From the Editor's Desk

I am happy that we are bringing out the first issue of the year 2009, again on time. I thank all the authors and the guest editor Professor N. Suryaprakash for their efforts to bring out this issue on NMR spectroscopy. NMR analysis has become an integral part of modern day research and is of particular importance in medicine and biology. Some of the recent techniques developed have aimed at looking at intricate features associated with molecular species including structural aspects and their correlation with function. It has become possible to evaluate the dynamics of molecular motion at nano- and femto-second time regime based on new experimental developments in NMR spectroscopy. We from the Editorial board are very excited to bring this issue for our reader community.

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Editorial

NMR spectroscopy continues to be a vibrant field with tremendous developments and diverse applications that have taken place in both liquid state and solid state. The advent of high speed spinning probes, development of numerous pulse sequences for efficient homo and heteronuclear decoupling techniques, have enabled the design of variety of three dimensional experiments in the solid state. Recent advances such as development of TROSY based methods, new labeling schemes, high field magnet technology, cryogenic probes and new fast data acquisition and processing techniques make it possible to determine structures of proteins upto 80kD in size and carry out functional studies on proteins upto ~1MDa in size. NMR has proven to be an indispensable tool particularly for the study of molecular dynamics over picosecond to second time regime, as the site specific dynamics of the molecules can be investigated.

The present issue is dedicated to the recent developments and applications in the field of NMR spectroscopy and several articles have been written by experts in the field. The articles on solid state NMR methods for the study of liquid crystals, determination of the structures and dynamics of proteins of transiently populated excited states with millisecond lifetimes, developments in the fast data acquisition methods, multiple quantum excitation techniques for spectral simplification, dynamic nuclear polarization, methodological developments for enantiomeric discrimination and the current status of peptide analyses have been extensively discussed. Thus I strongly feel that the current issue acts as an excellent reference for scientists working in diverse branches of NMR spectroscopy.

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