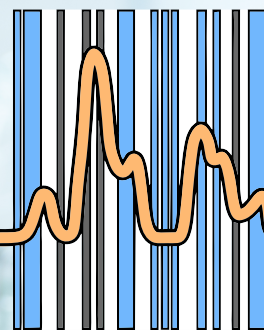


IMA-2021



12th International Conference on Instrumental Methods of Analysis Modern Trends and Applications

20-23 September 2021 | VIRTUAL EVENT

Conference program

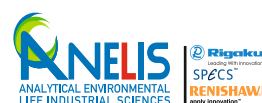
Oral presentations
Poster session

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Attention. Schedule times refer to Eastern European Summer Time

MONDAY 20 SEPTEMBER 2021

PLENARY LECTURES

SESSION A1

Virus spread analytics | Drug research

Chair: M. Mitrakas, M. Ochsenkühn, F. Tsopelas

09³⁰-10⁰⁰ Greetings (Moderator: Anastasios Zouboulis)
Manassis Mitrakas, Host Chairman, Aristotle University of Thessaloniki
Maria Ochsenkühn-Petropoulou, Chairperson, National Technical University of Athens
Nikolaos Papaioannou, Rector of Aristotle University of Thessaloniki
Andreas Boudouvis, Rector of National Technical University of Athens
Triantafyllos Albanis, Rector of University of Ioannina
Kyros Yakinthos, Dean of Polytechnic School
Glikeria Kakali, Dean of School of Chemical Engineering NTUA
Victoria Samanidou, Association of Greek Chemists
Dionysios Kokkinos, European Association of Professors Emeriti
Fotis Tsopelas, Chairman, National Technical University of Athens

10⁰⁰-10³⁰ Plenary lecture 1
Covid-19: the world's first environmental disease-integrative analytical and computational perspectives
Dimosthenis Sarigiannis

10³⁰-11⁰⁰ Plenary lecture 2
Wastewater-based epidemiology during COVID-19 pandemic
Nikolaos Thomaidis

11⁰⁰-11³⁰ Plenary lecture 3
Biomimetic chromatography to predict in vivo distribution of drug discovery compounds
Klara Valko

11³⁰-12⁰⁰ Plenary lecture 4
Magnetoliposomes for efficient AC-magnetic field remote controlled drug release
Maria del Puerto Morales

12⁰⁰-12¹⁵ Break

SESSION A2

Aerosol metrology | Advanced X-Ray techniques I

Chair: D. Eichert, K. Eleftheriadis

12¹⁵-12⁴⁵ Plenary Talk 5

Traceable analysis of aerosols and advanced materials at the nano- and microscales by X-ray spectrometry

Burkhard Beckhoff

12⁴⁵-13⁰⁰ Element mass concentrations in ambient aerosols, a comparison of results from filter sampling /ICP-MS and Cascade Impactor Sampling/Mobile Total Reflection X-ray Fluorescence Spectroscopy

S. Seeger, J. Osan, O. Czömpöly, A. Gross, H. Stosnach, L. Stabile, M. Ochsenkuehn-Petropoulou, L. A. Tsakanika, T. Lymperopoulou, S. Goddard, M. Fiebig, F. Gaie-Lével, Y. Kayser, B. Beckhoff

13⁰⁰-13¹⁵ X-ray fluorescence and absorption methods for identifying sources of urban aerosol pollution episodes

J. Osán, O. Czömpöly, V. Groma, E. Börcsök, S. Pollastri

13¹⁵-13³⁰ NPL Studies into dental surgery airborne particulates for COVID-19 mitigation

J.T. Tompkins, D.M. Butterfield, A.S. Brown

13³⁰-13⁴⁵ X-ray Photoelectron Spectroscopy and Scanning Auger Microscopy and Spectroscopy: Theory and applications

D. Karfaridis, G. Vourlias

13⁴⁵-14⁰⁰ Technological advantages in Photoelectron Spectroscopy: Near Ambient Pressure (NAP-XPS) instrumentation and applications

L. Socaciu-Siebert, P. Dietrich, A. Thissen

14⁰⁰-14³⁰ Lunch break

SESSION A3

Aerosol metrology | Advanced X-Ray techniques II

Chair: B. Beckhoff, S. Seeger

14³⁰-15⁰⁰ Plenary Talk 6

The role of aerosol science on understanding and preventing SARS-CoV-2 transmission in the community

Konstantinos Eleftheriadis

15⁰⁰-15¹⁵ Total reflection X-ray fluorescence reference materials for cascade impactor air quality monitoring systems

L. Vigna, M. Gottschalk, E. Cara, F. Ferrarese-Lupi, A. Verna, S.L. Marasso, S. Seeger, L. Boarino, N. De Leo, F.C. Pirri, M. Cocuzza

15¹⁵-15³⁰ Experimental measurement protocol of aerosol deposition relating to a bend in a large ventilation network with rectangular ducts

D. Costa, J. Malet, E. Géhin

15³⁰-15⁴⁵ Inter-laboratory comparison of ED-XRF/PIXE analytical techniques in the elemental analysis of filter-deposited multi-elemental certified reference materials representative of ambient particulate matter

M. Gini, M. I. Manousakas, V. Kantarelou, A.G. Karydas, M. Chiari, A. Migliori, N. Civici, B. Veleva, K. Šega, L. Samek, C. Samara, Z. Kertesz, J. Osan, K. Eleftheriadis

15⁴⁵-16⁰⁰ Evaluation of Bone and Joint Quality in Mice Employing X-ray Microtomography

P. Giannoutsou, A. Kaspiris, P. Kastana, C. Kontoyannis, E. Papadimitriou and M. Orkoula

16⁰⁰-16¹⁵ Aethalometer multiple scattering correction in an Arctic environment

S. Vratolis, K. Eleftheriadis

16¹⁵-16³⁰ Break

SESSION A4

Spectroscopy and applications

Chair: B. Michalke, E. Chatzitheodoridis

16³⁰-17⁰⁰ Plenary Talk 7

Timelines in Atomic Spectrometry

Gary Hieftje

17⁰⁰-17³⁰ Plenary Talk 8

Analytical and structural perspectives of NMR in natural products research: From mixture analysis to in-cell investigations

Ioannis Gerotherassis

17³⁰-17⁴⁵ Optimizing the Workflow for Microplastics Analysis using FTIR Microscopy

I. Robertson

17⁴⁵-18⁰⁰ Introduction to FTIR Techniques for Materials Characterization

L. Malletzidou, T. Zorba, G. Vourlias

18⁰⁰-18¹⁵ Further developments in battery-operated microplasmas

L. Quadeer, D. Cebula, V. Karanassios

18¹⁵-18³⁰ ATR – FTIR as a Tool for Osteoarthritis Disease Diagnosis

N. Pradakis, N. Vordos, D. A. Gkika, M. Koffa, K. Tilkeridis

18³⁰ End of sessions

TUESDAY 21 SEPTEMBER 2021

PLENARY LECTURES

SESSION B1

Trends in analytical techniques

Chair: N. Thomaidis, F. Tsoelas

09³⁰-10⁰⁰ Plenary lecture 8

Analysis for metals in biology: ultratraces, isotopes, species and images

Ryszard Lobinski

10⁰⁰-10³⁰ Plenary lecture 9

Reviewing determination methods for “Free Cu” and Fe(II)/Fe(III) ratio and development of a new and fast speciation techniques for reliable measurements of “free Cu” and Fe(II)Fe(III) ratio in various samples

Bernhard Michalke

10³⁰-11⁰⁰ Plenary lecture 10

Temperature Gradient Gas Chromatography (TGGC) – Pushing Separation Speed and Separation Efficiency at the Same Time

Erwin Rosenberg

11⁰⁰-11³⁰ Plenary lecture 11

Quo Vadis Electroanalytical Chemistry

Jiří Barek

11³⁰-11⁴⁵ Break

SESSION B2

Chromatography | Mass spectrometry I

Chair: E. Rosenberg, D. Lambropoulou

11⁴⁵-12⁰⁰ Challenges in cannabis testing

J.P. Hopkins, F. Aimone, A. Dalmia, E. Cudjoe, T. Astill, J. Jalali, J. P. Weisenseel, F. Qin, M. Murphy, T. Ruthenberg

12⁰⁰-12¹⁵ Green Microwave-Assisted Cannabis Extraction: from Lab to Industry

V.L. Tsamilj, A. Berberidis, A. Kaloyannis

12¹⁵-12³⁰ Overcoming analytical challenges in trace metal analysis by ICP-MS: A multi quadrupole perspective

H. Ernstberger, E. Kroukamp

VIRTUAL EXHIBITION

Chair: M. Ochsenkühn, A. Zouboulis

12³⁰-12⁴⁵ Vaggelis Rapatzikos, ANTISEL Selidis Bros S.A.

12⁴⁵-13⁰⁰ Charalampos Iosifidis, MALVA S.A.

13⁰⁰-13¹⁵ Lina Tsamili, ALS Analytical Laboratory Systems S.A.

13¹⁵-13³⁰ **Shimadzu corporation Advanced Trend: Rapid Detection by the Green Technology DPiMS-8060 Mass Spectrometry Direct ambient source**
Emmanouil Barmponis, Asteriadis S.A.

13³⁰-13⁴⁵ Christos Kontogiannis, HELLAMCO S.A.

13⁴⁵-13⁵⁰ Eleftherios Klothakis, ANELIS-Klothakis

13⁵⁰-13⁵⁵ Representative of Tsotras Publications

13⁵⁵-14⁰⁰ Representative of Pegasus Analytical S.A.

14⁰⁰-14³⁰ *Lunch break*

SESSION B3

Chromatography | Mass spectrometry II

Chair: R. Lobinski, A. Hiskia

14³⁰-14⁴⁵ **Photocatalysis of diclofenac using metal-organic framework-based oxidant systems: kinetics, transformation products elucidation, and in silico toxicity**
A. Kontogiannis, E. Evgenidou, C. Nannou, D. Bikiaris, D. Lambropoulou

14⁴⁵-15⁰⁰ **Stop Searching - Start Looking: A breakthrough in chromatography technologies**
R. Rozenich

15⁰⁰-15¹⁵ **Development and validation of a novel analytical approach for the simultaneous speciation analysis of mercury and selenium in fish by HPLC-ICP-MS following enzymatic extraction**
M. Ribeiro, A. Leufroy, T. Guérin, I. Castanheira, J. Silva, P. Jitaru

15¹⁵-15³⁰ **The coupling of CE and ICP-MS/MS as a novel tool for investigation of the gold nanoparticle-cisplatin based drug targeted delivery systems formation**
A. Wróblewska, A. Milewska, M. Drozd, M. Matczuk

15³⁰-15⁴⁵ **Novel CE-ICP-MS/MS-based methodology for the study of Fe₃O₄ nanoparticle's interactions with human serum proteins under physiological environment**
J. Sikorski, J. Kruszewska, A. Kamińska, M. Jarosz, M. Matczuk

15⁴⁵-16⁰⁰ **QSRR driven insight into retention in multimodal chromatography**
B. Otašević, B. Svrkota, J. Krmar, A. Protić, M. Zečević

16⁰⁰-16¹⁵ **Identification of transformation products derived from pharmaceutically active compounds in surface waters by liquid chromatography–high-resolution mass spectrometry**
K. Anagnostopoulou, C. Nannou, E. Evgenidou, D. Lambropoulou

16¹⁵-16³⁰ *Break*

SESSION B4

Chromatography | Speciation | Bioanalytics | Bioseparation

Chair: K. Valko, I. Panderi

- 16³⁰-16⁴⁵ On-line Hyphenation of CE with MC-ICP-MS for Species-specific Isotopic analysis of sulfur**
S. Faßbender, K. Rodiouchkina, F. Vanhaecke, B. Meermann
- 16⁴⁵-17⁰⁰ Challenges and innovations for trace level quantification of bioactive compounds in biological matrices using tandem mass spectrometry**
L. Barreiros, S. R. Fernandes, S. Machado, E. M. P. Silva, M. A. Segundo
- 17⁰⁰-17¹⁵ Prediction of acute aquatic ecotoxicity of emerging contaminants using biomimetic chromatographic measurements**
C. Stergiopoulos, F. Tsopelas, K. Valko, M. Ochsenkühn-Petropoulou
- 17¹⁵-17³⁰ Multiplex lateral flow assay for liquid biopsy applications**
P. Kalligosfyri, S. Nikou, S. Karteri, H. Kalofonos, V. Bravou, D. Kalogianni
- 17³⁰-17⁴⁵ Study of scandium extraction from Greek bauxite residue by Acetobacter Tropicalis**
K. Kiskira, Th. Lympelopoulou, L.A. Tsakanika, Ch. Pavlopoulos, K. Papadopoulou, K.M. Ochsenkühn, G. Lyberatos, M. Ochsenkühn-Petropoulou
- 17⁴⁵-18⁰⁰ Accumulation and biological role of zolendronate in rabbit intervertebral discs**
A. Kouroumalis, C. Christophoridis, D. Kletsas
- 18⁰⁰-18¹⁵ Machine learning techniques for the correlation of retention factors of biomimetic chromatography with pharmacokinetic properties**
P. Danias, F. Tsopelas, A. Pappa

18¹⁵-20⁰⁰ Poster session I

20⁰⁰ End of sessions

SESSION C1

Food analysis I

Chair: G. Theodoridis, C. Biliaderis

09³⁰-10⁰⁰ Plenary lecture 12

Verification of food authenticity claims: Consolidated strategies and new trends in data modelling

Paolo Oliveri

10⁰⁰-10¹⁵ High throughput analysis for reliable detection of EVOOs Adulteration – A non-target metabolomics approach for geographical origin and varietal discrimination

I.F. Tzavellas, S.K. Drakopoulou, M. E. Dasenaki, N.S. Thomaidis

10¹⁵-10³⁰ A multi-instrumental approach for the physicochemical characterization of a cotton honey-based spread produced by controlling compositional and processing parameters

V. Sereti, A. Lazaridou, C. Tananaki, C.G. Biliaderis

10³⁰-10⁴⁵ Physical properties and quality evaluation of composite dough and bakery products using a multi-analytical instrumental approach

K. Kotsiou, A. Lazaridou, C.G. Biliaderis

10⁴⁵-11⁰⁰ Discrimination of feta cheese from different geographical region, packaging type and production date according to its chemical composition and volatile profile.

M. Lygka, T. Massouras

11⁰⁰-11¹⁵ Application of spectroscopic techniques coupled with multivariate statistical analysis for the origin discrimination and quality control of agrofoods

R. Kontzedaki, M. Velegrakis

11¹⁵-11³⁰ Determination of Volatile compounds in Spirulina food supplements using HS-SPME – GC/MS

A. Paraskevopoulou, T. Kaloudis, A. Hiskia, T.M. Triantis

11³⁰-11⁴⁵ Break

SESSION C2

Food analysis II

Chair: P. Oliveri, C. Georgiou

11⁴⁵-12⁰⁰ Physicochemical and sensorial properties of wheat bread with sourdough made from starter culture isolated from a submerged chickpea fermentation extract

C. Nouska, M. Hatzikamari, C.G. Biliaderis, A. Lazaridou

12⁰⁰-12¹⁵ Polystyrene biodegradation by mealworms larvae: Identification of degradation products and metabolic alteration using GC-MS

E.D. Tsochatzis, I.E. Berggreen, H. Gika, G. Theodoridis

12¹⁵-12³⁰ Elemental metabolomics for honey authentication

12th International Conference on “Instrumental Methods of Analysis”

S.A. Drivelos, G. Danezis, M. Halagarda, S. Popek, C.A. Georgiou

12³⁰-12⁴⁵ Advanced and comprehensive screening methodologies for the monitoring of intentionally and non-intentionally added substances in food contact materials

C. Kanakaki, E. Meringi, N. Thomaidis

13⁰⁰-14⁰⁰ Poster session II

14⁰⁰-14⁴⁵ Lunch break

SESSION C3

Chemistry associations

Chair: V. Samanidou, M. Ochsenkühn, M. Karayannis

14⁴⁵-15¹⁵ Plenary lecture 13

FoodOmicsGR_RI: A Distributed National Research Infrastructure for the Comprehensive Characterisation of Foods

Georgios Theodoridis

15¹⁵-15⁴⁵ EURACHEM Greece: promoting quality of analytical measurements, QA and QC in analytical laboratories.

M. Kostakis, V. Zonaras, H. Gika and A. Iakovakis, C. Virgiliou, G. Theodoridis

15⁴⁵-16⁰⁰ N. Thomaidis, EuChemS – Division Analytical Chemistry

16⁰⁰-16¹⁵ EuChemS-WP EiC: EuChemS Working Party on Ethics in Chemistry

A. Silvestru, EuChemS-WP EiC Steering Committee

16¹⁵-16³⁰ Break

SESSION C4

Environmental analysis | Chromatography | Mass spectrometry

Chair: A. Zouboulis, G. Hieftje

16³⁰-16⁴⁵ Development of an HRMS-based workflow to quantify PFAs in leachates and urban waters

L. A. Koronaiou, C. Nannou, D. Lambropoulou

16⁴⁵-17⁰⁰ Combination of single algae-ICP-ToF-MS and multivariate statistics for (eco-)toxicological assessment

M. von der Au, O. Borovinskaya, C. Büchel, B. Meermann

17⁰⁰-17¹⁵ Relevant pesticide transformation products in surface waters using target and suspect screening with LC-HRMS

S. Petromelidou, C. Nannou, E. Evgenidou, D. Lambropoulou

17¹⁵-17³⁰ Optimization of the sample preparation step by central composite design for the analysis of a wide array of emerging contaminants in wastewaters and tap water using LC-HRMS

A. Ofrydopoulou, C. Nannou, E. Evgenidou, D. Lambropoulou

17³⁰-17⁴⁵ Occurrence of microplastics in wastewater treatment plant in the city of Thessaloniki

D. Kalaronis, N.M. Ainali, E. Evgenidou, M. Papageorgiou, A. Christodoulou, I. Lioumbas, G.Z.

Kyzas, D.N. Bikiaris, D. A. Lambropoulou

17⁴⁵-18⁰⁰ Untargeted analysis of cyanobacterial metabolites in lake Karaoun, Lebanon, by LC-HRMS with CyanoMetDB

S.K. Zervou, N.A. Hammoud, S. Godin, T. Kaloudis, A. Hiskia, J. Szpunar, R. Lobinski

18⁰⁰-18¹⁵ Hydrometallurgical recovery of scandium from bauxite residue by phosphoric acid leaching

L.A. Tsakanika, G. Panagiotatos, T. Lymperopoulou, E. Chatzitheodoridis, M. Ochsenkühn-Petropoulou

18¹⁵-18³⁰ Rare earth elements determination by inductively coupled plasma mass spectrometry after alkaline fusion

H.T. Mnculwane

18³⁰-18⁴⁵ Break

18⁴⁵-20⁰⁰ Poster session III

20⁰⁰ End of sessions

THURSDAY 23 SEPTEMBER 2021

SESSION D1

Materials analysis

Chair: M.P. Morales, K. Kordatos

09³⁰-09⁴⁵ The role of size and hyperthermia treatment on the distribution of magnetic nanoparticles for theranostic applications

F. Pinakidou, M. Katsikini, K. Simeonidis, E.C. Paloura, M. Agelakeris

09⁴⁵-10⁰⁰ Characterization of advanced technological material using XRD and SEM

E. Delli, E. Pavlidou, G. Vourlias

10⁰⁰-10¹⁵ Chemically and thermally modified activated carbons for the removal of aromatic compounds

A. Bosacka, M. Wasilewska, D. Sternik, A. Derylo-Marczewska

10¹⁵-10³⁰ A novel method for production of molecularly imprinted polymers with cholesterol and other biologically important molecules

G. Becskereki; M. P. Pešić; M. D. Todorov; G. Horvaj; T. Ž. Verbić, B. Tóth

10³⁰-10⁴⁵ Polymer Inclusion Membranes as extraction device for isolation pharmaceuticals and dental components from water samples

K. Bielicka-Daszkiwicz, K. Poniedziałek, K. Lipińska

10⁴⁵-11⁰⁰ Micromagnetic analysis as a way to evaluate physical properties of magnetic nanoparticles in biomedical applications

N. Maniotis and D. Serantes

11⁰⁰-11¹⁵ Thermal analysis techniques: Modern trends and applications

E. Tarani and K. Chrissafis

11¹⁵-11³⁰ Application of different analytical methods for characterization of pharmaceutical materials

K. Milczewska, J. Maziarczyk and A. Borkowska

11³⁰-11⁴⁵ Break

SESSION D2

Electrochemistry | Sensors | Archaeometry

Chair: J. Barek, A. Economou

11⁴⁵-12⁰⁰ The use of polyaniline nanofibers for the construction of ion-selective electrodes with solid contact

K. Pietrzak, C. Wardak, S. Malinowski, M. Golonka

12⁰⁰-12¹⁵ Lead Film Electrode for the Determination of Ultratrace Aluminum by Adsorptive Stripping Voltammetry

J. Wasąg, M. Grabarczyk

12¹⁵-12³⁰ PCR-free Hepatitis B Virus determination by Electrogenerated Chemiluminescence

P. Nikolaou, S. Petralia, A. Zanut, G. Valenti, S. Conoci, L. Prodi, F. Paolucci

12³⁰-12⁴⁵ Sensitive voltammetric approaches for the total isopropylmethylphenols quantification in plant material

G. Ziyatdinova, N. Chernousova

12⁴⁵-13⁰⁰ Gas-phase biosensing and imaging of human body VOCs

K. Litani, G. Zhang, K. Toma, T. Arakawa, K. Mitsubayashi

13⁰⁰-13¹⁵ Application of WD-XRF, XRD, FT-IR, and XANES to Archaeological Pottery Samples

K.B. Dasari, H. Cho, N. Lakshmana Das, T. Lee, Y.H. Yim, G.M. Sun

13¹⁵-13³⁰ Oil media on paper: The effect of linseed oil on the paper supports of works of art and printed material. A research matter of damage assessment.

P. Banou, K. Choulis, K. Tzia, D. Tsimogiannis, T. Karabotsos, L.A. Tsakanika, A. Alexopoulou

13³⁰-13⁴⁵ Determining optimum irradiation conditions for analysis of heritage materials by Raman spectroscopy

A. Philippidis, D. Anglos

13⁴⁵-14³⁰ Lunch break

SESSION D3

Mobile analytical instruments | Robotics and Automation | Chemometrics

Chair: I. Gerothanassis, D. Anglos

14³⁰-14⁴⁵ Unifying Analytical Information during Multidisciplinary Research

E. Chatzitheodoridis, N. Tsakonas, E. Profitis, A. Thoma, N. Panagiotopoulos

14⁴⁵-15⁰⁰ Optimising the remote detection systems of alpha particle emitters using Monte Carlo simulations

C. Olaru, M. Zadehrafai, M.R. Ioan, F. Krasniqi

15⁰⁰-15¹⁵ Monitoring the response of plants and vegetation under stress via imaging spectroscopy

K. Hatzigiannakis, A. Vardis, M. Konstantinou, D. Anglos

15¹⁵-15³⁰ Adaptation of Primary Source NIR Calibrations to Unlabeled Target Samples by Local Adaptive Fusion Regression and Null Augmented Regression

R.C. Spiers, J.H. Kalivas

15³⁰-16¹⁵

Closing Ceremony-Awards

POSTER SESSION 1

**Aerosol Metrology | Advanced X-Ray Techniques | Chromatography-Mass Spectrometry | Environment | Food/ Proteomics | Sample Handling
Biomedical and Pharmaceutical Analysis | Speciation**

Chair: D. Lambropoulou, B. Beckhoff

- P1-01** **Magnetic nanoparticles an indicator of health risks related to anthropogenic airborne particulate matter**
C. Martinez-Boubeta, K. Simeonidis, D. Sarigiannis, M. Kermenidou, Ll. Balcells
- P1-02** **Application of X-ray Absorption Fine Structure Spectroscopy for the study of human nails**
I. Karagiannis, M. Katsikini, F. Pinakidou, E. C. Paloura, K. Manika, D. Papakosta
- P1-03** **Cancelled**
- P1-04** **X-Ray Diffraction analysis for semi-quantitative identification of important mineral phases in mining wastes by-products valorisation**
E. Pagona, K. Kalaitzidou, X. Ntampou, E. Tzamos, K. Simeonidis, A. Zouboulis, M. Mitrakas
- P1-05** **Monitoring Fracture Healing in Mice Tibia Using Raman Spectroscopy and X-ray Microtomography**
P. Giannoutsou, A. Karavalasi, E. Maggiorou, A. Kaspiris, E. Mourkogianni, C. Kontoyannis, E. Papadimitriou, M. Orkoula
- P1-06** **X-ray fluorescence mapping of Gd_{0.6}Eu_{0.4}VO₄ nanoparticles in tissues**
E. Proiou, F. Pinakidou, E. C. Paloura, M. Abdesselem, N. Pétri, T. Gacoin, C. Laplace-Builhé, A. Alexandrou, M. Katsikini
- P1-07** **Cancelled**
- P1-08** **Estimation of the degree of crystallinity of PLA/PHSu block copolymers with XRD and DSC**
I. Chrysafi, D.N. Bikiaris
- P1-09** **Determination of stabilizers in nitrocellulose-based propellants before and after ageing**
A. Hatziantoniou, M. Achilleos, C. Colocassidou, E. Ioannou- Papayianni
- P1-10** **Optimization of mixed-mode HPLC method intended for analysis of adrenergic drugs**
B. Svrkota, J. Krmar, A. Protić, M. Zečević, B. Otašević
- P1-11** **Development and validation of a LC-DAD-ESI-MS method for the determination of phenolic compounds of the solid residues from the essential oil industry**
M. Irakli, P. Chatzopoulou, C. Biliaderis
- P1-12** **The potential of biopartitioning micellar chromatography to predict the soil sorption of pesticide compounds**
C. Stergiopoulos, F. Tsopelas, M. Ochsenkühn-Petropoulou

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- P1-13** **Monitoring of spent coffee grounds detoxification efficiency by high performance liquid chromatography**
Z. Juglová, P. Diviš, H. Maňáková
- P1-14** **Determination of the aroma profile of commercial Authentic Greek strained yoghurts and yoghurt desserts using SPME coupled with GC-MS**
G. Kartsiolas, M. Zoumpourlis, T. Massouras
- P1-15** **Development and validation of an UHPLC-qTOF-MS method for the determination of PET and PBT cyclic oligomers in food simulants**
D. Diamantidou, O. Mastrogianni, E. Tsochatzis, J. A. Lopes, G. Theodoridis, N. Raikos, H. Gika, S. Kalogiannis
- P1-16** **Exploring zwitterionic HILIC chromatography using the newly introduced BEH Z-HILIC column for targeted and untargeted LC-MS metabolic profiling**
A. Lioupi, C. Virgiliou, H. Gika, G. Theodoridis, I. D Wilson, K. Smith
- P1-17** **QSRR Modelling for Analytes Retention Prediction in LC/MS by Applying Different Machine Learning Algorithms**
T. Liapikos, D. Kodra, K. Kademoglou, D. Diamantidou, O. Begou, C. Zisi, A. Pappa-Louisi, G. Theodoridis
- P1-18** **Fabrication of a novel polydopamine-modified luffa sponge for the sorption-based extraction in sample pretreatment**
P. Anagnostou, C. Stalikas, T. Chatzimitakos
- P1-19** **Development of chromatographic conditions for separation of fifteen phenolic acids with the use of silica-based monolithic columns**
M. Staniak, M. Wójciak, S. Dresler, J. Sawicki
- P1-20** **Identification of malodorous compounds in a non-food product by using different chromatographic techniques**
S. Zauner, E. Rosenberg
- P1-21** **Development of a negative-thermal gradient GC for fast gas chromatography and its application for the study of volatile products formed in lithium-ion batteries**
B. Klampfl, R. D. Müller, E. Rosenberg
- P1-22** **Analyte-modulated optical properties of organic and inorganic nanoparticle suspensions for biothiol sensing using consumer electronic devices as detectors**
T. G. Choleva, A. Sfakianaki, A.G. Vlessidis, D.L. Giokas
- P1-23** **Breath alkanes study of the effectiveness of spirulina supplement in recovering from exercise-induced muscle damage in humans**
K. Mikedi, P. Zeimpekis, S. Karma, P. Athanasakis, I. Katsoulakis, A. Pappa, A. Krokidas, T. Nomikos, M. Krokida
- P1-24** **Fabric phase sorptive extraction coupled to porous graphitized carbon liquid chromatography for the quantitation of parabens in human breast milk**
A. Parla, I. Balatsouka, G. Mavrogeorgos, A. Kabir, V. Samanidou, K.G. Furton, D. Gennimata, I.

Vinkovic Vrcek, I. Panderi

- P1-25 Simultaneous quantitation of three ultraviolet filters in sun care products by high-performance liquid chromatography with photodiode-array (PDA) detection**
P. Feidias, I. Balatsouka, E. Kalogria, S. Papageorgiou, A. Varvaresou, I. Panderi
- P1-26 Determination of 19 psychoactive substances in biological samples by ultra-high-performance liquid chromatography–tandem mass spectrometry**
S. Karampela, J. Smith, I. Panderi
- P1-27 Label-free chemiluminescence detection of cysteine in biological fluids based on its catalytic effect on the reduction of gold ions to gold nanoparticles by luminol**
T. Choleva, E.A. Akrivi, N. Kourkoumelis, D.L. Giokas, A.G. Vlessidis, G.Z. Tsogas
- P1-28 Voltammetric determination of rivaroxaban**
M. Kartashov, J. Barek, E.I. Korotkova
- P1-29 Adsorptive stripping voltammetry as a convenient tool for the determination of Ti(IV) in plant samples on the example of nettle and horsetail**
T.M. Adamczyk, M. Grabarczyk
- P1-30 Selenium biotransformation by lactic acid bacteria, bifidobacteria and yeasts**
V. Kantorová, A. Kaňa, G. Krausová, I. Hyršlová, O. Mestek
- P1-31 Chromium fractionation in solid samples: the tannery waste scenario**
E. Kokkinos, A. Zouboulis
- P1-32 Chemical investigation of insect attractants and repellents using portable membrane inlet mass spectrometry.**
S. Giannoukos, A. Michaelakis, A. Pappa
- P1-33 Distinguishing 1- and 3-methylhistidine isomers based on combined chromatographic and ion abundance characteristics**
I. Sampsonidis, M. Marinaki, A. Pesiridou, H. Gkika, G. Theodoridis, N. Siachos, G. Arsenos, S. Kalogiannis
- P1-34 Combination of library-free and library-based metabolomics protocols for the characterization of anti-cancer drug Carfilzomib administered to mice**
I. Barla, P. Efentakis, S. Lamprou, P-E. Nikolaou, E. Kastritis, M.A. Dimopoulos, E. Terpos, I. Andreadou, N. Thomaidis, E. Gikas
- P1-35 Targeted metabolomics analysis for quantification of organic acids in urine by GC-MS/MS**
T. Mouskeftara, C. Virgiliou, G. Theodoridis, H. Gika
- P1-36 An alternative technique to calculate mineral carbon and total organic carbon**
K. Selekou, E. Chamilaki, V. Koulos, N. Pasadakis
- P1-37 Passive sampling of pharmaceuticals and pesticides as a tool to assess their occurrence in marine aquacultures**
E. Makou, V.I. Boti, I.K. Konstantinou, T.A. Albanis, D.G. Hela

12th International Conference on “Instrumental Methods of Analysis”

P1-38 Investigation of drug-protein interactions using immobilized protein chromatography and its potential to model aquatic toxicity

C. Stergiopoulos, P. Danias, E. Notari, L.A. Tsakanika, A. Tsantili- Kakoulidou, F. Tsopelas

P1-39 EXSA: The European X-ray Spectrometry Association

D. Eichert

POSTER SESSION 2

Food Analysis | Quality control | Environmental Analysis | Spectroscopy

Chair: D. Giokas, R. Tzimou-Tsitouridou

- P2-01 Application of Raman spectroscopy for the detection of olive oil adulteration with seed oils**
G. Bagkakis, P.K. Revelou, M. Xagoraris, E. Xera, C. Pappas, P. Tarantilis
- P2-02 High resolution mass spectrometry study of olive oil phenolic constituents in Megaritiki cultivar**
E. Xera, P.K. Revelou, M. Xagoraris, C. Kanakis, C. Pappas, P. Tarantilis
- P2-03 Volatile compound characterization of olive oil from Koroneiki cultivar by SPME-GC/MS and differentiation according to geographical origin**
P.K. Revelou, M. Xagoraris, E. Xera, C. Kanakis, C. Pappas, P. Tarantilis
- P2-04 The use of FTIR-ATR and SPME-GC-MS for botanical origin differentiation of unifloral honeydew and blend honeydew Greek common honey**
M. Xagoraris, P.K. Revelou, F.P. Vardaka, E. Alissandrakis, P.A. Tarantilis, C.S. Pappas
- P2-05 GC-MS and LC-QTOF-HRMS for volatile and phenolic analysis of strawberry tree honey from Greece**
M. Xagoraris, P.K. Revelou, E. Savvidaki, E. Lazarou, E. Alissandrakis, P.A. Tarantilis, C.S. Pappas
- P2-06 SPME/GC-MS study of volatile compounds from strawberry tree and autumn heather honeys**
M. Xagoraris, E. Lazarou, P.K. Revelou, E. Alissandrakis, P.A. Tarantilis, C.S. Pappas
- P2-07 Application of optical spectroscopic techniques and multivariate statistical analysis as a method of determining the percentage and type of adulteration of extra virgin olive oil**
G. Stavrakakis, A. Philippidis, Michalis Velegrakis
- P2-08 Optimized methods for the extraction of C-phycoyanin and β -carotene from *Arthrospira* spp. (*Spirulina*) and their application to microalgae isolated from Greece**
A. Paraskevopoulou, T. Kaloudis, S. Gkelis, U. Lortou, M. Panou, A. Hiskia, T.M. Triantis
- P2-09 Optical spectroscopy as an alternative tool for honey analysis**
E. Boumpoulaki, E. Orfanakis, A. Zoumi, A. Philippidis, M. Velegrakis
- P2-10 The isotopic approach to the authenticity of traditional products from Cyprus and Aegean islands for strengthening their identity**
E.I. Papayianni, E. Tzioni, C. Savvidou, C. Louka, R. Kokkinofita
- P2-11 Simultaneous speciation analysis of arsenic and selenium species in seafood and onion samples by HPLC-ICP-MS**
K. Karaś, D. Jakkielska, A. Zioła-Frankowska, M. Frankowski
- P2-12 Analysis of polyester cyclic oligomers of polyethylene terephthalate in pasta with modified QuEChERS clean-up and UHPLC-qTOF-MS**
E.D. Tsochatzis, J. Alberto Lopes, H. Gika, G. Theodoridis

12th International Conference on “Instrumental Methods of Analysis”

- P2-13** **Wide scope screening of >900 pesticides in olive oil using LC-ESI/GC-APCI-QToF-MS**
S.K. Drakopoulou, S.E. Kokolakis, M.E. Dasenaki, A.S. Kritikou, N.S. Thomaidis
- P2-14** **Holistic untargeted LC-HRMS-based metabolomics workflow for food authenticity studies: Exploiting both RPLC- & HILIC-HRMS platforms capability for citrus juices authenticity investigation**
A.S. Kritikou, S.K. Drakopoulou, M.E. Dasenaki, E. Gikas, N.S. Thomaidis
- P2-15** **Volatile-compound fingerprinting by both Headspace-SPME(HS-SPME) and static Headspace as a tool for the assessment of honey’s authenticity**
P.-L.P. Gialouris, G.A. Koulis, M.E. Dasenaki, N.S. Thomaidis
- P2-16** **Determination of Vitamin D2 in UV-B treated Mushrooms**
D. Z. Lantzouraki, G. Sotiroudis, T. Tsiaka, G. Koutrotsios, N. Kalogeropoulos, G.I. Zervakis, P. Zoumpoulakis
- P2-17** **Elemental metabolomics nutritional value of Polish and Greek honeys - Mn, Cu and Mg**
S.A. Drivelos, G. Danezis, M. Halagarda, S. Popek, C.A. Georgiou
- P2-18** **Utilizing Head-Space Solid Phase Microextraction (HS-SPME) coupled to Gas Chromatography-Mass Spectrometry (GC-MS) for the classification of Greek wines based on their volatile composition**
M. Marinaki, I. Sampsonidis, A. Lioupi, K. Zinoviadou, N. Thomaidis, G. Theodoridis
- P2-19** **Simplifying edible oil analysis by automating the transesterification process through the development of a 3D-printed continuous flow system**
A. du Preez, B. Khuzwayo, R. Meijboom, C. Arderne, E. Smit
- P2-20** **Lipidomics investigation of traditional Greek yoghurt skin (petsa) utilising RP-UHPLC-TOFMS following exhaustive liquid-liquid extraction**
A. Pesiridou, I. Sampsonidis, S. Kalogiannis, T. Moschakis, A. Pechlivanis, G. Theodoridis
- P2-21** **The determination of acrylamide in baby foods as an exemplary case study for the role of metrology in food safety**
C. Alexopoulos, A. Georgopoulou, P. Giannikopoulou, E. Kakoulides, E. Skotidaki, E. Stathoudaki, V. Schoina
- P2-22** **Optical Spectroscopic Techniques in Detecting Fuel Adulteration**
N.Fragkoulis, M. Velegrakis, P. Samartzis
- P2-23** **Fatty acids composition of traditional, strained and set type Greek yogurt, manufactured from cow's, sheep's and goat's milk**
M.F. Kontodimou, E. Zoidou, G. Papadopoulos, T. Massouras
- P2-24** **Metabolomic profiling of women with thyroid disorder**
C. Fotakis, G. Moros, A. Kontogeorgou, N. Iacovidou, T. Boutsikou, P. Zoumpoulakis
- P2-25** **Multiresidue analysis of pharmaceuticals and pesticides in fish feed by QuEChERS method coupled to liquid chromatography-high-resolution Orbitrap mass spectrometry**
P.P. Martinaiou, V.I. Boti, T.A. Albanis
- P2-26** **Analysis of Emerging Contaminants in seawater and aquaculture fish, using liquid**

chromatography-high-resolution Orbitrap mass spectrometry

P.P. Martinaiou, V.I. Boti, T.A. Albanis

P2-27 Investigation of Furalfadone Hydrolytic and Photolytic degradation in aqueous environmental systems

C.V. Efthymiou, V.I. Boti, T.A. Albanis

P2-28 Determination of pharmaceuticals and metabolites in sewage sludge using a modified QuEChERS extraction and UHPLC LTQ/Orbitrap MS

K. Miserli, C. Kosma, I. Konstantinou

P2-29 Photocatalytic degradation of antibiotic pharmaceuticals using nitrogen-modified TiO₂ nanostructures

P.P. Falara, M. Arfanis, K. Kordatos

P2-30 Micropollutants' degradation through heterogeneous catalytic ozonation - application of continuous flow pre-industrial unit

E. Kaprara, S. Psaltou, Ch. Nannou, M. Salapasidou, P.-A. Palasantza, P. Diamantopoulos, D. Lambropoulou, A. Zouboulis, M. Mitrakas

P2-31 Enhanced techniques for sensitive immunochromatographic detection of antibiotics and their application for control of honey

D.V. Sotnikov, L.V. Barshevskaya, A.V. Zherdev, B. B. Dzantiev

P2-32 Insights into the impact of 2,6-dichloro-1,4-benzoquinone and 2,6-dichloro-3-hydroxy-1,4-benzoquinone on human keratinocytes metabolism through an NMR metabolomic study

D.G. Meintani, T.G. Chatzimitakos, A.I. Kasouni, C.D. Stalikas

P2-33 Unbiased and class-independent optimization of Headspace Solid Phase Micro-Extraction conditions for the discovery of volatile classification markers in grape marc spirits using the Response Surface Methodology

I. Sampsonidis, M. Marinaki, A. Nakas, A. N. Assimopoulou, S. Kalogiannis, G. Theodoridis

P2-34 Multiresidue QuEChERS analysis for the detection of pharmaceuticals and their metabolites in aquaculture sediments using UHPLC LTQ/Orbitrap MS

A. Kalogeropoulou, C. Kosma, T. Albanis

P2-35 Phthalic Esters released in Hot Beverages by Vending Machines: Analytical Protocol by Means of Ultrasound-Vortex-Assisted Liquid-Liquid Micro-Extraction and GC-IT/MS

I. Notardonato, S. Passarella, C. Di Fiore, A. Iannone, G. Ianiri, M.V. Russo, P. Avino

P2-36 Detection and quantification of white wine adulteration with cider and apple juice using voltammetric fingerprinting on a screen-printed electrode and chemometrics

M. Liveri, A. Tsantili- Kakoulidou, F. Tsopelas

P2-37 Fast GC-MS method, for the quantification of polystyrene/polyurethane oligomers in liquid food simulants

E.D. Tsochatzis, H. Gika, G. Theodoridis

POSTER SESSION 3

**Materials | Sensors | Electrochemistry | Archeometry | Thermal analysis |
Chemometrics**

Chair: S. Girousi, K. Hatzigiannakis

- P3-01 Novel ink-jet inks with UV-absorbers as active agents for polyester and polyamide digital printing**
E. Karanikas, N. Nikolaidis
- P3-02 Synthesis of Crosslinked and Short Chain Branched Polyethylenes nanocomposites reinforced with graphene nanoplatelets**
D. Kourtidou, E. Tarani, D.N. Bikiaris, G. Vourlias, K. Chrissafis
- P3-03 Investigations of platinum dissolution by inductively coupled plasma mass spectrometry (ICP-MS) and transmission electron microscopy (TEM)**
M. Pawlyta, A. Bacha-Grzechnik, S. Smykała, A. Jakóbi-Kolon
- P3-04 Preparation and characterization of biocompatible poly (lactic acid) / poly (ethylene adipate) blends**
M. Lazaridou, C. Samiotaki, D.N. Bikiaris
- P3-05 Development of an electrochemical sensor for the detection of mephedrone on a modified carbon paste electrode with polymerized silver nanoparticles capped with saffron**
G.C. Papaioannou, S. Karastogianni, S. Girousi
- P3-06 Development of a chemically modified sensor for the voltammetric determination of carbofuran**
J. Barek, A.N. Solomonenko, E.V. Dorozhko, E.I. Korotkova
- P3-07 Electrochemical sensing of maple syrup urine disease (MSUD) biomarkers in a modified carbon paste electrodes with saffron coupled with silver nanoparticles**
S. Karastogianni, S. Girousi
- P3-08 Impedimetric sensor for hydroxyl radical detection in biological systems**
J. Barek, A.V. Geraskevich, E.I. Korotkova
- P3-09 Fluorescent carbon nanodots from Dunaliella salina biomass and their application as a 4-nitrophenol nanoprobe**
T. Skolariki, T.G. Chatzimitakos, C.D. Stalikas
- P3-10 3D Printed Voltammetric Sensor Modified with an Fe(III) Cluster for Nonenzymatic Determination of Glucose in Sweat**
H. Koukouviti, F. Vasileiou, A. K. Plessas, A. Economou, N. Thomaidis, G. S. Papaefstathiou, C. Kokkinos
- P3-11 Electrochemical paper-based devices fabricated via programmable pen-drawing and screen-printing**
D. Soulis, V. Pagkali, C. Kokkinos, M. Prodromidis, A. Economou

- P3-12 Development of a flexible electrochemical biosensor for fish stress monitoring**
H. Wu, Y. Ube, H. Ohnuki, H. Endo
- P3-13 Study of the influence of MWCNTs addition to the ion-selective membrane on the analytical parameters of electrodes sensitive to nitrates**
K. Pietrzak, C. Wardak
- P3-14 Identification of degradation products and new colouring components in shellfish purple and indigo by UHPLC-MS/MS**
A. Vasileiadou, I. Sampsonidis, S. Kalogiannis, G. Theodoridis, I. Karapanagiotis, A. Zotou
- P3-15 Characterization of ancient burial pottery at Ban Muang Bua archaeological site (northeastern Thailand) using X-ray spectroscopy**
C. Boonruang, K. Won-in, N. Nimsuwan, P. Pakawanit, P. Dararutana
- P3-16 Development of a portable LED-IF instrument for the characterisation of biodeterioration on monuments**
A. Giakoumaki, V. Piñon, K. Melessanaki, K. Hatzigiannakis, P. Pouli, D. Anglos
- P3-17 Paper-based device for the determination chloride as a biomarker of cystic fibrosis based on the photochemical reduction of silver halide nanocrystals**
C. Matiaki, A. G. Vlessidis, D.L. Giokas
- P3-18 Voltammetric determination of 2,3-dichloro-1,4-naphthoquinone**
J. Berek, N.V Aseeva, E.I. Korotkova
- P3-19 CeO₂·Fe₂O₃ nanoparticles modified electrode for the sensitive and selective quantification of lipoic acid**
G. Ziyatdinova, L. Gimadutdinova
- P3-20 Adapting Surface Enhanced Raman Spectroscopy for organic residue analysis in archaeological artifacts**
M.E. Konstantinou, A. Philippidis, D. Anglos
- P3-21 Laser-induced breakdown spectroscopy (LIBS) combined with machine learning models and neural networks for the classification of hard tissue remains**
L. Spanos, P. Siozos, A. Koropoulis, N. Hausmann, M. Holst, P. Pavlidis, D. Anglos
- P3-22 Physicochemical and adsorption characteristics of thiomethacrylate-co-divinylbenzene microspheres**
A. Bosacka, M. Wasilewska, A. Chrzanowska, D. Sternik, A. Derylo-Marczewska, B. Podskoscielna
- P3-23 Development of modern analytical methods employing innovative sample preparation techniques in combination with chemometric tools for the investigation of food authenticity**
N.P. Kalogiouri, V.F. Samanidou
- P3-24 Thermal behavior and pyrolysis kinetics of olive stone residue**
K.Chrissafis, T.Asimakidou
- P3-25 Thermal and Spectroscopic Study of a Commercial Resin**
C. Kyriakou Tziamtzi, L. Malletzidou, K. Chrissafis