

Supervisor's report

In Brno, June 5th, 2020

Academic year: **2019/2020**

Study programme: **Advanced materials and nanosciences**

Field of study: **Advanced nanotechnologies and microtechnologies**

Student: **Ing. Lukáš Flajšman**

Topic: **Magneto-optical study of the dynamic properties of magnetic nanostructures and nanostructured metamaterials**

J. Spousta:

I would like to express my gratitude and pleasure for the fact that I was able to meet Lukáš Flajšman during his bachelor's, master's and doctoral studies.

He is a hard-working, independent, and very talented student, who is able to solve complex physical problems on his own from their description, technical solution, implementation, and evaluation. I also really appreciate his personality. He is honest, friendly, always willing to help others. His doctoral thesis, carried out under the expert guidance of the consultant specialist Dr. Michal Urbánek, significantly exceeds the standards imposed on this type of work. For these reasons, I can only evaluate his overall performance during his doctoral studies as excellent.

M. Urbánek:

Lukáš Flajšman is one of the best students I've ever had a chance to work with. He is a very motivated young researcher with excellent knowledge of physics and outstanding analytical thinking. During his Ph.D. studies, Lukáš has always been working very hard not only on his Ph.D. topic but also on other related activities. These activities, among others, included setting up experiments for undergraduate physics course practicals, co-organizing European School on Magnetism, and participating in many science popularization events.

His work on the Ph.D. project was also excellent. He had to cover many areas, ranging from the construction of optical set-ups through nanopatterning and crystallography to micromagnetic simulations. He achieved to demonstrate the unique properties of magnetic nanostructures prepared by direct writing into metastable Fe₇₈Ni₂₂ thin films and their applicability in magnonics. He also built two set-ups for the investigation of static and dynamic magnetic properties of prepared nanostructures – scanning Kerr magnetometer and micro-BLS set-up.

Due to his outstanding diligence, experimental skills, and technical abilities coupled with the strong motivation driven by his scientific curiosity, he has achieved excellent experimental results at places where many of his predecessors failed. I do not doubt that his doctoral studies shall be honored with the highest grades.

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prof. RNDr. Jiří Spousta, Ph.D. – supervisor

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Ing. Michal Urbánek, Ph.D., co-supervisor