

Supervisor report

České Budějovice, 1.2. 2017

Gurkan Kesan joined our group as a PhD. student in 2011. Since Gurkan's master studies in Turkey dealt with quantum chemical calculations, his role in the group was to introduce basic methods of quantum chemical calculations also for the molecules we study predominantly in our lab, carotenoids and chlorophylls. Since the beginning of his PhD. studies he has also actively participated in experimental work, and though his previous history was nearly purely theoretical, during his PhD. years he has also become a skillful experimental physicist. Though without previous experience with lasers, he quickly grasped the experimental techniques used in the femtosecond laboratory and in later stages of his study he was able to carry out complicated experiments on his own. Yet, the main Gurkan's tasks were to support experimental results by quantum chemical calculations. He took this task very responsibly and only thanks to him we were able to complement our results with some basic theory, which significantly improved the quality of the projects at which Gurkan participated. To pinpoint the key achievements, it is certainly the project aiming for elucidating the structure of the unknown carotenoid from *Chromera velia* purely on the basis of spectroscopic results. Without Gurkan's insight and calculations we would never be able to successfully finish this project. Besides the tasks given him within his Ph.D. project he also kept ties with his former group in Turkey (PI from this group was also his Ph.D. co-supervisor) and this collaboration resulted in other 11 papers that are not included in the thesis. Thus, Gurkan is the author or coauthor of 18 papers that were produced during the course of his five-year Ph.D. study, which clearly shows his focus on research.

Both scientifically and socially, Gurkan has been an integral member of the group who has been entirely devoted to science. It must be also mentioned that during the five years he showed significant improvement in his written and presentation skills, which I hope he will also show during the thesis defense. It was a pleasure to work with Gurkan and it is also a pleasure to recommend the thesis for defense as it fulfills all necessary requirements for awarding a Ph.D.



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