

**Department of Ecology and Environment  
Protection at Lviv Polytechnic National University  
(Ukraine)**

**We are a new member of the BUP !!!**

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## 1. INDUSTRIAL AND ENGINEERING ECOLOGY, ENVIRONMENT PROTECTION TECHNOLOGIES AND EQUIPMENT FOR TREATMENT OF WASTE WATER, AIR POLLUTION AND SOLID WASTES

- development and implementation of technologies of sewage water purification from oil products, dyes, metals ions, organic solvents, sulfides; application of natural dispersive sorbents and reagent methods for water purification
- landfilling and waste management engineering, development of technologies of treatment of solid waste chemical, mining production and solid household waste (setting filtration shields, purifying drainage water)
- chemisorption sour gases of waste incineration; chemisorptions of  $H_2S$  on modified bentonite
- technologies of mineral fertilizers capsulation by organic and inorganic compounds

## 2. MATHEMATICAL MODELING OF ENVIRONMENTAL TREATMENT PROCESSES, PROCESSES OF HEAT EXCHANGE AND MASS-TRANSFER IN ENVIRONMENT ENGINEERING

- mathematical modelling of polluting substances migration in soil medium and preventing underground and surface water pollution
- intensification of mass-transfer processes by the method of cavitation and vacuuming of the system
- heat and mass transfer in the diffusive controlled processes



### **3. MODELLING AND PROGNOSTICATION OF THE STATE OF ENVIRONMENT, ENVIRONMENTAL MANAGEMENT, LIFE CYCLE ASSESSMENT, MONITORING, ECOLOGICAL SAFETY AND RISK ASSESSMENT**

- analysis of influence on the environment of ore mining enterprises
- minimization of ecological danger from a production and application of mineral fertilizers
- ecological safety of food industry enterprises (waste waters treatment, wastes utilization).
- an increase of ecological safety in waste-free technologies of multicomponent saliferous materials processing
- life cycle assessment of CO<sub>2</sub> sequestration processes



We look forward to  
your research cooperation!!!