STUDYING THE ROLE OF LIQUID ENVIRONMENTS IN FORMATION OF NOBLE METAL NANOPARTICLES BY LASER ABLATION

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We studied the role of the aqueous solution in formation of noble metal nanoparticles by laser ablation. The gold and silver nanoparticles were produced in different liquids such as water, ethanol, solution of polyvinylpyrrolidone (PVP). Size and optical properties of the nanoparticles were characterized and observed by a transmission electron microscopy (JEM 1010 – JEOL) and UV–visible 2450 spectrometer. In our experiments, we studied the effect of different solution to the average size and stability of the metal nanoparticles against coalescence. The results and discussions will be represented in this report.