



# ITACA

Innovative Training centre  
for Advanced third level Course  
in Azerbaijan



Co-funded by the  
Erasmus+ Programme  
of the European Union

## WORKSHOP

on

# *ENVIRONMENTAL REMEDIATION IN AZERBAIJAN*

Baku, AZ - September 18-19, 2023

***Deliverable 11.5***

# CBHE+ Project – ITACA

## Baku, AZ - September 18-19, 2023

### PROGRAMME

**18/09/2023**

#### **Morning session**

Baku Higher Oil School, Senate Hall

**10:30 – 11:00 REGISTRATION**

**11:00 - 11:30 Opening Session**

#### **Institutional Greetings**

Rector of BHOS Mr. Elmar Gasimov

Head of NEO Mr. Parviz Baghirov

Guest from the Ministry of Education and Science

**11:30 - 12:00 Plenary lecture**

#### **ITACA project 2019-2023 – Summary and Results**

Prof. Dr. L. Di Palma, Sapienza University, coordinator of ITACA Project

#### **Afternoon session**

Baku Higher Oil School, Senate Hall

**13:30 - 15:00 Session 1: Research activities at the Training Center**

(Chairman: Prof. Dr. J. Gonzalez-Lopez, UGR + Dr. R. Ismayilov, SRDI)

1. “Oil fields polluted with heavy metals, anions (nitrates, arsenate, f, cl etc.), organic pollutant (phenols and others)” – **Dr. Amir Reza Vakhshouri, BHOS**

2. “Produced wastewater polluted with oil and gas extraction process products. polluted with organic compounds” – **PhD Seynura Hasanova, AZUAC**

3. "Determine impacts of morphogenetic features of oil-contaminated soil and re-cultivation methods in Absheron peninsula" - **Prof. Dr. Yusif Abdullayev/ PhD Javanshir Salmanov, BEU**
4. "Ecological Challenges of the Absheron Peninsula and the Caspian Sea" - **Prof. Dr. Ismat Ahmadov**

*each presentation 15 minutes + 5 minutes Q&A*

**15:00 - 15:30** **Coffee Break**

**15:30 - 17:00** **Session 2: Research activities at the Training Center**

(Chairman: Prof. Dr. J.L. Nielsen, AAL + Assoc. Prof. Dr A.R.Vakhshouri, BHOS)

5. "Caspian sea polluted by oil spill (surfactants and nano-Fe<sub>3</sub>O<sub>4</sub> or polymeric composites etc.)" – **PhD Hajar Nabiyeva or Dr Sevda Zargarova (BHOS)**
6. "Investigation of anthropogenic impact on the Absheron peninsula and the Caspian sea" – **Doctor of Chemical Sciences Flora Hajiyeva (BSU)**
7. "Bio-remediation of contaminated surface soils in Absheron peninsula" - **PhD Mammad Huseynov (BEU)**
8. "Caspian Sea polluted by hydrocarbon deposits (methanol, total solids, COD, BOD, etc.)." – **Dr Farhad Aliyev (AzUAC)**

*each presentation 15 minutes + 5 minutes Q&A*

**19/09/2023**

**Morning session**

Baku Higher Oil School, Senate Hall

**9:00 - 9:30** **Plenary lecture**

**ITACA Advanced Course on Environmental Remediation and Sustainable Oil and Gas Extraction in Azerbaijan – Results and Perspectives**

(Prof. Dr. J.L. Nielsen, AAL, Didactic Board)

**9:30 - 11:10** **Session 3: Advanced Course on Environmental Remediation and Sustainable Oil and Gas Extraction in Azerbaijan – Research presentation**

(Chairman: Prof. Dr. Y. Abdullayev, BEU + Dr. Far. Aliyev, AzUAC)

1. "Startup of a bench-scale continuous flow aerobic granular sludge system for the treatment of wastewater" - **Madina Nabiyeva**

2. "Improve biofilm formation of Rhodococcus rubber for enhancing plastic biodegradation" - **Gulnaz Soltanova**
3. "Polyethylene wax conversion to adipic acid using gluconobacter oxidants"-  
**Reyhana Ganiyeva**
4. "Development of new natural sorbent for the removal of copper from industrial wastewater" - **Tahir Javadzade**
5. "Study of calcium carbonate precipitation for heavy metals uptake" - **Jeyran Baghirova**

*each presentation 15 minutes + 5 minutes Q&A*

**11:10 - 11:30**     **Coffee Break**

**11:30 - 13:00**     **Session 4: Research on Environmental protection/remediation in Azerbaijan**  
(Chairman: Prof. Dr. Franco Medici, Sapienza + Dr. Chem. Scien. F.Hajiyeva, BSU)

6. "Synthesis and investigation of new surfactants based on higher carboxylic acids, polyamines and C3 epoxy compounds" - **Postdoc fellow Amina N. Alimova, The Institute of Petrochemical Processes named after Y.H.Mammadaliyev (IPP)**  
Academic supervisor: Dr.Chem.I Scien., Ilhama Zarbaliyeva

7. "Preparation of amino alcohols based on methylcyclopentene hydroxyhalides and binary amines" - **Senior researcher, doctoral student Pashabeyli Narmin, IPP**  
Academic supervisor: PhD, associate professor, Sadigov Omar Abdurahim

8. "Eco-friendly alkylation process-future perspectives" - **Senior researcher, PhD student Babashova Yetar, IPP**  
Academic supervisor: Dr. Chemical Sciences, Prof. Reyhan V. Aliyeva

9. "The role of computational chemistry in identifying environmentally friendly solvents" - **Postdoc fellow, Azizbayli Hamida, IPP**  
Academic supervisors: Dr. Chemical Sciences, Prof. Munavvar D. Ibrahimova, Dr. Chemical Sciences Reyhan V. Aliyeva

each presentation 15 minutes + 5 minutes Q&A

### **Afternoon session**

Baku Higher Oil School, Senate Hall

#### **14:00 - 15:30      Session 5: Research on Environmental protection/remediation in Azerbaijan**

(Chairman: Prof. P. Koutsoukos, Univ. Patras + Dr. E. Gahramanov, BEU)

**10.** “Using of production technology of protective fluids and corrosion inhibitors based on oxidized vegetable oils and organic acids” – **PhD Hashimzada Zeynab, IPP**

Academic consultant: Academician Vagif Abbasov

**11.** “Assessment of disease types by image classification modelling of vegetable oils” – **PhD student Aydinsoy Emil, IPP**

Academic supervisor: Academician Vagif Abbasov

**12.** “The synthesis of imidazole-containing inhibitor-bactericides against corrosive sulfate-reducing bacteria in the oil pipelines” - **PhD Ayaz Mammadov, IPP**

Consultant: Dr. Chemical Sciences, Prof. Rana Alakbar Jafarova

**13.** “The role of zeolite-containing catalysts in cleaning the environment”- PhD Valiyeva Asmer, Western Caspian University

each presentation 15 minutes + 5 minutes Q&A

#### **15:30 - 16:30      Session 6: Advanced Course on Environmental Remediation and Sustainable Oil and Gas Extraction in Azerbaijan – Research presentation**

(Chairman: Prof. M. Stoller, Sapienza + Dr. S. Zargarova, BHOS)

**13.** “Isolation of potential degrading microorganisms of two model plastic compound”  
- **Aysha Hasanzade**

**14.** “Adsorption and precipitation experiments in fixed beds for removal of pollutants in wastewater” - **Vusala Jalilova**

**15.** “Energy potential of wastewater from Mardakan-Shuvalan wastewater treatment plant” - **Ulker Abbasli**

each presentation 15 minutes + 5 minutes Q&A

**16:30 – 17:00**

### **Closing Session**

(L. Di Palma, Sapienza University, R. Guliyeva, BHOS, F. Aliyev, AzUAC, I. Ahmadov, BSU, E. Gahraramov, BEU)