291. Title: Compact fiber-coupled terahertz spectroscopy system pumped at 800 nm wavelength
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Abstract: Photonic terahertz (THz) technology using femtosecond (fs) lasers has a great potential in a wide range of applications, such as non-destructive testing of objects or spectroscopic identification of chemical substances. For industrial purposes, a THz system has to be compact and easily implementable into the particular application. Therefore, fiber-coupled THz systems are the key to a widespread use of THz technology. In order to have flexible THz emitters and detectors near infrared fs light pulses have to be sent through optical fibers of considerable length. As a consequence, the fibers dispersion has to be compensated for and nonlinear effects in the fiber have to be minimized. A fiber-based THz time-domain spectroscopy system of high stability, flexibility, and portability is presented here.