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I was visiting Paul-Drude-Institut für Festkörperelektronik in Berlin in the framework of the Erasmus + project during the period July 9 – 15, 2017. Under the supervision of Dr. Sergio Fernández-Garrido, I successfully carried out all the experiments planned. In particular, I grew a series of samples of GaN nanowires on Si substrates with amorphous Al_xO_y buffer by plasma-assisted MBE (Fig. 1). Quadrupole Mass Spectrometer (QMS) was used to acquire *in-situ* data on Ga desorption from the sample (Fig. 2) during growths in order to analyze an influence of nitrogen flux on self-induced nucleation and PAMBE growth of GaN nanowires (Fig. 3). After experimental part of the work I made numerical analysis of the QMS data. Currently I am preparing these results for publication.

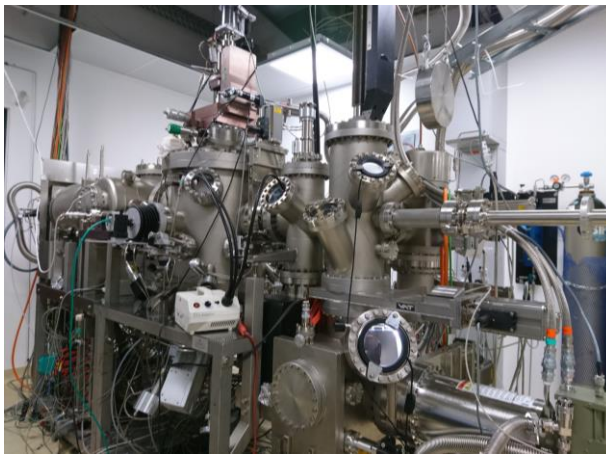


Fig. 1. PAMBE system at PDI in Berlin.

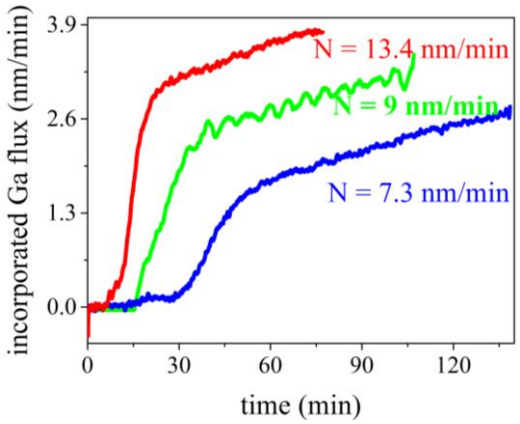
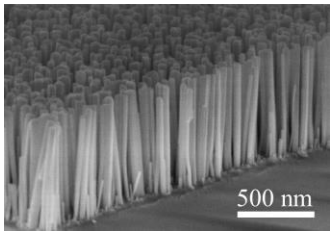


Fig. 2. QMS curves obtained for various nitrogen fluxes.



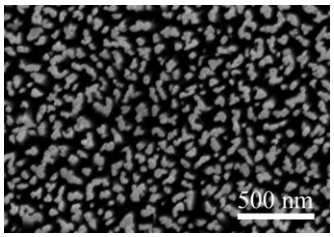


Fig. 3. SEM images of GaN NWs.

During the traineeship period I got experience in using QMS for *in-situ* analysis of PAMBE growth process of GaN nanowires. Discussions of experimental results with the team members from PDI allowed me to deepen my knowledge and understanding of physical processes taking place during spontaneous growth of semiconductor nanowires by PAMBE. Due to similar research profiles of MBE groups at both institutes, my mobility allowed me to acquire knowledge, specific know-how and practical skills relevant for my everyday research work. My visit helped to improve my competences as well as to improve quality of my work and activities in the area of MBE growth of GaN nanostructures. It also gave an opportunity to continue research contacts between IP PAS and PDI which have been established owing to ERASMUS Programme.