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In Memoriam: Dr. Joseph A. Rard (1945–2022)

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It is with great sadness that we announce the death of Dr, Joseph Antoine Rard "Joe" on February 10, 2022, after a prolonged illness. He is survived by his wife Deborah Marie, two children, Elizabeth Marie and Joseph David, and sister Kathleen Lastarria.

Joe served as joint Editor in Chief of the Journal from 2003, when he and Donald Palmer took over the editorship when Robert Kay, the Journal's founding editor, retired and later with Earle Waghorne, after Don Palmer stepped down in 2009. Joe brought his intelligence and scientific rigor to his editorship and these helped shape the Journal over the past 18 years.

Of course, Joe was already established as an outstanding scientist before he joined the Journal. He took his B.A. at Illinois University at Edwardsville and his Ph.D. with Professor Frank Spedding at Iowa State University of Science and Technology. He then spent two years as a Post-Doctoral Fellow at the Ames Laboratory of the AEC and then two further years as a Visiting Research Assistant Professor of Geology at the University of Illinois, Urbana–Champaign before joining the Lawrence Livermore National Laboratory as a Chemist in the

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Geochemistry Group. After his "retirement" in 2007, Joe continued his connection with Lawrence Livermore as a Participating Guest and Visiting Scientist.

The details of Joe's 131 scientific papers, book chapters and books and the numerous conference presentations and LLNL Reports that he authored, show the breadth of his scientific contributions. His work with Frank Spedding exposed him to the whole arsenal of physical chemistry techniques for characterizing electrolyte solutions, with publications reporting conductances, viscosities, transference numbers, heats of dilution and, perhaps most importantly, the isopiestic technique, in which he became the leading authority. Isopiestic work remained one of the constant threads throughout Joe's career and, latterly, led to a very productive trans-Atlantic collaboration with the Miladinović group at the University of Belgrade. In 2019, Joe organized a special issue of the Journal to mark 100 years of the isopiestic technique and his introduction to this [1] provides an interesting and insightful history of the development of the technique.

Unsurprisingly, his interactions with Spedding also led to an interest in the rare earths, in which he became an acknowledged expert, coauthoring *Chemical Thermodynamics of Technetium*, produced by the OECD Review Team for Technetium Thermochemical Data Base, which Joe chaired from 1988 to 1999, when its work was concluded.

Joe also collaborated with the late Donald G Miller from the mid-1970s and with John G. Albright from the early 1980s; these collaborations led to around 50 papers, largely on the measurement of diffusion coefficients of electrolytes, an area that has gained significantly in importance with the development of environmental issues, perhaps most importantly, the long term storage of radioactive materials. Appropriately, Joe's final scientific publication was a legacy paper from this long collaboration [2].

Beyond his scientific research Joe served on committees for a number of conferences and was chair of the local organizing committee for the 1997 Calorimetry Conference.

Joe was a thoughtful man with a good sense of humor. On an autumn trip to Texas, to visit John Albright's group, he explained that "…now that it's getting cooler in California, I've come here to Texas…" the outside temperature was between 100 and 105 Fahrenheit degrees (LP). It was always a pleasure to spend time with Joe and have long conversations ranging from the aromatic herbs he grew in his garden to his personal jerky recipe…. and his always interesting world view.

After his family and his science, Joe's third great passion was his massive collection of rare succulents and cacti, for which he won numerous awards at cactus and succulent shows in northern California. The bulk of his collection, over 100 plants, will become part of the permanent garden in a local botanical garden that specializes in cacti and succulents, so that nature lovers will be able to enjoy his plants for years to come.

This seems an entirely appropriate tribute to this gentle, intelligent man who made a large contribution to solution chemistry and to many solution chemists.

References

1. Rard, J.A.: The isopiestic method: 100 years later and still in use. J. Solution Chem. **48**, 271–282 (2019)
2. Rard, J.A., Miller, D.G., Albright, J.G., Zeidler, M.E., Annunziata, O.: Mutual diffusion coefficients and refractive index increments of K_2SO_4(aq) at 298.15 K from Rayleigh Interferometry. J. Solution Chem. **50**, 1315–1334 (2021)