Silvia Fiore

Associate Professor in
Environmental Sanitary Engineering
Politecnico di Torino, Italy

CURRICULUM VITAE

PERSONAL INFORMATION

Date of birth: 02/24/1971
Nationality: Italian
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Researcher unique identifier(s): orcid.org/0000-0001-5949-0559; scopus author ID 7005215992; www.researchgate.net/profile/Silvia_Fiore
H-index/citations: Scopus 12/398, Google Scholar 14/623 (July 2018).

- **EDUCATION:**

2003: PhD in Environmental GeoEngineering, Politecnico di Torino, Italy
Topic: Sorption of phenols on natural solid phases. Supervisor: Prof Giuseppe Genon.
1997: MSc in Analytical Chemistry, Faculty of Mathematics, Physics and Natural Sciences, University of Turin, Italy.

- **CURRENT POSITION:**

Since 2014: **Associate professor, Environmental Sanitary Engineering**, Department of Environment, Land and Infrastructures Engineering (DIATI), Politecnico di Torino, Italy. My research group is made of 2 PhD student (Civil and Environmental Engineering at Politecnico di Torino), 3 PhD students in co-supervision with Prof Carmen Teodosiu (Technical University of Iasi, Romania) and 15-20 undergraduate/graduate students per year. I hold the courses: Environmental Chemistry (60 hours, undergraduate level), Solid Wastes (30 hours, PhD level), Environmental Technologies of Productive Sites (20 hours, PhD level). I collaborate to the course: Environmental Sanitary Engineering (30 hours, undergraduate level).
Since 2018: **Coordinator of the laboratory "Biorefinery and Circular Economy" (type 2 biological lab)** at the Department of Engineering for Environment, Land and Infrastructures (DIATI), Politecnico di Torino. Laboratory equipment: UV-Visible spectrometer, UV-Visible portable photometer, COD digester, BOD analyzer (24 reactors), multi-parameter probe (pH, EC, ORP, T), oven, muffle, shaking incubator (T=5-60°C), anaerobic digestion reactors (4x2L and 18X0.5L) for fermentation processes at 20-50°C, biogas portable analyzer, UV lamp and E.Coli test equipment, laminar flow biological and chemical fume hood.

- **PREVIOUS POSITIONS:**

2006 – 2014: Assistant professor (permanent position), Environmental Sanitary Engineering
Department of Environment, Land and Infrastructures Engineering (DIATI), Politecnico di Torino, Italy
2002 – 2006: postdoc Research assistant, Environmental Sanitary Engineering

Department of Environment, Land and Georesources Engineering (DITAG), Politecnico di Torino, Italy

1999-2002: PhD student, Environmental GeoEngineering, Politecnico di Torino, Italy

1998-1999: post-graduate grant holder, Land and Georesources Engineering (DITAG), Politecnico di Torino, Italy

- **RESEARCH SUMMARY:**

The scientific activity involves both fundamental research and pilot/full-scale applications, and it is strongly oriented toward the feasibility of academic findings. The main research topics are:

- Treatment, recovery and disposal of municipal and industrial wastes (e-waste/WEEE, agro-industrial waste, waste biomasses, cosmetic industry, plastic waste, end-of-life vehicles, foundries);
- Water treatment (potabilization processes, disinfection by-products, emerging contaminants);
- Wastewater treatment and reuse (municipal and industrial wastewater);
- Energy efficiency and environmental assessment of urban water cycle;
- Study of contaminants sorption phenomena, characterization and remediation of polluted sites (organic and inorganic pollutants, *on site* remediation technologies: permeable reactive barriers and oxidation/reduction processes).

- **SUPERVISION of research assistants and PhD STUDENTS:**

2018 Marco Chiappero, research assistant, 6 months grant holder; research topic: Anaerobic digestion of wastewater treatment sludge at low temperature.

2017-2020 Francesca Demichelis, **PhD student in Civil and Environmental Engineering**; research topic: Biorefinery processes for the valorization of waste biomasses;

2016-2017 Francesca Demichelis, research assistant, 18 months grant holder at DIATI, Politecnico di Torino; Research topic: *Experimental tests about the anaerobic digestion of the wastes produced by L'Oréal plant in Turin area*;

2016-2017 Alice Salaris, research assistant, 1 year grant holder at DIATI, Politecnico di Torino; Research topics: *Experimental evaluation of ferrate efficiency in water and wastewater treatment* and *Investigation of the performances of a full-scale water treatment plant towards the removal of pesticides*;

2016-2020 Georgeta Ropcean, **PhD student in Chemical Engineering and Environmental Protection**, Technical University of Iasi, Romania (co-supervised); research topic: WEEE management;

2015-2019 Andreea Florina Gilca, **PhD student in Chemical Engineering and Environmental Protection**, Technical University of Iasi, Romania (co-supervised); research topic: *Emerging pollutants control and risk assessment in water treatment*;

2015-2019 Dumitrita Ibanescu, **PhD student in Chemical Engineering and Environmental Protection**, Technical University of Iasi, Romania (co-supervised); research topic: *WEEE management*;

2014–2017 Florina Fabian, **PhD student in Environmental Engineering** (co-tutored with University of Bacau, Romania); research topic: *Assessment of the efficiency of water and wastewater treatment for different requirements;*

2013-2016 Mihai Belciu, **PhD student in Environmental Engineering** (co-tutored with University of Bacau, Romania); research topic: *Evaluation of technological and environmental aspects of post-closure activity of municipal solid waste landfills*;

2014-2015 Marta Franz, research assistant, 1 year grant holder at DIATI, Politecnico di Torino; Research topic: *Evaluation of the performances of Turin water treatment plant;*

2013-2014 Mariantonia Zappone, research assistant, 2 years grant holder at DIATI, Politecnico di Torino; Research topics: *Environmental balance of Urban Water cycle in Turin metropolitan area* and *Evaluation of Energy efficiency of Turin wastewater treatment plant;*

2011-2013 Alessandro Cedrino, research assistant, research assistant for 3 years at DIATI, Politecnico di Torino; Research topics: *Evaluation of the performances of a lagoon as a pre-treatment for a potabilization process* and *Assessment of the generation and control of disinfection by-products in Turin water treatment plant*.

- **SUPERVISION OF UNDERGRADUATE/GRADUATE STUDENTS' FINAL PROJECTS:**

2006-present: supervision of over 100 undergraduate/graduate students' final projects about different topics of Environmental Sanitary Engineering in Environmental/Civil/Energy Engineering study courses. Many final projects were developed in cooperation with public and private companies managing water and wastewater treatment, waste collection and treatment, agro-food products and beverages in Piedmont, Italy.

- **TEACHING ACTIVITIES:**

as Professor:

- Environmental Applied Chemistry (PhD course, 20 hours) 2011-2014
- Solid Wastes (PhD course, 30 hours) since 2012
- Wastewater treatment plants optimization (post-graduate Master Course, 40 hours) 2013-2015
- Environmental Chemistry (B.Sc. course, 60 hours) since 2014
- Environmental Technologies of Productive Sites (B.Sc. course, 60 hours) 2015-2017

as teaching Assistant:

- Environmental Sanitary Engineering (B.Sc and M.Sc. courses, 20-30 hours per year) since 2000

- **INSTITUTIONAL RESPONSIBILITIES:**

2012-2016, designed Responsible for Internships and Integrative activities of Environmental Engineering study course, Politecnico di Torino;

2012-2016, designed Member of Outgoing and Job Committee, Environmental Engineering study course, Politecnico di Torino;

2012-2019, designed Member of the Committee for the Evaluation of Study Courses (SUA) for Environmental Engineering study course, Politecnico di Torino;

2010-2015, elected Member of DIATI Council, Politecnico di Torino;

2007-2011, support at the organization of the Incoming Students day for Environmental Engineering study course, Politecnico di Torino;

2015-2018, designed member of Didactic Field Activities Committee, Environmental Engineering collegium, Politecnico di Torino;

2015-2019, designed member of Environment and Energy Committee, DIATI Department, Politecnico di Torino;

2015-2019, designed member of Web site management Committee, DIATI Department, Politecnico di Torino;

since 2006, member of Environmental Engineering study course (BSc and MSc) collegium, Politecnico di Torino;

2009-2015, member of Environmental Engineering PhD collegium, Politecnico di Torino

2015-present, member of Civil and Environmental Engineering PhD collegium, Politecnico di Torino.

2012-present, member of Didactic Collaborations Designation Committee, Environmental Engineering study course, Politecnico di Torino.

- **COMMISSIONS OF TRUST:**

2012-present, Review panel member for MIUR (Italian Ministry of University and Research) within FIRB, PRIN, Futuro in Ricerca, SIR, Rita Levi Montalcini calls and VQR (Quality Evaluation of Research).

2015-present, Review panel member, Romanian National Research Concil (CNCS) and Executive Agency for Higher Education, Research, Development and Innovation Funding (UEFISCDI) within Young Research Teams 2014 and 2016 calls.

2010-present, Member of the Editorial Board of *Journal of Engineering Studies and Research*, Alma Mater Publishing House, Bacau, Romania, ISSN 2068-7559.

2015-present, Member of the Editorial Board of *Environmental Engineering and Management Journal* (http://omicron.ch.tuiasi.ro/EEMJ/).

2003-present, Reviewer for ISI Journals: Waste Management, Journal of Environmental Management, Bioresource Technology, Chemosphere, Water Research, Journal of Hazardous Materials, Applied Energy, Energy, Energy Conversion and Management, Resources Conservation and Recycling, Sustainability.

2015-2018: member of Scientific Advisory Board of project "Standard method and online tool for assessing and improving the energy efficiency of wastewater treatment plants" (ENERWATER) (www.enerwater.eu) funded by EC under H2020 Framework Programme for Research and Innovation - Grant agreement number 644771.

2017: member of scientific committee of BIOCHAR Conference (Alba, Italy, 20-24/8/2017).

2017: member of scientific committee of ICEEM09 Conference (Bologna, Italy 6-9/9/2017).

2018: Guest editor of Process Safety and Environmental Protection Journal (Elsevier) special issue dedicated to ICEEM09 Conference.

2018-2019: member of scientific committee of ICEEM10 Conference (Iasi, Romania, 18-21/9/2019).

- **MAJOR COLLABORATIONS with foreign Universities/Research Centers** (in chronological order):

- **Technical University of Delft (TU Delft), The Netherlands**: *assistant prof. Merle de Kreuk, Prof Luuk Rietveld.* Topics: AnMBR processes, Thermal energy recovery from wastewater (co-supervision of 2 graduate students in 2010 and 2014).

- **Norwegian University of Science and Technology (NTNU), Norway**: *Prof Helge Brattebo,* Topic: *Environmental balance of urban water cycle (*co-supervision of 1 graduate student in 2012*).* We co-authored one paper indexed on Scopus:
  - M. Zappone, S. Fiore, G. Genon, G. Venkatesh, H. Brattebø , L. Meucci (**2014**) Life Cycle Energy and GHG Emission within the Turin Metropolitan Area Urban Water Cycle, Procedia Engineering 12/2014; 89:1382-1389. DOI:10.1016/j.proeng.2014.11.463;

- **University of Bacau, Romania**: *Prof Valentin Nedeff, Prof Gabriel Lazar*. Topics: post-closure activity of landfills, efficiency of water and wastewater treatment processes, environmental impact of industrial processes (co-supervision of 4 graduate and 2 PhD students in 2010-2016). We co-authored 2 papers on peer reviewed ISI Journals:
  - F. Fabian, S. Fiore, G. Genon, D. Panepinto, V. Nedeff, M. Panainte (**2016**), Preliminary evaluation of the environmental impact of water treatment, Environmental Engineering and Management Journal, vol 51 (8), pp. 1867-1872;
  - M. Belciu, E. F. Moşneguţu, V. Nedeff, A. Chițimuș, N. Bârsan, S. Fiore (**2016**), Production capacity of leachate from Bihor landfill, Environmental Engineering and Management Journal, vol 51 (9), pp. 2057-2062;

- **ATB Potsdam Leibniz Institute of Agricultural Engineering and Bio-economy, Germany**: *Dr Joachim Venus, Dr Daniel Pleissner. Topic: synthesis of lactic acid from spent coffee dust and from food waste* (co-supervision of 3 graduate students in 2014-2015). We co-authored 4 papers on high IF peer reviewed ISI Journals:
  - D. Pleissner, F. Demichelis, S. Mariano, S. Fiore, I. M. Navarro Gutiérrez, R. Schneider, J. Venus (**2017**), Direct production of lactic acid based on simultaneous saccharification and fermentation of mixed restaurant food waste, Journal of Cleaner Production, vol. 143, pp. 615-623;
  - F. Demichelis, D. Pleissner, S. Fiore, S. Mariano, I. M. Navarro Gutiérrez, R. Schneider, J. Venus (**2017**), Investigation of food waste valorization through sequential lactic acid fermentative production and anaerobic digestion of fermentation residues, Bioresource Technology, vol. 241, pp. 508-516.
  - J. Venus, S. Fiore, F. Demichelis, D. Pleissner (**2018**), Centralized and decentralized utilization of organic residues for lactic acid production, Journal of Cleaner Production, vol. 172, pp. 778-785.
  - F. Demichelis, S. Fiore, D. Pleissner, J. Venus (**2018**), Technical and economic assessment of food waste valorization through a biorefinery chain, Renewable and Sustainable Energy Reviews, vol. 94, pp. 348.

- **Western University, Canada**: *prof Franco Berruti. Topics: biochar production through different pyrolysis processes, adsorption of metals and metalloids on biochar* (co-supervision of 4 graduate students in 2014-2016). We co-authored 4 papers published on the proceedings of international conferences and on high IF peer reviewed ISI Journals:
  - S. Fiore, M. Morando, C. Briens, F. Berruti (**2017**) Investigation of innovative and conventional pyrolysis of ligneous and herbaceous biomasses for biochar production, Proceedings of the international conference Biochar: production, characterization and applications, Alba, Italy.
  - S. Fiore, T. Marengo, C. Briens, F.Berruti (**2017**) Arsenic removal from drinking water by means of low-cost biochars derived from miscanthus and coconut shell, Proceedings of the international conference Biochar: production, characterization and applications, Alba, Italy.
  - S. Fiore, A. Colomba, A. Colomba, C. Briens, F.Berruti (**2018**) Evaluation of biochars deriving from waste biomasses for mercury adsorption, Proceedings of ISCRE25, 25th International Symposium on Chemical Reaction Engineering, Florence, Italy.
  - S. Fiore, F. Berruti, C. Briens (under review), Investigation of innovative and conventional pyrolysis of ligneous and herbaceous biomasses for biochar production, Biomass and Bioenergy Journal, Elsevier.

- **Technical University Hamburg (TUHH), Germany**: *Prof Kerstin Kuchta*. Topic: valorization of solid wastes (WEEE and plastic waste) (co-supervision of 5 graduate students in 2015-2018). In 2017 I joined the **EU COST Action Project ReCreew** – European network for innovative recovery strategies of rare earth and other critical metals from electrical and electronic waste, lead by Prof Kuchta. We co-authored 3 papers published on the proceedings of international conferences and on high IF peer reviewed ISI journals:
  - L. Pfennig, K. Kuchta, A. Prette, S. Fiore (**2016**), Evaluation of LDPE and ABS degradation by means of NIR spectroscopy, Proceedings of CRETE 2016, 5th International Conference on Industrial and Hazardous Waste Management, Chania, Greece.
  - J. Hobom, K. Kuchta, S. Caiani, S. Fiore (**2017**), Comparison between German (Hamburg) and Italian (Turin) WEEE management systems, Proceedings of CEST 2017, Rhodes, Greece.
  - Alassali, S. Fiore, K. Kuchta (under 2nd revision), Assessment of plastic waste materials degradation through Near InfraRed spectroscopy, Waste Management Journal, Elsevier.

- **Technical University of Crete, Greece**: Prof Nicholas Kalogerakis, topic: use of surfactants for the remediation of oil spills (co-supervision of 1 graduate student in 2017). I am **Academic coordinator of**

ERASMUS+ institutional agreement 2015-2021 between Politecnico di Torino and Technical University of Crete.

- **McGill University, Montreal, Canada**: Prof Nathalie Tufenkji; Topic: transport of nano-pesticides in porous media (**3 months stay as visiting professor in June-September 2016**, co-supervision of 1 MSc student in 2016/2017); Prof Dominic Frigon; topic: low-temperature anaerobic digestion of waste activated sludge (co-supervision of 1 graduate student in 2017-2018).

- **"Gheorghe Asahi" Tecnical University of Iasi, Romania**, Prof Carmen Teodosiu. Our cooperation started in 2015:
  - we are academic coordinators of ERASMUS+ institutional agreement 2015-2021 between Politecnico di Torino and Technical University of Iasi. Within this agreement in 2016-2017-2018 occurred in both directions 4 student mobilities (6-10 months each) and 7 teaching staff mobilities.
  - we co-supervised 2 graduate and 3 PhD students on the topics: WEEE management and Environmental assessment of water and wastewater treatment processes.
  - I was invited as keynote speaker at ICCE2016 Conference, 3rd International Conference on Chemical Engineering at Technical University of IASI (8-12/11/2016).
  - I was appointed in the scientific committee of ICEEM09 and ICEEM10 Conferences.
  - I was invited as guest editor of Process Safety and Environmental Protection Journal (Elsevier) special issue dedicated to ICEEM09 Conference.
  - we cooperated in the preparation of 2 proposals for Horizon 2020 calls: H2020-MSCA-ITN-2017 and H2020-SUSFOOD2.
  - we co-authored 2 papers published on high IF peer reviewed international journals and 3 papers presented at international conferences, and other papers are currently in preparation:
  - D. Ibanescu, D. Cailean Gavrilescu, C. Teodosiu, S. Fiore (2018), Assessment of the waste electrical and electronic equipment management systems profile and sustainability in developed and developing European Union countries, Waste Management, vol 73, pp. 39-53.
  - C. Teodosiu, A. Florina Gilca, G. Barjoveanu, S. Fiore (2018), Emerging pollutants through advances drinking water treatment: a review on processes and environmental performances assessment, Journal of Cleaner Production, vol. 197, pp. 1210-1221.
  - D. Ibanescu, S. Fiore, C. Teodosiu, D. Cailean Gavrilescu, A. Ronco (2018), Sustainability of e-waste management: an Italian case study, Proceedings of SUM 2018 Symposium on Urban minining and circular economy, Bergamo, Italy, 21-23/5/2018
  - Florina Gilca, G. Barjoveanu, C. Teodosiu, S. Fiore (2017), Life cycle assessment of a drinking water production system, Proceedings of ICEEM09.
  - D. Cailean Gavrilescu, D. Ibanescu, C. Teodosiu, S. Fiore (2017) Comparative evaluation of greenhouse gas emissions resulted from e-waste management systems in Italy and Romania, Proceedings of ICEEM09.

- **COORDINATION OF RECENT RESEARCH PROJECTS (or participation as task leader):**

- BASH-TREAT Optimization of bottom ash treatment for an improved recovery of valuable fractions, **Horizon 2020 ERA-MIN2 project** (May 2018-April 2021), role: **Coordinator of Research Unit at Politecnico di Torino**.
- "Investigation of critical issues and optimization perspectives for WEEE management" (January 2018-January 2019), funded by APIRAEE, role: **Coordinator**.

- “Design and start-up of a pilot scale digester for L’Oréal plant in Settimo Torinese” (October 2017-October 2018), funded by L’Oréal Saipo Industriale SpA, role: **Coordinator**.
- “Feasibility study about the anaerobic digestion of the wastes of L’Oréal plant in Settimo Torinese, Turin” (march 2016-april 2017), funded by L’Oréal Saipo Industriale SpA, role: **Coordinator**.
- “Evaluation of formaldehyde content in paper waste” (march 2016-may 2017), funded by Ahlstrom-Muskjo Italy SpA, role: **Coordinator**.
- “Evaluation of ferrate efficiency in water and wastewater treatment” (december 2015-june 2017), funded by SMAT (Società Metropolitana Acque Torino) SpA, role: task leader.
- *"New approaches in training specialists in Environmental Engineering for regional sustainable development and correlation to actual requirements of the labor market (REGIOSIM)" (may 2014-november 2015), funded by* EC and Romanian Government, role: **Coordinator of Research Unit at Politecnico di Torino.**
- “Environmental Monitoring Plan of ILVA SpA steel plant in Taranto, Italy” (november 2013-march 2014), funded by ILVA SpA, role: **Coordinator**.
- “Management and design intervents for the optimization of the performances of a small wastewater treatment plant” (february 2012-december 2013), funded by Alpi Acque SpA, role: **Coordinator**.
- “Management, design and start-up of the wastewater treatment plant of a talc mine in Italy” (3 grants in 2008-2012), funded by Imerys Talc Italy SpA, role: **Coordinator**.
- “Ecofood” (Valorization of agro-industrial wastes through anaerobic digestion), POR/FESR call of Regione Piemonte, Italy (september 2010-march 2014), role: Task leader.
- “Evaluation of the performances of a lagoon as a pre-treatment for Turin water treatment plant” (august 2010-december 2014), funded by SMAT SpA, role: Task leader.
- “Formation of disinfection by-products in Turin water treatment plant” (august 2010-december 2012), funded by SMAT SpA, role: Task leader.
- “Energy optimization of Turin wastewater treatment plant” (december 2012-december 2013), funded by SMAT SpA, role: Task leader.
- “Optimization of the performances of grit recovery in Turin wastewater treatment” (december 2012-december 2013), funded by SMAT SpA, role: Task leader.
- “Environmental and energy balance of Turin water cycle” (december 2012-december 2014), funded by SMAT SpA, role: Task leader.

- **Selected PUBLICATIONS:**

1. S.Fiore, M.C.Zanetti, G.Genon (**2003**) *Experimental study of the pH influence on the transport mechanisms of phenols in soil*, Annali di Chimica Rome, vol. 93, Issue 5-6, pp.595-605;
2. M.C.Zanetti, S.Fiore (**2003**), *Foundry processes: the recovery of green moulding sands for core operations*, Resources, Conservation and Recycling, vol. 38, Issue 3, pp.243-254;
3. M.C.Zanetti, S.Fiore (**2003**), *Foundry wastes recycling in moulding operations and in the ceramic industry*, Waste Management & Research, Sage Publications, vol. 21, pp.235-242;
4. M.C.Zanetti, S.Fiore, C.Clerici (**2004**), *Reuse of foundry sands for cores and glass production*, Journal of Solid Waste Technology and Management, Widner University, vol. 30, No.1, pp. 28-36;
5. S. Fiore, M.C. Zanetti, B. Ruffino (**2005**), *Waste characterization and recycle in a aluminum foundry*, Resources Conservation and Recycling, vol.45, pp. 48-59;

6. M.C. Zanetti, S. Fiore (**2005**), *Evaluation of mutual connections between zero-valent iron reactivity and groundwater composition in the degradation of trichloroethylene*, Annali di Chimica Rome, vol 95, Issue 11-12 , pp. 779-789;
7. S.Fiore, M.C.Zanetti (**2006**), *Degradation of trichloroethylene and perchloroethylene by a zero-valent iron permeable reactive barrier: preliminary tests*, International Journal of Sustainable Planning and Development, WIT Press, vol. 1, issue 4, pp. 1-16 ;
8. M.C. Zanetti, S. Fiore (**2007**), *Problems and perspectives concerning reclaimed water reuse in urban and agricultural areas*, International Journal of Sustainable Planning and Development, WIT Press, vol. 2, issue 1, pp. 1-11;
9. S. Fiore, M.C. Zanetti (2007) *Foundry wastes reuse and recycling in concrete production*, American Journal of Environmental Sciences, Science Publications, vol 3(3), pp. 126-134, ISSN: 1553-345X, DOI: 10.3844/ajessp.2007.135.142;
10. M.C. Zanetti, S. Fiore (**2007**), *Lab tests for the remediation of a PCE polluted site by means of HRC reactant*, American Journal of Environmental Sciences, vol 3 (3), pp. 151-157;
11. S.Fiore, M.C.Zanetti, B.Ruffino (**2008**), *Waste characterization in steel casting and recycling opportunities in Europe*, American Journal of Applied Sciences, Science Publications, vol. 5 (5), pp. 512-518;
12. S. Fiore, M.C. Zanetti (**2008**), *Industrial treatment processes for the recycling of green foundry sands*, International Journal of Cast Metals Research, W. S. Maney & Son Ltd., vol. 21 (6), pp. 435-438;
13. S. Fiore, M.C. Zanetti (**2009**), *Sorption of phenols: influence of groundwater pH and of soil organic carbon content*, American Journal of Environmental Sciences, Science Publications, vol. 5 (4), pp. 546-554;
14. S. Fiore, M.C. Zanetti (**2009**), *Preliminary tests for the evaluation of zero-valent iron materials efficiency in Acid Mine Drainage (AMD) remediation,* American Journal of Environmental Sciences, Science Publications, vol. 5 (4), pp. 555-560;
15. S. Fiore, M.C. Zanetti (**2010**), *Wet regeneration treatment for the reclamation of waste foundry sands: a case study*, Foundry Trade Journal, Institute of Cast Metals Engineers, ISSN 00159042, vol. 184 (No. 3678), pp.252-255;
16. S. Fiore, M.C. Zanetti (**2011**), *Evaluation of hydrogen/oxygen release compounds for the remediation of VOCs,* American Journal of Environmental Sciences, Science Publications, ISSN 1553-345X, vol 7(5), pp. 468-476;
17. S. Fiore, B. Ruffino, M.C. Zanetti (**2012**), Automobile shredder residues in Italy: characterization and valorization opportunities, Waste Management, Elsevier, Vol. 32, pp. 1548-1559;
18. E. Santagata, P.P Riviera., D. Dalmazzo, M. Lanotte M., M. C. Zanetti, S. Fiore, B. Ruffino (**2012**) *Design and Construction of a Full-Scale Test Section with Asphalt Rubber Gap-Graded Wearing Course Mixture*, Procedia: Social & Behavioral Sciences, Elsevier, Vol. 53, pp. 524-534;
19. C. Roati, S. Fiore, B. Ruffino, F. Marchese, D. Novarino, M.C. Zanetti (**2012**), Preliminary evaluation of the potential biogas production of food-processing industrial wastes, American Journal of Environmental Sciences, Science Publication, Vol. 8, pp. 291-296;
20. B. Ruffino, S. Fiore, M.C. Zanetti (**2013**), *Environmental risk analysis procedure applied to artificial turf sport fields*, Environmental Science and Pollution Research International, vol.20, pp. 4980-4992;
21. B. Ruffino, S. Fiore, M.C. Zanetti (**2014**), *Strategies for the enhancement of automobile shredder residues (ASRs) recycling: results and cost assessment*, Waste Management, Elsevier, vol. 34, pp. 148-155;
22. M.C. Zanetti, S. Fiore, B. Ruffino, E. Santagata, M. Lanotte (**2014**), *Assessment of gaseous emissions produced on site by bituminous mixtures containing crumb rubber*, Construction and Building Materials, Elsevier, vol. 67, pp. 291-296;

23. R. Cossu, S. Fiore, T. Lai, A. Luciano, G. Mancini, B. Ruffino, P. Viotti, M.C. Zanetti (**2014**), *Review of Italian experience on automotive shredder residue characterization and management*, Waste Management, Elsevier, vol 34 (10), pp. 1752-1762;
24. M. Zappone, S. Fiore, G. Genon, G. Venkatesh, H. Brattebø , L. Meucci (**2014**) Life Cycle Energy and GHG Emission within the Turin Metropolitan Area Urban Water Cycle, Procedia Engineering 12/2014; 89:1382-1389. DOI:10.1016/j.proeng.2014.11.463;
25. F. Boano, S. Fiore, R. Revelli (**2014**) Modeling the Fate of Disinfection By-products in Water Distribution Systems, Procedia Engineering 12/2014; 89. DOI:10.1016/j.proeng.2014.11.185;
26. M.C. Bruzzoniti, S. Fiore (**2014**) Removal of Inorganic Contaminants from Aqueous Solutions: Evaluation of the Remediation Efficiency and of the Environmental Impact of a Zero-Valent Iron Substrate, Water Air and Soil Pollution 09/2014; 225(9);
27. S. Fiore, G. Genon (**2014**), Heat recovery from municipal wastewater: evaluation and proposal, Environmental Engineering and Management Journal, 13(7): 1595-1604;
28. M C Zanetti · S Fiore · B Ruffino · E Santagata · D Dalmazzo · M Lanotte (**2015**) Characterization of crumb rubber from end-of-life tyres for paving applications, Waste Management 06/2015.
29. B. Ruffino, S. Fiore, C. Roati, G. Campo, D. Novarino, M.C. Zanetti (**2015**) Scale effect of anaerobic digestion tests in fed-batch and semi-continuous mode for the technical and economic feasibility of a full scale digester, Bioresource Technology 02/2015; 182C: 302-313;
30. B. Ruffino, S. Fiore, G. Genon, A. Cedrino, D. Giacosa, G. Bocina, M. Fungi, L. Meucci (**2015**), Long-term monitoring of a lagooning basin used as pretreatment facility for a WTP: effect on water quality and description of hydrological and biological cycles using chemometric approaches, Water Air Soil Pollution, pp. 226-231;
31. M.C. Zanetti, S. Fiore, B. Ruffino, E. Santagata, D. Dalmazzo, M. Lanotte (**2015**), Characterization of crumb rubber from end-of-life tyres for paving applications, Waste Management, vol. 45, pp. 161-170;
32. F. Boano, S. Fiore, R. Revelli (**2016**), Chlorate formation in water distribution systems: a modeling study, Journal of Hydroinformatics, vol. 18 (1), pp. 115-125;
33. D. Panepinto, S. Fiore, M. Zappone, G. Genon, L. Meucci (**2016**), Evaluation of the energy efficiency of a large wastewater treatment plant in Italy, Applied Energy, vol. 161, pp. 404-411;
34. M.C. Zanetti, E. Santagata, S. Fiore, B. Ruffino, D. Dalmazzo, M. Lanotte (**2016**), Evaluation of potential gaseous emissions of asphalt rubber bituminous mixtures. Proposal of a new laboratory test procedure, Construction and Building Materials, vol. 113, pp. 870-879;
35. S. Fiore, B. Ruffino, G. Campo, C. Roati, M.C. Zanetti (**2016**), Scale-up evaluation of the anaerobic digestion of food processing industrial wastes, Renewable Energy, vol. 96, pp. 949-959;
36. D. Panepinto, S. Fiore, M. Zappone, M. Acri (**2016**), Thermal valorization of sewer sludge: perspectives for large wastewater treatment plants, Journal of Cleaner Production, vol. 137, pp. 1323-1329;
37. F. Fabian, S. Fiore, G. Genon, D. Panepinto, V. Nedeff, M. Panainte (**2016**), Preliminary evaluation of the environmental impact of water treatment, Environmental Engineering and Management Journal, vol 51 (8), pp. 1867-1872;
38. M. Belciu, E. F. Moşneguţu, V. Nedeff, A. Chițimuș, N. Bârsan, S. Fiore (**2016**), Production capacity of leachate from Bihor landfill, Environmental Engineering and Management Journal, vol 51 (9), pp. 2057-2062;
39. D. Pleissner, F. Demichelis, S. Mariano, S. Fiore, I. M. Navarro Gutiérrez, R. Schneider, J. Venus (**2017**), Direct production of lactic acid based on simultaneous saccharification and fermentation of mixed restaurant food waste, Journal of Cleaner Production, vol. 143, pp. 615-623;
40. P. Arnò, S. Fiore, V. Verda (**2017**), Assessment of anaerobic co-digestion in areas with heterogenous waste production densities, Energy, vol 122, pp. 221-236.

41. F. Demichelis, D. Pleissner, S. Fiore, S. Mariano, I. M. Navarro Gutiérrez, R. Schneider, J. Venus (**2017**), Investigation of food waste valorization through sequential lactic acid fermentative production and anaerobic digestion of fermentation residues, Bioresource Technology, vol. 241, pp. 508-516.
42. J. Venus, S. Fiore, F. Demichelis, D. Pleissner (**2018**), Centralized and decentralized utilization of organic residues for lactic acid production, Journal of Cleaner Production, vol. 172, pp. 778-785.
43. D. Ibanescu, D. Cailean Gavrilescu, C. Teodosiu, S. Fiore (**2018**), Assessment of the waste electrical and electronic equipment management systems profile and sustainability in developed and developing European Union countries, Waste Management, vol 73, pp. 39-53.
44. F. Demichelis, S. Fiore, D. Pleissner, J. Venus (**2018**), Technical and economic assessment of food waste valorization through a biorefinery chain, Renewable and Sustainable Energy Reviews, vol. 94, pp. 348.
45. C. Teodosiu, A. Florina Gilca, G. Barjoveanu, S. Fiore (**2018**), Emerging pollutants through advances drinking water treatment: a review on processes and environmental performances assessment, Journal of Cleaner Production, vol. 197, pp. 1210-1221.
46. F. Demichelis, S. Fiore, M. Onofrio (**2018**), Pre-treatments aimed at increasing the biodegradability of cosmetic industrial waste, Process Safety and Environmental Protection, vol.118, pp. 245-253.

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