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## The scanning time-resolved Kerr microscope

In recent days, magnetic materials, structures, and devices are getting more popular, especially those related to spintronics. Research and development of such magnetic samples require a way to observe magnetization with good spatial and temporal resolution. Most dynamic changes of magnetization are realized in nanoseconds or even faster. If we can detect these dynamic processes, we can reveal many exciting magnetization features and add the fourth dimension to our experiments. We introduce a scanning Kerr microscope working in two modes: static and dynamic. In static mode, our microscope detects a direction of magnetization in a variable magnetic field. In dynamic mode, we use a pump-probe method to reach a temporal resolution and observe a fast evolution of magnetization.

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