



Technical University of Denmark



## PhD Workshop on Bioanalysis

November 27-28 2017: Hotel Märkischer Hof, Poststrasse 8, 14943 Luckenwalde, Germany

**Monday, Nov 27th 2017**

| 9.40 Welcome                     |                       |   |
|----------------------------------|-----------------------|---|
| Session 1 Chair: Olga Aleksejeva |                       |   |
| 9.45                             | Jingdong Zhang, DTU   | Application of Scanning Probe Microscopy in Bioelectrochemistry   |
| 10.15                            | Nikoloz Nioradze, THW | Nanogap Scanning Electrochemical Microscopy to Measure Permeability of Nuclear Pore Complex Membrane            |
| 10.30                            | Kim Tiedemann, UP     | Molybdoenzymes with Novel Reactivities  |
| 10.45                            | Biljana Mitrova, UP   | Direct Bioelectrocatalysis of Surfactant Immobilized TMAO Reductase –Towards Biosensor Construction             |
| 11.00                            | Coffee                |   |
| Session 2 Chair: Biljana Mitrova |                       |   |
| 11.30                            | Lo Gorton, LU         | Electrochemical Communication between Photosynthetic Membranes/Cells and Electrodes for Harvesting Solar Energy |
| 12.00                            | Dmitri Ciornii, THW   | Driving Photosystem I with Enzymes: Catalytic Bioelectronic Circuits on 3D Electrode Architectures              |
| 12.15                            | Chris Cadek, UP       | Analysis of the Function of TusA Homologous Proteins in Sulfur Metabolism of <i>Escherichia coli</i>            |
| 12.30                            | Tugba Yildiz, UP      | Analysis of the Role of TusA for Cell Functionality in <i>Escherichia coli</i>                                  |
| 12.45                            | Lunch                 |   |
| Session 3 Chair: Aysu Yarman     |                       |   |
| 13.45                            | Zeynep Altintas, TUB  | Biosensor Applications of Virus nanoMIPs  |
| 14.15                            | Jan Grzegorzewski, UP | Pattern Recognition Applied on Virus Classification   |
| 14.30                            | Sandra Stanke, IZI-BB | AC Electrically Functionalized Sensor Array for Influenza Virus Detection                                       |
| 14.45                            | Xiaorong Zhang, UP    | Electrosynthesized Molecularly Imprinted Polymer for Transferrin Recognition                                    |
| 15.00                            | Göksu Özçelikay, AU   | First MIP for the Recognition of Butyrylcholine Esterase  |

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|--------------|---------------------|--|
| <b>15.15</b> | Bettina Neumann, UP | Electrocatalytic Activity of an Electropolymerized Porphyrin Layer |
| <b>15.30</b> | <b>Coffee</b>       |  |

| <b>Session 4 Chair: Sandra Stanke</b> |                                       |  |
|---------------------------------------|---------------------------------------|--|
| <b>16.00</b>                          | <b>Henrike Müller-Werkmeister, UP</b> | <b>Ultrafast Structural Dynamics in Proteins</b>                             |
| <b>16.30</b>                          | Heike Kagel, THW                      | Controlling Enzyme Activity with Light using Photo Acids                     |
| <b>16.45</b>                          | Christin Möser, IZI                   | DNA Nanostructures as Multivalent Carriers for Peptides                      |
| <b>17.00</b>                          | Juliane Pfeil, THW                    | Mobile Microscopy on the Smartphone for Blood Analysis                       |
| <b>17.15</b>                          | Mariam Esmaeeli, UP                   | Human Aldehyde Oxidase 1: Structure-Function Studies on a Cysteine-Rich Loop |
| <b>17.30</b>                          | Fabian Heinrich, THW                  | Impedimetric Detection of Abasic DNA   |
| <b>18.00-19.00</b>                    | <b>Dinner</b>                         |  |
| <b>19.00</b>                          | <b>Social event</b>                   |  |

## Tuesday, Nov 28th 2017

| <b>Session 5 Chair: Dmitri Ciornii/ Mariam Esmaeeli</b> |                              |  |
|---|------------------------------|--|
| <b>09.15</b>  | <b>Sergey Shleev, MU</b>     | <b>Biosupercapacitors</b>  |
| <b>09.45</b>  | Jing Tang, DTU               | 3D Graphene-Glucose Oxidase Bioanodes for Enzymatic Biofuel Cells  |
| <b>10.00</b>  | Gero Göbel, THW              | Electrode Materials for a Reliable Catecholamines Detection via Differential Pulse Voltammetry   |
| <b>10.15</b>  | Olga Aleksejeva, MU          | Glucose/Oxygen Electric Power Biodevices with an Operating Voltage Exceeding the Thermodynamically Limited Open-Circuit Voltage  |
| <b>10.30</b>  | <b>Coffee</b>                |  |
| <b>11.00</b>  | Oscar Rojas, UNA             | Carbon based Nanoparticles: Potential Material for Biocatalysis and Immobilization   |
| <b>11.15</b>  | Muhammad Abrar Hasnat, UP    | Dissecting the Proteins that Insert Fe-S clusters into Enzymes Involved in the Biosynthesis of the Molybdenum Cofactor or into Molybdoenzymes in <i>Escherichia coli</i> |
| <b>11.30</b>  | Theresa Richter, IZI-BB      | Fluorescent Labeling and Functional Characterization of the Adenosine A2a Receptor in a Eukaryotic Cell-Free System  |
| <b>11.45</b>  | Franziska Ramm, IZI-BB       | Synthesis and Functional Characterization of Apoptin and Dianthin in Eukaryotic Cell-free Systems  |
| <b>12.00</b>  | <b>Closing remarks/Lunch</b> |  |
| <b>14.00 End</b>  |                              |  |