Full Paper	Thematic Section: Physico-Chemical Research
Reference Object Identifier – ROI: jbc-02/15-42-6-138	Subsection: Electrochemistry
The article is published on materials of the report on "International Scien	ntific Forum
Butlerov Heritage – 2015". http://foundation.butlerov.com/bh-2015/	(English Preprint)
Submitted on April 08, 2015.	

## On the peculiarities of passivation of copper in sulfuric acid solutions

## © Alexander I. Biryukov, Alexander G. Tyurin, and Artem P. Tronov

Department of Analytical and Physical Chemistry. Chelyabinsk State University. Br. Kashirinykh St., 129. Chelyabinsk, 454136. Russia. Phone: (351) 799-70-69. E-mail: st4857@yandex.ru

*Keywords:* copper sulfate-containing aqueous solutions, electrochemical equilibrium diagram E - pH, polarization curves.

## **Abstract**

Building a cross-section diagrams Fe-pH systems  $SO_4^{2^2}-H_2O$  and  $Cu-H_2SO_4-H_2O$  was presented. Polarization curves of copper in the solution of  $1M\ H_2SO_4$  were demonstrated. Thermodynamic and kinetic features of passivation of copper in sulfuric acid medium have been analyzed.

<sup>\*</sup>Supervising author; \*Corresponding author