

# Tuning the structure and photocatalytic activity of TiO<sub>2</sub> sol-gel fabricated films by incorporation of nano- and submicron particles

N. M. Denisov <sup>1</sup>,

A.V. Baglov <sup>2</sup>

2017

Belarusian State University of Informatics and Radioelectronics P. Browka 6, 220013 Minsk, Belarus

**Keywords:** Photocatalysis, sol-gel method, semiconducting metal oxide, rhodamin B, aluminum foil.

**Abstract:** TiO<sub>2</sub> nanostructured films were fabricated by sol-gel technique with an addition of TiO<sub>2</sub> nano- or/and submicron particles into the sol. The highest photocatalytic activity along with high crystallinity predominantly in the anatase phase were achieved by adding both types of the particles. Photocatalytic activity of the films was found to get maximum after calcination at 500 – 550 °C corresponding to the best crystallization of the deposited material both with and without added preliminary formed nano- and submicron particles.

## **Published in:**

Proceedings of International Conference “Nanomeeting – 2017” in Physics, Chemistry and Application of Nanostructures, ed. by V. E. Borisenko, S. V. Gaponenko, V. S. Gurin, 2017, pp. 274-278. – [https://doi.org/10.1142/9789813224537\\_0063](https://doi.org/10.1142/9789813224537_0063).

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