

DEVELOPMENT OF OPTICAL BIOSENSORS ON BASIS OF MICRO-DISK RESONATORS

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Abstract Optical Whispering Gallery Modes in micro-cavities with toroidal shape offer small mode volumes and high Quality-Factors. The shift of the mode frequencies when biological substances are attached to the resonators surface allows detection down to singles molecules. For the parallel detection of different types of bio-molecules, each resonator has to be functionalized for specific molecules. The goal of our project is the development of a device for label-free, parallel detection of biomolecules.