







FOREWORD

Nuclear energy is a clean source of power enabling significant reduction in CO_2 emission. Government of India is committed to growing its nuclear power capacity as part of its overall infrastructure development programme. Department of Atomic Energy, India is actively involved in development and deployment of nuclear technologies to further the cause of national development. India's nuclear energy self-sufficiency extends from uranium exploration and mining through fuel fabrication, heavy water production, reactor design and construction, to reprocessing and waste management. It has a small fast breeder reactor and is building a larger one. It is also developing technology to utilize its abundant resources of thorium as a nuclear fuel.

We all are aware that Government of India has initiated "Azadi Ka Amrit Mahotsav" to celebrate 75 years of India's Independence. The development of the mostly homegrown Indian nuclear energy program has played a crucial role in enforcing the energy independence and security needs of the country. The release of this book is a befitting tribute to such a monumental occasion.

The various chapters in this book are an excellent collection of all the significant milestones of nuclear technology achieved indigenously by our scientists and engineers since independence. I am sure that the lucid presentation would make it an informative and interesting read for a broad and diverse readership. I must compliment the editors of the book, Dr. A. K. Tyagi, Director, Chemistry Group, BARC and Dr. P. R. Vasudeva Rao, Vice Chancellor, HBNI for putting-in efforts to assimilate such an extensive amount of research and development in a compact format.

I wish all the readers an enjoyable and enlightening journey through this book.



