

### In Memoriam (2011-2013)





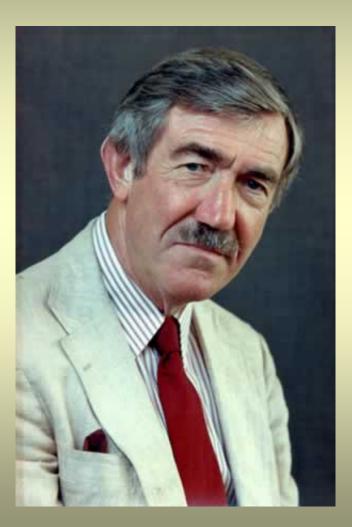
#### Jeffrey S. Beck (1962-2012)



- Co-inventor: MCM-41, p-xylene synthesis process
- NACS Eugene Houdry Award
- Breck Award: International Zeolite Association
- Heroes of Chemistry Award, American Chemical Society; Thomas Alva Edison Award
- National Academy of Engineering



### Michel Boudart (1924-2012)

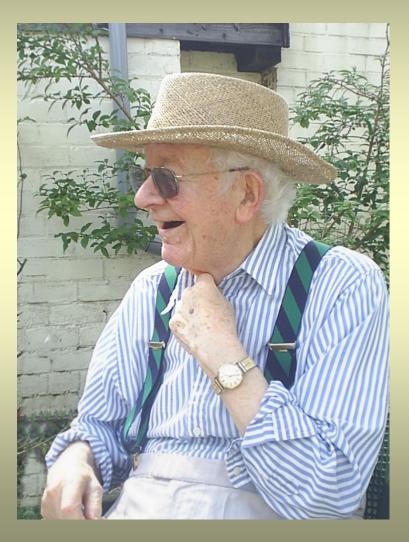


- Professor emeritus, Stanford University
- Brought catalysis, as a science, to chemical engineering in the US
- The guiding force in the field of heterogeneous catalysis for more than forty years
- Mentored over 70 PhD students and 100 postdocs
- National Academy of Science and National Academy of Engineering



#### Dennis A. Dowden

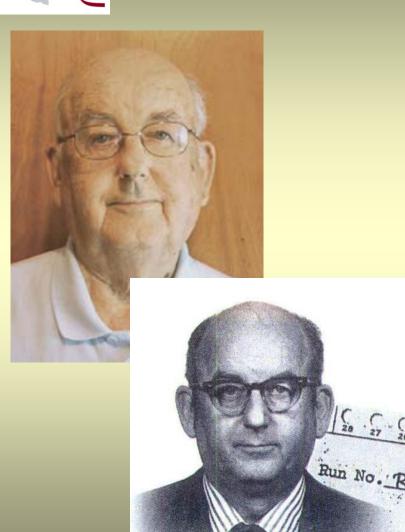
(1914-2012)



- ICI-Billingham Research Chemist and Research Fellow, Edinburgh University
- Pioneering catalysis researcher and first proponent of the electronic theory of catalysis
- Chemical Society (UK) Industrial Medal; F. G. Ciapetta Lecturer (NACS)
- ICC Diploma in Recognition of Lifetime Service to Community of Catalytic Scientists



## *William E. Garwood* (1919-2011)



- Consultant for ExxonMobil
- Retired from Mobil in 1987
- Pioneering research in organic chemistry ... basis for the development of Mobil 1 and other synthetic oils
- Co-inventor of more than 100 patents



### D. Wayne Goodman (1945–2012)



- Professor at Texas A&M University
- Developed models of metal/oxide interfaces that have become valuable tools for imaging and imagining the structure of supported heterogeneous catalysts (> 500 publications)
- ACS Ipatieff Prize and Somorjai Award in Catalysis
- NACS Burwell Lecturer



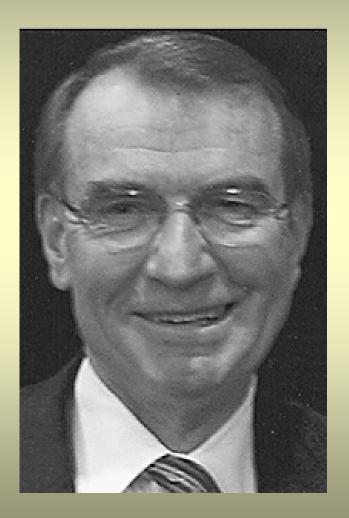
#### László Guczi (1932-2012)



- Professor at the University of Szeged and the Budapest University of Technology
- Developed the "Double Labeling Method" and applied it in the study of the mechanism of the selective hydrogenation of acetylene and butadiene
- More than 400 research papers,
   12 books and chapters



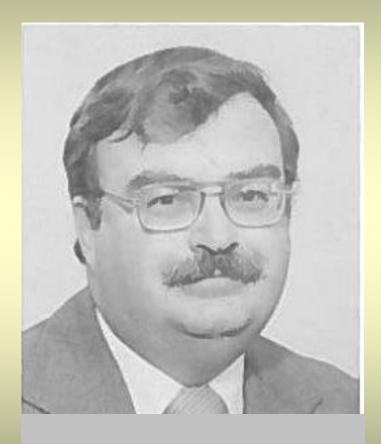
## James R. Katzer (1941–2012)



- ExxonMobil: Technology Vice President, Catalyst and Process R&D Manager
- Professor, University of Delaware, Co-Founder Catalysis Center
- National Academy of Engineering
- Co-author of classic catalysis textbook



### Charles L. Kibby (1938-2013)



- 40-year career at Gulf and Chevron and active consultant in areas of catalyst design and characterization
- Pioneer Fischer-Tropsch synthesis researcher and inventor of the Gulf-Badger process
- Prolific inventor with more than 60 patents and 50 scientific publications



#### Edmond I. Ko (1952-2012)



- Professor and Vice Provost for Education at Hong Kong University of Science and Technology (HKUST)
- Professor of Chemical Engineering at Carnegie Mellon University
- Over 100 publications in the area of surface science and catalysis



### Consuelo Montes (1952-2012)



- Professor at the University of Antioquia, Medellin, Colombia
- Breck Award, International Zeolite Association (recognizing first 18-ring molecular sieve)
- Broad research interests and contributions in environmental catalysis



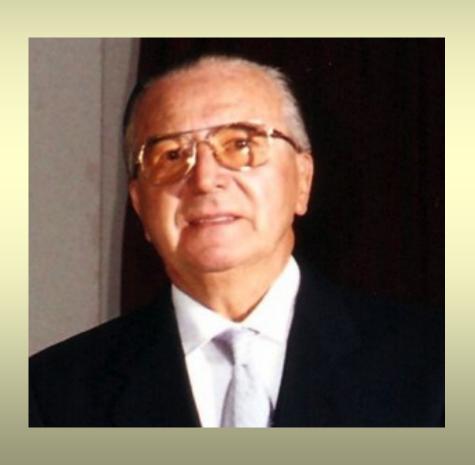
## *Milton Orchin* (1915–2013)



- Pioneer and prolific author in areas of hydroformylation and related catalytic processes
- Professor, University of Cincinnati
- Director, Hoke S. Greene Laboratory of Catalysis
- Co-author of 7 books. 15
   reviews, more than 200
   scientific publications and 20
   patents



#### José M. Parera (1930-2012)



- Director, Institute of Catalysis and Petrochemistry (INCAPE), Santa Fe, Argentina
- Editorial Board of Catalysis
   Reviews Science and
   Engineering, Applied Catalysis
- Bernardo Houssay Research
   Award
- Kopex Award Science and Technology



### Fernando Ramôa Ribeiro (1945-2011)



- Professor at Instituto Superior Técnico, in Lisbon
- Member of the Scientific Council and VP of EFCATS
- Research interest in catalysis on zeolites
- Authored over 200 scientific papers, co-authored 6 books







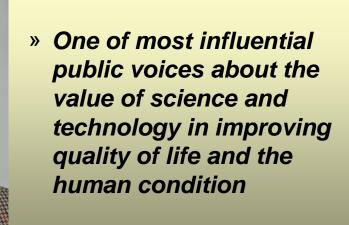
- Founder and Chairman of leading catalyst technology company
- Champion of fundamentals in the practice of industrial catalysis



## Haldor Topsøe (1913-2013)



 Champion of fundamentals in the practice of industrial catalysis



(www.topsoelegacy.com)



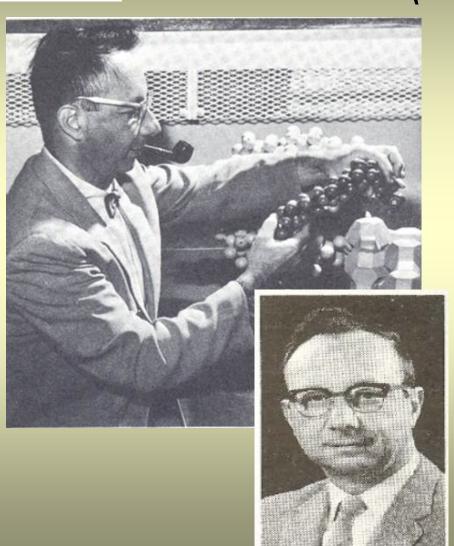
#### Jean-Claude Volta (1946-2011)



- Institut de Recherches sur la Catalyse (IRC), CNRS, Lyon
- Major contribution in "structure sensitivity" of metallic oxides for catalytic selective oxidation of hydrocarbons. His case study was MoO3 single crystals
- More than 150 publications and patents in the field of oxidation catalysis



#### Paul B. Weisz (1919–2012)



- Senior Scientist and Manager,
   Mobil Central Research Laboratory
- Pioneer of "shape-selective catalysis" concept, set the foundations for zeolite catalysis
- ACS E. V. Murphree Award in Industrial Chemistry
- ACS Langmuir Distinguished Lecturer Award
- Perkin Medal
- National Medal of Technology (1992)



# *In Memoriam (2011-2013)*

.... and our thoughts and memories for all those others we have lost ....

... and for those to whom they were so dear

Acknowledgment: Hong-Xin Li