HOPE COLLEGE CHEMISTRY SEMINAR

“ENLIGHTENMENT AND THE RESPONSIBILITIES OF THE ENLIGHTENED”

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Abstract
We live in the most advanced scientific and technological society in history. New discoveries have led to personal and societal enlightenment, to improvements and benefits in our daily lives, but also to new societal problems. Education is the key to societal progress. In one part of my talk I shall discuss the rationale for enhancing the learning experiences of undergraduate students at all types of institutions. I will offer specific suggestions for consideration by faculty as we all contemplate ways to improve both the technical skills and the judgment of our students. I shall use examples from my own experience in chemistry education. Undergraduate science opportunities must be properly utilized to showcase science at its best in addressing human needs locally and worldwide. Undergraduate faculty can greatly enrich the education of their students by aiming to promote science literacy. Science literacy is necessary for the democratic process to work. By science literacy I mean an appreciation of science, an understanding of the benefits of technology and the potential rewards and risks associated with advances in both, as well as a recognition of what science is capable of achieving and what it cannot accomplish. Science literacy enlightens and enables people to make informed choices; to be skeptical; to reject shams, quackery, and unproven conjecture; and to avoid being bamboozled into making foolish decisions where matters of science and technology are concerned. Science literacy is for everyone--chemists, artists, humanists, all professionals, the general public, youth and adults alike. The level of science literacy in any society is a measure of what it values and its resolve to put these values into practice.

Biography
Dr. Shakhashiri is well known internationally for his effective leadership in promoting excellence in science education at all levels, and for his development and use of demonstrations in the teaching of chemistry in classrooms as well as in less formal settings, such as museums, convention centers, shopping malls and retirement homes. His scholarly publications, including the multi-volume series, Chemical Demonstrations: A Handbook for Teachers of Chemistry, are models of learning and instruction that have been translated into several languages. Dr. Shakhashiri earned a B.A. degree in chemistry from Boston University and a Ph.D. in Chemistry from the University of Maryland. After a year of post-doctoral research and two years as a junior member of the chemistry faculty at the University of Illinois-Urbana, Professor Shakhashiri joined the faculty of the UW-Madison in 1970, a position he still holds. In 1983 he founded the Institute for Chemical Education (ICE) and served as its first director. From 1984 to 1990 Professor Shakhashiri served as Assistant Director of the National Science Foundation (NSF) for Science and Engineering Education. Professor Shakhashiri has given over 1400 invited lectures and presentations and is the recipient of over 35 major awards. Professor Shakhashiri was elected the 2012 President of the American Chemical Society.