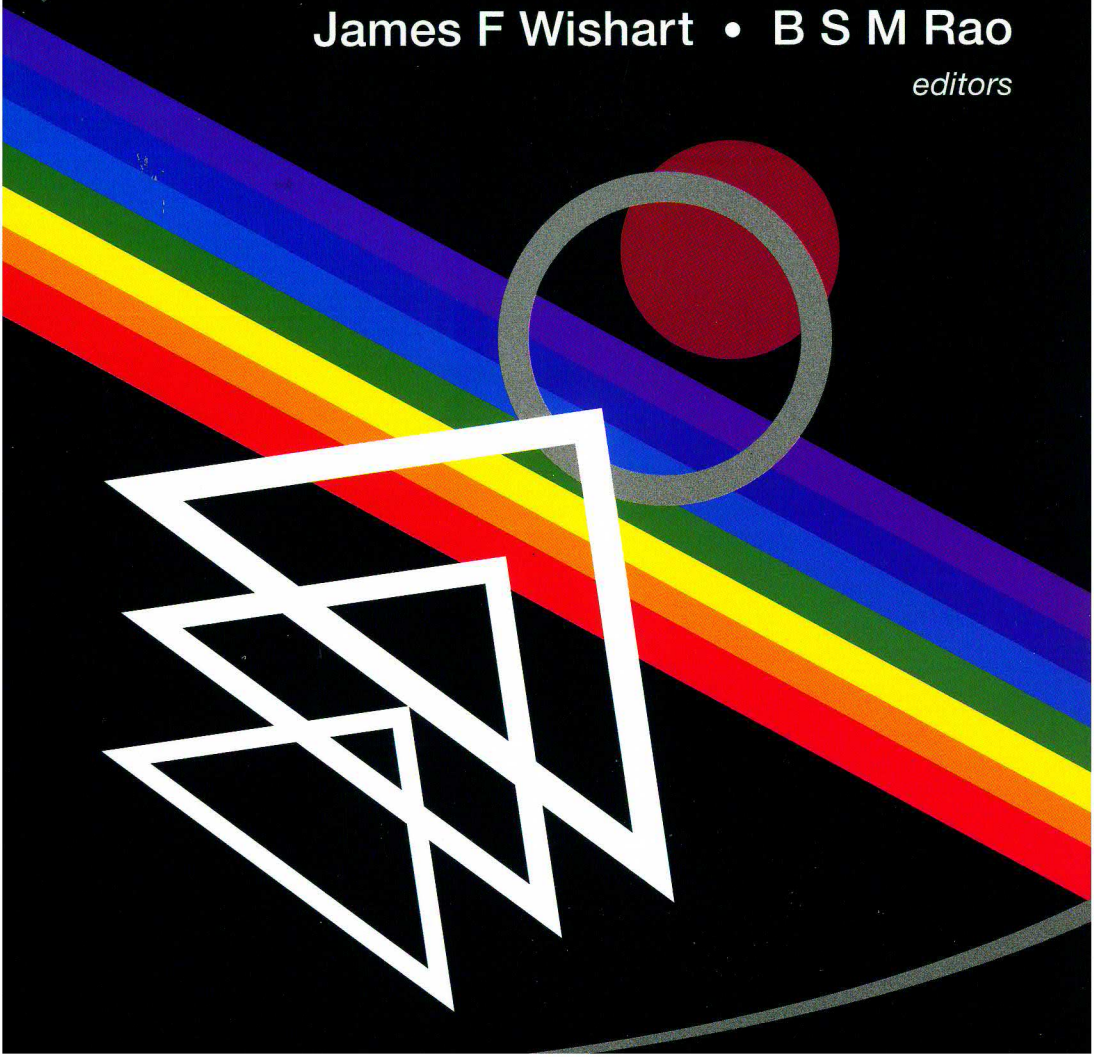
Recent Trends in Radiation Chemistry

James F Wishart • B S M Rao
editors



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Cover image:
The cover image depicts the spirit of pulse radiolysis experiment. The white arrows represent the pulsing of the radiation beam on the target (grey circle) leading to formation of transient species (maroon circle) whose spectrum is exhibited by the colored lines. The picture is redrawn from the mural at the National Centre for Free Radical Research, Department of Chemistry, University of Pune, Pune 411007, India.

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Recent Trends in Radiation Chemistry

Recent Trends in Radiation Chemistry is a state-of-the-art review of the present status and future trends in the field of radiation chemistry research. It covers a broad spectrum of topics, ranging from the historical perspective, instrumentation of accelerators in the nanosecond to femtosecond region, through the use of radiation chemical methods in the study of antioxidants and nanomaterials, radiation-induced DNA damage by ionizing radiation involving both direct and indirect effects, to ultrafast events in free electron transfer, radiation-induced processes at solid–liquid interfaces and the recent work on infrared spectroscopy and radiation chemistry.

The contributors to the book are world-renowned specialists. The book is unique in that it covers a wide spectrum of topics that will be of great interest to beginners as well as experts. Recent data on ultrafast phenomena from the recently established world-class laser-driven accelerators facilities in the US, France and Japan are reviewed.

There has not been a significant book covering the important field of radiation chemistry for the last 5 years. This timely book, which includes highlights of recent work, will appeal not only to the specialists working in the area but also to other researchers involved in related specialties.