
**ADVANCED ELECTROCHEMICAL
TECHNIQUES FOR DETECTION OF
PEROXO-EXPLOSIVES**
-workshop-

Gas sensors for preventing terrorist attacks
(SPS G5550)

The NATO Science for peace and Security Programme

19-21 April, 2019, Ohrid

P R O G R A M M E

Friday, 19th April 2019

14.00 **Registration**

15.30 **Prof. Valentin Mirceski**
Welcoming address

Project presentation

15.45 **Gas Sensors for Preventing Terrorist Attacks (SPS G5550): Scopes and Research Methodology**
Prof. Valentin Mirceski
Institute of Chemistry, Faculty of Natural Sciences and Mathematics, University "Ss Cyril and Methodius" Skopje

16.15 **A Field Detector for Genotoxicity from CBRN and Explosive Devices (SPS MYP G5266)**
Prof. Tatjana Ruskovska
Faculty of Medical Sciences, Goce Delcev University Stip

16.45 **Graphene/Polymer Based Sensor (SPS G5244)**
Prof. Jadranka Blazevska Gilev
Faculty of Technology and Metallurgy, University "Ss Cyril and Methodius", Skopje

17:15 *Coffee Break*

Inter-project cooperation and networking

17:45 **Round table discussion**
Moderator: Prof. Valentin Mirceski

Saturday, 20th April 2019

Scientific module

- 9:00** **Development of theory of voltammetric methods for sensor design**
Prof. Rubin Gulaboski
Faculty of Medical Sciences, Goce Delcev University Stip
- 10:30** *Coffee Break*
- 11:00** **Advanced pulse voltammetric techniques: theory and application**
Prof. Valentin Mirceski
Institute of Chemistry, Faculty of Natural Sciences and Mathematics, University "Ss Cyril and Methodius" Skopje
- 12:30** **Laser ablation of polymer/graphene composites**
Prof. Jadranka Blazevska Gilev
Faculty of Technology and Metallurgy, University "Ss Cyril and Methodius", Skopje
- 13:30** *Lunch*
- 14:30** **Voltammetric sensors for volatile explosives via hydrogen peroxide detection**
Prof. Rubin Gulaboski
Faculty of Medical Sciences, Goce Delcev University Stip
- 15:30** **Novel Concepts in Chronoamperometry and Voltammetry and Application in Electrochemical sensor Design**
Prof. Valentin Mirceski
Institute of Chemistry, Faculty of Natural Sciences and Mathematics, University "Ss Cyril and Methodius" Skopje
- 16:30** *Coffee Break*
- 17.00** **Horizontal Electrophoresis of Single Cells in Agarose Gel**
Prof. Tatjana Ruskovska
Faculty of Medical Sciences, Goce Delcev University Stip

Sunday, 21st April 2019

Students' presentation

9:00 Electrochemical Faradic Spectroscopy as a Sensing Tool for Electrochemical Sensors

Leon Stojanov

*Institute of Chemistry, Faculty of Natural Sciences and Mathematics,
University "Ss Cyril and Methodius" Skopje*

9:20 Basic Voltammetric Characteristics of the Home-made peroxo explosives

Jovica Todorov

*Institute of Chemistry, Faculty of Natural Sciences and Mathematics,
University "Ss Cyril and Methodius" Skopje*

9:40 Redox Biomolecules as Potential Hydrogen Peroxide Sensors

Kosta Najkov

*Institute of Chemistry, Faculty of Natural Sciences and Mathematics,
University "Ss Cyril and Methodius" Skopje*

10:00 Properties Comparison of rGO/MWCNT Polymer Based Composites

Marija Prosheva

*Faculty of Technology and Metallurgy, University "Ss Cyril and Methodius",
Skopje*

10:20 Anodic Stripping Voltammetry for Trace Metal Detection

Nese Salih

*Institute of Chemistry, Faculty of Natural Sciences and Mathematics,
University "Ss Cyril and Methodius" Skopje*

10:40 Coffee Break

11:00 Discussion and experimental demonstrations

Prof. Rubin Gulaboski

13:00 Lunch

14:00 Concluding remarks and directions for further work

Prof. Valentin Mirceski