

Preface

In view of the numerous applications of accelerators in diverse fields like research in the basic and applied sciences, viz., medical sciences (cancer treatment therapy, diagnostics and nuclear medicine), industry, agriculture and energy production, the recent past has seen tremendous growth in the development of more advanced and versatile accelerators and accelerator based research. Particle accelerators are fundamental tools for modern research. They improve our quality of life through the development of new medicines and new materials besides they help us understand how the elements were formed and why the universe works the way it does. They benefit the economy by forcing the pace of technology development and transferring skills and knowledge from laboratories to industry.

The atomic era dawned on mankind in a catastrophic way with it being used against Man versus Man in Hiroshima in 1945. The public fear about atomic energy is perhaps accentuated by the history of this wrong use of the potential friend by man. While radiation can be used for many beneficial uses, it can also create damage to biological systems if suitable safety norms are not adopted. Hence, it is necessary to inculcate public awareness of nuclear radiation and materials both in the educational institutions and in the public. Either people can become too scared or can become complacent about it.

The discussion in this symposium covered the latest developments in the area of study of radiation, its effects, protection philosophy and focus on the developments taking place not only in our country but all over the world.

The papers for special issue were collected from the participants; a stringent process for peer review was applied. Total number of 25 reviewers gave their services to review these papers. The special issue will serve as a reference document for the current Accelerator and Low Level Radiation safety Community, as well the young researchers. Mr Sahshi Dhraran Nair who deserves special appreciation for his painstaking approach for designing, formatting the pages, editing the photographs and to complete this strenuous task. Finally, I thank Mrs Poonam Bhatt and Mrs Prabha Gupta for their sincere efforts and full cooperation in bringing out this special issue.

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