenberg was the head of the Institute for Nuclear and Energy Technology at the Karlsruhe Institute of Technology, where he lectured on conventional power plant technology as well as nuclear power plant technology. As a member of the steering committee for fourth-generation water-cooled reactors, he was actively involved in the Generation IV International Forum for many years.

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