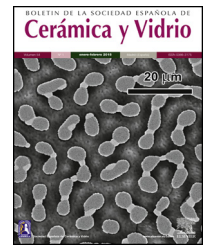




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Editorial



Víctor Orera was our first teacher and scientific father in the laboratory. With him we also learned that research, like any human activity, must be honest and contribute to improving the world around us. He was very passionate about science, dedicated and naturally optimistic. When we were having a bad day at the lab, he had a knack for finding the silver lining in an apparently unsuccessful outcome. Until retirement, he was the leader of our Research Group, *Processing and Characterization of Structural and Functional Ceramics*, PROCACEF, at the Institute of Materials Science of Aragon, ICMA, an institute that he contributed to found and develop. ICMA has recently become part of the Aragon Institute of Nanoscience and Materials (INMA), from where we write these words.

From the start, dedicated to the investigation of defects in solids, Víctor contributed to create reference knowledge and to set the trend. Throughout his career, he tackled varied topics with courage, depth and rigor, obtaining relevant results and recognition. He studied the physical and optical properties of glasses and materials for high temperature lasers; made original models for defects in the zirconia technological ceramic; investigated the solidification and mechanical properties of directionally solidified oxide eutectic ceramics based on Al_2O_3 , where many of his works are now a reference in the field; started a research line on eutectics for functional applications (photonic and electrochemical); promoted the implementation of highly applied research in fuel cells and solid-state electrolyzers at the institute; among others. More recently, he was enthusiastic about the study of archaeological ceramic materials in collaboration with his wife Pilar. And, out of inexhaustible curiosity, he was always interested in other scientific topics, even if they were not his specialty.

He held management positions at ICMA, the University of Zaragoza, and the Spanish Council for Scientific Research (CSIC). He was a member and Fellow of scientific societies and of the Royal Academy of Sciences of Zaragoza. He also worked for the Spanish Society of Ceramics and Glass, SECV, being the president of the Section of Basic Science and member of the editorial committee of the Journal, the Bulletin of the Spanish Society of Ceramics and Glass (BSECV). In the accompanying photography we can see Víctor at the XLV Congress of the SECV (Seville, November 2005).

Victor took care of those around him, also setting a trend in the way of doing research. His legacy is still present in the



Víctor Orera, at the XLV Congress of the SECV, photo courtesy of Dr. Pedro J. Sánchez Soto.

current investigations of many of us. In representation of his coworkers, although his is a very small tribute, we want to dedicate this special issue of the BSECV to his memory. We also would like to thank the SECV for giving us this possibility of recognition to one of its members. In particular, to Pedro J. Sánchez Soto for his suggestion to pay tribute from here and to Amador Caballero, editor-in-chief of the BSECV, for allowing us to carry it out. The shape is our responsibility. Thanks also to those of you who have contributed to the issue with your work and sincere dedications.

The issue includes a very small selection of current research from the journal's scope, carried out by colleagues and friends who shared research with Víctor throughout his career. We are sure that there are many more who, had they been invited, would have agreed to submit dedicated manuscripts. We express regret for these omissions as we know there should be much more contributions in this issue.

We are confident that this issue will be of interest to the journal's regular readers, as well as many more. Also take a little time to read the text by some of his friends who preface the issue. We hope that his memory will help us to be better persons and scientists. *¡Hasta siempre!*

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Víctor Manuel Orera Clemente – Biographical sketch of a friend and colleague



When I completed my bachelor's degree, Prof. Casas invited me to join his laboratory as part of a small, newly formed research group comprising Dr. Alcalá and a young student who had just begun his PhD. That student was Víctor Orera, and, as our boss was absent, it fell to him to welcome me and describe their scientific activities with his proverbial optimism. That is how we met, and it marked the beginning of a close scientific collaboration and a firm lifelong friendship. Even when our professional interests later diverged, we still continued to exchange our points of view, safe in the knowledge that we could rely on each other to be a loyal, constructive, and discreet critic. This introduction, that I do not want to extend, reveals how hard it is for me to comment on the man Víctor was.

Víctor was born on 20 December 1950 in the city of Castellón de la Plana where his civil-servant parents had been posted. At the age of six, he came to Zaragoza, the city he was linked with from then on and where, in the main, he enjoyed a long and successful career. With family roots in Aragon and captivated by the Pyrenees from an early age, he felt Aragonese through and through, despite his universal outlook: he realised the pursuit of knowledge, which he dedicated his life to, could be no other way.

The eldest of four children, Víctor was always brimming with life and optimism that was only tempered by his extreme generosity and ingrained sense of family and social responsibility. Sincere, loyal, and demanding of himself and others, mountains and research were his two passions. An idealist with great social sensitivity, he believed honest scientists should not work just for their own curriculum and prestige and instead should work on key areas for society. So that is exactly what he did.

After completing his secondary education at the Calasancio PP Escolapios school, he successfully completed his Degree in Physics, specialising in Optics, at the Faculty of Sciences of the University of Zaragoza in 1972, obtaining both an Extraordinary Degree Award and the Daza Valdés Final Degree Award by the Spanish Optical Society. That same year he began his research, supervised by Dr. Alcalá Aranda, an activity he shared with teaching at the German School of Zaragoza. When he obtained a research staff training grant in 1973 and was appointed teaching assistant of optics, he was able to work

full-time on his doctoral thesis in physics entitled: "Study of the formation and evolution of large aggregates of defects in fluorite crystals". He defended his thesis in 1976 and obtained the Extraordinary PhD Award from the University of Zaragoza.

At a time when leaving Spain was necessary for a change of scene and to join in cutting-edge research in his field, he stayed at the Atomic Energy Research Establishment, Materials Development Division in Harwell, United Kingdom, for ten months as a visiting researcher while working on his PhD. A postdoctoral visit to the Solid State Division of Oak Ridge National Laboratory (ORNL) in the United States with Dr. Yok Chen from 1978 to 1979 exerted a profound influence on his scientific development. Later, he returned to ORNL where he was an external scientific consultant from 1986 to 1987.

After passing a public competitive examination, he became an assistant lecturer at the University of Zaragoza in 1978, where he continued his teaching and research at the Faculty of Sciences until he was appointed a scientific researcher at the CSIC (Superior Council of Scientific Research) in 1988. He arrived at the ICMA (Institute of Materials Science of Aragon), recently created as a CSIC-University of Zaragoza joint centre—he was one of its proponents—at a time when Spanish research into materials science was on the rise. Two years later (1990) he was promoted to research professor.

First at the University of Zaragoza and then at the CSIC, Víctor knew how to combine first-rate worldwide research with management roles in research institutions. He was vice dean of the Faculty of Sciences of the University of Zaragoza (1984–86) at key times during the democratic transformation of Spanish universities and faculties. He was the director of the ICMA (1991–94), scientific coordinator of the Materials Area of the CSIC (1994–96), a member of the CSIC Scientific Committee (1996–2004), institutional coordinator of the CSIC in Aragon (2005) and then CSIC vice-president of organisation and institutional relationships from December 2005 to March 2006, when he resigned due to illness. After recovering, he became the CSIC representative at the European Energy Research Alliance, JP-H2 (2010–14), and CSIC institutional coordinator in Aragon (2011–15).