

## Investigation of dynamics and character of excitons in WSe<sub>2</sub> and MoSe<sub>2</sub> multilayers

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### Abstract

We report about our time-resolved Faraday ellipticity (TRFE) experiments on multilayers of the transition metal dichalcogenide WSe<sub>2</sub> and MoSe<sub>2</sub>. In a continuation of our recent work by Raiber et al. [1], we aim to investigate the nature of the temporal dynamics in TMDC multilayers. These previous results have shown that pseudospin oscillations appear in the TRFE signal when we apply an in-plane magnetic field to our multilayer samples. Now we try to characterize and manipulate these oscillations by playing with different experimental parameters. Current results show that the oscillations have two different frequencies, a shorter one earlier in time and a longer one later in time. This suggests two different exciton dynamics or species.