Thematic course: Hydrochemical synthesis of metal chalcogenide films. Part 23.

Chemical bath deposition kinetics of indium(III) sulfide in tertaric-hydroxylamine solution by thioacetamide

© **Stanislav S. Tulenin**,[1+] **Vyacheslav F. Markov**,[1,2]*
Larisa N. Maskaeva,[1,2] and **Andrey V. Tretyakov**[1]
[1] *Department of Physical and Colloidal Chemistry. The Ural Federal University n.a. the first President
of Russia B.N. Yeltsin. Mira St., 19. Ekaterinburg, 620002. Sverdlovsk area. Russia.
Phone: +7 (343) 375-93-18. E-mail: stast1989@mail.ru*
[2] *Department of Chemistry and Burning Processes. Ural institute GPS of the Ministry of Emergency
Measures of Russia. Mira St., 22. Ekaterinburg, 620022. Russia.
Phone: +7 (343) 360-81-68. E-mail: v.f.markov@ustu.ru*

_____
*Supervising author; +Corresponding author

Keywords: indium(III) sulfide, chemical bath deposition, formal chemical kinetic, rate of chemical reaction.

Abstract
The chemical bath deposition kinetics of indium(III) sulfide by means of thioacetamide in tartaric and hydroxylamine solutions at 333-363 K in spontanious nucliation conditions of solid phase was studied. The formal-kinetic equation of indium(III) sulfide formation rate was determined. The formal-kinetic equation of indium(III) sulfide formation rate with determination of individual orders on all component in system and an activation process energy was made.