

PUBLICATIONS

- 1) Tatti F., **Petrangeli Papini M.**, Sappa G., Raboni M., Arjmand F., Viotti P. Contaminant Back-Diffusion from Low-Permeability Layers as affected by Groundwater Velocity: a Laboratory Investigation by Box Model and Image Analysis (2017) *Science of the Total Environment*. Article in press
- 2) Ceci, A., Pinzari, F., Riccardi, C., Maggi, O., Pierro, L., **Petrangeli Papini, M.**, Gadd, G.M., Persiani, A.M. Metabolic synergies in the biotransformation of organic and metallic toxic compounds by a saprotrophic soil fungus (2017) *Applied Microbiology and Biotechnology*, pp. 1-15. Article in Press.
- 3) Palma, E., Daghio, M., Franzetti, A., **Petrangeli Papini, M.**, Aulenta, F. The bioelectric well: A novel approach for in situ treatment of hydrocarbon-contaminated groundwater (2017) *Microbial Biotechnology*. Article in Press.
- 4) Ludovica Silvani, Carmela Riccardi, Espen Eek, **Marco Petrangeli Papini**, Nicolas A.O. Morin, Gerard Cornelissen, Amy M.P. Oen, Sarah E. Hale. Monitoring alkylphenols in water using the polar organic chemical integrative sampler (POCIS): Determining sampling rates via the extraction of PES membranes and Oasis beads. *Chemosphere*, 184, 2017, pp 1362-1371
- 5) Silvani, L., Di Palma, P.R., Riccardi, C., Eek, E., Hale, S.E., Viotti, P., **Petrangeli Papini, M.**. Use of biochar as alternative sorbent for the active capping of oil contaminated sediments. (2017) *Journal of Environmental Chemical Engineering*, 5 (5), pp. 5241-5249.
- 6) Pierro, L., Matturro, B., Rossetti, S., Sagliaschi, M., Sucato, S., Alesi, E., Bartsch, E., Arjmand, F., **Papini, M.P.** Polyhydroxyalkanoate as a slow-release carbon source for in situ bioremediation of contaminated aquifers: From laboratory investigation to pilot-scale testing in the field (2017) *New Biotechnology*, 37, pp. 60-68.
- 7) Silvani, Ludovica, Blanka Vrchotova, Petr Kastanek, Katerina Demnerova, Ida Pettiti & **Marco Petrangeli Papini**. Characterizing Biochar as Alternative Sorbent for Oil Spill Remediation. (2017) *Scientific Reports*, 7, art. no. 43912
- 8) Agnese Lai; Federico Aulenta; Marina Mingazzini; Maria Teresa Palumbo; **Marco Petrangeli Papini**; Roberta Verdini; Mauro Majone. Bioelectrochemical approach for reductive and oxidative dechlorination of chlorinated aliphatic hydrocarbons (CAHs), *Chemosphere*, 169, 351-360, 2017
- 9) Ludovica Silvani, Alessandro Latini, Danny Reible, **Marco Petrangeli Papini**. Characterizing toluene adsorption onto carbon nanotubes for environmental applications. (2017) *Desalination and Water Treatment*, 60, pp. 218-227.
- 10) Wacławek Stanisław, Chronopoulou Laura, **Marco Petrangeli Papini**, Vinod V.T.P., Palocci Cleofe, Kupčík Jaroslav, Černík Miroslav. Enhancement of stability and reactivity of nanosized zero-valent iron with polyhydroxybutyrate. (2017) *Desalination and Water Treatment*, 69, pp. 302-307.

- 11) Tatti, F., **Papini, M.P.**, Raboni, M., Viotti, P. Image analysis procedure for studying Back-Diffusion phenomena from low-permeability layers in laboratory tests. (2016) *Scientific Reports*, 6, art. no. 30400
- 12) **Papini, M.P.**, Majone, M., Arjmand, F., Silvestri, D., Sagliaschi, M., Sucato, S., Alesi, E., Barstch, E., Pierro, L. First pilot test on the integration of GCW (groundwater circulation well) with ENA (enhanced natural attenuation) for chlorinated solvents source remediation (2016) *Chemical Engineering Transactions*, 49, pp. 91-96..
- 13) Ceci, A., Pierro, L., Riccardi, C., Pinzari, F., Maggi, O., Persiani, A.M., Gadd, G.M., **Papini, M.P.** Biotransformation of β -hexachlorocyclohexane by the saprotrophic soil fungus *Penicillium griseofulvum* (2015) *Chemosphere*, 137, pp. 101-107.
- 14) Maretto, M., Vignola, R., Williams, C.D., Bagatin, R., Latini, A., **Petrangeli Papini, M.** Adsorption of hydrocarbons from industrial wastewater onto a silica mesoporous material: Structural and thermal study (2015) *Microporous and Mesoporous Materials*, 203 (C), pp. 139-150.
- 15) Viggi, C.C., Presta, E., Bellagamba, M., Kaciulis, S., Balijepalli, S.K., Zanaroli, G., **Papini, M.P.**, Rossetti, S., Aulenta, F. The "Oil-Spill Snorkel": An innovative bioelectrochemical approach to accelerate hydrocarbons biodegradation in marine sediments (2015) *Frontiers in Microbiology*, 6 (SEP), art. no. 881.
- 16) Baric, M., Pierro, L., Pietrangeli, B., **Petrangeli Papini M.** "Polyhydroxyalkanoate (PHB) as a slow-release electron donor for advanced in situ bioremediation of chlorinated solvent-contaminated aquifers" *New Biotechnology*, 31 (4), pp. 377-382, 2014
- 17) Tosco T., **Petrangeli Papini M.**, Cruz Viggi C., Sethi R. "Nanoscale zerovalent iron particles for groundwater remediation: a review" *Journal of Cleaner Production*, 77, pp. 10-21, 2014
- 18) Maretto M., Blanchi F., Vignola R., Canepari S., Baric M., Iazzoni R., Tagliabue M., **Petrangeli Papini M.** "Microporous and mesoporous materials for the treatment of wastewater produced by petrochemical activities" *Journal of Cleaner Production*, 7, pp. 22-34, 2014
- 19) Viotti P., Di Palma R., Aulenta F., Luciano A., Mancini G., **Petrangeli Papini M.** "Use of a reactive transport model to describe reductive dechlorination (RD) as a remediation design tool: application at a CAHs-contaminated site" *Environmental Science and Pollution Research*, 21(2), 1514-1527, 2014
- 20) Matturro, B., Aulenta, F., Majone, M., **Petrangeli Papini M.**, Tandoi, V., Rossetti, S. "Field distribution and activity of chlorinated solvents degrading bacteria by combining CARD-FISH and real time PCR" *New Biotechnology*, 30(1), 23-32, 2012
- 21) Baric M., Majone M., Beccari M., **Petrangeli Papini M.** "Coupling of polyhydroxybutyrate (PHB) and zero valent iron (ZVI) for enhanced treatment of chlorinated ethanes in permeable reactive barriers (PRBs)" *Chemical Engineering Journal*, 195-196, 22-30, 2012
- 22) Luciano A., Viotti P., **Petrangeli Papini M.**, Shoari N. "On Morphometric Properties Of DNAPL Sources: Relating Architecture To Mass Reduction" *Water, Air, and Soil Pollution*, 223 (5), 2849-2864, 2012

- 23) Aulenta F., Ferri T., Nicastro D., Majone M., **Petrangeli Papini M.** "Improved electrical wiring of microbes: anthraquinone-modified electrodes for biosensing of chlorinated hydrocarbons" *New Biotechnology*, 29 (1), 126-131, 2011
- 24) Aulenta F., Majone M., **Petrangeli Papini M.**, Rossetti S., Tandoi V. Reductive dechlorination of chloroethenes: from the laboratory to field scale investigations. In *Microbial Bioremediation of non-metals: Current Research*, edited by Koukkou A.I., Horizon Scientific Press, Hethersett, Norwich, UK, Chapter 1, 2011
- 25) Luciano A., Viotti P., **Petrangeli Papini M.** "Laboratory investigation of DNAPL migration in porous media" *Journal of Hazardous Materials*, 176(1-3), 1006-1017, 2010
- 26) Dionisi D., Bornoroni L., Mainelli S., Majone M., Pagnanelli F., **Petrangeli Papini M.** "Theoretical and experimental analysis of the role of sludge age on the removal of adsorbed micropollutants in activated sludge processes" *Industrial & Engineering Chemistry Research*, 47(17), 6775-6782, 2008.
- 27) Liburdi P., Duale KahieY., Giuliano V., **Petrangeli Papini M.** "The role of mineralogical and organic fraction on metal adsorption onto soil: experimental approach and modelling" In *Advances in Subsurface Pollution of Porous Media – Indicators, Processes and Modelling, IAH Selected Papers on Hydrology (SP14)*, edited by Candela L., Vadillo I., Elorza F.J. Taylor and Francis- CRC Press (Abingdon, UK) ISBN 9780415476904, 2008
- 28) Aulenta F., Bozzano F., Leccese M., Petitta M., **Petrangeli Papini M.**, Viotti P. "Development and application of a 2D reactive transport model aimed at evaluating the effectiveness of rd stimulation by lactate injection at a CAHs contaminated site" in *Advances in Subsurface Pollution of Porous Media – Indicators, Processes and Modelling, IAH Selected Papers on Hydrology (SP14)*, edited by Candela L., Vadillo I., Elorza F.J. Taylor and Francis- CRC Press (Abingdon, UK) ISBN 9780415476904, Capter 10, pp. 161-173, 2008
- 29) Aulenta F., Fuoco M., Canosa A., **Petrangeli Papini M.**, Majone M. "Use of poly-□-hydroxy-butyrate as a slow-release electron donor for the microbial reductive dechlorination of TCE" *Water Science and Technology*, 57(6), 921-925, 2008.
- 30) Aulenta F., Beccari M., Majone M., **Petrangeli Papini M.**, Tandoi V. "Competition for H₂ between sulfate reduction and dechlorination in butyrate-fed anaerobic cultures" *Process Biochemistry*, 43, 161-168, 2008.
- 31) Riccardi C., Di Filippo P., Pomata D., Incoronato F., Di Basilio M., **Petrangeli Papini M.**, Spicaglia S. "Characterization and distribution of petroleum hydrocarbons and heavy metals in groundwater from three Italian tank farms", *Science of the Total Environment*, 393, 50-63, 2008.
- 32) Leccese M., Aulenta F., **Petrangeli Papini M.**, Viotti P., Rossetti M., Majone M. "Anaerobic bioremediation of chlorinated solvents contaminated aquifers in the presence of DNAPL: the Rho test site project", *Italian Journal of Engineering Geology and Environment*, Special Issue (1), 107-114, 2007.

- 33) Aulenta A., Canosa A., Leccese M., **Petrangeli Papini M.**, Majone M. "Field study of in-situ anaerobic bioremediation of a chlorinated solvent source zone" *Industrial & Engineering Chemistry Research*, 46 (21), 6812- 6819, 2007.
- 34) Aulenta F., Pera A., **Petrangeli Papini M.**, Rossetti S., Majone M. "Relevance of side reactions in anaerobic reductive dechlorination microcosms amended with different electron donors" *Water Research*, 41 (1), 27-38, 2007.
- 35) Dionisi D., Bertin L., Bornoroni L., Capodicasa S., **Petrangeli Papini M.**, Fava F. "Removal of organic xenobiotics in activated sludges under aerobic conditions and anaerobic digestion of the adsorbed species" *Journal of Chemical Technology & Biotechnology*, 81(9), 1496-1505, 2006.
- 36) Aulenta F., Di Tomassi C., Cupo C., **Petrangeli Papini M.**, Majone M. "Influence of hydrogen on the reductive dechlorination of tetrachloroethene (PCE) to ethene in a methanogenic biofilm reactor: role of mass transport phenomena" *Journal of Chemical Technology & Biotechnology*, 81(9), 1520-1529, (2006).
- 37) Aulenta F., Potalivo M., Majone M., **Petrangeli Papini M.**, Tandoi V. "Anaerobic bioremediation of groundwater containing a mixture of 1,1,2,2 - tetrachloroethane and chloroethenes", *Biodegradation*, 17, 193-206, 2006.
- 38) Dionisi D., Beccari M., Di Gregorio S., Majone M., **Petrangeli Papini M.**, Vallini G. "Storage of biodegradable polymers by an enriched microbial community in a Sequencing Batch Reactor operated at high organic load rate" *Journal of Chemical Technology & Biotechnology*, 80 (11), 1306-1318, 2005.
- 39) Aulenta F., Gossett J.M., **Petrangeli Papini M.**, Rossetti S., Majone M. "Comparative study of methanol, butyrate, and hydrogen as electron donors for long-term dechlorination of tetrachloroethene in mixed anaerobic cultures", *Biotechnology & Bioengineering*, 91 (6), 743-753, 2005.
- 40) F. Aulenta, A. Fina, M. Potalivo, **M. Petrangeli Papini**, S. Rossetti, M. Majone "Anaerobic transformation of tetrachloroethane (TeCA), perchloroethylene (PCE), and their mixtures by mixed-cultures enriched from contaminated soils and sediments" *Water Science and Technology*, 52 (1-2), 357-362, 2005.
- 41) Dionisi D., Carucci G., **Petrangeli Papini M.**, Riccardi C., Majone M., Carrasco F. "Olive oil mill effluents as a feedstock for production of biodegradable polymers", *Water Research*, 39 (10), 2076-2084, 2005.
- 42) Viotti P., **Petrangeli Papini M.**, Stracqualursi N., Gamba C. "Contaminant transport in an unsaturated soil: laboratory tests and numerical simulation model as procedure for parameters evaluation" *Ecological Modelling*, 182, 131-148, 2005.
- 43) Aulenta F., Bianchi A., Majone M., **Petrangeli Papini M.**, Potalivo M., Tandoi V. "Assessment of natural or enhanced in situ bioremediation at a chlorinated solvent-contaminated site in Italy: a microcosm study" *Environment International*, 31, 185-190, 2005.

- 44) **Petrangeli Papini M.**, Majone M. "Modelling of heavy metal sorption onto clays", in "Mineral Surfaces", W. Forsling Editor, Marcel Dekker Inc. New York, accepted.
- 45) **Petrangeli Papini M.**, Bianchi A., Behra Ph., Grimaldi C. "The effect of oxide coating dissolution of Cd transport through a natural quartz sand" *Water, Air and Soil Pollution*, **159**, 49-65, 2004.
- 46) Carrasco, F., Majone, M., Dionisi, D., **Petrangeli Papini, M.**, Carucci, G., Beccari, M. "Polyhydroxyalkanoates. Microorganism-produced biodegradable plastics". *Ingenieria Quimica* (Madrid, Spain) **36**(414), 244-251, 2004
- 47) Bertin L., Berselli S., Fava F., **Petrangeli Papini, M.**, Marchetti, L. "Anaerobic digestion of olive mill wastewaters in biofilm reactors packed with granular activated carbon and "Manville" silica beads" *Water Research*, **38**, 3167-3178, 2004.
- 48) **Petrangeli Papini M.**, Saurini M.T., Bianchi A., Majone M., Beccari M. "Modeling the competitive adsorption of Pb, Cu, Cd and Ni onto a natural heterogeneous sorbent material (italian "Red Soil")" *Industrial & Engineering Chemistry Research*, **43**, 5032-5041, 2004.
- 49) Bianchi A., **Petrangeli Papini M.**, Corsi A., Behra P., Beccari M. "Competitive transport of cadmium and lead through a natural porous medium: influence of the solid/liquid interface processes" *Water Science and Technology* 48(3), 9-16, 2003.
- 50) M. Beccari, Lanz A., Majone M., Carucci G., **Petrangeli Papini M.** "Removal of molecular weight fractions of COD and phenolic compounds in an integrated treatment of olive oil mill effluents" *Biodegradation*, **13**, 401-410, 2002
- 51) **Petrangeli Papini M.**, Bianchi A., Majone M., Beccari M. "Equilibrium modeling of lead adsorption onto a "Red Soil" as function of liquid phase composition" *Industrial & Engineering Chemistry Research*, 41 (8), 1946-1954, 2002
- 52) **Petrangeli Papini M.**, Majone M. "Modeling of Heavy Metal Adsorption at Clay Surfaces" in Encyclopedia of Surface and Colloid Science, Editor A. Hubbard, Marcel Dekker, Inc – New York, 2002.
- 53) Beolchini F., **Petrangeli Papini M.**, Toro L., Trifoni M., Vegliò F. "Acid leaching of Manganiferous ores by sucrose: kinetic modelling and related statistical analysis" *Minerals Engineering*, 14, 175-184, 2001.
- 54) **Petrangeli Papini M.**, Beccari M., Marucci D., Majone M. "Lead adsorption onto "red soils" as function of environmental conditions" *Annali di Chimica, Journal of Analytical and Environmental Chemistry*, 91, 479-490, 2001.
- 55) **Petrangeli Papini M.**, Majone M., Rolle E. "Kaolinite Sorption of Cd, Ni and Cu from Landfill Leachates: Influence of Leachate Composition" *Water Science and Technology*, 44, 343-350, 2001.
- 56) Beccari M., Majone M., **Petrangeli Papini M.**, Torrisi L. "Enhancement of anaerobic treatability of olive oil mill effluents by addition of Ca(OH)2 and bentonite without intermediate solid/liquid separation" *Water Science and Technology*, 43, 275-282, 2001.

- 57) Pagnanelli F., **Petrangeli Papini M.**, Toro L., Vegliò F. "Biosorption of Metal ions on Arthrobacter sp.: Biomass Characterization and Biosorption Modeling" *Environmental Science and Technology*, 34, 2773-2778, 2000.
- 58) **Petrangeli Papini M.**, Kahie Y. D., Troia B., M. Majone. "Adsorption of lead at variable pH onto a natural porous medium: modeling of batch and column experiments", *Environmental Science and Technology*, 33, 4457-4464, 1999.
- 59) Boni, M.R., Lombardi, G., **Petrangeli Papini M.** "Bioremediation of a phenol-contaminated soil as affected by nutrients content" *The Journal of Solid Waste Technology and Management*, 26 (2), 70-73, 1999.
- 60) Majone M., **Petrangeli Papini M.**, Rolle E. "Influence of metal speciation in landfill leachate on kaolinite adsorption". *Water Research*, 32 (3), 882-890, 1998
- 61) **Petrangeli Papini M.**, Majone M. "Experimental investigation of transport of strongly retained species by soil columns". *Water, Air and Soil Pollution*, 95, 337-351, 1997
- 62) Majone M., **Petrangeli Papini M.**, Rolle E. "Heavy metals speciation in landfill leachates by exchange on Chelex-100 resin". *Environmental Technology*, 17, 587-595, 1996
- 63) Majone M., **Petrangeli Papini M.**, Rolle E. "Modelling lead adsorption on clays by models with and without electrostatic terms". *Journal of Colloid and Interface Science*, 179, 412-425, 1996
- 64) **Petrangeli Papini M.**, Majone M., Senofonte O., Caroli A. "Optimization of the analytical procedure for Cr, Cu, Ni and Pb determination by ICP-AES in municipal landfill leachates". *Microchemical Journal*, 50, 191-200, 1994
- 65) Majone M., **Petrangeli Papini M.**, Rolle E. "Clay adsorption of lead from landfill leachate". *Environmental Technology*, 14, 629-638, 1993
- 66) Majone M., **Petrangeli Papini M.**, Rolle E. "Leachate-soil interaction in landfill: modelling of lead sorption on clay". *Ingegneria Sanitaria Ambientale*, 2, 59-67, 1993