

CURRICULUM VITAE OF ANGELA VOLPE

PERSONAL INFORMATION

Nationality: Italian
Date of birth: 24/01/1966
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EDUCATION AND TRAINING

- 1994 University of Bari (Italy): MS Degree in Chemistry. Thesis in organic chemistry "*Regio- and stereoselective synthesis by means of organometallic compounds*".
- 1995 CNR, Centro di Studio sulle Metodologie Innovative di Sintesi Organiche (Bari): Nine months research grant. Research topic: Synthesis of biologically relevant organic compounds.
- 1996-1997 University of Bari: attendance of Chemical Sciences PhD course (1st and 2nd year). Research topic: Synthesis of biologically and technologically relevant organic molecules by means of organometallic compounds.
- 1998 Karlsruhe Research Center (Germany) – Institute for Technical Chemistry, Water Technology and Geotechnology Division. Visiting researcher for two months, studying the application of mathematical models to the description of ion exchange equilibria.

PROFESSIONAL EXPERIENCE

Since 09/1997: CNR, Istituto di Ricerca Sulle Acque (IRSA), Department of Bari: Full time researcher. Research activity:

- 1997-2001 Removal and recovery of heavy metals from industrial wastewater through the application of selective materials and chemicals (reactive polymers and biosorbents). Theory of processes at solid-liquid interface and environmental fate of persistent pollutants.
Analytical techniques for the detection of trace pollutants (Atomic spectroscopy, gas-chromatography, mass spectrometry).
- 2002-2003 Dehalogenation of chlorinated organics by means of zero-valent iron. Application of chemical reduction processes to groundwater remediation.
- 2004-2006 Bioremediation of groundwater contaminated by chlorinated solvents and MTBE. Biodegradation technologies for the cleanup of contaminated sites.
- 2007-2009 Application of *landfarming* techniques to the bioremediation of hydrocarbons in soil. Analytical methods for high molecular weight hydrocarbons in soil samples.

PARTICIPATION TO RESEARCH PROJECTS

- 2004-2006 *AQUATEC* Project, funded by the Italian Ministry of University and Scientific Research (MIUR). Study of groundwater bioremediation and application of bioremediation processes to an industrial area located in Southern Italy.
- 2007-2008 BDT - Banca dati tossicologica del suolo e prodotti derivati, Regional Project. Bioremediation of hydrocarbon-contaminated soil.

TUTORING AND TEACHING

Tutoring activity in a postgraduate advanced course on the subject: "Bioremediation of contaminated groundwater", held at CNR-IRSA in the frame of the *AQUATEC* project.

Supervisor of research grantees working in the field of bioremediation of contaminated groundwater and soil.

Teaching in professional training courses in the field of water treatment and analysis.

PUBLICATIONS

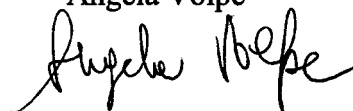
1. Calò, V.; Fiandanese, V.; Nacci, A.; Volpe, A.: *Allylated Ketosulphides of Benzothiazole as Intermediates for Stereoselective Synthesis of Allyl Ketones, Allyl Thiiranes and Dienes*, TETRAHEDRON **1996**, 52, 2155-2166.
2. Calò, V.; Nacci, A.; Fiandanese, V.; Volpe, A.: *Reaction of Heterocyclic Allyl Sulphides with Ethyl Diazoacetate: a Simple Method for the Synthesis of Conjugated Dienoic Esters*, TETRAHEDRON LETTERS **1997**, 38, 3289-3290.
3. Calò, V.; Nacci, A.; Volpe, A.: *Synthesis of 2-Oxo-Oxazolidines and -Thiazolidines from the Corresponding 2-Thioxo-Compounds*, GAZZETTA CHIMICA ITALIANA **1997**, 127, 283-285.
4. Petruzzelli, D.; Volpe, A.; Tiravanti, G.; Passino, R.: *An Ion Exchange Based Process for Coagulants Recovery from Water Clarifier Sludge*, in: *Advances in ion exchange for industry and research*, The Royal Society of Chemistry **1999**, Eds. P.A. Williams and A. Dyer.
5. a) Petruzzelli, D.; Volpe, A.: *Speciazione chimica in sistemi solido-liquido naturali. Parte I. Aspetti generali*, INQUINAMENTO **1999**, 7, 49-54; b) Petruzzelli, D.; Volpe, A.: *Speciazione chimica in sistemi solido-liquido naturali. Parte II. Il ruolo dei metodi e delle tecniche analitiche*, INQUINAMENTO **1999**, 11, 38-44.
6. Petruzzelli, D.; Volpe, A.; Limoni, N.; Passino, R.: *Coagulants Removal and Recovery from Water Clarifier Sludge*, WAT. RES. **2000**, 34, 2177-2182.
7. Petruzzelli, D.; Volpe, A.; Di Pinto, A. C.; Passino, R.: *Conservative Technologies for Environmental Protection Based on the Use of Reactive Polymers*, REACTIVE AND FUNCTIONAL POLYMERS **2000**, 45, 95-107.
8. Petruzzelli, D.; Volpe, A.; Passino, R.: *Conservative Technologies for Environmental Protection*, **2001**, 2nd Symposium on Protection of Groundwater from Pollution and Seawater Intrusion, Bari, September 27-October 1, 1999.
9. Volpe, A.; Lopez, A.; Pagano, M.: *Olive Husk: an Alternative Sorbent for Removing Heavy Metals from Aqueous Streams*, APPLIED BIOCHEMISTRY AND BIOTECHNOLOGY **2003**, 110 (3), 137-150.
10. Lopez, A.; Pagano, M.; Volpe, A.; Di Pinto, A.C.: *Fenton's pre-treatment of mature landfill leachate*, CHEMOSPHERE **2004**, 54, 1005-1010.

11. Volpe, A.; Lopez, A.; Mascolo, G.; Detomaso, A.: *Chlorinated herbicide (Triallate) dehalogenation by iron powder*, CHEMOSPHERE **2004**, 57 (7), 579-586.
12. Volpe, A.; Mascolo, G.; Lopez, A.: *Reductive dechlorination of the herbicides Triallate and Acetochlor by zero-valent iron*, Abstracts of the First European Conference on Oxidation and Reduction Technologies for Ex-Situ and In-Situ Treatment of Water, Air and Soil (ECOR-1), Sartorius College, Göttingen, Germany, April 25-28, **2004**, p. 94.
13. Del Moro, G.; Lovecchio, G.; Mascolo, G.; Tandoi, V.; Volpe, A.: *Remediation of Groundwater at a Contaminated Site in Southern Italy: A Comparison Between Bioremediation and Advanced Chemical Oxidation Approaches* (Poster). Proceedings of the European Summer School "Innovative approaches to the bioremediation of contaminated sites" Bologna, 7-11 Settembre **2004**.
14. Del Moro G., Volpe A., Rossetti S., Tandoi V.: *Aerobic Biodegradation of MTBE by Microbial Consortia Obtained from Aquifer Material of a Former Refinery Site* (Poster). VIII Congresso "Chimica sostenibile e tecnologie ambientali: stato dell'arte e prospettive", Bologna, 23-24 Marzo **2006**.
15. Volpe A., Rossetti S., Marani D., Mininni G., Tomei M.C.: *Tecnologie e processi per l'ambiente sviluppate dall'IRSA (BA E RM)* (Poster). Convegno Nazionale con Atti: Expo del capitale umano e dell'innovazione, Fiera di Milano, Milano. 15/03/2006 - 18/03/2006.
16. Tandoi V., Del Moro G., Mascolo G., Ciannarella R., Volpe A.: *Remediation of contaminated aquifers by biological and advanced oxidation processes: The AQUATEC project*, ITALIAN JOURNAL OF ENGINEERING GEOLOGY AND ENVIRONMENT, Special Issue 1, **2007**, 79-84.
17. Tandoi V., Del Moro G., Mascolo G., Volpe A. : *Remediation of contaminated aquifers by biological and advanced oxidation processes in the Aquatec project. Exchange and utilisation of technologies and know-how from national ground water and soil remediation research projects between Germany and Italy*, University of Kiel and University of Rome "La Sapienza" Center of research – CERI, centro culturale italo-tedesco Villa Vigoni, Lago di Como 2-4 Aprile **2006**.
18. Tandoi V., Del Moro G., Mascolo G., Volpe A.: *Remediation of MTBE contaminated aquifers by biological process*. Ambiente: tecnologie, controlli e certificazioni per il recupero e la valorizzazione di materiali ed energie. - Gestione e bonifica dei siti inquinati, Ecomondo, Rimini, 8-11 Novembre **2006**, pp. 217-220.
19. Volpe A, Del Moro G., Rossetti S., Tandoi V., Lopez A.: *Remediation of PCE-contaminated groundwater from an industrial site in southern Italy: A laboratory-scale study*. PROCESS BIOCHEMISTRY **2007**, 42, 1498-1505.
20. Volpe A., Mascolo G., Ciannarella R., Del Moro G., Tandoi V.: *MTBE removal from an Italian national interest site by biological process and AOP*. La cultura e le tecnologie ambientali in Italia ed in Europa, Ecomondo, Rimini, 8-11 Novembre **2007**, pp. 302-307.
21. Volpe A., Del Moro G., Rossetti S., Tandoi V.: *High MTBE removal from a microbial consortium enriched at an Italian National Interest site*. Proceedings of ConSoil 2008 - The 10th International UFZ-Deltares/TNO Conference on Soil-Water Systems, Milano, June 3-6, 2008.
22. Pagano M., Lopez A., Volpe A., Mascolo G., Ciannarella R.: *Oxidation of nonionic surfactants by Fenton and H₂O₂/UV processes*. ENVIRONMENTAL TECHNOLOGY **2008**, 29 (4), 423-433.
23. Tandoi V., Volpe A., Lopez A., Majone M.: *Biorisanamento in situ di falde acquifere contaminate* (Presentazione). Disinquinamento di sedimenti marini e risanamento di corpi idrici sotterranei: Situazione e prospettive, Società Chimica Italiana, Taranto, 18/03/2008.
24. Antonicelli A., Tandoi V., D'Arpa S., Uricchio V.F., Volpe A.: *Bioremediation of soil contaminated by hydrocarbons and chromium: the Alta Murgia (Apulia) case study* (Presentazione). Ecomondo, Rimini, 5-8 Novembre 2008.

25. Volpe A., Del Moro G., Rossetti S., Tandoi V., Lopez A.: *Enhanced bioremediation of methyl tert-butyl ether (MTBE) by microbial consortia obtained from contaminated aquifer material*. Chemosphere **2009**, 75 (2), 149-155. doi:10.1016/j.chemosphere.2008.12.053.
26. D'Arpa S., Volpe A., Uricchio V.F.: *Processi di landfarming per il biorisanamento di suoli*, AMBIENTE E AGRICOLTURA Giugno-Luglio 2009.
27. Tandoi V., Matturro B., Rossetti S., Aulenta F., Volpe A.: Application of molecular tools for the identification and quantification of dechlorinating micro-organisms. Ecodesign per il pianeta. Soluzioni per un ambiente pulito e per una nuova economia, Ecomondo, Rimini, 28-31 Ottobre 2009, pp. 522-526.

Bari, November 20th, 2009

Angela Volpe

A handwritten signature in black ink, appearing to read 'Angela Volpe', written in a cursive style.