

Supervisor's report

Student: Jelena Pejovic Simeunovic

Topic: New technique on a chip for rapid detection of biological materials

Jelena Pejovic started getting acquainted with microfluidic techniques in autumn 2013, focusing on the detection of biologically interesting substances. During the first two years, she mastered the basic techniques of preparation of microfluidic PDMS chips, and by successive experiments with the current study of the literature, she finally focused on the use of conjugated quantum dots in detection. She has already elaborated her experience, the studied theory and visions about the aims of the work in the small thesis. In the following years, she set experimental goals and ideas experimentally and processed them into the presented comprehensive work in which she wants to show the possibilities of using simple chips in analytics.

During her studies, she completed several courses and an internship at the Vienna University, where she focused on different technological techniques also usable in microfluidics, thus broadening her horizons beyond current work. One journal publication was created from this internship. The second publication deals with the topic of the dissertation. The latest results are being processed into another publication, which will be submitted to the journal Analytical and Bioanalytical Chemistry (Springer) by the end of this month. This delay, including the submission of the entire thesis for defense, arose due to the PhD student's leaving on maternity leave.

During her studies and experimental work, she continuously consulted on the procedure and worked independently on solving the work aims. She participated in two student conferences and conferences CECE 2016 (Brno) and AMET 2017 (Belgrade).

She has already worked on the dissertation in her home country, Serbia.

In my opinion, she organized the text into a logical sequence of experiments and their evaluation, which contributes to the clarity and understanding of the work.

She has fulfilled the aims of her work and I recommend her work for defense.

In Brno, June 1st, 2020

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doc. Ing. Jaromír Hubálek, Ph.D.