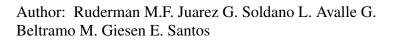
### Accepted Manuscript

Title: Current transients for the hydrogen evolution reaction at high overpotentials on silver electrodes in acid solutions: Experiments and Modelling





PII:	S0013-4686(13)01381-9
DOI:	http://dx.doi.org/doi:10.1016/j.electacta.2013.07.112
Reference:	EA 20905
To appear in:	Electrochimica Acta
Received date:	2-3-2013
Revised date:	12-7-2013
Accepted date:	13-7-2013

Please cite this article as: Ruderman, M.F. Juarez, G. Soldano, L. Avalle, G. Beltramo, M. Giesen, E. Santos, Current transients for the hydrogen evolution reaction at high overpotentials on silver electrodes in acid solutions: Experiments and Modelling, *Electrochimica Acta* (2013), http://dx.doi.org/10.1016/j.electacta.2013.07.112

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## ACCEPTED MANUSCRIPT

#### Current transients for the hydrogen evolution reaction at high

#### overpotentials on silver electrodes in acid solutions:

#### **Experiments and Modelling**

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#### Abstract

The hydrogen evolution reaction has been investigated on Ag(100) by potentiostatic current transients at high overpotentials ( $\eta > 0.7V$ ) in acidic solutions. The reaction proceeds via the Volmer – Heyrovsky mechanism, simultaneously coupled with desorption of sulphate / disulphate anions. Volmer is the rate determined step, although the Heyrovsky reaction is only slightly faster. The kinetic parameters have been obtained under various conditions of pH and concentration of anions. A catalytic effect due to the presence of anions has been observed.

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