**Maria Concetta Bruzzoniti**

**Education**

Degree in Chemistry (Magna cum Laude), and the qualification to practice as a chemist (100/100). She got the PhD title in Chemical Sciences in 1998. She has integrated her competences with research periods abroad (USA, Japan, Hungary).

**Previous Experiences And Current Position**

1999-2000: post-doc researcher at the Department of Chemistry of the University of Turin (Italy)

2000-2011: highly specialized technician at the Department of Chemistry of the University of Turin (Italy)

2011 – present: associate professor at the Department of Chemistry of the University of Turin (Italy) in the academic discipline “*Chemistry for the Environment and for Cultural Heritage, CHIM/12”*, class teacher of the courses

* Instrumental Analytical Chemistry with laboratory (Bachelor Degree in Chemistry)
* Treatment of sewage and waste (Master Degree in Environmental Chemistry)
* Chemical Risk (Master Degree in Environmental Biology)
* Environmental Chemistry (Master degree in Science and Sustainable Management of Natural Systems)

**Field Of Specialization**

Scientific activities are related to the following environmental-analytical topics, hereafter summarized:

* Determination of emerging and priority pollutants by GC-MS and **LC-MS/MS** methods specifically derived for selected matrices (**waters**, soils, **sediments,** **zooplankton**, food, oils).
* Development of innovative sample pre-treatment approaches (**QuEChERS**) for environmental samples.
* Purifications of waters intended for human consumption from inorganic and organic pollutants through innovative (silica based mesoporous and ceramic substrates) and **low costs (biochars)** adsorbents.

**Size And Profile Of Working Group**

She coordinates one assistant professor, three PhD students and one post-Doc fellows. The group has relevant expertise on analytical/environmental methodologies for micropollutant determination and removal.

**Previous And On-Going Projects**

She is the **head of research** unit for **15 financed projects** of national and international relevance, among which:

* CARITRO call (2015-2017): Polymer-derived ceramics with hierarchical porosity **for water filtration/purification**.
* ERANETMED call (2016-2019): IRRIGATIO: Assessing the **chemical/microbiological contamination** and productivity in the agricultural production chain of model fruit species grown under irrigation with different kinds of reclaimed wastewater.
* POR FESR 2014/2020. (2019-2021): BIOENPRO4TO. Bioenergy and sustainable products of Green Chemistry (output) from the integrated **valorization** of urban, industrial, **biomass and wastewater** (inputs), through intelligent modules
* Society of Water Management in Turin, Italy (2017-2019): Haloacetic acids in **waters intended for human consumption**: their analytical determination and their affinity for **biochar** **substrates**.
* PRIN2017, IT Ministry of University (2019-2022). Nanostructured ceramics for **environmental** and energy applications
* FOSC-ERANET Cofund (2021-2024). SECUREFOOD2050. Improving **resilience** and **food security** in 2050 climate through soilless precise agricultural techniques and irrigation with wastewater properly treated by **innovative** **technologies** to ensure food safety.

She is the **reference** for the following **Erasmus+ bilateral agreement** of University of Turin and:

* Nicolaus Copernicus University, Torun Poland (Area: Chemistry)
* Universitatea Babes-Bolyai, Cluj-Napoca, Romania (Area: Environmental Chemistry)
* University of Nova Gorica, Nova Gorica, Slovenia (Area: Analytical Chemistry)
* University of Porto, Portugal ((Area: Environmental Chemistry)

**Scientific Output**

Co-author of **99** ISI papers (**h**-index = **25**; citations: **2020,** source Scopus), 160 presentations at national/international conferences, with 22 invited lectures (11 international). Six book chapters.

Member of the Editorial board of *ISRN* *Chromatography* and of *Algerian Journal of Environmental Science and Technology*, since 1998 she is referee for international journals. Expert reviewer for Higher Education, Research, Development, and Innovation Funding, Romania and for MUR, Italy.

**Membership And Boards**

2015- present: member of the executive board of the Division of Environmental Chemistry and Cultural Heritage (Italian Chemical Society).

2013- present: member of the International Advisory Committee of University of Nova Gorica (Slovenia).

**Organisation Of Scientific Meetings**

Chairwoman of 16th European Meeting of Environmental Chemistry (EMEC16, Torino, Italy, 2015) and XIX National Conference of Environmental Chemistry and Cultural Heritage (Torino, Italy 2022). Member in the Organizing Committee of six schools/conferences. Member in the Scientific Committee of ten schools/conferences.

**References** [1-99]

1. Sarzanini, C., M.C. Bruzzoniti, G. Sacchero, and E. Mentasti, *On-line preconcentration and separation of neutral and charged aromatic compounds by ion interaction chromatography.* Journal of Chromatography A, 1996. **739**(1-2): p. 63-70.

2. Bruzzoniti, M.C., E. Mentasti, G. Sacchero, and C. Sarzanini, *Retention model for singly and doubly charged analytes in ion-interaction chromatography.* Journal of Chromatography A, 1996. **728**(1-2): p. 55-65.

3. Sarzanini, C., M.C. Bruzzoniti, G. Sacchero, and E. Mentasti, *Retention model for anionic, neutral, and cationic analytes in reversed-phase ion interaction chromatography.* Analytical Chemistry, 1996. **68**(24): p. 4494-4500.

4. Bruzzoniti, M.C., E. Mentasti, C. Sarzanini, M. Braglia, G. Cocito, and J. Kraus, *Determination of rare earth elements by ion chromatography. Separation procedure optimization.* Analytica Chimica Acta, 1996. **322**(2 JAN): p. 49-54.

5. Bruzzoniti, M.C., E. Mentasti, and C. Sarzanini, *Determination of lanthanides by ion chromatography. Separation and retention mechanism.* Analytica Chimica Acta, 1997. **353**(2-3): p. 239-244.

6. Bruzzoniti, M.C., E. Mentasti, C. Sarzanini, and S. Cavalli, *Behaviour of selenium and tellurium species and their determination by ion chromatography.* Chromatographia, 1997. **46**(1-2): p. 49-56.

7. Bruzzoniti, M.C., E. Mentasti, and C. Sarzanini, *Divalent pairing ion for ion-interaction chromatography of sulphonates and carboxylates.* Journal of Chromatography A, 1997. **770**(1-2): p. 51-57.

8. Bruzzoniti, M.C., E. Mentasti, C. Sarzanini, and P. Hajós, *Ion chromatographic separation of carboxylic acids. Prediction of retention data.* Journal of Chromatography A, 1997. **770**(1-2): p. 13-22.

9. Abollino, O., M. Aceto, M.C. Bruzzoniti, E. Mentasti, and C. Sarzanini, *Determination of metals in highly saline matrices by solid-phase extraction and slurry-sampling inductively coupled plasma-atomic emission spectrometry.* Analytica Chimica Acta, 1998. **375**(3): p. 293-298.

10. Abollino, O., M. Aceto, M.C. Bruzzoniti, E. Mentasti, and C. Sarzanini, *Speciation of copper and manganese in milk by solid-phase extraction/inductively coupled plasma-atomic emission spectrometry.* Analytica Chimica Acta, 1998. **375**(3): p. 299-306.

11. Bruzzoniti, M.C., E. Mentasti, and C. Sarzanini, *Carboxylic acids: Prediction of retention data from chromatographic and electrophoretic behaviours.* Journal of Chromatography B: Biomedical Applications, 1998. **717**(1-2): p. 3-25.

12. Sarzanini, C., O. Abollino, M.C. Bruzzoniti, and E. Mentasti, *Electrochemical detection of sulphonated azo dyes and their metal complexes in ion interaction chromatography.* Journal of Chromatography A, 1998. **804**(1-2): p. 241-248.

13. Sacchero, G., M. Concetta Bruzzoniti, C. Sarzanini, E. Mentasti, H.J. Metting, and P.M.J. Coenegracht, *Comparison of prediction power between theoretical and neural-network models in ion-interaction chromatography.* Journal of Chromatography A, 1998. **799**(1-2): p. 35-45.

14. Abollino, O., M.C. Bruzzoniti, E. Mentasti, and C. Sarzanini, *Theory of bulk and flow electrolysis and approach to parameter optimisation for chromatographic electrochemical detection.* Analusis, 1998. **26**(7): p. 231-236.

15. Sarzanini, C., M.C. Bruzzoniti, and E. Mentasti, *Preconcentration and separation of haloacetic acids by ion chromatography.* Journal of Chromatography A, 1999. **850**(1-2): p. 197-211.

16. Sarzanini, C., M.C. Bruzzoniti, O. Abollino, and E. Mentasti, *Sulphonated azoligand for metal ion determination in ion interaction chromatography.* Journal of Chromatography A, 1999. **847**(1-2): p. 233-244.

17. Bruzzoniti, M.C., E. Mentasti, and C. Sarzanini, *Simultaneous determination of inorganic anions and metal ions by suppressed ion chromatography.* Analytica Chimica Acta, 1999. **382**(3): p. 291-299.

18. Abollino, O., M. Aceto, M.C. Bruzzoniti, E. Mentasti, and C. Sarzanini, *Determination of stability constants of metal-azo dyes complexes by ion-exchange and spectrophotometry.* Annali di Chimica, 1999. **89**(1-2): p. 119-128.

19. Bruzzoniti, M.C., C. Sarzanini, and E. Mentasti, *Preconcentration of contaminants in water analysis.* Journal of Chromatography A, 2000. **902**(1): p. 289-309.

20. Bruzzoniti, M.C., E. Mentasti, C. Sarzanini, B. Onida, B. Bonelli, and E. Garrone, *Retention properties of mesoporous silica-based materials.* Analytica Chimica Acta, 2000. **422**(2): p. 231-238.

21. Sarzanini, C., M.C. Bruzzoniti, and E. Mentasti, *Determination of epichlorohydrin by ion chromatography.* Journal of Chromatography A, 2000. **884**(1-2): p. 251-259.

22. Sarzanini, C., M.C. Bruzzoniti, and P. Hajós, *Effect of stationary phase hydrophobicity and mobile phase composition on the separation of carboxylic acids in ion chromatography.* Journal of Chromatography A, 2000. **867**(1-2): p. 131-142.

23. Bruzzoniti, M.C., E. Mentasti, C.A. Pohl, J.M. Riviello, and C. Sarzanini, *Effect of ion-exchange site and eluent modifiers on the anion-exchange of carboxylic acids.* Journal of Chromatography A, 2001. **925**(1-2): p. 99-108.

24. Conca, R., M.C. Bruzzoniti, E. Mentasti, C. Sarzanini, and P. Hajos, *Ion chromatographic separation of polyamines: Putrescine, spermidine and spermine.* Analytica Chimica Acta, 2001. **439**(1): p. 107-114.

25. Sarzanini, C. and M.C. Bruzzoniti, *Metal species determination by ion chromatography.* TrAC - Trends in Analytical Chemistry, 2001. **20**(6-7): p. 304-310.

26. Bruzzoniti, M.C., E. Mentasti, C. Sarzanini, and E. Tarasco, *Liquid chromatographic methods for chloral hydrate determination.* Journal of Chromatography A, 2001. **920**(1-2): p. 283-289.

27. Sarzanini, C. and M.C. Bruzzoniti, *The present and future of ion chromatography.* American Laboratory, 2002. **34**(10 SUPPL.): p. 12+14-17.

28. Aceto, M., O. Abollino, M.C. Bruzzoniti, E. Mentasti, C. Sarzanini, and M. Malandrino, *Determination of metals in wine with atomic spectroscopy (flame-AAS, GF-AAS and ICP-AES); a review.* Food Additives and Contaminants, 2002. **19**(2): p. 126-133.

29. Bruzzoniti, M.C., N. Cardellicchio, S. Cavalli, and C. Sarzanini, *A study of the mechanisms involved in the separation of metal ions with a mixed-bed stationary phase.* Chromatographia, 2002. **55**(3-4): p. 231-234.

30. Bonelli, B., M.C. Bruzzoniti, E. Garrone, E. Mentasti, B. Onida, C. Sarzanini, V. Serafino, and E. Tarasco, *Mesoporous materials for the retention and separation of haloacetic acids.* Chromatographia, 2002. **56**(SUPPL.): p. S189-S191.

31. Bruzzoniti, M.C., C. Mucchino, E. Tarasco, and C. Sarzanini, *On-line preconcentration, ion chromatographic separation and spectrophotometric determination of palladium at trace level.* Journal of Chromatography A, 2003. **1007**(1-2): p. 93-100.

32. Bruzzoniti, M.C., S. Cavalli, A. Mangia, C. Mucchino, C. Sarzanini, and E. Tarasco, *Ion chromatography with inductively coupled plasma mass spectrometry, a powerful analytical tool for complex matrices: Estimation of Pt and Pd in environmental samples.* Journal of Chromatography A, 2003. **997**(1-2): p. 51-63.

33. Bruzzoniti, M.C., S. Andrensek, M. Novic, D. Perrachon, and C. Sarzanini, *Determination of epichlorohydrin by sulfite derivatization and ion chromatography: Characterization of the sulfite derivatives by ion chromatography-mass spectrometry.* Journal of Chromatography A, 2004. **1034**(1-2): p. 243-247.

34. Sarzanini, C. and M.C. Bruzzoniti, *New materials: Analytical and environmental applications in ion chromatography.* Analytica Chimica Acta, 2005. **540**(1): p. 45-53.

35. Bruzzoniti, M.C., C. Sarzanini, G. Costantino, and M. Fungi, *Determination of herbicides by solid phase extraction gas chromatography-mass spectrometry in drinking waters.* Analytica Chimica Acta, 2006. **578**(2): p. 241-249.

36. Bruzzoniti, M.C., A. Prelle, C. Sarzanini, B. Onida, S. Fiorilli, and E. Garrone, *Retention of heavy metal ions on SBA-15 mesoporous silica functionalised with carboxylic groups.* Journal of Separation Science, 2007. **30**(15): p. 2414-2420.

37. Bruzzoniti, M.C., P. Hajos, K. Horvath, and C. Sarzanini, *Ion chromatographic retention mechanism of inorganic anions on macrocycle based stationary phase.* Acta Chimica Slovenica, 2007. **54**(1): p. 14-19.

38. Berto, S., M.C. Bruzzoniti, R. Cavalli, D. Perrachon, E. Prenesti, C. Sarzanini, F. Trotta, and W. Tumiatti, *Synthesis of new ionic β-cyclodextrin polymers and characterization of their heavy metals retention.* Journal of Inclusion Phenomena and Macrocyclic Chemistry, 2007. **57**(1-4): p. 631-636.

39. Berto, S., M.C. Bruzzoniti, R. Cavalli, D. Perrachon, E. Prenesti, C. Sarzanini, F. Trotta, and W. Tumiatti, *Highly crosslinked ionic β-cyclodextrin polymers and their interaction with heavy metals.* Journal of Inclusion Phenomena and Macrocyclic Chemistry, 2007. **57**(1-4): p. 637-643.

40. Bruzzoniti, M.C., R.M. De Carlo, and M. Fungi, *Simultaneous determination of alkali, alkaline earths and ammonium in natural waters by ion chromatography.* Journal of Separation Science, 2008. **31**(18): p. 3182-3189.

41. Onida, B., S. Fiorilli, B. Camarota, D. Perrachon, and M.C. Bruzzoniti, *Acidic functional groups incorporated in ordered mesoporous materials: a comparison among different host matrices*, in *Studies in Surface Science and Catalysis*. 2008. p. 67-72.

42. Bruzzoniti, M.C., R.M. De Carlo, and C. Sarzanini, *Determination of sulfonic acids and alkylsulfates by ion chromatography in water.* Talanta, 2008. **75**(3): p. 734-739.

43. Bruzzoniti, M.C., R.M.D. Carlo, K. Horvath, D. Perrachon, A. Prelle, R. Tófalvi, C. Sarzanini, and P. Hajós, *High performance ion chromatography of haloacetic acids on macrocyclic cryptand anion exchanger.* Journal of Chromatography A, 2008. **1187**(1-2): p. 188-196.

44. Bruzzoniti, M.C., R.M. De Carlo, S. Fiorilli, B. Onida, and C. Sarzanini, *Functionalized SBA-15 mesoporous silica in ion chromatography of alkali, alkaline earths, ammonium and transition metal ions.* Journal of Chromatography A, 2009. **1216**(29): p. 5540-5547.

45. Fiorilli, S., B. Camarota, D. Perrachon, M. Concetta Bruzzoniti, E. Garrone, and B. Onida, *Direct synthesis of large-pore ethane-bridged mesoporous organosilica functionalized with carboxylic groups.* Chemical Communications, 2009(29): p. 4402-4404.

46. Bruzzoniti, M.C., M. Fungi, and C. Sarzanini, *Determination of EPA's priority pollutant polycyclic aromatic hydrocarbons in drinking waters by solid phase extraction-HPLC.* Analytical Methods, 2010. **2**(6): p. 739-745.

47. Bruzzoniti, M.C., D.K. Kobylinska, M. Franko, and C. Sarzanini, *Flow injection method for the determination of silver concentration in drinking water for spacecrafts.* Analytica Chimica Acta, 2010. **665**(1): p. 69-73.

48. Kobylinska, D.K., M.C. Bruzzoniti, C. Sarzanini, and M. Franko. *Determination of colloid silver in drinking water by flow injection analysis with TLS spectrometric UV detection*. in *Journal of Physics: Conference Series*. 2010.

49. Korte, D., M.C. Bruzzoniti, C. Sarzanini, and M. Franko, *Influence of Foreign Ions on Determination of Ionic Ag in Water by Formation of Nanoparticles in a FIA-TLS System.* Analytical Letters, 2011. **44**(18): p. 2901-2910.

50. Maina, R., V. Tumiatti, M.C. Bruzzoniti, R.M. De Carlo, J. Lukić, and D. Naumović-Vuković. *Copper dissolution and deposition tendency of insulating mineral oils related to dielectric properties of liquid and solid insulation*. in *Proceedings - IEEE International Conference on Dielectric Liquids*. 2011.

51. Bruzzoniti, M.C., R.M. De Carlo, and C. Sarzanini, *The challenging role of chromatography in environmental problems.* Chromatographia, 2011. **73**(SUPPL. 1): p. S15-S28.

52. Korte, D., M.C. Bruzzoniti, C. Sarzanini, and M. Franko, *Thermal lens spectrometric determination of colloidal and ionic silver in water.* International Journal of Thermophysics, 2011. **32**(4): p. 818-827.

53. Bruzzoniti, M.C., C. Sarzanini, A.M. Torchia, M. Teodoro, F. Testa, A. Virga, and B. Onida, *MCM41 functionalized with ethylenediaminetriacetic acid for ion-exchange chromatography.* Journal of Materials Chemistry, 2011. **21**(2): p. 369-376.

54. Bruzzoniti, M.C. and C. Sarzanini, *By-products of drinking water disinfection: Trends and challenges in their monitoring*, in *Water Disinfection*. 2011. p. 1-43.

55. Bruzzoniti, M.C., R. Maina, V. Tumiatti, C. Sarzanini, L. Rivoira, and R.M. De Carlo, *Fast low-pressure microwave assisted extraction and gas chromatographic determination of polychlorinated biphenyls in soil samples.* Journal of Chromatography A, 2012. **1265**: p. 31-38.

56. Bruzzoniti, M.C., R.M. de Carlo, C. Sarzanini, D. Caldarola, and B. Onida, *Novel insights in Al-MCM-41 precursor as adsorbent for regulated haloacetic acids and nitrate from water.* Environmental Science and Pollution Research, 2012. **19**(9): p. 4176-4183.

57. Bruzzoniti, M.C., R.M. De Carlo, C. Sarzanini, R. Maina, and V. Tumiatti, *Determination of copper in liquid and solid insulation for large electrical equipment by ICP-OES. Application to copper contamination assessment in power transformers.* Talanta, 2012. **99**: p. 703-711.

58. De Carlo, R.M., M.C. Bruzzoniti, C. Sarzanini, R. Maina, and V. Tumiatti, *Copper contaminated insulating mineral oils-testing and investigations.* IEEE Transactions on Dielectrics and Electrical Insulation, 2013. **20**(2): p. 557-563.

59. Bruzzoniti, M.C., R.M. De Carlo, C. Sarzanini, R. Maina, and V. Tumiatti, *Stability and reactivity of sulfur compounds against copper in insulating mineral oil: Definition of a corrosiveness ranking.* Industrial and Engineering Chemistry Research, 2014. **53**(21): p. 8675-8684.

60. Bruzzoniti, M.C. and S. Fiore, *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, 2014. **225**(9).

61. Bruzzoniti, M.C., R. Maina, R.M. De Carlo, C. Sarzanini, and V. Tumiatti, *GC methods for the determination of methanol and ethanol in insulating mineral oils as markers of cellulose degradation in power transformers.* Chromatographia, 2014. **77**(15-16): p. 1081-1089.

62. Bruzzoniti, M.C., L. Checchini, R.M. De Carlo, S. Orlandini, L. Rivoira, and M. Del Bubba, *QuEChERS sample preparation for the determination of pesticides and other organic residues in environmental matrices: A critical review.* Analytical and Bioanalytical Chemistry, 2014. **406**(17): p. 4089-4116.

63. De Carlo, R.M., C. Sarzanini, M.C. Bruzzoniti, R. Maina, and V. Tumiatti, *Copper-in-oil dissolution and copper-on-paper deposition behavior of mineral insulating oils.* IEEE Transactions on Dielectrics and Electrical Insulation, 2014. **21**(2): p. 666-673.

64. Caldarola, D., D.P. Mitev, L. Marlin, E.P. Nesterenko, B. Paull, B. Onida, M.C. Bruzzoniti, R.M.D. Carlo, C. Sarzanini, and P.N. Nesterenko, *Functionalisation of mesoporous silica gel with 2-[(phosphonomethyl)-amino] acetic acid functional groups. Characterisation and application.* Applied Surface Science, 2014. **288**: p. 373-380.

65. De Carlo, R.M., L. Rivoira, L. Ciofi, C. Ancillotti, L. Checchini, M. Del Bubba, and M.C. Bruzzoniti, *Evaluation of different QuEChERS procedures for the recovery of selected drugs and herbicides from soil using LC coupled with UV and pulsed amperometry for their detection.* Analytical and Bioanalytical Chemistry, 2015. **407**(4): p. 1217-1229.

66. Bruzzoniti, M.C., R. Maina, V. Tumiatti, C. Sarzanini, and R.M. De Carlo, *Simultaneous determination of passivator and antioxidant additives in insulating mineral oils by high-performance liquid chromatography.* Journal of Liquid Chromatography and Related Technologies, 2015. **38**(1): p. 15-19.

67. Rivoira, L., R.M. De Carlo, S. Cavalli, and M.C. Bruzzoniti, *Simple SPE-HPLC determination of some common drugs and herbicides of environmental concern by pulsed amperometry.* Talanta, 2015. **131**: p. 205-212.

68. Jana, P., M.C. Bruzzoniti, M. Appendini, L. Rivoira, M. Del Bubba, D. Rossini, L. Ciofi, and G.D. Sorarù, *Processing of polymer-derived silicon carbide foams and their adsorption capacity for non-steroidal anti-inflammatory drugs.* Ceramics International, 2016. **42**(16): p. 18937-18943.

69. Rivoira, L., M. Appendini, S. Fiorilli, B. Onida, M. Del Bubba, and M.C. Bruzzoniti, *Functionalized iron oxide/SBA-15 sorbent: investigation of adsorption performance towards glyphosate herbicide.* Environmental Science and Pollution Research, 2016. **23**(21): p. 21682-21691.

70. Rossini, D., L. Ciofi, C. Ancillotti, L. Checchini, M.C. Bruzzoniti, L. Rivoira, D. Fibbi, S. Orlandini, and M. Del Bubba, *Innovative combination of QuEChERS extraction with on-line solid-phase extract purification and pre-concentration, followed by liquid chromatography-tandem mass spectrometry for the determination of non-steroidal anti-inflammatory drugs and their metabolites in sewage sludge.* Analytica Chimica Acta, 2016. **935**: p. 269-281.

71. Bruzzoniti, M.C., C. Sarzanini, L. Rivoira, V. Tumiatti, and R. Maina, *Simultaneous determination of five common additives in insulating mineral oils by high-performance liquid chromatography with ultraviolet and coulometric detection.* Journal of Separation Science, 2016. **39**(15): p. 2955-2962.

72. Ciofi, L., C. Ancillotti, U. Chiuminatto, D. Fibbi, B. Pasquini, M.C. Bruzzoniti, L. Rivoira, and M. Del Bubba, *Fully automated on-line solid phase extraction coupled to liquid chromatography-tandem mass spectrometry for the simultaneous analysis of alkylphenol polyethoxylates and their carboxylic and phenolic metabolites in wastewater samples.* Analytical and Bioanalytical Chemistry, 2016. **408**(12): p. 3331-3347.

73. Bruzzoniti, M.C., R.M. De Carlo, L. Rivoira, M. Del Bubba, M. Pavani, M. Riatti, and B. Onida, *Adsorption of bentazone herbicide onto mesoporous silica: application to environmental water purification.* Environmental Science and Pollution Research, 2016. **23**(6): p. 5399-5409.

74. Bruzzoniti, M.C., O. Abollino, M. Pazzi, L. Rivoira, A. Giacomino, and M. Vincenti, *Chromium, nickel, and cobalt in cosmetic matrices: an integrated bioanalytical characterization through total content, bioaccessibility, and Cr(III)/Cr(VI) speciation.* Analytical and Bioanalytical Chemistry, 2017. **409**(29): p. 6831-6841.

75. Rivoira, L., S. Studzińska, M. Szultka-Młyńska, M.C. Bruzzoniti, and B. Buszewski, *New approaches for extraction and determination of betaine from Beta vulgaris samples by hydrophilic interaction liquid chromatography-tandem mass spectrometry.* Analytical and Bioanalytical Chemistry, 2017. **409**(21): p. 5133-5141.

76. Fiorilli, S., L. Rivoira, G. Calì, M. Appendini, M.C. Bruzzoniti, M. Coïsson, and B. Onida, *Iron oxide inside SBA-15 modified with amino groups as reusable adsorbent for highly efficient removal of glyphosate from water.* Applied Surface Science, 2017. **411**: p. 457-465.

77. Karef, S., A. Kettab, D. Loudyi, M.C. Bruzzoniti, M. Del Bubba, F.A. Nouh, N. Boujelben, and L. Mandi, *Pollution parameters and identification of performance indicators for wastewater treatment plant of medea (Algeria).* Desalination and Water Treatment, 2017. **65**: p. 192-198.

78. Rivoira, L., M. Zorz, M. Martelanc, S. Budal, D. Carena, M. Franko, and M.C. Bruzzoniti, *Novel approaches for the determination of biogenic amines in food samples.* Studia Universitatis Babes-Bolyai Chemia, 2017. **62**(3): p. 103-122.

79. Rivoira, L., M. Castiglioni, M. Del Bubba, and M.C. Bruzzoniti, *3D amperometry in the liquid chromatographic determination of trace pharmaceutical and herbicide emerging compounds.* International Journal of Environmental Analytical Chemistry, 2018. **98**(12): p. 1149-1159.

80. Zera, E., E. Brancaccio, L. Tognana, L. Rivoira, M.C. Bruzzoniti, and G.D. Sorarù, *Reactive Atmosphere Synthesis of Polymer-Derived Si–O–C–N Aerogels and Their Cr Adsorption from Aqueous Solutions.* Advanced Engineering Materials, 2018. **20**(7).

81. Bruzzoniti, M.C., M. Appendini, B. Onida, M. Castiglioni, M. Del Bubba, L. Vanzetti, P. Jana, G.D. Sorarù, and L. Rivoira, *Regenerable, innovative porous silicon-based polymer-derived ceramics for removal of methylene blue and rhodamine B from textile and environmental waters.* Environmental Science and Pollution Research, 2018. **25**(11): p. 10619-10629.

82. Bruzzoniti, M.C., M. Appendini, L. Rivoira, B. Onida, M. Del Bubba, P. Jana, and G.D. Sorarù, *Polymer-derived ceramic aerogels as sorbent materials for the removal of organic dyes from aqueous solutions.* Journal of the American Ceramic Society, 2018. **101**(2): p. 821-830.

83. Ciofi, L., L. Renai, D. Rossini, C. Ancillotti, A. Falai, D. Fibbi, M.C. Bruzzoniti, J.J. Santana-Rodriguez, S. Orlandini, and M. Del Bubba, *Applicability of the direct injection liquid chromatographic tandem mass spectrometric analytical approach to the sub-ng L−1 determination of perfluoro-alkyl acids in waste, surface, ground and drinking water samples.* Talanta, 2018. **176**: p. 412-421.

84. Bruzzoniti, M.C., L. Rivoira, L. Meucci, M. Fungi, M. Bocina, R. Binetti, and M. Castiglioni, *Towards the revision of the drinking water directive 98/83/EC. Development of a direct injection ion chromatographic-tandem mass spectrometric method for the monitoring of fifteen common and emerging disinfection by-products along the drinking water supply chain.* Journal of Chromatography A, 2019. **1605**.

85. Rivoira, L., M. Castiglioni, and M.C. Bruzzoniti, *Chromatographic determination of biogenic amines in four typical Italian cheeses: correlations with processing and nutritional characteristics through a chemometric approach.* Journal of the Science of Food and Agriculture, 2019. **99**(11): p. 4963-4968.

86. Berardi, C., D. Fibbi, E. Coppini, L. Renai, C. Caprini, C.V.A. Scordo, L. Checchini, S. Orlandini, M.C. Bruzzoniti, and M. Del Bubba, *Removal efficiency and mass balance of polycyclic aromatic hydrocarbons, phthalates, ethoxylated alkylphenols and alkylphenols in a mixed textile-domestic wastewater treatment plant.* Science of the Total Environment, 2019. **674**: p. 36-48.

87. Boumalek, W., A. Kettab, N. Bensacia, M.C. Bruzzoniti, D. Ben Othman, L. Mandi, M.N. Chabaca, and S. Benziada, *Specification of sewage sludge arising from a domestic wastewater treatment plant for agricultural uses.* Desalination and Water Treatment, 2019. **143**: p. 178-183.

88. Rivoira, L., M. Castiglioni, A. Kettab, N. Ouazzani, E. Al-Karablieh, N. Boujelben, D. Fibbi, E. Coppini, E. Giordani, M.D. Bubba, and M.C. Bruzzoniti, *Impact of effluents from wastewater treatments reused for irrigation: Strawberry as case study.* Environmental Engineering and Management Journal, 2019. **18**(10): p. 2133-2143.

89. Scordo, C.V.A., L. Checchini, L. Renai, S. Orlandini, M.C. Bruzzoniti, D. Fibbi, L. Mandi, N. Ouazzani, and M. Del Bubba, *Optimization and validation of a method based on QuEChERS extraction and liquid chromatographic–tandem mass spectrometric analysis for the determination of perfluoroalkyl acids in strawberry and olive fruits, as model crops with different matrix characteristics.* Journal of Chromatography A, 2020. **1621**.

90. Del Bubba, M., B. Anichini, Z. Bakari, M.C. Bruzzoniti, R. Camisa, C. Caprini, L. Checchini, D. Fibbi, A. El Ghadraoui, F. Liguori, and S. Orlandini, *Physicochemical properties and sorption capacities of sawdust-based biochars and commercial activated carbons towards ethoxylated alkylphenols and their phenolic metabolites in effluent wastewater from a textile district.* Science of the Total Environment, 2020. **708**.

91. Djillali, Y., M.N. Chabaca, S. Benziada, H. Bouanani, L. Mandi, M.C. Bruzzoniti, N. Boujelben, and A. Kettab, *Effect of treated wastewater on strawberry.* Desalination and Water Treatment, 2020. **181**: p. 338-345.

92. Rivoira, L., M. Castiglioni, S.M. Rodrigues, V. Freitas, M.C. Bruzzoniti, S. Ramos, and C.M.R. Almeida, *Microplastic in marine environment: reworking and optimisation of two analytical protocols for the extraction of microplastics from sediments and oysters.* MethodsX, 2020. **7**.

93. Bruzzoniti, M.C., L. Rivoira, M. Castiglioni, A. El Ghadraoui, A. Ahmali, T. El Hakim El Mansour, L. Mandi, N. Ouazzani, and M. Del Bubba, *Extraction of polycyclic aromatic hydrocarbons and polychlorinated biphenyls from urban and olive mill wastewaters intended for reuse in agricultural irrigation.* Journal of AOAC International, 2020. **103**(2): p. 382-391.

94. Castiglioni, M., L. Rivoira, M. Gallo, I. Ingrando, M. Del Bubba, B. Onida, and M.C. Bruzzoniti, *Removal of sugars from food and beverage wastewaters by amino-modified SBA-15.* Journal of Cleaner Production, 2021. **324**.

95. Castiglioni, M., L. Rivoira, I. Ingrando, M. Del Bubba, and M.C. Bruzzoniti, *Characterization techniques as supporting tools for the interpretation of biochar adsorption efficiency in water treatment: A critical review.* Molecules, 2021. **26**(16).

96. Ahmed, N., D. Vione, L. Rivoira, L. Carena, M. Castiglioni, and M.C. Bruzzoniti, *A review on the degradation of pollutants by fenton-like systems based on zero-valent iron and persulfate: Effects of reduction potentials, ph, and anions occurring in waste waters.* Molecules, 2021. **26**(15).

97. Castiglioni, M., B. Onida, L. Rivoira, M. Del Bubba, S. Ronchetti, and M.C. Bruzzoniti, *Amino groups modified SBA-15 for dispersive-solid phase extraction in the analysis of micropollutants by QuEchERS approach.* Journal of Chromatography A, 2021. **1645**.

98. Renai, L., F. Tozzi, C.V.A. Scordo, E. Giordani, M.C. Bruzzoniti, D. Fibbi, L. Mandi, N. Ouazzani, and M. Del Bubba, *Productivity and nutritional and nutraceutical value of strawberry fruits (Fragaria x ananassa Duch.) cultivated under irrigation with treated wastewaters.* Journal of the Science of Food and Agriculture, 2021. **101**(3): p. 1239-1246.

99. Castiglioni, M., L. Rivoira, I. Ingrando, L. Meucci, R. Binetti, M. Fungi, A. El-Ghadraoui, Z. Bakari, M. Del Bubba, and M.C. Bruzzoniti, *Biochars intended for water filtration: A comparative study with activated carbons of their physicochemical properties and removal efficiency towards neutral and anionic organic pollutants.* Chemosphere, 2022. **288**.