

INFLUENCE OF SODIUM IONS (Na^+) DOPANT ON THE EFFICIENCY OF THE TUNGSTEN TRIOXIDE PHOTOELECTRODE

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Abstract: *The paper presents the influence of the sodium dopant ions (Na^+) on the properties of WO_3 film, used as photoelectrode for water photolysis. The photoluminescence and photocurrent stability were recorded in a photoelectrochemical system having doped and, respectively, undoped WO_3 films, deposited by spray pyrolysis on fluorine-doped tin oxide as photoanode and Pt as cathode, in HCl electrolyte ($\text{pH} = 5$). The crystalline structure, topography and electrical properties were investigated. The experiments confirm that the doping process will increase the photoelectrode efficiency.*

Key words: *thin film, crystal structure, electronic properties, optical properties.*

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