

SOL-GEL METHOD PREPARATION AND INVESTIGATION PROPERTIES OF SILICA POWDERS DOPED ORGANIC LUMINOPHORS.

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In connection with increase of quantity of various products, being a subject to marks, the problem of protection them from forgery is very urgent. The most perspective decision of a given problem is the development of new types of mark means with using of organic and unorganic luminophors, as well as microdisperse materials with the various special additives, the availability of which is tested by physico-chemical methods. Taking flexibility and opportunities of use of various initial substances, a sol-gel method is widely begin applied to obtain various disperse materials. This method is based on use of metal alkoxide connections, subjected to controllable hydrolysis in acid or alkaline environments [1,2].

As a result of researches some ways of reception doped silica powder with use various alkalis as catalysts hydrolysis were developed on the basis of sol-gel method and their spectral-luminescent properties were investigated. Optimum luminophor concentration in the powder silica dioxide, which provides sure visual registration of luminescent at excitation with a UF-source of radiation with a main length of a wave 365 nm and capacity not more than 10 Wt is determined.

References

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