Review report

Student: Ing. Lenka Kuboňová
PhD thesis: „Surface activation of ordered mesoporous silica materials by cobalt and rhodium“

Work of Lenka Kuboňová followed the earlier experimental measurements of catalytic decomposition of N₂O undertaken in the framework of the GACR projects at the Department of Physical Chemistry and Theory of Technological Processes, Faculty of Metallurgy and Materials Engineering, VŠB-Technical University of Ostrava and later at the Institute of Environmental Technology, VŠB-Technical University of Ostrava.

Lenka started her internal doctoral studies in the 2010/2011 after graduating from VŠB-Technical University of Ostrava in the program Process Engineering, Chemical Engineering specialization. She began to study into internal PhD study program Chemical metallurgy. After opening Nanotechnology USP in 2012, she moved to this PhD program, which is focused closer to her dissertation topic.

During doctoral studies, she participated in the project from Ministry of Industry and Trade No. 2A-2TP1/061 „Leveling of emission of ozone precursors (VOC a NOₓ) from industrial sources enabling its more effective disposal“ (2007-2010), later in the projects focused on heterogeneous catalysis: Technologie Agency of Czech Republic No. TA01020336 „Abatement of N₂O emissions from waste gas of nitric acid production“(2011-2013) and Grant Agency of Czech Republic No. 14-13750S „Structured catalysts with active oxide layer for abatement of gaseous pollutants” (2014-2016). In 2013, she was the investigator of the project FRVŠ No. 1217 / G1 "Design and building of learning adsorption station" in the category of creative activity of students.

Thanks to Lenka, a new collaboration with the Laboratory of adsorption and catalysis at the University of Antwerp was established. Lenka spent a year on the professional internship under the scholarships obtained Flemish Community here. During the internship, she prepared several series
of catalysts that subsequently tested for the N₂O catalytic decomposition and CO catalytic oxidation in the laboratory of Institute of Environmental Technology.

I would like to emphasize Lenka’s independence, the ability of creative scientific work and excellent language skills. Lenka approached to partial tasks responsibly and carefully. In the course of her study, she closely acquainted with the most important findings in the field and by the processing of the dissertation thesis, she demonstrated ability to achieve original scientific results and develop them further. I recommend the conferment of the academic degree "Ph.D.".

Ostrava, September 26, 2015