EMILIA BRAMANTI CV- July 2014

Italian National Research Council (CNR)-Institute for Chemistry of Organo-Metallic Compounds (ICCOM, Pisa)-Laboratory of Instrumental Analytical Chemistry, Via G. Moruzzi 1, 56124- Pisa, ITALY.

Birth Pietrasanta (Tuscany), 29/02/1968 (ITALY)

Rank Research Scientist

Via Moruzzi 1 56124 Pisa
Phone 39-050-315.2293 FAX 39-050-315.2555
e-mail: bramanti@pi.iccom.cnr.it

Educational Background:

- University of Pisa, Institute of Biophysics –CNR- Pisa -Master Degree in Life Science- Thesis dissertation title “Use of Ethylendiammine in the speciation of copper in seawater by polarography and DP-Anodic Stripping Voltammetry" (Summa Cum Laude)1986-1990, July 5th 1991.
- University of Pisa, Department of Chemistry, Pisa Ph.D. Chemistry -Ph.D. dissertation title “Conformational analysis of proteins by Fourier Transform Infrared Spectroscopy” 1992-1995, October 24th 1996.

Training and Employment Record

- Electrochemistry (Differential Pulse Polarography and Voltammetry) (UG student at Institute of Biophysics, CNR-Pisa -September 1990-November 1991).
- Spectroscopic techniques (Fourier Transform Infrared Spectroscopy, Circular Dichroism, UV/Visible spectroscopy, NMR spectroscopy), protein conformational analysis (Ph.D student at the Department of Chemistry, University of Pisa -December 1991-April 1996).
- Molecular fluorescence and Trp phosphorescence spectroscopy, analysis of protein dynamic (Institute of Biophysics, Pisa -CNR Fellowship -May 1996-August 1996).
- Atomic spectrometry techniques (Atomic Absorption Spectrometry, Atomic Fluorescence Spectrometry); liquid chromatography (LC); hyphenated techniques (LC-AFS); development of analytical methods; protein analysis; food analysis (milk) (Researcher at Institute of Instrumental Analytical Chemistry, CNR, Pisa, now Institute for Chemical and Physical Processes (IPCF) -September 1996-present).
- Flow Injection Analysis, surface tension measurements, polymer and protein surface activity, process analysis (Short Term Mobility Fellowship of CNR at University of Washington, Department of Chemistry, Seattle, WA, USA).
-

Awards & Activities

- **CNR Young Researcher Award 2005**
- **Peer reviewer** of J. Chromatography A, Talanta, Analytica Chemistry, Analytical Biochemistry, J. Agric. Food Chem., Analytica Chimica Acta, Spectrochimica Acta B, Journal of Hazardous Materials.
- **2 Short Term Mobility Fellowships** of CNR (June 1999-August 1999 and June 2001-July 2001) at the University of Washington/Center for Process Analytical Chemistry (CPAC)-Prof. Robert E. Synovec research group, Seattle, WA, USA.
- **Visiting scientist** at the Department of Chemistry of the University of Washington/Center for Process Analytical Chemistry (CPAC)-Seattle, WA, USA, September 2003-October 2003 / February 2006-March 2006/ May 2007/ June-July 2008.
- Society of Italian Pure and Applied Biophysics Award (**Premio Borsellino** 1996).

- **114 publications in international journals**, about 40 research presentations in international meetings.
- **H-index = 20**
- **7 patents (4 italian patents; 3 PCT)**
- **Thesis supervisor** of 19 students, 2 PhD students.

Research:

Development and optimization of methods, procedures and instrumentation for chemical analysis, their validation and application to environmental, biological matrices, polymers, processes, environmental monitoring, clinical chemistry, food and protein chemistry.

CNR Project. PM.P07.015 Experimental and theoretical methodologies for the non invasive diagnosis

Development and application of specific, sensitive instrumentation for FIA/HPLC on-line detection of thiols, thiolic proteins and metal-binding proteins and their complexes with metals (organic and inorganic mercury, cadmium).

- Development and application of a Dynamic Surface Tension Detector (DSTD) to the study of proteins and polymers at water/air interfaces and as detection system of surfactants for FIA and HPLC instrumentation.
- Development of microwave/UV-assisted photodegradation processes for applications in analytical chemistry and environmental monitoring.
- Conformational analysis of beta-amyloid peptide and self-assembly proteins using Fourier Transform Infrared Spectroscopy (FTIR). Applications in clinical diagnosis.
- Physico-Chemical Characterization of collagen and gelatins and their interactions with chlorinated and sulfochlorinated paraffins.

European Project Life+ (2011-2012) ECOFATTING "Environmentally friendly natural products instead of cloroparaffines in the fatting phase of the tanning cycle" ("LIFE10 ENV/IT/000364). (Coordinator-1.500 keuro)

European Project Life+ (2012-2013) SOREME "Low cost sorbent for reducing mercury emissions" **(Life 11 ENV/IT/109)** (Coordinator-1.500 keuro)

FIRB Young project: Chemical characterization of clay nanotubes for the design of ecosustainable smart materials (FIRB-RBFR12ETL5)(partecipant)

European Project Life+ (2014-2015) LIFE12-ENV/IT/109-BioNAD "Naturalised dyes replacing commercial colorants for environmentally friendly leather dyeing recycle" (participant)

European Project Life+ (2014-2015) LIFE12-ENV/IT/336-After-CU "Anti-infective environmental friendly molecules against plant pathogenic bacteria for reducing Cu" (participant)

European Project Life+ (2014-2016) LIFE13/ENV/IT ECODEFATTING - Environmentally friendly natural products instead of chemical products in the degreasing phase of the tanning cycle in ITALY (participant).

Cooperations:

University of Washington, Seattle, WA, USA.

University of Pisa, Department of Chemistry, Department of Experimental Pathology; Department of Physiology.
CNR Institute of Clinical Physiology.
CNR, Institute of Biophysics.
PI in projects with SMI (Ambiente s.c.r.l and CGS s.a.s) granted by Regione Toscana (DOCUP 2003, DOCUP 2004, DOCUP 2005, DOCUP 2007)

2014

B1. B. Campanella, M. Onor, A. D'Ulivo, S. Giannarelli, E. Bramanti, Impact of Protein Concentration on the Determination of Thiolic Groups of Ovalbumin: A Size Exclusion Chromatography-Chemical Vapor Generation-Atomic Fluorescence Spectrometry Study via Mercury Labeling, Analytical Chemistry 2014 (86)2251-2256.

B2. J. González-Rivera, J. Tovar-Rodríguez, E. Bramanti, C. Duce, I. Longo, E. Fratini, I.R. Galindo-Esquivel, C. Ferrari, Surfactant recovery from mesoporous metal-modified materials (Sn-,Y-, Ce-, Si-MCM-41), by ultrasound assisted ion-exchange extraction and its re-use for a microwave in-situ cheap and eco-friendly MCM-41 synthesis, Journal of Materials Chemistry A, 2014 in press.

B3. J González-Rivera, I R. Galindo-Esquivel, M Onor, E Bramanti, I Longo and C Ferrari, Heterogeneous catalytic reaction of microcrystalline cellulose in hydrothermal microwave assisted decomposition: effect of modified zeolite Beta, Green Chemistry, 2014 (16) 1417-1425.

B4. C. Duce, L. Bernazzani, E. Bramanti, A. Spepi, M.P. Colombinia, M.R. Tinè, Alkyd artists' paints: do pigments affect the stability of the resin? A TG and DSC study on fast-drying oil colours, Polymer Degradation and Stability, in press 2014.

B5. Davide Pellegrini, Massimo Onor, Ilaria Degano, Emilia Bramanti, Development and validation of a novel derivatization method for the determination of lactate in urine and saliva by liquid chromatography
B6. with UV and fluorescence detection, Talanta130 (2014) 280–287.

B7. Celia Duce, Valentina Della Porta, Maria Rosaria Tiné, Alessio Spepi, Lisa Ghezzi, Maria Perla Colombini, Emilia Bramanti, FTIR study of ageing of fast drying oil colour (FDOC) alkyd paint replicas, Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 130 (2014) 214–221.

B8. Beatrice Campanella, Massimo Onor, Carlo Ferrari, Alessandro D'Ulivo and Emilia Bramanti, Direct, simple derivatization of disulfide bonds in proteins with organic mercury in alkaline medium without any chemical pre-reducing agents. Analytica Chimica Acta, in press 2014.

B9. Beatrice Campanella and Emilia Bramanti, Detection of proteins by hyphenated techniques with endogenous metal tags and metal chemical labelling (Critical Review), Analyst, 2014, in press (DOI: 10.1039/C4AN00722K).

2013

B10. B1. E. Bramanti, L. Fulgentini, R. Bizzarri, F. Lenci, A. Sgarbossa, Amyloid Amorphous Aggregates Induced by the Small Natural Molecule Ferulic Acid, J Physical Chemistry B, 2013, 117 (44), 13816–13821

B11. S. Monti, E. Bramanti, V. Della Porta, M. Onor, A. D'Ulivo and V. Barone, Interaction of Collagen with Chlorosulphonated Paraffin Tanning Agents: Fourier Transform Infrared Spectroscopic Analysis and Molecular Dynamics Simulations, Physical Chemistry Chemical Physics, 2013 (15) 14736-14747.

B12. C. Ferrari, H. Chen, R. Lavezza, C. Santinelli, I. Longo and E. Bramanti, Photodegradation of the Rhodamine B using the microwave/UV/H2O2 process: effect of the temperature, International Journal of Photoenergy, 2013, UNSP 854857.

B13. Corti, G. Bergamini, M. Menegazzi, S. Piaggi, E. Bramanti, I. Scataglini, S. Cianchetti, P. Paggiaro, P. Melotti and P. A., Gamma-glutamyltransferase catabolism of S-nitroso-glutathione modulates IL-8 expression in cystic fibrosis bronchial epithelial cells, Free Radical Biology & Medicine, 2013 (65) 360-370.

B14. E. Bramanti, K. J. Skogerboe and R. E. Synovec, Chemical analysis in a drop: A dynamic surface tension detector for polymer and protein characterization, Polymer International, 2013 (62) 1135-1143.

B15. Legnaioli S, Garcia FA, Andreotti A, Bramanti E, Pace DD, Formola S, Lorenzetti G, Martini M, Pardini L, Ribechini E, Sibilia E, Spiniello R, and Palleschi V Multi-technique study of a ceramic archaeological artifact and its content. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy 100 (2013) 144-148.

B16. C Duce, E Bramanti, L Ghezzi, L Bernazzani, I Bonaduce, MP Colombini, A Spepi, S Biagi and MR Tine. Interactions between inorganic pigments and proteinaceous binders in reference paint reconstructions, Dalton Trans. 42 (2013) 5975-5984 (DOI: 10.1039/C2DT32203J)

B17. A Sgarbossa, S Monti, F Lenci, E Bramanti, R Bizzarri, V Barone, The effects of ferulic acid on β-amyloid fibrillar structures investigated through experimental and computational techniques, Biochimica Biophysica Acta 1830 (2013) 2924-2937.

B18. B.Campanella, M. Onor, A. D'Ulivo, C. Ferrari, M.C. Mascherpa, E. Bramanti, Determination of Thiomersal by Flow Injection coupled with Microwave-Assisted Photochemical Online Oxidative Decomposition of Organic Mercury and Cold Vapor Atomic Fluorescence Spectroscopy, Analytica Chimica Acta, 2013 (804) 66-69.

B19. B.Campanella, J.Gonzalez Rivera, C. Ferrari, S. Biagi, M. Onor,A. D'Ulivo, E. Emilia Bramanti, Microwave Photochemical Reactor for the Online Oxidative Decomposition of

B20. p-Hydroxymercurybenzoate (pHMB)-Tagged Proteins and Their Determination by Cold Vapor Generation-Atomic Fluorescence Detection, Analytical Chemistry 2013 (85) 12151-12157.

B21. Method of detecting serum gamma-glutamyl transferase isoforms in a biological fluid-Patent Number:US 08486650-Patent Assignee:Universita' di Pisa-Inventor(s):Paolicchi, Aldo; Pompella, Alfonso; Franzini, Maria; Barsacchi, Renata; Emdin, Michele; Bramanti, Emilia, Official Gazette of the United States Patent and Trademark Office Patents-Published:JUL 16 2013

2012

B22. S.Biagi, S.Ghimenti, M.Onor and E.**Bramanti** Simultaneous determination of lactate and pyruvate in human sweat using reversed phase high performance liquid chromatography: a non invasive approach. Biomedical Chromatography, 2012, 2713.

B23. C. Duce, L.Ghezzi, M.Onor, I.Bonaduce, M.P. Colombini, M.R.Tine', E.**Bramanti**, Physico-chemical characterization of protein–pigment interactions in tempera paint reconstructions: casein/cinnabar and albumin/cinnabar, Analytical and Bioanalytical Chemistry, 402 (2012) 2183-2193.

B24. Legnaioli S, Garcia FA, Andreotti A, **Bramanti** E, Pace DD, Formola S, Lorenzetti G, Martini M, Pardini L, Ribechini E, Sibilia E, Spiniello R, and Palleschi V Multi-technique study of a ceramic archaeological artifact and its content. Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy, 2012, in press.

2011

B25. Valeria Angeli, Simona Biagi, Silvia Ghimenti, Massimo Onor, Alessandro D'Ulivo, Emilia Bramanti, Flow injection-chemical vapor generation atomic fluorescence spectrometry hyphenated system for organic mercury determination: A step forward, *Spectrochimica Acta B*, 66 (2011) 799–804.

B26. Emilia Bramanti, Carlo Ferrari, Valeria Angeli, Massimo Onor and Robert E. Synovec, Characterization of BSA unfolding and aggregation using a Single-Capillary Viscometer and Dynamic Surface Tension Detector, *Talanta* 85 (2011) 2553-2561.

B27. Huilun Chen, Emilia Bramanti, Iginio Longo, Massimo Onor and Carlo Ferrari, Oxidative decomposition of atrazine in water in the presence of hydrogen peroxide using an innovative microwave photochemical reactor, *Journal of Hazardous Materials* 186 (2011) 1808-1815.

B28. V. Angeli, C Ferrari, I. Longo, M. Onor, A. D'Ulivo and E. Bramanti. A novel microwave photochemical reactor for the on-line oxidative decomposition and determination of p-hydroxymercurybenzoate (PHMB) and its thiolic complexes by cold vapour generation atomic fluorescence detection, *Analytical Chemistry* 83 (2011) 338-343. IF=5.214.

B29. Chen H, Angiuli M Ferrari C, Tombari E, Salvetti G., Bramanti E. Tocopherol speciation as first screening for the assessment of extra virgin olive oil quality by reversed-phase high-performance liquid chromatography/fluorescence detector. *Food Chemistry*, 125 (2011) 1423-1429. IF=3.146.

B30. Bramanti E, Angeli V, Paolicchi A, Pompella A. The determination of S-nitrosothiols in biological samples –procedures, problems and precautions. *Life Sciences* 88(2010) 122-129. *IF=2.56*

2010

B31. S. Bakirdere, E. Bramanti, A. D'ulivo, O. Y. Ataman, Z. Mester, Speciation and determination of thiols in biological samples using high performance liquid chromatography–inductively coupled plasma-mass spectrometry and high performance liquid chromatography–Orbitrap MS, *Anal. Chimica Acta* 680 (2010) 41-47.IF=3.757

B32. Rao Y., McCooeye M., Windust A., Bramanti E., D'Ulivo A., Mester Z., Mapping of Selenium Methabolic Pathway in yeast by Liquid Chromatography-Orbitrap Mass Spectrometry, Anal. Chem., 82 (2010) 8121-8130.IF=5.214

B33. Karisa Pierce, Emilia Bramanti, Massimo Onor, Roberto Spiniello, Alexandra Kangas, Kristen Skogerboe and Robert E. Synovec, The Effect of TBA Cation on Protein Surface Activity in the Multidimensional Analysis of Soluble Coffee Samples by Size Exclusion Chromatography coupled to UV-Vis Absorbance and Dynamic Surface Tension Detection, *Talanta*, 80 (2010) 1445-1451.IF=3.29

B34. Lomonte, J Fritsche,E Bramanti, A Doronila, D Gregory,A J. M. Baker, SD Kolev, Assessment of the pollution potential of mercury contaminated biosolids, *Environ. Chem*. 2010, 7, 146–152. IF=1.85

B35. Fei Wang, Jun Yao, Yang Si, Huilun Chen, Mohammad Russel, Ke Chen, Yiguang Qian, Gyula Zaray and Emilia Bramanti, Short-time effect of heavy metals upon microbial community activity *Journal of Hazardous Materials*, 173 (2010) 510-516.IF=4.144

B36. Huilun Chen, Carlo Ferrari, Marco Angiuli, Jun Yao, Costantino Raspi and Emilia Bramanti, Qualitative and quantitative analysis of wood samples by Fourier transform infrared spectroscopy and multivariate analysis, *Carbohydrate Polymers*, 82 (2010) 772-778. IF=3.167

B37. Yulan Rao, Bingren Xiang, Emilia Bramanti, Alessandro D'Ulivo and Zoltan Mester, Determination of Thiols in Yeast by HPLC Coupled with LTQ-Orbitrap Mass Spectrometry after Derivatization with p-(Hydroxymercuri)benzoate *J. Agric. Food Chem*. 58 (2010) pp 1462–1468. IF=2.469

B38. Emilia Bramanti, Valeria Angeli, Zoltan Mester, A Paolicchi, A Pompella, Alessandro D'Ulivo Determination of S-Nitrosoglutathione in Plasma: Comparison of Two Methods, Talanta 81 (2010) 1295–1299.IF=3.29

B39. Valeria Angeli, Huilun Chen, Zoltan Mester, Yulan Rao, Alessandro D'Ulivo and Emilia Bramanti, Derivatization of GSSG by pHMB in alkaline media. Determination of Oxidized Glutathione in Blood, *Talanta*, 82 (2010) 815-820. IF=3.29

B40. Emilia Bramanti, Francesco Lenci, Antonella Sgarbossa, Effects of hypericin on the structure and aggregation properties of beta-amyloid peptides, Eur Biophysical J., 39 (2010) 1493-1501 .IF=2.437.

2009

B41. Emilia Bramanti, Valeria Angeli, Zoltan Mester, Alessandro D'Ulivo, Reply to comments of Tsikas on "Determination of S-nitrosoglutathione and other nitrosothiols by p-hydroxymercurybenzoate derivatization and reverse phase chromatography coupled with chemical vapor generation atomic fluorescence detection, *Talanta*, 79 (2009), pp. 554-555. (Elsevier)

B42. Valeria Angeli, Emilia Bramanti, Cecilia Vecoli, Aldo Paolicchi, Maria Franzini, Renata Barsacchi, Riccardo Baldassini, Alfonso Pompella, A safe procedure for measurement of S-Nitrosoglutathione, the central metabolite in S-Nitrosothiols formation and bioactivity, *Free Radical Research* 43 Suppl. 1 (2009) 83.

B43. Emilia Bramanti, Valeria Angeli, Maria Franzini, Cecilia Vecoli, Riccardo Baldassini, Aldo Paolicchi, Renata Barsacchi and A. Pompella, Exogenous vs. endogenous c-glutamyltransferase activity: Implications for the specific determination of S-nitrosoglutathione in biological samples, *Archives of Biochemistry and Biophysics*, 487 (2009) 146-152. (Elsevier)

B44. Carlo Ferrari, Iginio Longo, Elpidio Tombari, Emilia Bramanti, A novel microwave photochemical reactor for the oxidative decomposition of Acid Orange 7 azo dye by MW/UV/H2O2 process *Journal of Photochemistry and Photobiology A,* 204 (2009) 115–121. (Elsevier)

B45. Huilun Chen, Jun Yao, Fei Wang, Martin M.F. Choi, Emilia Bramanti and Gyula Zaray, Study on the toxic effects of diphenol compounds on soil microbial activity by a combination of methods, *Journal of Harzadous Materials* 167 (2009) 846-851. (Elsevier)

B46. Hui-Lun Chen, Jun Yao, Lin Wang, Fei Wang, Emilia Bramanti, Thomas Maskow, Gyula Zaray Evaluation of solvent tolerance of microorganisms by microcalorimetry, *Chemosphere* 74 (2009) 1407–1411.

B47. Valeria Angeli, Alessia Tacito, Aldo Paolicchi, Renata Barsacchi, Maria Franzini, Riccardo Baldassini, Cecilia Vecoli, Alfonso Pompella and Emilia Bramanti, S-Nitrosoglutathione as a substrate of gamma-glutamyltransferase (GGT) – A kinetic study, *Archives of Biochemistry and Biophysics*, 481 (2009) 191–196. (Elsevier)

B48. Hui-Lun Chen, Jun Yao, Fei Wang, Emilia Bramanti, Thomas Maskow, Gyula Zaray, Acute toxic effects of three pesticides on *Pseudomonas putida* monitored by microcalorimeter *Journal of Environmental Science and Health, Part B-Pesticides Food Contaminants and Agricultural Wastes*, 44-2 (2009) 157 – 163.

2008

B49. Emilia Bramanti, Karin Jacovozzi, Lucia D'Ulivo, Cecilia Vecoli, Roberto Zamboni, Zoltan Mester and Alessandro D'Ulivo, Determination of S-nitrosoglutathione and other nitrosothiols by p-hydroxymercurybenzoate derivatization and reverse phase chromatography coupled with chemical vapor generation atomic fluorescence detection, *Talanta* 77 (2008) 684-694. (Elsevier)

B50. M.Franzini, V. Ottaviano, V. Fierabracci, Emilia Bramanti, L. Zyw, R. Barsacchi, F. Scatena, C. Boni, C. Mammini, C. Passino, A. Pompella, M. Emdin, A. Paolicchi, Fractions of plasma gamma-glutamyltransferase in healthy individuals: Reference values, *Clinica Chimica Acta*, 395 (1-2), pp. 188-189, 2008. (Elsevier)

B51. Wang, F., Yao, J., Tian, L., Zhou, Y., Chen, H., Chen, H., Gai, N., Chen, Y., Zhuang, R., Zaray, G., Maskow, T. and Bramanti Emilia, Microcalorimetric investigation of the toxic action of ammonium ferric(III) sulfate on the metabolic activity of pure microbes. *Environmental Toxicology and Pharmacology* 25 (2008) 351-357.

B52. Bramanti Emilia, Cavallaro Rosa, Onor Massimo, Zamboni Roberto, D'Ulivo Alessandro. Determination of thiolic compounds as mercury complexes by cold vapor atomic absorption spectrometry and its application to wines. *Talanta* 74 (2008) 936-943. (Elsevier)

B53. Franzini Maria, Bramanti Emilia, Ottaviano Virginia, Ghiri Emiliano, Scatena Fabrizio, Barsacchi Renata, Donato Luigi, Emdin Michele, Aldo Paolicchi, A high performance gel filtration chromatography method for γ-glutamyltransferase fraction analysis. *Analytical Biochemistry*. 374 (2008) 1-6. (Elsevier)

B54. Yao, J., Tian, L., Wang, Y., Djah, A., Wang, F., Chen, H., Su, C., Zhuang, R., Zhou, Y., Choi, M.M.F. and Bramanti Emilia Microcalorimetric study the toxic effect of

hexavalent chromium on microbial activity of wuhan brown sandy soil: An in vitro approach. *Ecotoxicology and Environmental Safety*. 69 (2008) 289-95.

B55. BREVETTO PCT Patent No. PCT/IB2008/052499 del 24/06/2008, PAOLICCHI Aldo, POMPELLA Alfonso, FRANZINI Maria, BARSACCHI Renata, EMDIN Michele, BRAMANTI Emilia "*Identification / quantification of distinctsub-components of serum gamma-glutamyltransferase"*. proprietà dell' Universita' di Pisa- Licenza esclusiva (10 anni) a Sorta Srl.

B56. BREVETTO PCT Patent N.o PCT/IB2007002090: Pompella Alfonso (IT); Paolicchi Aldo (IT); Bramanti Emilia (IT); Barsacchi Renata (IT); Franzini Maria (IT), . "*Process for determining S-nitrosothiols in biological fluids*", publication number WO2008012642, Priority number(s): IT/21.07.06/ITA PI20060093, Publication date: 2008-01-31 Application N.o 07789530.8-2404 (lettera dell'European Patent Office del 11/03/09). Proprietà dell' Universita' di Pisa- Licenza esclusiva (10 anni) a Sorta Srl.

2007

B57. Rensheng Zhuang; Wenhui Zhong; Jun Yao; Huilun Chen; Lin Tian; Yong Zhou; Fei Wang; Emilia Bramanti; Gyula Zaray Isolation and characterization of aniline-degrading *Rhodococcus* sp. strain AN5, *Journal of Environmental Science and Health, Part A- Hazardous Substances & Environmental Engeneering*, 42 (2007) 2009 – 2016.

B58. Yao J., Xu C., Wang F., Tian L., Wang Y., Chen H., Yong Z., Choi M.M.F., Bramanti Emilia, Maskow T., An in vitro microcalorimetric method for studying the toxic effect of cadmium on microbial activity of an agricultural soil, *Ecotoxicology* 16 (2007) 503–509.

B59. Chen H, Yao J, Wang Y, Tian L, Wang F, Djak A, Choi MM, Bramanti Emilia. A microcalorimetric method for studying the toxic effect of different diphenol species on the growth of Escherichia coli. *Journal of Environmental Science and Health Part A-Toxic/Hazardous Substances & Environmental Engeneering*. 2007 Apr;42(5):613-20.

B60. BREVETTO ITALIANO: PAOLICCHI Aldo, POMPELLA Alfonso, FRANZINI Maria, BARSACCHI Renata, EMDIN Michele, BRAMANTI Emilia "Procedimento di determinazione e di separazione di isoforme di gamma-glutamiltransferasi (GGT) sierica in un campione di fluido biologico e isoforme enzimatiche così ottenute", TO2007A000455 depositato il 25/06/2007.

2006

B61. Vecoli Cecilia, Bramanti Emilia, Toncelli Daniel, Barsacchi Renata, Neglia Danilo, Low-flow ischemia induces release of nitrosoglutathione (GSNO) in the effluent of isolated perfused rat heart, *European Heart Journal* 27 (2006) 478-478.

B62. Bramanti Emilia, Toncelli Daniel, Morelli Elisabetta, Lampugnani Leonardo, Zamboni Roberto, Miller Keith E, Zemetra J, D'Ulivo Alessandro. Determination and characterization of phytochelatins by liquid chromatography coupled with on line chemical vapour generation and atomic fluorescence spectrometric detection, *J. Chromatography A* 1133(2006) 195-203. (Elsevier)

B63. Emilia Bramanti, Lucia D'Ulivo, Cristina Lomonte, Massimo Onor, Roberto Zamboni, Giorgio Raspi, Alessandro D'Ulivo. Determination of hydrogen sulfide and volatile thiols in air samples by mercury probe derivatization coupled with liquid chromatography–atomic fluorescence spectrometry. *Analytica Chimica Acta* 579 (2006) 38–46. (Elsevier)

B64. Emilia Bramanti, Chiara Allegrini, Massimo Onor, Giorgio Raspi, Kristen J. Skogerboe, Robert E. Synovec, Flow injection analysis with diode array absorbance detection and dynamic surface tension detection for studying denaturation and surface activity of globular proteins, *Analytical Biochemistry* 351 (2006) 100–113. (Elsevier)

B65. Neglia D, Marraccini P, Vecoli C, De Caterina A, Gastaldelli A, Ciociaro D, Natali A, Bramanti Emilia, Vassalle C, Prontera C, Barsacchi R, Recchia F, L'Abbate A, Stanley W Augmented nitric oxide release in the coronary circulation parallels myocardial metabolic stress in patients with dilated cardiomyopathy *Journal of the American College of Cardiology* 47 (2006) 91A-91A Suppl. A.

B66. BREVETTO ITALIANO: Paolicchi A., Pompella A., Franzini M., Barsacchi R., Vecoli C. and Bramanti Emilia Appl. No. PI/2006/A/000093, depositato il 21 Luglio 2006: "Procedura per la determinazione di S-nitrosotioli in fluidi biologici".

2005

B67. Emilia Bramanti, Donatella Catalano, Claudia Forte, Carlo Alberto Veracini, Solid State 13C NMR and FT-IR Spectroscopy of the Cocoon Silk of Two Common Spiders', *Spectrochimica Acta Part A*: *Molecular and Biomolecular Spectroscopy*, 62 (2005) 105-111. (Elsevier)

B68. Emilia Bramanti, Cristina Lomonte, Massimo Onor, Roberto Zamboni, Giorgio Raspi, Alesandro D'Ulivo, Mercury speciation by Liquid Chromatography Coupled with On Line Chemical Vapour Generation and Atomic Fluorescence Spectrometric Detection (LC-CVGAFS), *Talanta*, 66 (2005) 762-768. (Elsevier)

B69. Emilia Bramanti, Cecilia Vecoli, Danilo Neglia, Maria Paola Pellegrini, Giorgio Raspi and Renata Barsacchi,Speciation and quantitative determination of thiols by Reversed Phase Coupled with On Line Chemical Vapour Generation and Atomic Fluorescence Spectrometric Detection (RP-CVGAFS). Method validation and preliminary applications. *Clinical Chemistry*, 51(2005) 1007-1013.

B70. Patrizia Cioni, Emilia Bramanti and Giovanni B. Strambini, Effects of sucrose on the internal dynamics of azurin, *Biophysical Journal* 88 (2005) 4213-4222.

B71. D'Alessio Aldo, Bramanti Emilia, Piperno M., Naccarato Giovanni, Vergamini Piergiorgio, Fornaciari Gino, An 8,500-year old bladder stone from uzzo cave (Trapani): Fourier Transform Infrared Spectroscopy Analysis, *Archaeometry*, 47 (2005) 127-136.

B72. Bethany A. Staggemeier, Emilia Bramanti, Chiara Allegrini, Kristen J. Skogerboe, and Robert E. Synovec High-Throughput Screening of Protein Surface Activity via Flow Injection Analysis-pH Gradient-Dynamic Surface Tension Detection *Analytical Chemistry*, 77 (2005) 250-258. (American Chemical Society)

2004

B73. Emilia Bramanti, Cristina Lomonte, Massimo Onor, Roberto Zamboni, Giorgio Raspi and Alessandro D'Ulivo Study of the Disulfides Reduction of Denatured Proteins by Liquid Chromatography Coupled with On-Line Cold Vapor Generation Atomic Fluorescence Spectrometry (LC-CVGAFS), *Analytical and Bioanalytical Chemistry*, 380 (2004) 310-318. (Springer)

B74. Emilia Bramanti, Cristina Lomonte, Alvaro Galli, Massimo Onor, Roberto Zamboni, Giorgio Raspi and Alessandro D'Ulivo Characterization of Denatured Metallothioneins by Reversed Phase Coupled with On Line Chemical Vapour Generation and Atomic Fluorescence Spectrometric Detection (RP-CVGAFS), *J. Chromatography A*, 1054/1-2 (2004) 285-291 (invited paper). (Elsevier)

B75. Elena Sbrana, Emilia Bramanti, Maria C. Spinetti, Giorgio Raspi. S-Adenosyl Methionine/S-Adenosyl Homocysteine ratio determination by capillary electrophoresis employed as a monitoring tool for adenosine analogs antiviral effectiveness. *Electrophoresis* 25 (2004) 1518-1521.

B76. Elena Sbrana, Adriano Paladini, Emilia Bramanti, Maria Carla Spinetti, Giorgio Raspi, Quantization of reduced glutathione and cysteine in HIV infected patients. *Electrophoresis* 25 (2004) 1522-1529.

B77. Emilia Bramanti, Chandra Sortino, Cristina Lomonte, Massimo Onor, Roberto Zamboni, Giorgio Raspi and Alessandro D'Ulivo, Hydrophobic Interaction Chromatography coupled with Atomic Fluorescence Spectrometric Detection. Effect of the Denaturation on the Determination of Thiolic Proteins., *Talanta* 63 (2004) 383-389. (Elsevier)

B78. Wes W.C. Quigley, Emilia Bramanti, Bethany A. Staggemeier, Keith E. Miller, Abdul Nabi, Kristen J. Skogerboe and Robert E. Synovec, Molar Mass Determination of Proteins Denatured in Guanidine Thiocyanate using Dynamic Surface Tension Analysis, *Analytical and Bioanalytical Chemistry*, 378 (2004) 134-143. (Springer)

B79. Emilia Bramanti, Wes W. C. Quigley, Chandra Sortino, Francesca Beni, Massimo Onor, Giorgio Raspi and Robert E. Synovec, Multidimensional Analysis of Denatured Milk Proteins by Hydrophobic Interaction Chromatography coupled to a Dynamic Surface Tension Detector, *J Chromatography A*, Volume: 1023, Issue: 1, January 9, 2004, pp. 79-91. (Elsevier)

B80. Robert E. Synovec, Bethany A. Staggemeier, Emilia Bramanti, Wes W. C. Quigley, Bryan J. Prazen, Size Exclusion Chromatography with Dynamic Surface Tension Detection: Analysis of Polymers and Proteins in "*Multiple Detection Size-Exclusion Chromatography"* -ACS Symposium Series 893," A. M. Striegel Ed.; American Chemical Society: Washington, DC; BOOK CHAPTER N.16, 2004 (ISBN: 0-8412-3878-2), p 266-280.

2003

B81. Emilia Bramanti, Fabrizio Ferri, Chandra Sortino, Massimo Onor, Giorgio Raspi Marcella Venturini, Characterization of Denatured Proteins by Hydrophobic Interaction Chromatography: a preliminary study, *Biopolymers*, 69 (2003) 293-300.

B82. Emilia Bramanti, Chandra Sortino, Massimo Onor, Francesca Beni and Giorgio Raspi, Separation and Determination of Denatured αs1- αs2-, β- and κ-Caseins by Hydrophobic Interaction Chromatography in Cows', Ewes' and Goats' Milk, Milk Mixtures and Cheeses, *J Chromatography A*, 994 (2003) 59-74. (Elsevier)

2002

B83. Emilia Bramanti, Chandra Sortino, Giorgio Raspi New Chromatographic Method for Separation and Determination of Denatured αs1- αs2-, β- and κ-Caseins by Hydrophobic Interaction Chromatography, *J. Chromatography A*, 958 (2002), 157-166. (Elsevier)

2001

B84. Alessandro D'Ulivo, Emilia Bramanti, Leonardo Lampugnani, Roberto Zamboni, Improving the analytical performance of hydride generation non-dispersive atomic fluorescence spectrometry. Combined effect of additives and optical filters, *Spectrochimica Acta Part B*, 56 (2001)1893-1907. (Elsevier)

B85. Giorgio Raspi, Maria Spinetti, Giovanna Tesi, Emilia Bramanti, Simultaneous Determinations of Glycolytic Enzymes in Crude Extract Concentrate by Hydrophobic Interaction Chromatography. *Chromatographia*, 53 (2001) S-174.

B86. Emilia Bramanti , Chandra Sortino , Giorgio Raspi and Robert E. Synovec Separation and determination of denatured caseins by hydrophobic interaction chromatography. Part II. Method validation and applications, *The Analyst*, 126 (2001) 995-1000. (Royal Society of Chemistry)

B87. Emilia Bramanti, Fabrizio Ferri, Giorgio Raspi, Leonardo Lampugnani, Maria Carla Spinetti, Keith E. Miller and Robert E. Synovec, New Method for Separation and Determination of Denatured Caseins by Hydrophobic Interaction Chromatography, *Talanta*, 54 (2001) 343-349. (Elsevier)

B88. Emilia Bramanti, Serena Lucchesini, Alessandro D'Ulivo, Leonardo Lampugnani, Roberto Zamboni, Maria Carla Spinetti, Giorgio Raspi, Selective determination of thiolic proteins by Hydrophobic Interaction Chromatography coupled with on-line Cold Vapour Atomic Fluorescence Spectrometry, *Journal of Analytical Atomic Spectrometry*, 16 (2001) 166-171. (Royal Society of Chemistry)

2000

B89. Keith E. Miller, Emilia Bramanti, Bryan J. Prazen, Marina Prezhdo, Kristen J. Skogerboe, Robert E. Synovec, Multidimensional Analysis of Polyethylene Glycols by Size Exclusion Chromatography and Dynamic Surface Tension Detection, *Anal. Chemistry*, 72 (2000), 4372-4380. (American Chemical Society)

B90. D'Ulivo A., Marcucci K., Bramanti E., Lampugnani L., Zamboni R., Studies in Hydride Generation atomic fluorescence determination of selenium and tellurium. Part 1-Self Interference effect in Hydrogen Telluride Generation and the effect of KI, *Spectrochimica Acta. Part B*, 55 (2000) 1325-1336. (Elsevier)

B91. Benedetti E., D'Alessio A., Zini M.F., Bramanti Emilia, Tirelli N., Vergamini P., Moggi G., Characterization of acrylic resins and fluoroelastomer blends as potential materials in stone protection, *Polymer International*, 49 (2000) 888-892.

1999

B92. Pergami P, Bramanti Emilia, Ascoli GA, Structural Dependence of the Cellular Isoform of Prion Protein on Solvent: Spectroscopic Characterization of an Intermediate Conformation. *Biochem Biophys Res Commun.,* 264 (1999) 972-978.

B93. Emilia Bramanti, Alessandro D'Ulivo, Leonardo Lampugnani, Roberto Zamboni, Giorgio Raspi, Application of mercury cold vapor atomic fluorescence spectrometry to the characterization of mercury-accessible -SH groups in native proteins, *Analytical Biochemistry,* 274 (1999) 163-73. (Elsevier)

B94. Morganti Fabrizio, Bramanti Emilia, Solaro Roberto, Nannipieri E., Narducci P., Krauser S.F., Samour C.M., Benedetti Enzo, Chiellini Emo, Thermal and Spectroscopic characterization of interactions between a penetration enhancer and stratum corneum components*, J. Bioactive and Compatible Polymers*, 14 (1999) 162-177.

B95. Franchi M., Bramanti Emilia, Bonzi L.M., Orioli P.L., Vettori C., Gallori E., Clay-nucleic acid complexes: characteristics and implications for the preservation of genetic material in primeval habitats, *Origins of Life and Evolution of Biosphere*, 29 (1999) 297-315.

B96. Giorgio Raspi, Maria Spinetti, Giovanna Tesi and Emilia Bramanti*,* 203Hg Labelled PHMB as Reagent for the Determination of –SH groups in Native and Denatured Proteins by Hydrophobic Interaction Chromatography, *The Analyst*, 124 (1999) 511-515. (Royal Society of Chemistry)

B97. Emilia Bramanti, Alessandro D'Ulivo, Leonardo Lampugnani, Giorgio Raspi and Roberto Zamboni, Cold vapour atomic fluorescence studies on the Behaviour of Hg(II) and Hg(II)–Thiol complexes. An alternative route for Characterization of –SH binding groups", *J.Anal. At.Spectrom*., 14 (1999) 179-185. (Royal Society of Chemistry)

1998

B98. Giorgio Raspi, Maria Spinetti, Giovanna Tesi and Emilia Bramanti, Simultaneous determination of denatured proteins by Hydrophobic Interaction Chromatography, *Anal. Commun*., 35 (1998) 399-402.

B99. Ascoli G., Pergami P., Luu KX, Alkon DL, Bramanti Emilia, Bertucci C, Di Bari L, Salvadori P, Use of CD and FT-IR to determine the secondary structure of purified proteins in the low-microgram range. *Enantiomer*, 3 (1998) 371-81.

B100. Edoardo Benedetti, Emilia Bramanti, Federico Papineschi, Piergiorgio Vergamini and Enzo Benedetti, An approach to the study of Primitive Thrombocythemia (PT) megakaryocytes by means of Fourier Transform Infrared Microspectroscopy, *Cellular and Molecular Biology*, 44 (1998) 129-139.

1997

B101. Giovanna Biondi, M.Francesca Zini, Emilia Bramanti, Edoardo Benedetti, Giovanni Agostini, Marianno Franzini, Piergiorgio Vergamini, Enzo Benedetti, Reactivity of nucleic acids with ozone. An FT-IR Microspectroscopy study. *Applied Spectroscopy*, 51 (1997) 1516-1520.

B102. Ascoli G. A., Luu K.X., Olds J.L., Nelson T.J., Gusev P.A., Bertucci C., Bramanti Emilia, Raffaelli A., Salvadori P., Alkon D.L., Secondary structure and Ca2+-induced conformational change of calexcitin, a learning-associated protein. *J Biol Chem*. 272 (1997) 24771-24779.

B103. Edoardo Benedetti, Emilia Bramanti, Federico Papineschi, Ilaria Rossi and Enzo Benedetti, Determination of the relative amount of nucleic acids and proteins in leukemic and normal lymphocytes by means of Fourier Transform Infrared Microspectroscopy (FT-IR-M*). Applied Spectroscopy*, 51 (1997) 792-797.

B104. Emilia Bramanti, Edoardo Benedetti, Andrea Sagripanti, Federico Papineschi and Enzo Benedetti, Determination of the secondary structure of normal fibrin from human peripheral blood using a new deconvolution procedure of infrared spectra. *Biopolymers*, 41 (1997) 545-553.

B105. Emilia Bramanti, Edoardo Benedetti, Claudio Nicolini, Tatiana Berzina, Victor Erokhin, Aldo D'Alessio and Enzo Benedetti, Qualitative and quantitative analysis of the secondary structure of cytochrome C Langmuir-Blodgett films. *Biopolymers*, 42 (1997) 227-237.

B106. DeVito S., Ciardelli F., Benedetti E., Bramanti Emilia, Thermal Phase Transition in the solid state in ethylene-carbon monoxide alternating copolymer, *Polymers for Advanced Technologies*, 8 (1997) 53-62.

1996

B107. Bramanti Emilia, Benedetti Enzo, Determination of the secondary structure of isomeric forms of human serum albumin by a particular frequency deconvolution procedure applied to FT-IR analysis. *Biopolymers*, 38 (1996) 639-653.

1995

B108. Bramanti Emilia, Bramanti Mauro, A wide-band dielectric characterization system for liquid materials of interest in biology, *Journal of Microwave Power and Electromagnetic Energy*, 30 (1995) 213-218.

1994

B109. Bramanti Emilia, Bramanti M., Stiavetti P., Benedetti E., A frequency deconvolution procedure using a conjugate gradient minimization method with suitable constrains, *J. of Chemometrics*, 8 (1994) 409-421.

B110. Papineschi F., Bucalossi A., Capochiani E., Benedetti E., Bramanti Emilia, Dastoli G., Dispensa E., Benedetti E., Spremolla G., Recombinant a2a Interferon and Polycythemia Vera: Clinical results and biological evaluation by means of Fourier Transform Infrared microspectroscopy, *Eur. J. Haematol*., 53 (1994) 213-217.

B111. Romano, S., Benvenuti S., Conti A., Benedetti E., Bramanti Emilia, Rossi I., Benedetti E. FT-IR microspectroscopy shows significant differences between spectra of undifferentiated and polynucleated FLG 29.1 dried cells *Proceedings of Microscopy, Holography, and Interferometry in Biomedicine* Book Series: *Proceedings of the Society of Photo-Optical Instrumentation Engeneers (SPIE)* 2083 (1994) 195-200-Editor(s): Fercher AF; Lewis A; Podbielska H; Schneckenburger H; Wilson T; Katzir A

1993

B112. Scarano G., Bramanti Emilia, Voltammetric behaviour of marine hydrophobic copper complexes: effect of adsorption processes at mercury electrode, *Anal. Chim. Acta*, 277 (1993) 137-144. (Elsevier)

1992

B113. Bramanti Emilia, Ronca F., Teodori L., Trinca M.L., Papineschi F., Benedetti E., Spremolla G., Vergamini P., Benedetti E., A New Approach to the Study of Human Hairs by Means of FT-IR Microspectroscopy, *J. Soc. Cosmet. Chem*., 43 (1992) 285-296.

B114. Scarano G., Bramanti Emilia, Zirino A., Determination of copper complexation in seawater by a ligand competition technique with voltammetric measurement of the labile metal fraction*., Anal. Chim. Acta*, 264 (1992) 153-162. (Elsevier)

Pisa, July 26th 2013