

Editorial

Rajaram Nityananda, Chief Editor

Our last issue for 2017 celebrates an outstanding organic chemist – George Andrew Olah. This time, we have two of his close associates contributing both biographical and technical material. *Resonance* was fortunate in its early days to carry articles by S Ranganathan on organic synthesis. These articles now form a *Masterclass* e-book on our website (<http://www.ias.ac.in/Publications/e-Books/>). To do justice to the sheer volume of Olah's work, the technical article in this issue is longer than what we usually carry; splitting it might have reduced its value as a resource for serious students of the subject. Outsiders and perhaps even other chemists are often awed by the virtuosity which practitioners of organic synthesis have shown (*e.g.*, Woodward, *Resonance*, July 2014). One can only offer the rationalization that the real hero is the carbon atom, which sits in a strategic location – the middle column of the periodic table – bonding with many other elements, but crucially, with four, three, two or one of its own kind. Our recent issues highlighting polymers (April and November 2017) cover just one aspect of carbon chemistry, but one which has practically taken over our lives.

All lives depend on the chemistry of biomolecules, and here perhaps the organic chemists themselves have to join the others and stand in awe. What evolution has put in place is intricate chemistry at very moderate temperatures and atmospheric pressure, largely in an aqueous medium. If we could imitate it, there would be no need for the brutal temperatures and pressures which methods like the Haber process use to break one of the strongest bonds – nitrogen with nitrogen (*Resonance*, December 2011). The environmental activists have a point – why struggle with this method of fixing nitrogen when there are natural processes honed over billions of years which can meet our needs? If only we could keep those 'needs' in check!



Email:

rajaram.nityananda@gmail.com



Chemistry itself is strategically located at the trijunction of physics, biology, and yes, even mathematics. The opening remarks of the text ‘Quantum Chemistry’ by Eyring (*Resonance*, July 2012), Walter, and Kimball from which many of us learned the basics of quantum mechanics reads like Archimedes promising to move the Earth. “In so far as quantum mechanics is correct, chemical questions are problems in applied mathematics.” Our issue of August 2017 tells us how far that grand proclamation has been realized.

Unusually, the rest of this issue does not carry any biology. We do have mathematics, both at its logical foundations and also in soap films. Two technological marvels, the GPS, and the multi-core microprocessor make their appearance – *Resonance* has a long tradition of covering cutting edge as well as basic engineering. Our journal is based on the idea that undergraduate students of science and their teachers need not only exposure to popular accounts, but in-depth, up to date, pedagogic exposition of well-chosen topics over the entire spectrum of pure and applied science, and mathematics. Clearly, each reader will have her favorite areas, but we hope that the totality is a resource for the entire community. The founders of *Resonance* realized the need for this kind of broad scope. This need has only increased with the progress of science over the last twenty-two years, much of it driven by cross-fertilization across the traditional disciplines. It is indeed a challenge to provide, month after month, material which goes beyond what is now available in plenty on the internet. We are aware that we meet this ambitious goal only imperfectly, but it is a goal worth striving for!

As I hand over the baton to the next Chief Editor, this is the place to thank the authors, editors, referees, and the editorial staff who have made this monthly offering possible, and to hope that *Resonance* will continue to serve a wider community of readers as the years go by.

