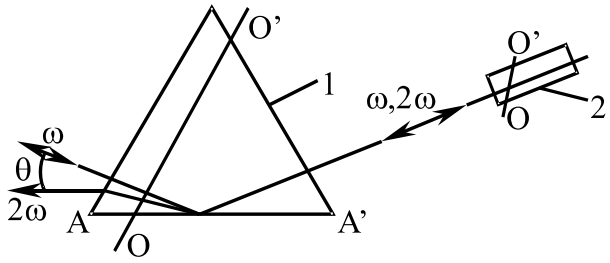

Using of a crystal $CaCO_3$ is caused by a significant anisotropy and tranparence of a crystal. The phase synchronism of interacting waves in a nonlinear crystal is carried out by moving of a prism 1 toward an optical axis OO′. The peak efficiency of transformation in created optical system makes $\sim 80\%$, that allows to use such type of the schemes in laser systems.

The analysis of temperature fields generated under electrochemical deposition of metals stimulated by laser radiation

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In the study radially - temporal dependences of temperature in the vicinity of local settlings under laser electrochemical deposition of argentum on a copper substrate under different power densities of laser radiation were experimentally examined.

Using the finite-element method the calculations of temperature fields generated under electrochemical deposition of metals stimulated by laser radiation were made. As a result radially - temporal temperature fields distributions were obtained and graphically displayed which corresponded to experimental ones in the whole range of power densities. The analysis of the dynamics of the process of temperature fields forming has

allowed to find out the mechanism of local metal precipitates formation. The obtained information was used for optimization of parameters of the processes which take place under laser electrochemical forming of local metal precipitates.