

Biographical Data

Miguel Jose Yacaman

Academic Degrees:

BSC. Physics, National University of Mexico (UNAM). 1969
Ph.D. Materials Science, National University of Mexico (UNAM). 1973
Adviser: Dr. Alan Basset, Warwick University.
Post Doctoral. Department of Materials Science, University of Oxford, UK. 1976, and
NASA-AMES Research Center, Mountain View, California. 1978.
Post doctoral Advisers: Dr. Peter Hirsch (Oxford), and Dr. Helmut Poppa (NASA).

Academic Positions:

Luchter Brown Endowed chair at UTSA 2012
Professor and Chair, Department of Physics and Astronomy, UT San Antonio, 2008 -
Present.
Affiliate Professor University Of Nuevo Leon, Mexico, 2003 - Present.
Reese Endowed Professor in Engineering, Department of Chemical Engineering, The
University of Texas at Austin, 2002-2008.
Visiting Professor; Fellow of Cockrell Regents Chair, The University of Texas
at Austin. 2000-2002.
Professor of Physics of Materials, University of Mexico. 1980-2002.
Director, National Nuclear Research Institute, Mexico. 1995-2000.
Director, and Chair of the Institute of Physics, University of Mexico. 1983-1991.
Professor of Physics, University of West Virginia. 1982
Professor of Physics, University of Mexico. 1980-1982
Associate Professor, Institute of Physics, University of Mexico. 1979-1980
Assistant Professor, Institute of Physics, University of Mexico. 1973-1976

Miguel Jose Yacaman publications in scientific literature exceed 500, returning more than 8500 citations and an H factor of 43. He has also given over 250 talks in scientific conferences. In addition he has supervised around 60 PhD, and Master students, along with a large number of Post doctoral and visiting scholars. He has four USA and international patents. He has extensive teaching experience in courses related to core materials sciences at the undergraduate and graduate level. He has taught during his career a number of special courses on electron microscopy and nanotechnology.

Miguel Jose Yacaman did post docs at The University of Oxford in the United Kingdom, Materials Science Department under Prof. Peter Hirsch, and at NASA-AMES Lab in Mountain View, California under Prof. Helmut Poppa at The Surface Science Electron Microscopy Group. He returned to the Institute of Physics, University of Mexico as a leader of the Electron Microscopy Group in 1979. He built up an internationally

recognized program in Materials Science with emphasis in surface and interface science. He further established research collaborations with distinguished research programs in the United States of America and Europe. The latter enabled collaboration with top researchers such as John Hirth (Ohio State University), Michael Boudart (Stanford), Zuhair Munir (University of California, Davis), Alan McKay (Birbeck College), and many others that produced the first truly international highly visible research group in materials science in Latin America. He was promoted to professor in 1981 at the Institute of Physics, University of Mexico and became director of that Institute in 1983. In 1991 he became Science Director of CONACYT and in 1995 Director of The National Institute for Nuclear Research of Mexico. In 2000 he joined The University of Texas at Austin as visiting fellow holding the Cockrell Regents Chair and then in 2002 he became Reese Endowed Professor in Engineering at the Chemical Engineering Department, UT-Austin, and director of the International Center for Nanotechnology and Advanced Materials, in 2004. In 2008, he moved to the University of Texas at San Antonio as Chair and Professor of the Physics and Astronomy department. In 2012, he was appointed as Lutchter Brown Endowed Professor at UTSA.

The main focus of his research has been the shape, crystallography, and properties of nanoparticles and its alloys. His scientific contributions however, cover a broad range of subjects, including contributions in the field of Electron Diffraction Theory, Biomimetic, Design of Materials, nanoparticles Quasicrystals, and Surface Science. His most significant achievements include the development of a transmission electron microscope method using weak beam dark field to study particles in the nanometer size range, which opens the way to understanding the shape of a crystal at the nano level. He was also the first to describe images of non-crystallography particles, such as icosahedral. He has demonstrated the antiviral action of silver nanoparticles and the fact that gold particles can be nucleated inside live plants. This last work was included as one of the most promising achievements in nanotechnology in the annual report submitted by the President's Office to Congress in 2003. The latter was published in July 2005 and became one of the most consulted papers of all time on PubMed in only six months. His paper on the antibacterial effect of silver nanoparticles has received more than 1200 citations and is considered a classic in the field.

In 2011, he received the Wheatley award of the American Physical Society and The SACNAS Award to Distinguished Scientists. In 1997, Yacamán received the Mehl Award of TMS. During the same year he delivered the prestigious Institute of Metals Lecture. Other awards include; the National Prize of Sciences of Mexico in 1994, The Medal of the State of Mexico in 1991. He represented Mexico in the general assemblies of the IAEA in Vienna during the years of 1996-1999, Member of the Mega science group of the OECD 1994-1995, and President of the Mexican National Academy of Sciences. He is a Fellow of The American Physical Society and has presided over many societies including The Mexican Materials Society. He acts as a reviewer on a regular basis to prestigious journals such as Physical Review, Science, Journal of Physical Chemistry, and Surface Science, among many others. He has served as Associate Editor of several journals, including Acta Materialia, Scripta Materialia, Nanostructured Materials, Microscopy and Microanalysis, Acta Microscopica, and Catalysis Letters among several others. He has acted as reviewer

for NSF, The State Department, and the Science Organizations of Brazil, Chile, Panama, and Spain. He is currently Member of the Consultant Body in Science to the president of Mexico. He has served in many committees such as the DOE Committee for reviewing the Electron Beam Facilities at The National Labs, the DOE Committee for the Nano Centers at The National Labs, and in UT-Austin as a Chairman of the TEM Committee, and the Graduate Studies Committee in Materials Engineering Program. Finally he served during 1998-2006 as member of the Board of Regents of the University of Veracruz in Mexico. Dr. Miguel Jose-Yacamán has received honorary degrees from The University of Nuevo Leon In Mexico and the University of Cordoba in Argentina.