Springer Link Search Log in



Published: November 2005

# Electrochemical Behavior of Copper in a Water-Ethanolamine Medium

T. I. Lezhava, N. Sh. Ananiashvili, M. P. Kikabidze & D. A. Metreveli

*Russian Journal of Electrochemistry* **41**, 1211–1214 (2005)

**67** Accesses | **1** Citations | Metrics

## Abstract

Dependences of the copper etching rate in a water-monoethanolamine medium on the solution pH and concentration of Cu(II) in the presence and absence of chloride ions are determined. An increase in the stability of univalent species and in the diffusion coefficient of Cu(I) at pH 10.30 is attributed to chelation. The mechanism of copper etching in the medium is proposed. The copper etching deceleration at pH > 10.30 is attributed to the metal blockage by surface compounds.

This is a preview of subscription content, access via your institution.

Access options

Buy article PDF

39,95 €

Price includes VAT (Georgia)

Instant access to the full article PDF.

Rent this article via DeepDyve.

Learn more about Institutional subscriptions

## REFERENCES

1. Lezhava, T.I., Sal'nikova, E.N., Chepaikin, E.G., Lavrent'ev, I.P., Khidekel', M.L., Laskorin, B.N., Buchikhin, E.P., Shatalov, V.V., and Ananiashvili, N.Sh., USSR Inventor's Certificate no. 387473, 1987.

2. Ananiashvili, N.Sh., Lavrent'ev, I.P., Lezhava, T.I., Sal'nikova, E.N., and Chepaikin, E.G., *Preprint of Inst. of Chemical Physics, Academy of Sciences of USSR, Chernogolovka*, Tbilisi: Institute of Inorganic Chemistry and Electrochemistry, 1988, no. 89/87.

3. Galus, Z., *Fundamentals of Electrochemical Analysis*, Chichester: Ellis Horwood, 1976.

4. Ananiashvili, N.Sh. and Lezhava, T.I., *Koord. Khim.*, 1997, vol. 2, p. 135.

5. Lezhava, T.I., Ananiashvili, N.Sh., and Kikabidze, M.P., *Elektrokhimiya*, 2001, vol. 37, p. 1496.

6. Lezhava, T.I. and Ananiashvili, N.Sh., *Elektrokhimiya*, 1988, vol. 24, p. 714.

## Author information

Authors and Affiliations

**Agladze Institute of Inorganic Chemistry and Electrochemistry, Academy of Sciences of Georgia, Tbilisi, Georgia**

T. I. Lezhava, N. Sh. Ananiashvili, M. P. Kikabidze & D. A. Metreveli

Corresponding author

Correspondence to T. I. Lezhava.

## Additional information

Translated from Elektrokhimiya, Vol. 41, No. 11, 2005, pp. 1358–1362.

Original Russian Text Copyright © 2005 by Lezhava, Ananiashvili, Kikabidze, Metreveli.

## Rights and permissions

Reprints and Permissions

## About this article

### Cite this article

Lezhava, T.I., Ananiashvili, N.S., Kikabidze, M.P. *et al.* Electrochemical Behavior of Copper in a Water-Ethanolamine Medium. *Russ J Electrochem* **41**, 1211–1214 (2005). https://doi.org/10.1007/s11175-005-0204-y

| Received | Issue Date |
| --- | --- |
| 25 January 2005 | November 2005 |

DOI

https://doi.org/10.1007/s11175-005-0204-y

### Key words

**copper** **monoethanolamine** **etching rate** **disproportionation** **equilibrium** **stability of Cu(I)** **pH** **surface compounds**

Not logged in - 5.178.173.177
Not affiliated
SPRINGER NATURE

© 2023 Springer Nature Switzerland AG. Part of Springer Nature.