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PROFILE

Interview with Gautam Desiraju

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Gautam R. Desiraju works in the Solid State and Structural Chemistry Unit of the Indian Institute of Science, Bangalore. His research is concerned with crystal engineering and the properties of intermolecular interactions, especially hydrogen bonds. He has authored more than 50 papers in *ChemComm*. He is the current President of the International Union of Crystallography.

Do you remember what it felt like to publish your first *ChemComm* article?

Of course I remember my first paper in the journal. I submitted the paper in late 1982 and it appeared in early 1983. We had to wait many weeks before the manuscript reached the UK (as a typewritten hard copy by regular post), got refereed and the result sent back. The acceptance came in the form of a typewritten green coloured slip (also by regular post in a small manila envelope). I didn't really know what the green slip meant and I showed it to the head of my department, who had given me some tips during the submission. I think he was quite surprised that the paper had been accepted without any revision whatsoever. Not many people in India were able to publish in *ChemComm* in those days. Interestingly, the title of that paper contained the phrase "crystal engineering" and this has been the recurring theme of my research ever since.

How has your research evolved from your first to your most recent article?

Evolution is the right word. Initially, it was trying to convince people that there was a subject called crystal engineering, then establishing the nature of the intermolecular interactions that one might use in the design process for an organic crystal, then in working out a strategic pathway through the agency of what are now called supramolecular synthons. During the last decade, my group has been working on more exotic themes such as mechanical properties of crystals and most recently the idea of a crystal structure landscape (which is the theme of the *ChemComm* in the present issue, DOI: 10.1039/C2CC33811D). The structural landscape is a brand new way of looking at polymorphism.

What do you like most about publishing in *ChemComm*?

What I like most about *ChemComm* is that it lets me say exactly what I want to say. In the early days, crystal engineering was a very interpretative subject and one had to sell an idea rather than data. I found that the so-called more prestigious journals were very intrusive in that the referees were over cautious to the point of interfering with the idea that I wanted to communicate in a paper, in the name of maintaining rigour. *ChemComm* was never like this. Almost all my fifty and more papers in the journal are first time submissions and most of them were accepted with minor revisions or even no revisions at all. I am very happy that today when an author submits a paper to *ChemComm*, one of the categories in which (s)he can assign it to is "crystal engineering". Crystal engineering, which was an idea 30 years ago, has now become a subject.

What aspect of your research are you most excited about at the moment?

I am most excited now about the fact that many qualitative concepts that I advanced years ago are being validated in quantitative terms using sophisticated instrumentation. Nanoindentation is one such example in that it can be used to quantify the properties of intermolecular interactions.

What is the best part of your job?

The best part of my job is that I am always working with young people.

What is the secret to success in scientific publishing?

The secret to success in scientific publishing is to have fun. Take my *ChemComms* for example. Some of them are very well known and cited. I can quote the paper where Thomas Steiner and I distinguished between a hydrogen bond and a van der Waals interaction, or the paper with V. R. Pedireddi on a scale of carbon acidity, or the single author paper on the likelihood of hydration in an organic crystal. But there are other less cited papers that also gave me much pleasure in their inception and execution. I can remember the paper with Shekhar Reddy where we compared tetrahydroxyadamantane and caesium chloride, the paper with Archan Dey where we correlated the presence of a crystal inversion centre with a high dipole moment, or the comment with Tejender Thakur where we corrected an earlier misassigned C–H···Cu agostic bond in the journal as a very weak hydrogen bond. While many of these niche papers have not been highly cited, we had lots of fun doing the work and writing the papers. They still make interesting reading years later. Many of these latter submissions were also accepted

without change. So I would caution workers from getting carried away with citations and impact factors. These are mere numbers. They are not science. They don't capture the essence of the scientist.

What is your advice to young emerging scientists?

To think carefully before setting out on a research venture, not to get carried away by prevailing trends and fancies and to remember that a reputation is easier to lose than to gain. They should follow their instincts and never give up.

What do you do in your spare time?

On moving to Bangalore, after 30 years in Hyderabad, I have consciously tried to create more spare time for myself and I have been able to get back to singing classical South Indian music, an activity that I abandoned 20 years ago. I spend time pottering around my home and garden and I find this to be extremely relaxing. Not doing anything is a conscious activity and it needs concentration and ability to hone this skill.

By the time I'm 100 I would like to have. . .. . .

...left this world a long time back.

