

Electron beam lithography in a scanning electron microscope Tescan Miran LMH is described. Detailed parameters of preparation procedure of metal structures with characteristic dimensions below 100 nm were obtained. Additionally, a preparation of square arrays of sub 100-nm metal dots with 1 μm period is being discussed. The lithography was performed with self-prepared resist layers (thickness < 25 nm), parameters of the spin-coating procedure are listed as well. A construction of a model single-wire sensor is described. The sensor had macroscopic gold contacts with thin (< 200 nm) tin oxide wires in between. The structures were investigated by means of scanning electron microscopy and atomic force microscopy.