



PERSONAL INFORMATION

Aurora Santos López

 [Redacted address] [Redacted phone number] aursan@ucm.es <https://www.ucm.es/inproquima> AURORA SANTOS LOPEZ

PERSONAL STATEMENT

During the last two decades, she has specialized in Applied Catalysis and Chemical Reactors, both of them applied to environmental engineering (remediation of soil and water) and industrial processes (purification of cyclohexanone and caprolactam production, mainly). In the field of environmental technologies, she worked in catalytic oxidation processes (catalytic wet air oxidation and advanced oxidation processes) for water treatment and more recently also in soil remediation. In the last field, she has studied In Situ Chemical Oxidation (catalyzed hydrogen peroxide or activated persulfate as oxidants) or In Situ Chemical Reduction (using iron micro or nanoparticles has been also studied. Abatement of pesticides, PAHs, PFOA, gasoline, fuel, etc. has been studied, considering also the effect of different types of matrix soils (carbonate, acid, gypsum ...). Real problems have also been studied. In cooperation with EthicalChem (a US company) the extraction and oxidation of non aqueous liquid phases (NAPL) in the subsurface enhanced by surfactants has been applied to Light NAPL

(fuel) or Dense NAPL (chlorinated compounds). The application of surfactants and oxidants has been carried out for remediation of a site contaminated from diesel leaks in a maintain train station in Madrid (in cooperation with RENFE). Besides, the remediation of two landfills located at Sabiñanigo (Huesca) polluted with wastes from Lindane production, illegally dumped during almost 20 years, is studied in cooperation with the Government of Aragon. Due to the complexity of the problem (significant contamination of the soil and groundwater) a multidisciplinary approach has been carried out, in cooperation with foreign groups and Spanish groups (including mining engineering, geologist, hydrogeologist and edaphologist).

The research group of A. Santos (INPROQUIMA) collaborates with international research groups, highlighting the collaboration existing with Dr. Renato Baciocchi (Rome, Italy), expert in in situ chemical oxidation and risk analysis in soil remediation. Renato Baciocchi, has been part of INPROQUIMA in last two MINECO projects and in the CARESOIL (Characterization, Remediation, Modeling and Risk Assessment of Contaminated Soils) Program (funded by CM) since 2009. Actually, CARESOIL integrates 6 groups into a multidisciplinary project that allows tackling complex problems, in a very positive experience. A. Santos collaborates with other Scientifics such as Prof. Oturan, a reference in the electrochemical oxidation processes, from the University Paris-Est Marne la Vallée (France) and with Dra Rosso from Universidad Nacional de la Plata (Argentina). Moreover, she takes part of the recent application of a LIFE project (under evaluation), in collaboration with the Stichting International HCH & Pesticides Association (Netherlands), the University of Stuttgart (Germany), the Sociedad Aragonesa de Gestión Agroambiental S.L.U. (Spain) and the Gobierno de Aragón (Spain).

WORK EXPERIENCE

01/02/1988–Present

College / university teaching professional
Universidad Complutense de Madrid, Madrid (España)

Aurora Santos is Professor of Chemical Engineering at the Universidad Complutense de Madrid since

2006. She has been linked to UCM since 1988, when she started hers PhD. She received her PhD (Industrial Chemistry) in 1992 with the Extraordinary Doctorate Award qualification. After that, she carried out a postdoctoral stay (EU grant) in 1993 at the Polytechnic of Torino under the direction of Professor G. Baldi, working on three-phase reactors applied to industrial and environmental processes.

EDUCATION AND TRAINING

01/10/1982–01/10/1987

Degree in Industrial Chemistry

Universidad Complutense de Madrid, Madrid (España)

PhD in Industrial Chemistry, September 1992. Universidad Complutense de Madrid.

Researching Fields: Process engineering, Environmental technology, Chemical engineering, Soil remediation.

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Number of doctoral theses conducted in the last 10 years: 6

Total citations (SCOPUS): 2536

Average number of appointments/year during the last 5 years (SCOPUS): 230

Total documents (SCOPUS): 102

Index h (SCOPUS): 28

PERSONAL SKILLS

Mother tongue(s) Spanish

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	C1	B2	B2	B2
Italian	B2	B2	B1	B1	A2

Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user
Common European Framework of Reference for Languages