

Foreword

The Twentieth Rare Earth Research Conference was held September 12–17, 1993 at the Monterey Convention Center in California, USA. The Rare Earth Research Conferences are held every three years. There have been 19 RERCs since the first was held at Lake Arrowhead, California in 1960. Oral sessions included the most recent advances in lanthanides in biochemistry and medical diagnostics; optical spectroscopic probes of electronic excited-state structure and dynamics in lanthanide systems; characterization of rare earth energy-level structures in optically opaque materials; molecular lanthanide chemistry in the development of new materials and reaction catalysts; recent developments in the characterization, understanding, and applications of magnetic and superconducting properties in rare-earth-based materials; synthesis and properties of light metal glasses utilizing the rare earths; industrial applications of rare earths; emerging technologies; and comparative aspects of lanthanide and actinide behavior. There were companion poster sessions scheduled, as well as sessions on coordination chemistry, solids, physics, magnetism, etc. The Conference was attended by almost 200 scientists, with a majority coming from outside the United States.

The Twentieth Rare Earth Research Conference is sponsored by the Rare Earth Research Conferences, Inc., and co-sponsored by San Jose State University (an equal-opportunity university). The Rare Earth Research Conferences, Inc., is a non-profit organization dedicated to the staging of the Rare Earth Research Conferences and serving the interests of the rare-earth community. The Board of Directors of the Corporation appoint and advise the chief officials of each Conference.

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The Seventh Frank H. Spedding Award

The seventh Frank H. Spedding Award was presented to Professor LeRoy Eyring of Arizona State University. This prestigious award is given in recognition of distinguished contributions in the field of rare earth science and/or technology. It is presented by the Conference with the financial support of Rhône-Poulenc Industries. We would like to thank the Spedding Award Committee, Chaired by Dr. DeLong, for their efforts. We congratulate Professor LeRoy Eyring on joining the distinguished list of previous Spedding Awardees:

1st: W.E. Wallace (USA – Rare Earth Intermetallics and Hydrides, Nitrides)

2nd: Georg Busch (Switzerland – Solid State Chemistry and Physics of Semiconductors)

3rd: S. Legvold and W. Koehler (USA – Magnetic Properties of Rare Earth Metals)

4th: A. Mackintosh and H. Bjerrum Moeller (Denmark – Foundations of Rare Earth Magnetism)

5th: B.R. Judd (USA – Theory of Rare Earth Spectroscopy)

6th: Karl Gschneidner, Jr. (USA – Rare Earth Chemistry, Materials and Metallurgy)

I would like to thank all those individuals who helped to make this Conference a success.

Herbert B. Silber
General Conference Chairman