

CURRICULUM VITAE

César Plaza

Current position: Tenured Scientist and Group Leader at the Spanish National Research Council (CSIC)

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EDUCATION

2002 Ph.D. in Environmental and Agricultural Chemistry, Autonomous University of Madrid (European Doctorate)
1998 Graduate in Chemistry, Autonomous University of Madrid

EMPLOYMENT AND APPOINTMENTS

2009-present Research Group Leader, Institute of Agricultural Sciences, CSIC
2008-present Tenured Scientist, Institute of Agricultural Sciences, Center for Environmental Sciences, CSIC
2006-2008 Ramón y Cajal Research Fellow, Center for Environmental Sciences, CSIC
2005-2006 Juan de la Cierva Research Fellow, Center for Environmental Sciences, CSIC
2003-2005 Postdoctoral Research Associate, Department of Agroforestral and Environmental Biology and Chemistry, University of Bari, Italy
1998-2002 Research Assistant, Center for Environmental Sciences, CSIC

Visiting Scientist at the Institute of Agricultural Chemistry and Department of Agroforestral and Environmental Biology and Chemistry, University of Bari, Italy (1999, 2000, 2001, 2002, and 2006), Department of Plant, Soil & Insect Sciences, University of Massachusetts, Amherst, USA (2008), Department of Plant Sciences, University of California, Davis, USA (2009), Columbia Plateau Conservation Research Center, USDA-ARS, Pendleton, USA (2010), Environmental NMR Research Center, Department of Chemistry, University of Toronto, Scarborough, Canada (2011), National Soil Resources Institute, Cranfield University, UK (2013)

2014-Present, Vice-Chair, Soil Chemistry Subdivision, SSS, European Geosciences Union (EGU)

2012-Present, Editorial Board, The Scientific World Journal

2009-2015, Associate Editor, Journal of Environmental Quality

RESEARCH INTERESTS AND EXPERTISE

- Mechanisms of organic matter stabilization and C sequestration in soils
- Chemistry of soil organic matter: molecular structures, reactivity, properties, and functions
- Treatment of organic wastes for use in agriculture and effects on soil and crops
- Biochar production and use
- Experience of analysis and interpretation of soil physical, chemical, biochemical, and microbiological properties
- Experience of analytical chemistry, biochemistry, and spectroscopy applied to the environment: elemental analysis; thermal analysis; potentiometry; ultraviolet/visible spectroscopy; fluorescence spectroscopy; infrared spectroscopy; nuclear magnetic resonance spectroscopy; electron spin resonance spectroscopy...

SELECTED PEER-REVIEWED PUBLICATIONS (*h-index*, 22)

- Plaza, C., Pawlett, M., Fernández, J.M., Méndez, A., Gascó, G., Ritz, K., 2015. Does biochar interfere with standard methods for determining soil microbial biomass and phenotypic community structure? *Soil Biology & Biochemistry* 81, 143-146.
- Fernández, J.M., Nieto, M.A., López-de-Sá, M.E., Gascó, G., Méndez, A., Plaza, C., 2014. Carbon dioxide emissions from semi-arid soils amended with biochar alone or combined with mineral and organic fertilizers. *Science of the Total Environment* 482-483, 1-7.
- Courtier-Murias, D., Simpson, A.J., Marzadori, C., Baldoni, G., Ciavatta, C., Fernández, J.M., López-de-Sá, E.G., Plaza, C., 2013. Unraveling the long-term stabilization mechanisms of organic materials in soils by physical fractionation and NMR spectroscopy. *Agriculture, Ecosystems and Environment* 171, 9-18.
- Plaza, C., Courtier-Murias, D., Fernández, J.M., Polo, A., Simpson, A.J., 2013. Physical, chemical, and biochemical mechanisms of soil organic matter stabilization under conservation tillage systems: A central role for microbes and microbial by-products in C sequestration. *Soil Biology & Biochemistry* 57, 124-134.
- Plaza, C., Gollany, H., Baldoni, G., Polo, A., Ciavatta, C., 2012. Predicting long-term organic carbon dynamics in organically amended soils using the CQESTR model. *Journal of Soils and Sediments* 12, 486-493.
- Franco-Otero, V.G., Soler-Rovira, P., Hernández, D., López-de-Sá, E.G., Plaza, C., 2012. Short-term effects of organic municipal wastes on wheat yield, microbial biomass, microbial activity and chemical properties of soil. *Biology and Fertility of Soils* 48, 205-216.
- Plaza, C., Fernández, J.M., Pereira, E.I.P., Polo, A., 2012. A comprehensive method for fractionating soil organic matter into pools not protected and protected from decomposition by physical and chemical mechanisms. *CLEAN-Soil Air Water* 40, 134-139.
- Fernández, J.M., Plaza, C., Polo, A., Plante, A.F., 2012. Use of thermal analysis techniques (TG-DSC) for the characterization of diverse organic municipal waste streams to predict biological stability. *Waste Management* 32, 158-164.