Laboratory of Aquatic Chemistry

Director: Professor Elia Psillakis
Telephone: +30 2821037806, 37810 Fax: +30 28210 846
E-Mail: elia@enveng.tuc.gr

Staff:

<table>
<thead>
<tr>
<th>Name</th>
<th>Title</th>
<th>E-MAIL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kalliopi Antelli</td>
<td>Teaching staff</td>
<td><a href="mailto:antelli@mred.tuc.gr">antelli@mred.tuc.gr</a></td>
</tr>
<tr>
<td>Nicoleta Solomou</td>
<td>PhD Candidate</td>
<td><a href="mailto:nicoletasolwmou@hotmail.com">nicoletasolwmou@hotmail.com</a></td>
</tr>
<tr>
<td>Niki Koutela</td>
<td>MSc candidate</td>
<td><a href="mailto:nkoutela@isc.tuc.gr">nkoutela@isc.tuc.gr</a></td>
</tr>
<tr>
<td>Sofia-Maria Mela</td>
<td>UG candidate</td>
<td><a href="http://www.sophmarmela@gmail.com">www.sophmarmela@gmail.com</a></td>
</tr>
<tr>
<td>Anastasia Liakata</td>
<td>UG candidate</td>
<td><a href="mailto:aliakata94@gmail.com">aliakata94@gmail.com</a></td>
</tr>
</tbody>
</table>

Research activities
Current research activities mainly focus on
- Understanding, developing and applying novel analytical procedures for detecting trace amounts of organic pollutants in a variety of environmental or engineered samples
- Studying the fate of organic pollutants in natural and engineered environments

Lab infrastructure
Gas Chromatography (GC) facilities
- GC-Ion Trap Mass spectrometer (GC-IT-MS)
  Varian 450-GC, Varian 220-MS, Varian
- GC-Mass Spectrometer (GC-MS)
  GC17A, QP5050A Shimadzu
- GC-Electron Capture Detector-Flame Ionization Detector (GC-ECD/FID)
  GC17A, Shimadzu

Liquid Chromatography (LC) facilities
- LC-Mass Spectrometry (LC-MS)
  Agilent 1200 Series HPLC system (binary pump, autosampler, degasser, thermostatted column compartment and photodiode array (PDA)) - Agilent 6100 Series Quadrupole
- HPLC-PDA-Fluorescence detectors (HPLC-PDA-FLU)
  CTO10AC, SPD-M10A, RF-10AxL, with Autosampler, Shimadzu

Sample Preparation
Solid-Phase Microextraction
- Headspace and Direct Immersion SPME
- Vacuum Assisted Headspace SPME

Liquid Phase Microextraction (LPME)
- Hollow-Fiber LPME
- Single Drop Microextraction
- Vortex-Assisted Liquid-Liquid Microextraction
Ultrasound-Assisted Emulsification Microextraction

**Environmental Fate**
Photosimulator Suntest CPS (Atlas Material Testing Solutions) equipped with Xenon arc lamp 1500W
Two photoreactors equipped with low-pressure mercury lamps (8–10 W, 254 nm)

**General equipment**
Ultrasonic bath, vortex agitator, Magnetic stir bar plates with temperature control option, incubator, fridges, weighting scales, multimeter (conductivity, DO, pH, TDS and temperature), centrifuges.

**Research projects**
1. Leaching of chemicals of environmental concern from used heated tobacco sticks to natural water and comparison with leaching from smoked conventional cigarettes, Role: Coordinator; Funding Source: PMI Science; Budget: €99533; Duration: 2018-2020.
2. European network for the promotion of portable, affordable and simple analytical platforms, PortASAP; COST Action CA16215; Role: Work-group Leader; MC Member; Funding Source: COST Association; Budget: €450000/year; Duration: 2017-2021.
3. New biotechnological approaches for biodegrading and promoting the environmental biotransformation of synthetic polymeric materials. Role: Research Collaborator; Funding Source: FP7-KBBE; Budget: €4000000; Duration: 2012-2015.