

*In Memoriam*

## Alvin J. Salkind (1927-2015)



ALVIN J. SALKIND

**A**LVIN SALKIND, an emeritus member of ECS, died on June 9, 2015, in New Brunswick, New Jersey, at the age of 87. He received his PhD in Chemical Engineering and X-Ray Physics from the Polytechnic Institute in New York and had additional graduate training at Penn State University and at the Harvard Business School. He was an author of more than 120 technical papers and patents and he was an author or editor of 17 books. He published extensively in the *Journal of The Electrochemical Society* beginning in 1959. He joined The Electrochemical Society in 1953 and became an ECS Fellow in 2014. He was also a Fellow of the American College of Cardiology, AAAS, AIMBE, and New Jersey College of Medicine. He had over 40 years of experience in the electrochemical battery field in his dual academic-industrial career. He was a professor at Rutgers University, President of the Electric Storage Battery Company, and the Executive Director of the Yeager Center at Case Western Reserve University. An ECS blog of June 10, 2015 first announced his passing to the ECS members.

### Forrest Trumbore wrote the following about Alvin Salkind:

Upon my retirement from Bell Labs, I found a new home as an adjunct professor in Prof. Salkind's battery group in the Bioengineering Division of the Department of Surgery at the University of Medicine and Dentistry of New Jersey (UMDNJ), Robert Wood Johnson Medical School. The group was housed in a succession of trailers, in whose relatively cramped quarters another professor and his students worked on bone growth and such problems. Al was a truly unique individual who it seemed knew virtually everybody in the battery field. To say the atmosphere in the group was informal is an understatement; Informal dress was the rule and as likely as not Al's shirttail was hanging out. Al was keenly devoted to batteries and science and, even when he initiated conversations of a personal nature, the subject would soon become one related to some technical problem or subject.

Some of the most interesting times with Al and his group involved teaching courses on battery science and technology for the Army, Navy, and for Corning. But the most enjoyable were yearly three-day short courses that Al, I, and another colleague gave yearly for a decade in New Jersey and in Amsterdam for the Center for Professional

Advancement. Although I was the course director, there was no question as to who was the most popular lecturer in the course. At the end of each course, the students were given evaluation forms and Al inevitably got the highest ratings. Often, as he was giving his lectures, I would think to myself "Come on Al, stop rambling and get back to the subject." At which point, virtually every time, he would drop a pearl of battery wisdom that I had not heard before. That pearl alone would justify the money the students had spent to attend the course! It was never boring working with Salkind and I am indebted to him for providing a stimulating environment in my later years.

### Tom Reddy contributed this tribute:

I first met Al Salkind in the early 1960s when he was at the Electric Storage Battery (ESB) Lab in Yardley, PA where he worked in association with Paul Reutchi, the famous Swiss Battery Scientist, who was the Lab Director. Following Dr. Reutchi's return to Switzerland, Al became Lab Director and a Vice-President of ESB. Following ESB's acquisition by International Nickel, Al left ESB and began his academic career.

Initially, he taught at Case Western Reserve and later joined the Faculty of the Rutgers Medical School and the Rutgers School of Engineering. His contributions to lead-acid and alkaline battery technology in this era are legendary. Our paths crossed on numerous occasions and as my retirement at Yardney Technical Products approached, Al arranged for appointments for me in the Dept. of Materials Science and Engineering at Rutgers and in Bio-Engineering in the Rutgers Medical School. These appointments allowed me to continue my career in battery R&D and by consulting. I also taught in a number of short courses given by Rutgers. On one occasion at US Army TACCOM in Warren, MI, when I was using up my allotted time giving a lecture on lithium-ion battery technology using material from an ECS short course, Al asked me to stop, since he believed I was boring the audience. This was the only time I was ever told I was boring an audience.

At the time of his death, Al Salkind was embarking on a new venture to make significant improvements in battery technology. He was a unique individual as both a person and as a scientist. He will be long remembered. ■

*The ECS blogs about Dr. Salkind, including a video interview and podcast with him, can be found at: [www.ecsblog.org/tag/salkind](http://www.ecsblog.org/tag/salkind).*

*In Memoriam***H. Russell “Russ” Kunz**  
(1931-2015)**H. RUSSELL KUNZ**

**H.** RUSSELL “RUSS” KUNZ passed away on March 4, 2015, in Hartford, CT. Russ obtained all his degrees from Rensselaer Polytechnic Institute. He spent most of his career working with various divisions of United Technologies Corporation, and especially at International Fuel Cells (IFC). During his long career in engineering and research, Russ worked on disparate technologies such as turbine engines, fuel cells, and rockets. While at IFC, Russ published a number

of seminal papers on alkaline, phosphoric acid, and molten carbonate fuel cells and conceived new concepts for commercial, space, and military fuel cells that have significantly influenced the current U.S. fuel cell program. Concurrently during his career in industry, he served as an Adjunct Professor in the Hartford Graduate center of RPI. After retirement, Russ served as a Professor in Residence in the Department of Chemical Engineering at the University of Connecticut for about two decades, wherein he conducted research on various fuel cell and other electrochemical technologies and mentored numerous graduate students and faculty members, many of whom are active in ECS today. Russ was an exceptional researcher and mentor and a superb role model for several generations of scientists and engineers. He was an emeritus member of ECS (joined in 1976) and a regular at the biannual meetings. Russ received the Research Award of the Energy Technology Division of ECS in 1998 for his contributions to advancing fuel cell technology. ■

**Richard A. Oriani**  
(1920–2015)

**R.**ICHARD A. ORIANI, an ECS member since 1983, passed away on August 11, 2015 in Edina, Minnesota. An undergraduate of College of the City of New York, he received his PhD in Physical Chemistry from Princeton University in 1948. He worked as a research associate for Union Carbide and Carbon and then for General Electric R&D Center. From 1959-1980 he was an Assistant Director at U.S. Steel Research Laboratory. In 1980 he joined the faculty at University of Minnesota, Department of Chemical Engineering and Materials Science, where he served as the Director of the Corrosion Research Center. There he pioneered the use of the Kelvin probe to study metal corrosion. He formally retired from the faculty appointment in 1989, and officially retired from the University in 1999, but enjoyed emeritus status since. He was the world’s expert on hydrogen embrittlement in steels. He published close to 170 papers listed in *Chemical Abstracts* on a number of subjects of physical chemistry and materials science. He was also interested in the study of nuclear particles generated during electrolysis. Well along into his retirement he served in his community as a member of the Alternative Energy Working Group. He was a member of the Twin Cities Section and the Corrosion Division. In 1994 he was elected a Fellow of ECS. ■

**New & Notab!e**

**CHENNUPATI JAGADISH** (ECS member 1996, Life) of the Australian National University, in Canberra, was honored by the Institute of Electrical and Electronics Engineers Nanotechnology Council (NTC) for “For pioneering and sustained contributions to compound semiconductor nanowire and quantum dot optoelectronics.” He received the 2015 NTC Pioneering Award on July 29, 2015.

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