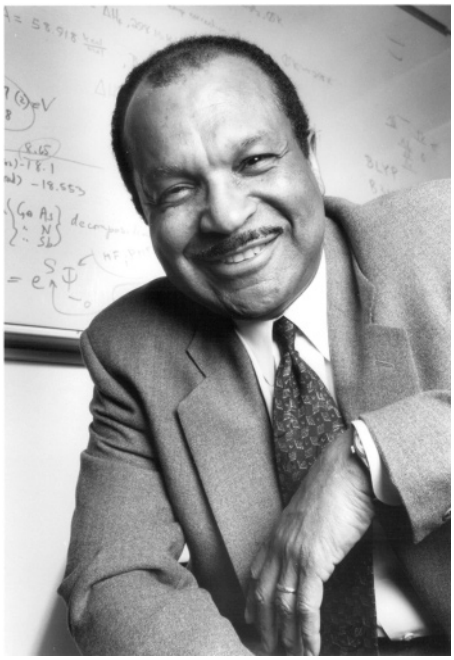
THE JOURNAL OF PHYSICAL CHEMISTRY A

 VOLUME 112, NUMBER 10, MARCH 13, 2008



Introduction to the William A. Lester, Jr., Festschrift

This special issue of the *Journal of Physical Chemistry* is dedicated to Professor William A. Lester, Jr., on the occasion of his 70th birthday. Most of the articles included in this issue are products of the research of friends and former students, post-doctoral researchers, and collaborators of Professor Lester, many of whom attended a conference organized in his honor in March of 2007 at the University of California, Berkeley, campus.

The breadth of topics represented in this issue is a testimony to Professor Lester's wide and deep research interests and also reflects his influence on the scientific community.

The issue includes 20 original research articles, including one from Professor Lester's research group, Professor Lester's curriculum vitae, a list of publications, and a list of his co-workers. It also includes a detailed autobiography.

To honor Professor Lester, we decided to include brief testimonials about Professor Lester from former graduate students that worked in his research group from the 1970s to the present. Professor Barbara Garrison, The Pennsylvania State University, joins us in describing Professor Lester as an important guiding figure in the formative stages of our careers.

We wish to thank George Schatz and Anne McCoy from the *Journal of Physical Chemistry*, as well as Betsy Foran, for making this issue possible. Brian Austin, Dominik Domin, Kris Leonardo, Rochelle Lester, Shelly Mannoni, Hyung-Min Cho, Brian Hammond, Michael Philpott, and Romelia Salomón-Ferrer helped with the organization of the Symposium held at Berkeley and made it such a success. We also thank Microsoft and Lawrence Berkeley National Laboratory for sponsoring the conference.

Alán Aspuru-Guzik

Harvard University

John A. W. Harkless

Howard University

Testimonials from Former Graduate Students

Barbara Garrison (San Jose/Early Years)

Andy Raczskowski and I were Bill's first graduate students in the early 70s although officially we were graduate students

10.1021/jp801183j CCC: $40.75
Published on Web 03/06/2008

at UC Berkeley and worked with Bill at IBM in San Jose. The early 70s was the era when we used punched cards for our Fortran codes, had paper output, and used typewriters for preparing manuscripts and correspondence. Thus, it was mandatory that I physically go to IBM to do my computing and to interact with Bill. My initial goal was to go two to three days a week but eventually the 75 min each way trips were daily.

My project was to investigate a proposal by Charles Townes that collisions caused an anomalous cooling of the rotational doublets of interstellar formaldehyde. With Bill, I had the opportunity to learn electronic structure techniques and quantum mechanical coupled channel scattering methodology. Bill taught me two lessons that have sustained me through my career. First, during my coding changes, he had me run my polyatomic molecule scattering code for a diatomic molecule in order to compare with results from his version of the code. The results differed in the 14th significant figure. I had to track the difference back to the order in which spherical harmonics were added in order to assure him that my coding changes were right. Second, once I had calculated scattering cross-sections, I had the pleasure of using them to test and verify the proposition that collisions are the cause of rotational cooling, a result published in *Astrophysical Letters*. Both lessons are constant reminders of Bill Lester's positive influence on me.

John Harkless (Mid 1990s)

The first time I met Professor Lester was at the new graduate student orientation in August 1995. I had finished my undergraduate degree at Morehouse, which is all male and well over 90% African-America—in many ways a very homogeneous environment—and made my way to a completely inhomogeneous environment at UC Berkeley. I was simultaneously just another face in the crowd and not at all anonymous. Professor Lester introduced himself, and before I could return the introduction, he said, "Your reputation precedes you." What I hadn't known is that the people who do science at Morehouse knew and communicated to the people who do science at Berkeley. It was that instance of wry, witty turnabout that introduced me to the person from whom I would soon choose to learn how to do science.

The most important nonacademic lesson that I learned from Professor Lester is this: "People do science." I started learning this lesson a few weeks later when I chose to join his research group. This coincided with his time at NSF, which meant that our face-to-face time would be limited for the first three semesters of my graduate career. Regular phone calls, e-mails, and monthly visits to Berkeley from Washington, DC, were the norm, and truly demonstrated the care and concern he had for his people who were doing his science. That commitment to mentoring and caring for his people has become a cornerstone of my early career as a research faculty member.

Alán Aspuru-Guzik (1999−2004)

As an undergraduate in Mexico City, I was intrigued upon finding a review, and later a textbook, on quantum Monte Carlo written by Professor Lester. From that moment, I decided to do my undergraduate thesis on quantum Monte Carlo, and little did I know that I would eventually have the opportunity to attend UC Berkeley as a graduate student, to work with Professor Lester himself. Since day one, Professor Lester was interested in me both as a person and as a researcher. He allowed me to pursue many different research directions (some of them very exploratory!), while at the same time providing guidance for my career development.

Now that I have a group as well, I have found myself repeating many of the practices that Professor Lester used to guide me through my first years of science. When I tell my graduate students to rewrite a sentence in a certain way or when I need to confront a thorny problem, I often hear Professor Lester's advice played back in my brain. I am fortunate enough to have a student in my laboratory who has worked with William Lester as a summer student (James D. Whitfield), as well as the son of one of Professor Lester's former postdoctoral associates (Patrick Rebentrost). The academic and personal seeds planted by Professor Lester will hopefully be harvested and passed along to the students of my students. I am most proud of being a part of the Lester academic family and a part of his legacy.