

Book Review

Letters to a Young Chemist

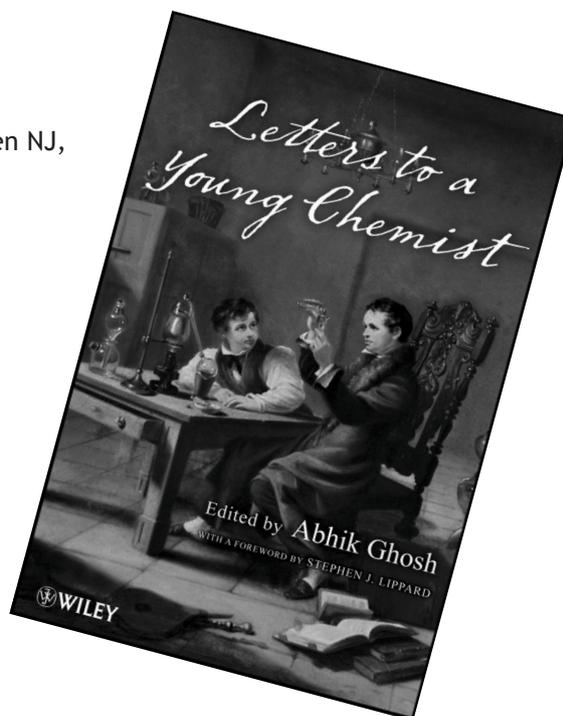
Edited by Abhik Ghosh: John Wiley & Son Inc., Hoboken NJ, 2011, pp. 298. ISBN 98-0-470-39043-6 (paper).

\$US 39.95, NZ 57.99.

There have been a good number of books written as *Letters to a Young ...*, the earliest of which I am aware being the 1803, 3rd edition of the Rev. John Bennett's *Letters to a Young Lady* 'to improve the heart, to form the manners and to enlighten the understanding'. Since then the noted book ... *to a young poet* appeared in 1902 with the genre expanding rapidly in the past fifteen years from the appearance of *Letters to a Young Doctor* (1997), ... *Lawyer* (2005), ... *Mathematician* (2006), ... *Teacher* (2007), and ... *Architect* (2009). The appearance of this book ... *to a Young Chemist* in 2011, the International Year of Chemistry, is more than appropriate. IYC looks back at *the achievements of chemistry and its contribution to the wellbeing of humankind* while the book with its seventeen letters looks forward to what we can expect in the future. It is a book that every undergraduate student of chemistry should cherish; every teacher of the subject at the high school level should read (and ensure that there is a copy in the school library!); and every academic should own. It describes the excitement of the forefronts of our discipline in simple terms so that the fictitious Angela can make a sensible choice for her future career in science, ideally in chemistry.

The range of books on popular science has, until now, had little on chemistry. This title deserves to be held by every public library as the interested layperson will quickly come to see just why it is that our discipline is so exciting and vibrant, and what it is that makes it so essential for the future of humankind. How better could one start to explain nanotechnology than by beginning with *The Cat in the Hat Comes Back* (as does Michael Sailor), or recalling Angela's appendectomy as a child to unravel the intricacies of anaesthesiology (as do the Sessler brothers)?

Abhik Ghosh has drawn a good gender mix of seventeen academic research chemists at various stages in their careers, and asked them to write a letter to the fictitious student, Angela, who is just entering second year studies at the University of California–San Diego (UCSD). Angela has taken first-year chemistry courses and is recently returned from the summer working as an undergraduate student in Ghosh's lab in Tromsø (Norway). Each author writes to Angela, some adopting a fictitious persona (Carl Wamser becomes *Uncle Carl*, Elizabeth Nolan a presumed cousin, Cynthia Burrows someone well known), describing their research area, what it is that fascinates them with it, where it is heading and why it is of significance, all with a view to encourage Angela into chemistry research. The editor has chosen four fundamentally important areas of Chemistry, providing five letters covering concepts *From Fundamentals to Applications*, six on *Chemistry and the Life Sciences*, three letters on *Fundamental Materials*, and three on *Chemistry and Energy*.



The book is aimed at a general audience and, although it carries a number of chemical diagrams, formulae, figures and equations, none are essential to gaining a good understanding of the topic under discussion.

With such a wide range of authors, it is inevitable that the style, the assumed background and the level of coverage varies, but this is not such a bad thing as each letter has its own way of drawing the reader into its subject matter and offering advice [Marye Anne Fox: *choose your mentor (and your spouse) carefully*]. Again, there is some overlap between the chapters and inevitable with the all encompassing absorption of UV light and fluorescence as it appears in *Let's Get Physical* (Marye Anne Fox), *Let's Visualize Biology: Chemistry and Cellular Imaging* (Elizabeth M. Nolan), *Bioinorganic Chemistry: Show Your Mettle by Meddling with Metals* (Kara L. Bren), *The Advantage of Being Small: Nanotechnology* (Michael J. Sailor), *Happy Campers: Chemist's Solutions to Energy Problems* (Penelope J. Brothers), and *Clean Electrons will Save the World* (Carl C. Wamser). The most notable overlap occurs in the section on Energy and Chemistry as each of the three authors discusses hydrogen storage, though under different guises. Overall, the overlaps are incidental as the explanations in one chapter enhance the descriptions in another.

The book is well presented and contains relatively few typographical errors. However, the decision not to use colour has diminished the impact (and clarity) of many of the figures (dominantly in the biological area) and that of the nanoflask (Fig. 12.4: *Supramolecules to the Rescue* - Cohen) has the guest molecule appear behind and not inside its host. Hopefully these issues can be addressed for future editions, which I presume to be guaranteed and look forward to.

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