Welcome to the fourth issue of the BARC Newsletter for the year 2014. This issue carries four interesting articles and two Brief Communications.

The Honourable Prime Minister of India, Shri. Narendra Modi has made his first visit to BARC, Mumbai on 21st July 2014 and a brief account of this important visit is included in the first section of this report.

An important work on the development of rare earth-transition metal based alloy powers such as Sm-Co and its method of fabrication was discussed in one of the brief communications. Indigenous development of switch-routers for dependable video surveillance has been described in another short communication.

BARC is involved in Hydrogen production by thermo-chemical splitting of water through the IS process. Different approaches have been evaluated to scale up the PBMR (Packed Bed Membrane Reactor), for the decomposition of Hydrogen Iodide. This evaluation has been carried out using numerical simulations.

Cyclic ball indentation is an emerging technique in the area of alternate methods for estimation of properties of materials. BARC has developed an ‘In situ Mechanical Property Measurement System (IProMS)’, suitable for Zr-2.5Nb pressure tubes is described in one of the articles.

Finally, your contributions are important to further enrich our newsletter and I request to send your contributions.

Dr. K. Bhanumurthy
On behalf of the Editorial Committee