



Ijncse ,volume 2, issue 3 (July - September) , 2015

S No	Title	Page
1	Influence of citric acid-Zn²⁺ System on Inhibition of Corrosion of Mild Steel in Simulated Concrete Pore Solution, <i>P.Nithya Devi, J.Sathiyabama, S.Rajendran, R Joseph Rathish and S Santhana Prabha</i>	 1-13
2	Corrosion inhibition by flower extracts-An over view <i>M.Sangeetha, S.Rajendran, J.Sathiyabama, T. Umasankareswari, A Krishnaveni and RM Joany</i>	 14-21
3	Corrosion inhibition by dyes from plants <i>V.Johnsirani, S.Rajendran, A.Christy Catherine Mary, R.Joseph Rathish, T. Umasankareswari and J Jeyasundari</i>	 22-28
4	Green Approach To Corrosion Inhibition By Emblica Officinalis (NA-7) Leaves Extract <i>D. Renita, T. Sanish, Dwivedi and C. Amit,</i>	 29-45
5	Corrosion Inhibition by Oxyanions A.Christy Catherine Mary, S.Rajendran, A Sharmila, K Devadharshini, P Sangeetha and A Krishnaveni	 46-59



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Volume 2; Issue 3, Year 2015

S No	Title, Authors and Abstract	Pages
<p>1</p>	<p>Influence of citric acid-Zn²⁺ System on Inhibition of Corrosion of Mild Steel in Simulated Concrete Pore Solution</p> <p>P.Nithya Devi*, J.Sathiyabama , S.Rajendran , R Joseph Rathish and S Santhana Prabha</p> <p>The inhibition efficiency (IE) of citric acid -Zn²⁺ system in controlling corrosion of mild steel in Simulated Concrete Pore Solution (SCPS) prepared in well water in the absence and presence of Zn²⁺ has been investigated by weight loss study. It can be seen from the data obtained that formulation consisting of 250 ppm of Citric acid and 50 ppm of Zn²⁺ provides 88% of inhibition efficiency. Inhibition was found to increase with an increasing concentration of Zn²⁺. Polarization study confirms the formation of a protective film on the metal surface. AC impedance spectra also revealed that a protective film formed on the metal surface. The inhibitor system controls the anodic reaction predominantly. The results obtained show that the Citric acid could serve as an effective inhibitor for the corrosion of mild steel in Simulated Concrete Pore Solution.</p> <p>Keywords: Concrete Corrosion, Simulated Concrete Pore Solution, Mild Steel, Citric acid, Well water</p>	<p>1-13</p>
<p>2</p>	<p>Corrosion inhibition by flower extracts-An over view</p> <p><i>M.Sangeetha* ,S.Rajendran , J.Sathiyabama, T. Umasankareswari, A Krishnaveni and RM Joany</i></p> <p>Most of the flowers are coloured. Colourless flowers have attractive fragrance. Hence Extracts of flowers have active principles containing polar atoms such as nitrogen, oxygen, sulphur and phosphorus. The active principle molecules pump electrons towards the metal surface through these electron rich centers. Thus the release of electron from the metal surface is prevented. Thus</p>	<p>14-21</p>



Corrosion of metals is prevented by flower extracts. Weight loss and electrochemical studies have been employed to evaluate the corrosion inhibition efficiencies of the extracts of flowers. Usually aqueous extracts are conveniently employed. Adsorption of active principle on the metal surface obey Langmuir, temkin and frenlich absorption isotherm. Thermodynamic parameters have been calculated. Protective film has been analysed by SEM, EDX, AFM and FTIR. Mild steel in the metal mostly employed in these studies.

Key words: corrosion inhibitors, flower extract, green inhibitors, colored inhibitors.

3	<p>Corrosion inhibition by dyes from plants</p> <p><i>V.Johnsirani* , S.Rajendran , A.Christy Catherine Mary ,</i></p> <p><i>R.Joseph Rathish, T. Umasankareswari and J Jeyasundari</i></p> <p>Many organic compounds containing hetero atoms like sulphur, nitrogen and oxygen have been used as corrosion inhibitors. However, the environmental needs have prompted the researchers to make use of environmental friendly green inhibitors. The synthetic dyes have been used as corrosion inhibitors however, they have been discarded due to environmental hazards. Natural dyes, extracted from plant materials have been used as corrosion inhibitors. For this purpose dyes such as berberine, lawsone and curcumin extracted from plant materials have been used as corrosion inhibitors. The inhibition efficiency has been evaluated by electrochemical studies and weight loss method. The protective film has been analysed by FTIR spectra, fluorescence spectra, SEM and EDAX.</p> <p>Keywords : Corrosion inhibition, natural dyes berberine, lawsone and curcumin, FTIR spectra, fluorescence spectra, SEM and EDAX.</p>	22-28
4	<p>Green Approach to Corrosion Inhibition by <i>Emblica Officinalis</i> (NA-7) Leaves Extract</p> <p>D. Renita *, T. Sanish , Dwivedi , and C. Amit</p> <p>The inhibition potentials of <i>Emblica officinalis</i> leaves extract was investigated by evaluating the corrosion behavior of mild steel immersed in 1N HCl solution containing varied concentration of the extract ranging from 200ppm to 1000ppm. Weight loss, corrosion rate, percentage inhibition efficiency, surface coverage and Langmuir adsorption isotherm were utilized to evaluate the corrosion inhibition and</p>	29-45

	<p>adsorption properties of the extract. The inhibition efficiency increased with increase in concentration of the inhibitor and the highest %IE was obtained at 1000ppm. The adsorption of the plant extract on the mild steel surface was found to obey Langmuir adsorption isotherm. UV, Fourier transform infrared spectroscopy, Scanning electron microscopic studies provided the confirmatory evidence of improved surface condition, due to adsorption, for the corrosion protection.</p> <p>Key words: Emblica officinalis, corrosion, inhibition, efficiency and adsorption, green inhibitor</p>	
<p>5</p>	<p style="text-align: center;">Corrosion Inhibition by Oxyanions A.Christy Catherine Mary , S.Rajendran, A Sharmila, K Devadharshini ,P Sangeetha and A Krishnaveni</p> <p>Oxyanion contains electrons on oxygen atom. These electrons can be released to the metal surface and thus corrosion of metals can be prevented. Corrosion of many metals have been prevented by oxyanions in acidic, basic and neutral medium. Usually weight loss method and electrochemical studies have been employed to evaluate the corrosion inhibition efficiency of oxyanion. The protective film formed on metal surface in presence of oxyanion have been analysed by FTIR spectra, SEM, EDAX, Auger electron spectroscopy (AES), piezo-electrokinetic (PEK) method, cyclic potentiodynamic polarization (CPP) measurement, linear polarization resistance (LPR) techniques and XRD pattern.</p> <p>Keywords: oxyanion, review, metals , corrosion inhibition, methods</p>	<p>46-59</p>