Thin Lays of the metal nanoparticles for ICF targets, Production and monitoring [[1]](#footnote-1)\*)

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Recently much attention is focused on the targets with low-density thin metal layers on the targets made of nanopowder, which allow one to get interesting results with help of the presently operating ICF facilities find those being put into operation. Such layers and the methods of their precision monitoring at the LPI for a number of years [1,2,3,4].

The manufacturing technology of low-density 1/50-1/300 and very low-density (up to 1/600 from the density of a solid substance) layers of a number of metals demanded long and future development. Much attention was paid to the problems of monitoring, since the control accuracy influences the interpretation of the experimental results and the planning of future research.The precision optical and x-ray methods were used in monitoring procedure. The development of low-density targets brings a variety of technologies for the manufactory of targets layers from the such materials as Bi,Sn,Cu and W. The most low-density layers are produced from In and Au. As a rule for each materials an individual production technology was developed. The experiments on obtaining higher conversion of laser radiation into the x-ray one for Bi and Au [1,4,5]. By changing the conditions of layer production we managed to regulate the achieved density in a certain range. We overcame the difficulties associated with the problems of manipulation with microscopic amounts of the used materials, and the work with micro-objects. The samples of targets for laser experiments were made.

The layers produced are of importance for novel laser experiments and development of promising future target models [2,3,5,6].

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1. \*) [abstracts of this report in Russian](http://www.fpl.gpi.ru/Zvenigorod/XLVIII/It/ru/DO-Gromov.docx) [↑](#footnote-ref-1)