

# Book Review

***Atomic Romances, Molecular Dances Chemistry Poetry* by Mala L. Radhakrishnan, Illustrated by Mary O'Reilly, (lulu.com, 2011) 143pp., ISBN:9781458331922, \$14.95, (paperback)**

Reviewed by Michael P. Filosa

Many years ago I picked up a well-worn, 50-cent copy of the *Works of John Keats* and I have referred to it many times since. I could never get over the tragedy of his life and how it is expressed so beautifully and timelessly in poems such as "Ode to a Nightingale."

*My heart aches, and a drowsy numbness pains  
My sense, as though of hemlock I had drunk,  
Or emptied some dull opiate to the drains  
One minute past, and Lethe-wards had sunk: . . .*

Although Keats is not devoid of chemical references (he trained as an apothecary), I little imagined that the day-to-day activities of a chemist could be reduced to poetry until Professor Radhakrishnan of Wellesley College asked whether the *Nucleus* would consider reviewing her new book of chemistry poetry: *Atomic Romances, Molecular Dances*.

Professor Radhakrishnan's book is a collection of 50 poems written over the past ten years. A number have been previously published in publications such as *Biochemistry and Molecular Biology Education*, *ChemInformation*, *Technology Review* and *Tech Talk*. All of the poems have been slightly modified or edited since their previous publication.

This is an interesting read for any chemist and a way for teachers to enliven their teaching of chemistry to students, who may, like myself, have never thought of expressing their chemistry learning experiences poetically.

The book is organized into fourteen sections, each based on the subject of the poems, and spanning the breadth of chemistry: I. The Mole and Stoichiometry, II. Periodic Trends, III. Selected Elements, IV. Common Reactions, etc. The titles of the poems are often whimsical: *The Atoms' Family*, *The Ugly Doping*, *Bridge Over Troubled H<sub>2</sub>O*, *All My Carbons*, *Guiding Light*.

*All My Carbons* is a poetical rendering of a process typical of introductory organic chemistry: the chain extension of 1-propene to 1-pentene involving a series of important simple reactions: hydroboration, conversion of an alcohol to a bromide, Grignard formation, reaction with ethylene oxide, tosylation and elimination with t-butoxide. Certainly, not the typical subject of a poem, but a really nice creative exercise, and all because "Peter Propene" felt too small.

*Peter Propene was aching with tension:*

*He really wanted to get an extension, For every day his ego would shatter Whenever he heard "size really does matter."*

Physical properties are romanticized in the poem, *The Foiling Point of Water* where the different boiling points of water and methanol are explained:

*So how come the methanol boils at this point,  
But water can't seem to break out from this joint?  
Well, water's got two "H's" bonded to "O,"  
While methanol has only one, as you know.*

Mark Methanol can fly at 65° C, but Wally Water is stuck because of his extra hydrogen bond. A clever and memorable way to teach the power of the hydrogen bond.

Overall, the 50 poems cover a wide array of chemical topics suitable for facilitating understanding. These poems will stimulate many spirited discussions and enliven any classroom. I recommend this book as a source of inspiration and amusement, not only to teachers, but to anyone who has a passion for chemistry.