

## Enrique Merino

By the end of December 2005, Professor Enrique Merino had devoted more than 29 years of exemplary service to the Department of Geological Sciences and to the geological profession. His retirement is but another event in a career hallmarked by innovative teaching; rigorous mentoring of undergraduate, graduate, and postdoctoral students; seminal contributions to the field of geochemistry; and expansive service to numerous professional societies.

Enrique is a native of Madrid, Spain, having been born there in 1942. In 1965, he earned the degree Ingeniero de Minas at the School of Mines in that city, and from 1965 to 1967 he held a position as geologist with American Overseas Petroleum (Spain) Ltd. Enrique continued his academic training at the University of California, Berkeley, where he held Fulbright and Del Amo Foundation fellowships (1967–71), and received the doctoral degree in 1973. While at Berkeley, Enrique met and married Consuelo Lopez-Morillas, who also earned her doctorate at that institution and is now professor of Spanish and adjunct professor of Near Eastern languages and cultures at IU. Enrique's first teaching appointment was at the University of Western Ontario (1973–74), followed by a research associateship at Case Western Reserve University during the 1975–76 academic year.

In 1976, by that time a highly trained, experienced geological scientist, Enrique accepted an assistant professorship in chemical sedimentology at Indiana University, where he was promoted to the rank of associate professor in 1982 and to professor in 1994. In the classroom Enrique has demonstrated enviable versatility, having taught courses in physical and historical geology, earthquakes and volcanoes, environmental geology, mineralogy, geochemistry, optical mineralogy/petrography, theoretical geochemistry, and chemical sedimentology. Exceptional expertise in several of these courses is manifest in his research interests, which embrace dynamic geochemical phenomena that cut across several subdisciplines of earth science. These phenomena include stylolitization, metamorphic banding, intracrystalline oscillatory zonation, orbicular zoning in certain kinds of igneous rocks, and banding/fibrosity of agates. All of these are examples of what Enrique was first to identify as geochemical self-organization. From studying the dynamics of geochemical self-organization, he moved on to studying the dynamics of larger-scale geochemical phenomena, particularly weathering, dolomitization, and the origin of terra rossa. All of these involve the puzzle of mineral replacement, which had to be solved first. In his subsequent research on replacement chemistry and mechanics, Enrique has broken new ground and formulated new theories, all involving rigorous application of geologic, chemical, and mathematical principles. Enrique's research has attracted numerous grants from the National Science Foundation, the Petroleum Research Fund of the American Chemical Society, NATO, the Grassmann Foundation, and Indiana University. Enrique's efforts have resulted in the publication of dozens of solo and co-authored abstracts and scores of articles.

Because of his high visibility as a forefront research scientist, Enrique has been a frequent reviewer or referee for articles and books published by no fewer than 25 professional organizations. Further, he has served as associate editor for the *Journal of Sedimentary Petrology* (1988–1992) and for *Geochimica et Cosmochimica Acta* (1992–2002); and as proposal referee for the National Science Foundation, U.S. Department of Energy, Japanese Research and Technology Group, Spanish Ministry of Science and Technology, Swiss National Foundation, and Research Council of Norway. Enrique has held numerous visiting appointments and fellowships, which evidence the acclaim he is accorded as a research scientist. These have included the Université de Poitiers (1985); University of Valencia (1987); Université d'Aix Marseille III (1991); University of Salamanca (1998); Instituto Ciencia de Materiales, Madrid (1999); Geothermal Institute, University of Auckland (1999); and Institute for Advanced Study, Norwegian Academy of Science and Letters (2001).

High tribute to his professional achievements is evident in the number of keynote lectures that Enrique has delivered at high-level conferences and symposia at venues in the United States, France, Spain, Iceland, Norway, and Italy. He has made oral presentations at many other scientific meetings both at home and abroad, including the

prestigious Penrose Conferences of the Geological Society of America, and geological congresses and conferences in Salamanca, Barcelona, Moscow, Paris, Edinburgh, Sardinia, Florence, and Reykjavik. Invited lectures have been legion, adding greatly to his credentials as an incredibly productive scientist. Among these are numerous presentations made at U.S. universities, federal agencies and corporate entities, and academic institutions in Canada, Spain, France, Norway, Switzerland, China, Japan, and New Zealand.

Despite his intensive and highly focused research activity, Enrique is at once a most affable and highly approachable individual. He has willingly and effectively carried out many departmental service responsibilities, is a regular participant in Friday morning discussions over coffee and donuts in the Owen Room, and, with Consuelo, is a convivial presence at departmental social functions. Enrique's enormous enthusiasm for geology is most evident when he bursts forth from his office and exclaims (for example), "*Don!* I have just made the most FANTASTIC discovery regarding zebra banding in dolostone," all the while gesticulating in a manner wholly consistent with the excitement generated by his latest findings.

Fortunately for the department, Enrique is "retiring" only from his teaching and service activities, and plans continued research into long-unsolved problems of geodynamics. We look forward to continued daily association with this remarkable man of science, and to the intellectual stimulation accompanying that relationship. To Enrique we extend collective thanks for his many contributions to departmental development, congratulations upon having achieved an exalted place in the annals of scientific endeavor, and heartiest best wishes for a long, happy, and productive future.

Donald E. Hattin