

INFLUENCE OF GAMMA IRRADIATION ON STRUCTURAL PROPERTIES OF COPPER NANOTUBES

It is well-known that irradiation with a gamma-ray flux of metal nanostructures is an effective tool for stimulating a controlled modification of structural and conductive properties of materials in a modern materials science. The paper presents the results of studies of the influence of gamma irradiation on structural and conductive properties of copper nanotubes obtained by electrochemical synthesis in the pores of template matrices based on polyethylene terephthalate. SEM, XRD and EDA methods show that gamma-ray irradiation with doses of 50 and 100 kGy allows modifying the crystal structure of nanotubes, increasing their conductivity and decreasing the resistance of nanostructures without destroying their structure.

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