



▶ Anna Bletsou

Postdoctoral Researcher at University of Athens

Phone: +302107274775

e-mail: abletsou@chem.uoa.gr

Education

B.Sc. in Chemistry (2004-2009), University of Athens, Grade: very good

M.Sc. in Chemical Analysis & Quality Control (2009-2011), University of Athens, Grade: excellent

Ph.D. in Chemistry (2012-2015), University of Athens, Grade: excellent

Research Topics

Graduate assignment: Determination of pesticides in vegetables and water by Liquid Chromatography (LC) tandem mass spectrometry detection (MS/MS) and Gas Chromatography (GC) Electron Capture Detector (ECD) and Nitrogen- Phosphorus Detection (NPD)

Master thesis: Determination of 6 multiclass pesticides (bifenthrin, iprodione, lufenuron, thiacloprid, spinosad, pyridalyl) in vegetables by Liquid Chromatography (LC) tandem mass spectrometry (MS/MS)

Erasmus program study: Development and Characterization of novel reversed-phase liquid chromatography stationary phases based on dimedone

Ph.D. thesis: Development of Mass Spectrometric Methods for the determination of Emerging Pollutants in wastewater

Research Interests

- High Resolution Mass Spectrometry
- Wide-scope target screening methods by LC-HRMS
- Environmental and food analysis
- Water quality and water treatment
- Liquid Chromatography (Reversed Phase LC & HILIC)
- Suspect and non-target HRMS screening of emerging pollutants

Research Projects

Thalis project: (2012-2015) Investigation of organic micro pollutants in wastewater treatment and study of their behavior during wastewater disposal to the aquatic environments –WATERMICROPOL

Aristeia project: (2012-2015) Transformation products of emerging pollutants in the aquatic environment - TREMEPOL

Publications in journals

1. Nikolaos S. Thomaidis, Alexandros G. Asimakopoulos, Anna A. Bletsou “Emerging contaminants: a tutorial mini-review” *Global NEST Journal*, 2012, 14(1), 70-77.
2. Anna A. Bletsou, Ahmed H. Hanafi, Marilena E. Dasenaki, Nikolaos S. Thomaidis “Development of specific LC-ESI-MS/MS methods to study the degradation rates and the Pre Harvest Intervals (PHI) of bifenthrin, lufenuron and iprodione in green beans, peas and chili peppers under Egyptian field conditions” *Food Analytical Methods*, 2013, 6, 1099–1112.
3. Alexandros G. Asimakopoulos, Anna A. Bletsou, Qian Wu, Nikolaos S. Thomaidis, Kurunthachalam Kannan “Determination of 1,2,3-Benzotriazoles and 1,3-Benzothiazoles in Human Urine by Liquid Chromatography-Tandem Mass Spectrometry” *Analytical Chemistry*, 2013, 85, 441-448.
4. Anna A. Bletsou, Alexandros G. Asimakopoulos, Athanasios S. Stasinakis, Nikolaos S. Thomaidis, Kurunthachalam Kannan “Mass loading and fate of linear and cyclic siloxanes in wastewater treatment plant in Greece” *Environmental Science and Technology*, 2013, 47, 1824–1832.
5. Akinranti Ajibola, Pablo Gago-Ferrero, Viola L. Borova, Marilena E. Dasenaki, Anna A. Bletsou and Nikolaos S. Thomaidis “Benzosulfonamides in wastewater: method development, occurrence and removal efficiencies” *Chemosphere*, 2015, 119, S21-S27.
6. Aikaterini K. Psoma, Anna A. Bletsou, Ioannis N. Pasiadis and Nikolaos S. Thomaidis “Development and validation of a multi-residue method for the determination of pesticides in Chios mastic gum by QuEChERS and liquid chromatography - tandem mass spectrometry” *Food Analytical Methods*, 2015, 8, 624-634.
7. Constantinos Noutsopoulos, Elena Koumaki, Daniel Mamais, Maria-Christina Nika, Anna A. Bletsou, Nikolaos S. Thomaidis “Removal of endocrine disruptors and non-steroidal anti-inflammatory drugs through wastewater chlorination: the effect of pH, total suspended solids and humic acids and identification of degradation by-products” *Chemosphere*, 2014, 119, S109-S114.
8. Anna A. Bletsou, Junho Jeon, Juliane Hollender, Eleni Archondaki, Nikolaos S. Thomaidis “Targeted and non-targeted liquid chromatography-mass spectrometric workflows for identification of transformation products of emerging pollutants in the aquatic environment” *Trends in Analytical Chemistry*, 2015, 66, 32-44.
9. Emma Schymanski, Heinz Singer, Jaroslav Slobodník, Ildiko Ipolyi, Peter Oswald, Martin Krauss, Tobias Schulze, Peter Haglund, Thomas Letzel, Sylvia Grosse, Nikolaos Thomaidis, Anna Bletsou, Christian Zwiener, Maria Ibáñez, Tania Portoles, Ronald de Boer, Malcolm Reid, Matthias Onghena, Uwe Kunkel, Wolfgang Schulz, Amelie Guillon, Naïke Noyon, Gaëlle Leroy, Philippe Bados, Sara Bogianni, Drazenka Stipanicev, Pawel Rostkowski, Juliane Hollender “Non-target screening with high resolution mass spectrometry: Critical review using a collaborative trial on water analysis” *Analytical and Bioanalytical Chemistry*, 2015, 407, 6237–6255.
10. Marilena E. Dasenaki, Anna A. Bletsou, George A. Koulis, Nikolaos S. Thomaidis “Qualitative multi-residue screening methods for 143 veterinary drugs and pharmaceuticals in milk and fish tissue using liquid chromatography quadrupole-time-of-flight mass spectrometry” *Journal of Agricultural and Food Chemistry*, 2015, 63, 4493–4508.
11. Elena Koumaki, Daniel Mamais, Constantinos Noutsopoulos, Maria-Christina Nika, Anna A. Bletsou, Nikolaos S. Thomaidis, Alexander Eftaxias, Georgia Stratogianni “Degradation of emerging contaminants from water under natural sunlight: the effect of season, pH, humic acids and nitrate and identification of photodegradation by-products” *Chemosphere*, 2015, 138, 675–681.
12. Pablo Gago-Ferrero, Emma L. Schymanski, Anna A. Bletsou, Reza Aalizadeh, Juliane Hollender, Nikolaos S. Thomaidis, “Extended suspect and non-target strategies to characterize emerging polar organic contaminants in raw wastewater with LC-HRMS/MS” *Environmental Science & Technology*, 2015, 49, 12333–12341.
13. Maria-Christina Nika, Anna A. Bletsou, Elena Koumaki, Constantinos Noutsopoulos, Daniel Mamais, Athanasios S. Stasinakis, Nikolaos S. Thomaidis “Chlorination of benzothiazoles

and benzotriazoles and transformation products identification by LC-HR-MS/MS" *Journal of Hazardous Materials*, 2016, submitted.

14. Reza Aalizadeh, Nikolaos S. Thomaidis, Anna Bletsou, Pablo Gago-Ferrero "QSRR models to support non-target high resolution mass spectrometric screening of emerging contaminants in environmental samples" *Journal of Chemical Information and Modeling*, 2016, submitted.

Publications in book chapters

1. Alexandros G. Asimakopoulos, Anna Bletsou, Kurunthachalam Kannan, Nikolaos S. Thomaidis "Recent Developments in Liquid Chromatography-Mass Spectrometry: Advances in Liquid Chromatographic Separations, Ionization Techniques/Interfaces" (chapter 5) in "Mass Spectrometry for Analysis of Pesticide Residues and their Metabolites", edited by Despina Tsipi, Eleni Botitsi, Anastasios Economou, Wiley, 2015, 113-130.
2. Marilena E. Dasenaki, Anna A. Bletsou, Nikolaos S. Thomaidis "ANTIBACTERIALS" (chapter 38) in "Handbook of Food Analysis, Third Edition" by Leo M.L. Nollet and Fidel Toldra (Eds), CRC Press, Boca Raton, FL, 2015, in press.

Conferences Presentations

1. Anna Bletsou, Ahmad Hanafi, Marilena E. Dasenaki, Nikolaos S. Thomaidis "Development of specific LC-ESI-MS/MS methods to study the degradation rates and the Pre Harvest Intervals (PHI) of bifenthrin, lufenuron and iprodione in green beans and peas under the Egyptian field conditions" International Symposium on New Trends in Food Analyses - From LC MS Technologies to UPLC, AFSILAB – AOAC Int., 2009, Paris.
2. Anna Bletsou, Georg Schuster, Wolfgang Lindner "Column Characterization of novel 2-acyl dimedone derived stationary phases ANAKON, 2011, ETH, Zurich, p. 202.
3. Anna Bletsou, Georg Schuster, Wolfgang Lindner "Development and Characterization of novel reversed-phase liquid chromatography stationary phases based on dimedone" 7th International Conference of Instrumental Methods of Analysis Modern Trends and applications, 2011, Chania, Greece.
4. Anna A. Bletsou, Ahmed H. Hanafi, Marilena E. Dasenaki, Nikolaos S. Thomaidis "Development of specific LC-ESI-MS/MS methods for the determination of spinosad, thiacloprid and pyridalyl and study of the degradation rates and the Pre Harvest Intervals in spring onions" 5th Int. Symp. On Recent Advances in Food Analysis, 2011, Prague, p. 354.
5. Maria-Christina Nika, Anna A. Bletsou, Evangelos Gikas, Nikolaos S. Thomaidis "Investigating the degradation and by-product formation of benzothiazoles and benzotriazoles during chlorination" 8th International Conference on Instrumental Methods of Analysis, IMA, 2013, Thessaloniki, Greece, poster presentation, proceedings p.105 (P1-18).
6. Anna A. Bletsou, Dimitrios E. Damalas, Alexandros Stouraitis, Asimina A. Papanastasiou, Nikolaos S. Thomaidis "Screening of emerging pollutants in wastewater samples using low and high resolution mass spectrometry" 8th International Conference on Instrumental Methods of Analysis, IMA, 2013, Thessaloniki, Greece, oral presentation, proceedings p.78 (MO16).
7. Anna A. Bletsou, Aikaterini K. Psoma, Pablo Gago Ferrero, Nikolaos S. Thomaidis "Targeted determination of 1525 micropollutants and transformation products in wastewater by liquid chromatography quadrupole-time-of-flight mass spectrometry with an accurate-mass database", poster presentation, 248th ACS National Meeting & Exposition, 2014, San Francisco.
8. Marilena E. Dasenaki, Anna A. Bletsou, Nikolaos S. Thomaidis, Tony Drury "Quantitative multi-residue method for 150 veterinary drugs and pharmaceuticals in meat using liquid chromatography quadrupole-time-of-flight mass spectrometry (LC-QToF-MS)", poster presentation, 248th ACS National Meeting & Exposition, 2014, San Francisco.
9. Anna A. Bletsou, Marilena E. Dasenaki, Nikolaos S. Thomaidis, Emmanouil I. Dasenakis, Tony Drury, Petra Decker "Screening of pesticides residues and their metabolites in environmental samples using liquid chromatography quadrupole-time-of-flight mass spectrometry with an accurate-mass database", poster presentation, 13th IUPAC

International Congress of Pesticide Chemistry, 2014, San Francisco.

10. Maria Christina Nika, Anna Bletsou, Evangelos Gikas, Nikolaos Thomaidis “Degradation and by-products identification of benzothiazoles and benzotriazoles during chlorination by LC-HR-MS/MS”, EuCheMS DCE Annual Meeting 2014, Istanbul, poster award.
11. Aikaterini Psoma, Anna Bletsou, Nikolaos Thomaidis “Workflow for the identification of biotransformation products of amine-containing psychotropic drugs in the aquatic environment”, EuCheMS DCE Annual Meeting 2014, Istanbul, poster award.
12. Anna A. Bletsou, Dimitrios E. Damalas, Pablo Gago Ferrero, Emma L. Schymanski, Heinz P. Singer, Juliane Hollender, Nikolaos S. Thomaidis “Wide-scope target screening of 2327 emerging pollutants during wastewater treatment by RP-LC-QTOF-HR-MS/MS with an accurate-mass database”, oral presentation, 14th International Conference on Environmental Science and Technology, CEST 2015, Rhodes.
13. Anna A. Bletsou, Alexandros A. Markatis, Pablo Gago Ferrero, Emma L. Schymanski, Heinz P. Singer, Juliane Hollender, Nikolaos S. Thomaidis “HILIC-QTOF-HR-MS/MS for wide-scope screening of polar micropollutants in environmental samples” oral presentation, 14th International Conference on Environmental Science and Technology, CEST 2015, Rhodes.

Awards and Honors

1. Prize “Σαφή” for high performance in exams of Chemistry (2004).
2. Prize “Σαφή” for high performance in exams of Physics (2004).
3. Scholarship by the State Scholarships Foundation for the introduction in the department of chemistry with the second best mark (2004).
4. Scholarship by the Erasmus Mobility Programme (2010).

Professional Affiliations

Association of Greek Chemists, 2009-Present

Hellenic Mass Spectrometry Society, 2012-Present

Contact information

Anna Bletsou

Office: 4th floor, Wing D, Office 12

Phone: 210 7274775

Postal Address: Panepistimiopoli Zografou, Postal Code:15771, Athens, Greece

e-mail: abletsou@chem.uoa.gr