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Tribute to David Chandler

On behalf of the students, postdoctoral scholars, colleagues, and visiting scholars who have worked with Professor David Chandler, we are delighted to mark his 60th birthday by dedicating this issue of *The Journal of Physical Chemistry B* to him. David's contributions to statistical mechanics, particularly as it pertains to complex chemical systems, are truly remarkable. His work has spanned a broad range of areas, and in each case it has led to fundamental new ideas. The cover attempts to depict only a fraction of his significant accomplishments. Many will recognize that the artwork includes cartoons representing the WCA (Weeks, Chandler, Andersen) theory of the structure of liquids, the RISM approach to understanding the structure of molecular fluids, the theory of the hydrophobic effect, the transition path sampling method, and work on the theory of the glass transition. Many other important advances, such as David's work on electrons in liquids, could not be represented on the cover because of space limitations.

No narrative of David's contributions to science can be complete without mentioning his impact on the education of generations of scientists who have learned statistical mechanics from "the little green book" (*Introduction to Modern Statistical Mechanics*). In this book, clearly, logically, and concisely, David takes the reader from basic thermodynamics to advanced concepts such as the renormalization group theory.

The "little green book" is a well-known way in which David has educated people he may never meet. Less obvious, perhaps, is the impact of his scholarship and pedagogy on those that he has mentored personally. One of us (K.S.S.) was fortunate to have David as both a classroom instructor and Ph.D. thesis advisor in the early days at Illinois. David was then, and remains today, a dedicated, enthusiastic, inspiring, and highly organized teacher. As a thesis advisor, David was an outstanding mentor and role model via his insistence on a deep physical understanding, his drive to continually learn new areas of science and statistical mechanics, and his genuine appreciation of experiment and its critical role in building a fundamental theoretical understanding. After graduation, David serves as a source of sage advice and an enthusiastic cheerleader. He is a truly supportive person who takes great interest and pride in the careers and well being of his former students.

David is also a great mentor for his junior colleagues. One, now not so young, colleague (A.K.C.) became interested in statistical field theory a few years after coming to Berkeley. David became his teacher, inspiration, and model for true scholarship. He even taught him how to compute functional integrals! Many younger scientists around the world continue to benefit from David's mentorship and generosity.

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Knowing David as a faculty colleague is also a rewarding experience. As we all know, David is an intense person, and he brings that intensity to every endeavor he undertakes, be it a committee on revising the content of graduate courses, the hiring or tenure evaluation of junior faculty, or of course matters of research. David and I (W.H.M.) have had very stimulating times with joint postdocs, but I have also greatly valued his input to the Berkeley Chemistry Department in these other ways. He is a superb and valued colleague in every respect.

This special issue of *The Journal of Physical Chemistry B* is a tribute to David Chandler's remarkable contributions to advancing our understanding of the physical chemistry of a broad range of complex systems and to the far-reaching impact of his book on the education of chemists, physicists, and engineers. David Chandler has made the field of physical chemistry richer, and we look forward to many more years of his scientific intensity, friendship, and inspiration.

Arup K. Chakraborty

William H. Miller

Kenneth S. Schweizer