Journal of Alloys and Compounds 488 (2009) 492

Contents lists available at ScienceDirect

Journal of Alloys and Compounds

journal homepage: www.elsevier.com/locate/jallcom

Professor William J. Evans
Recipient of the Twelfth Frank H. Spedding Award

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According to Prof. Josef Takats, the nineteenth century is rightly regarded as a classical and heroic era of discovery, the period during which the vast majority of the elements were discovered and which in many ways culminated with Mendeleev's Periodic Table, which organized these discoveries into an ordered and coherent system. Of all the elements discovered, the lanthanides, then lumped together with sundry others as "the rare earths", were among the most mysterious and the hardest won, as they failed to fit into the established order. In the words of William Crookes: "These elements perplex us in our researches, baffle us in our speculations and haunt us in our dreams. They stretch like an unknown sea before us – mocking, mystifying and murmuring strange revelations and possibilities."

The Frank H. Spedding Award *for Outstanding Contributions to Science and Technology of the Rare Earths* has been awarded eleven times over the years, generally coinciding with the Rare Earth Research Conferences (RERCs), which have numbered 24. In 2008, we will award the 12th Spedding Award to Dr. William J. Evans of the University of California – Irvine, at the 25th Rare Earth Research Conference. The previous awardees include: W.E. Wallace, Georg Busch, S. Legvold and W. Koehler, A. Mackintosh and H. Bjerrum Moeller, B.R. Judd, Karl Gschneidner, LeRoy Eyring, Gregory R. Choppin, Brian Maple, Lynn Boatner, and most recently, John D. Corbett, who served as Division Chief at the Ames Laboratory of the U.S. Department of Energy from 1963 to 1978.

In 2000, Dr. Joanne A. Goldman wrote an article for *Technology and Culture*, the signature periodical for the Society for the History of Technology, in which she surveyed the history of the Ames Laboratory and Frank Spedding in her article entitled "National Science in the Nation's Heartland: The Ames Laboratory and Iowa State University, 1942–1965." Frank Spedding's leadership role in the development of the Institute for Atomic Research (IAR), the Ames Laboratory, and the critical chemical separation and purification methods for rare earth elements highlighted the symbiotic relationship between the leader/scientist, a National and International treasure of information, and a Land Grant university.

As the Rare Earth community well appreciates, the "Fraternal Fifteen" elements, so named by Karl Gschneidner in 1966, comprise a host of interesting properties that make them noteworthy – Spedding noted in his "Spedding Papers" (ISU Archives, 1951) that pronounced magnetic properties arise from the filling of the 4f-shell, leading to magnetic properties of great technological importance. And yet, these fraternal fifteen were considered "contaminants" by many.

Despite this reputation, the Rare Earth Research community recognizes the accomplishments of one of our own by celebrating under the watchful eyes of Frank Spedding, a pioneer among many who recognized the scientific and technological implications of the "Fraternal Fifteen". A committee of past, current, and future RERC chairs, together with industry leadership, reviewed outstanding nominations of chemists, physicists, and metallurgists from the community and selected Dr. William J. Evans for the 12th Frank H. Spedding Award for 2008.

Over the course of his career at the University of Chicago and the University of California-Irvine, his work on the organometallic chemistry of f-elements has been cited over 10,000 times with an average citation index per paper of 40. His honors have included the DuPont Young Faculty Award, Sloan Research Fellow, Camile and Henry Dreyfus Teacher Scholar, the NSF Special Creativity Extension Award, the ACS Award in Inorganic Chemistry, and the Sir Edward Frankland Prize of the Royal Society. He has been recognized as well for his outstanding contributions to undergraduate education at UCI and was recently awarded the UCI distinguished faculty award for research. His service to the scientific community has also included serving as the Chair for the Gordon Research Conference on Inorganic Chemistry and a member of the editorial board for journals such as Inorganic Chemistry and the Journal of the Chemical Society.

0925-8388/$ – see front matter
doi:10.1016/j.jallcom.2009.11.069