

Mohamed L. Merroun is an Associate Professor of Microbiology at the Department of Microbiology, University of Granada. He earned his degree in Biology from the University of Tetuan (Morocco). He obtained his Ph.D degree at Department of Microbiology, University of Granada, Spain with a thesis on biosorption of heavy metals by bacteria. He worked for more than 9 years, as senior scientist, at Resource Ecology Institute, Helmholtz-Zentrum Dresden, Rossendorf, Germany. He got Research Mobility Grants of the Spanish Minister of Education within the program "Salvador Madariaga" at the University of Sheffield (4 months), and University of Swansea (6 months). He is an active user of Radiation Synchrotron Facilities (e.g. ESRF, Soleil). He was awarded by Ramon y Cajal Program Tenure track grant (2009-2012). He has presently published more than 65 papers, reviews and book chapters (more than 1300 citations) in peer-reviewed international scientific press, including Physical Review Letters, Journal of Hazardous Materials, Applied and Environmental Microbiology, etc. His *hirsh* index is 20. He takes on ad hoc peer-review tasks for a wide range of scientific journal and research agencies. He has secured >1.000.000,00 € funding over the last 8 years (national, European and international private companies funding). His research has over the years been presented in international conferences (more than 100 communications), in newspapers and magazines. He has supervised more than 15 master thesis in Germany and in Spain. Since 1994, his research interests are on geomicrobiology, biogeochemistry of heavy metal contaminated sites, microbiology of deep geological disposal of radioactive wastes, microbial interactions with radionuclides. He is collaborating with researchers from University of Swansea (Prof. Jesus Ojeda), University of Manchester (Prof. John Lloyd), University of Birmingham (Prof. Lynne Macaskie), University of Sheffield (Prof. Maria Romero Gonzalez), Helmholtz-Zentrum Dresden Rossendorf (Dr. Henry Moll, Dr. Andrea Cherkouk, Dr. Evelyn Krawczyk-Bärsch), CEA, Cadarache, France (Dr. Catherine Berthomieu), VTT, Finland (Dr. Hanna Miettinen), etc. Actually, his research team include 2 senior scientists, 4 PhD students, 3 master students, and bachelor students.

His major achievements are summarized as follows:

-Demonstration for the first time using spectroscopic methods (TRLFS, difference FT-IR, XAS), TEM microscopy with EDX, molecular biology, tolerance and sorption studies the speciation of uranium bound to cells of genetically microdiverse strains of *Acidithiobacillus ferroxidans*. **The results obtained were awarded the best poster at the Annual Meeting of the German Association of General and Applied Microbiology** held in Oldenburg, 2001 and **highlighted in the saxonian regional newspaper "Sächsische Zeitung"**.

-The **first structural study** on the bonding of **uranium** with isolated bacterial **surface layer proteins** (*Bacillus sphaericus* JG-A12) (Merroun et al. *Appl. Environ. Microbiol.* 71: 5542-5553 (98 time cited)

-Fabrication and characterization of metallic nanoparticles (Pd, Au, Pt, Pb) using bacterial cells and S-layer proteins as template and the study of their magnetic and catalytic properties. These investigations were performed in collaboration with collaborators from Germany, France, etc. The summary of this work was published in the **European Synchrotron Radiation Facility Highlights 2006** as well as in a number of online nanotechnology specialized newspapers:

<http://www.newscientisttech.com/channel/tech/nanotechnology/dn9821-bacteria-skin-helps-assemble-metalnanoclusters.html>, <http://www.azonano.com/news.asp?newsID=2882>, <http://www.rhombos.de/shop/a/show/story/?877>, <http://www.pro-physik.de/Phy/leadArticle.do?mid=2&laid=8246>