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Program and Book of abstracts

T7-P-26 **Thermosensitive properties of vanadium oxide films deposited by pulsed DC reactive magnetron sputtering**

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The structure and electrical properties of vanadium oxide films deposited by pulsed DC reactive magnetron sputtering were studied. We have studied the change in the temperature coefficient of resistance (TCR) and resistivity of vanadium oxide films depending on their production conditions. The structure of the sputter deposited films was studied by the Raman spectroscopy. As a result of the research, thermoresistive layers with TCR=2.1%/°C were obtained with a resistivity of 2.8 Ohm·cm.

T7-P-27 **Atmospheric pressure plasma-assisted fabrication of iron oxide nanostructures**

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Experimental studies of the process of formation of iron oxide nanostructures by low-temperature plasma electrolysis, including spectroscopic studies of plasma in contact with a solution and characterization of the structure and composition of formed nanoparticles were carried out.

T7-P-28 **Preparation and parameters adjusting of nanoparticle suspensions for a working medium of a laser microengine**

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The dependence of the characteristics of nanoparticle suspensions on the synthesis conditions and adjusting them for using as a working fluid of a laser micromotor is presented. The experiments were curried out by varying laser radiation wavelength, time of particle production, and spatial positioning of a target in the cell with liquid. The range of the optimal parameters for the synthesis of carbon-containing nanoparticles suitable for using in laser micromotors has been determined.

T7-P-29 **Spatially resolved LIBS and XRF for environmental monitoring in aquatic ecosystems**

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LIBS and XRF are mutually complementary in terms of analytical potential, including typical analytes and options for local or bulk analysis. We compared their performance for the determination of inorganic pollutants in biosamples. For LIBS, different plasma zones were considered, showing different degrees of self-absorption of spectral lines. This information was used to improve the calibration graphs. The study was funded by RFBR and BRFFR, projects No. 20-53-04036 and Б21РМ-085, respectively.