

From the Guest Editors

The variability in constituent building blocks, be it chemical molecules or biomolecules, and the endless possibilities of permissible bonding and connectivity leading to functionally relevant and dynamically interactive systems, encompass the impressive domain of *Complex Chemical Systems*. Stochastic systems in chemistry and biology have a strong propensity to exhibit complex phenomenon emanating from bonding, nonlinearity in chemical composition, symmetry rules, spatial organization, and other relevant variables, which greatly influence the overall nature and structure of such systems. Studies concerning complex chemical systems benefit from the tools available to study molecular composition, architecture and networks (both in solid and solution phase) and their functions. Needless to mention, these experimental advances are ably supported by theoretical modeling, which brings fresh insight for *in silico* formulation of complexity in chemical and biological processes. With notable research contributions revolving around this theme, this special issue of *Indian Journal of Chemistry, Section A*, on *Complex Chemical Systems*, presents invited research papers and reviews from established and young researchers in different topics ranging from experiment design to theoretical studies to biological systems.

This issue is an outcome of a special event under the auspices of *Germany + India – Infinite Opportunities*. Researchers from Germany, India and Singapore, gathered at the Indian Institute of Science Education and Research Bhopal, India, recently to exchange ideas and to create an Indo-German science bridge for collaboration and exchange. The special issue on *Complex Chemical Systems* summarizes current work in emerging fundamental and interdisciplinary research areas including interface of organic synthesis, metal-organic and enzymatic catalysis, chemoselective ligation strategies, bioorthogonal reactions, nucleic acids and their use as nanodevices or catalysts, peptide chemistry, and, spectroscopic investigations, amongst others.

It is hoped that the invited papers recruited for this focused issue on *Complex Chemical Systems*, will further invigorate scientific inquiry into chemical complexity and that the readers will benefit from the wide range of research articles and focused reviews.

*Alexander Heckel
Sandeep Verma*