



## Novel thiophene symmetrical Schiff base compounds as corrosion inhibitor for mild steel in acidic media

Submitted by Emmanuel Lemoine on Wed, 12/04/2013 - 16:28

Titre	Novel thiophene symmetrical Schiff base compounds as corrosion inhibitor for mild steel in acidic media
Type de publication	Article de revue
Auteur	Issaadi, S. [1], Douadi, Tahar [2], Zouaoui, A. [3], Chafaa, Salah [4], Khan, Mustayeen Ahmed [5], Bouet, Gilles [6]
Type	Article scientifique dans une revue à comité de lecture
Année	2011
Date	2011/04
Numéro	4
Pagination	1484 - 1488
Volume	53
Titre de la revue	Corrosion Science
ISSN	0010-938X
Mots-clés	Corrosion [7], Hydrochloric acid [8], Inhibitor [9], Mild steel [10], Schiff base [11]
Résumé en anglais	<p>The inhibiting effect of two Schiff bases on the corrosion of the mild steel (MS) in 1 M HCl has been studied by electrochemical impedance spectroscopy (EIS) and Tafel polarisation measurements. The Schiff bases, 4,4'-bis(3-carboxaldehyde thiophene) diphenyl diimino ether (L1) and 4,4'-bis(3-carboxaldehyde thiophene) diphenyl diimino ethane (L2), were synthesized using 3-carboxaldehydethiophene and its corresponding amine. Polarisation curves reveal that both compounds are mixed type (cathodic/anodic) inhibitors and inhibition efficiency (% IE) increases with increasing concentration of compounds. It is suggested that their effects depend on their concentrations and the molecular structures. Adsorption of compounds on mild steel surface is spontaneous and obeys Langmuir's isotherm.</p>
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua35">http://okina.univ-angers.fr/publications/ua35</a> [12]
DOI	10.1016/j.corsci.2011.01.022 [13]
Lien vers le document	<a href="http://dx.doi.org/10.1016/j.corsci.2011.01.022">http://dx.doi.org/10.1016/j.corsci.2011.01.022</a> [13]

### Liens

- [1] [http://okina.univ-angers.fr/publications?f\[author\]=195](http://okina.univ-angers.fr/publications?f[author]=195)
- [2] [http://okina.univ-angers.fr/publications?f\[author\]=194](http://okina.univ-angers.fr/publications?f[author]=194)
- [3] [http://okina.univ-angers.fr/publications?f\[author\]=196](http://okina.univ-angers.fr/publications?f[author]=196)
- [4] [http://okina.univ-angers.fr/publications?f\[author\]=193](http://okina.univ-angers.fr/publications?f[author]=193)
- [5] [http://okina.univ-angers.fr/publications?f\[author\]=266](http://okina.univ-angers.fr/publications?f[author]=266)
- [6] [http://okina.univ-angers.fr/publications?f\[author\]=83](http://okina.univ-angers.fr/publications?f[author]=83)
- [7] [http://okina.univ-angers.fr/publications?f\[keyword\]=5976](http://okina.univ-angers.fr/publications?f[keyword]=5976)

- [8] [http://okina.univ-angers.fr/publications?f\[keyword\]=5980](http://okina.univ-angers.fr/publications?f[keyword]=5980)
- [9] [http://okina.univ-angers.fr/publications?f\[keyword\]=5977](http://okina.univ-angers.fr/publications?f[keyword]=5977)
- [10] [http://okina.univ-angers.fr/publications?f\[keyword\]=5979](http://okina.univ-angers.fr/publications?f[keyword]=5979)
- [11] [http://okina.univ-angers.fr/publications?f\[keyword\]=5978](http://okina.univ-angers.fr/publications?f[keyword]=5978)
- [12] <http://okina.univ-angers.fr/publications/ua35>
- [13] <http://dx.doi.org/10.1016/j.corsci.2011.01.022>

Publié sur *Okina* (<http://okina.univ-angers.fr>)