CITY ENGINEERING COLLEGE

Approved by AICTE New Delhi & Affiliated by VTU, Belagavi
Doddakallasandra, Off Kanakapura Main Road,
Next to Gokulam Apartment, Bangalore - 560 062.

_____

ISO 9001:2015

Criteria 3- Research, Innovations and Extension

Key Indicator: 3.3 Research Publication and Awards

Metric Number   : 3.3.2 Number of books and chapters in edited volumes/books published and papers published in national/ international conference proceedings per teacher during last five years.

2021-2022

Journal of
the Electrochemical
Society of India

CONTENTS

Synthesis of PANI-vinylpolyester composite coatings for corrosion protection of A16065 M M Cs

N. Sunitha[1], Dr. K. G. Manjunatha[1],
[1]*City Engineering College, Bangalore, India.
[1]Ghousia College of Engineering, Ramanagaram, India. suninair_hello@yahoo.co.in
gopimanju1984@gmail.com

Abstract: Coatings are formulated by mixing of PANI doped pTSA powder to the matrix polymer. PANI-Vinyl polyester composite is laminated on Al 6065 metal surface by using programmable dip coating unit. PANI- Vinyl polyester composite is characterized by SEM. Pani-Vinyl polyester coated Al 6065 metal matrix and its composites are studied by EIS technique. Impedance values in PANI-Vinyl polyester coated specimens are compared to the uncoated ones in 0.1M HCl medium. With increase of percentage of SiC particulates in matrix causes reduction of corrosion rate inhibition efficiency in composites.

Keywords: SEM. Pani-Vinyl polyester. Impedance. Corrosion rate inhibition efficiency.

1 Introduction

Conducting polymers made its way into the research by its high conductivity, stability, ease of fabrication and good oxidation-reduction properties compared to other organic compounds. These properties gave conducting polymers an avenue for its usage in electronic appliances, rechargeable batteries, sensors, erosion protection and electroluminescence in light emitting devices. An example for conducting polymer is polythiophene employed as charge dissipation coatings in electron-beam lithography, in electrochromic devices, Polyvinylcarbazole used in electro-luminescence devices, pani is used in erosion protection [1]. Pani has replaced the conventional system of coating containing chromates which are highly toxic to the environment. In corrosion protection pani can be used as both individual coating as well as a primer in the coatings. Corrosion protection of pani based coatings are studied by using electrochemical technique. Positive shift in the Ecorr indicates that the surface is anodized and decrease in corrosion rate for the pani and Polydimethylsiloxane (PDMS) blend coating. The advantage of this technique is that we can obtain kinetic parameters like rate of charge transfer, double layer capacitance, pseudo capacitance of the polymer film. Coating can act as either barrier protection or anodic protection [2].

2 Experimental

2.1 Coating

Pani composites are prepared by blending method, aims to mix an earlier coalesced pani with a polymer matrix. Al 6065 rectangular test coupon of 0%, 2%, 4% SiC and hybrid composite with equal amounts of SiC and graphite are grinded using various grade emery papers to get mirror finish surface. Matrix polymer used in the present work is thermoset vinyl polyester resin (VPoR) acts as binder. Coatings are formulated by the mixing of green color pani doped pTSA powder with incorporation of accelerator and catalyst to the matrix polymer. VPoR and pani doped pTSA are taken in 50:1 ratio by weight. . Pani-VPoR composite is coated on the Al surface using programmable dip coating unit. Coated Al 6065 rectangular test coupon are cured at room temperature for 10 hours and during curing process thermoset resin transforms from liquid to gel and eventually to a glassy solid. A hole is drilled through coating to display metal surface to corrodents and corrosion rate is determined by following Potentiodynamic polarization studies [3-5]. Fig. 1 shows pani-VPoR composite coatings on rectangular test coupons.

Binding interaction between 4-Hydroxy-3-nitrocoumarin and metal ions-A spectroscopic approach

G. Nagasree [a], H.S. Geethanjali [b], D. Nagaraja [c] 👤 ✉

Show more ⌄

🔗 Share   📝 Cite

Abstract

Metal ions play vital role in many biochemical and physiological functions when they are in very low concentrations and become lethal if certain limit is exceeded. Their detection even at very low concentration is very much essential. In this work we report the detection of metal ions Cu^{++} and Ni^{++} being members of environment pollutants using a coumarin derivative 4-Hydroxy-3-nitrocoumarin by absorption and emission spectroscopic methods. It is noticed that the metal ions are capable of reducing the absorbance (OD) and emission intensity of the coumarin derivative dissolved in Toluene, Dichloromethane and 1,2-Dichloroethane even at very low concentration of 10^{-3} M. The sample concentration is maintained at 10^{-5}M. The OD is reduced with the increase in metal ion concentration without shift in absorption peak of 272 nm. Emission intensity is also quenched by them without shifting the emission peak which is located at 555 nm. The spectroscopic data is analyzed using Benisi-Hildebrand. Binding constant values are calculated using both absorption and emission data. The values are found to be towards higher side. Gibb's free

A Detailed Survey Study on Various Issues and Techniques for Security and Privacy of Healthcare Records

| Conference paper | First Online: 27 August 2021

| pp 181–189 | Cite this conference paper
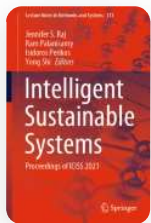
Intelligent Sustainable Systems

M. H. Chaithra & S. Vagdevi

Abstract

It is noticed that the exponential data growth in the healthcare domain is manageable by the application of Big Data architecture and techniques. Various Machine Learning (ML) and Big Data techniques are influencing healthcare. It is essential to propose a secure and smart

Rights and permissions

Copyright information

About this paper

Cite this paper

Chaithra, M.H., Vagdevi, S. (2022). A Detailed Survey Study on Various Issues and Techniques for Security and Privacy of Healthcare Records. In: Raj, J.S., Palanisamy, R., Perikos, I., Shi, Y. (eds) Intelligent Sustainable Systems. Lecture Notes in Networks and Systems, vol 213. Springer, Singapore. https://doi.org/10.1007/978-981-16-2422-3_15

.RIS⤓   .ENW⤓   .BIB⤓

Publish with us

Classification of Medical Health Records Using Convolutional Neural Networks for Optimal Diagnosis

| Conference paper | First Online: 15 May 2022

| pp 247–257 | Cite this conference paper
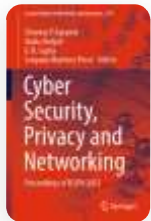
Cyber Security, Privacy and Networking

M. H. Chaithra ✉ & S. Vagdevi

👁 **417** Accesses

Abstract

Pneumonia is considered to be one of the lungs affecting inflammation for small air sacs. Dry cough, chest pain, fever, and breathing difficulty are some of the common symptoms during this situation. The seriousness of the condition of the patient is variable based on several

parameters. Viruses, bacteria, and by other microorganisms usually cause pneumonia. Some of the risk factors during this situation are: cystic fibrosis, chronic obstructive pulmonary disease (COPD), asthma, diabetes, and heart failure. Sometimes a weak immune system may also increase the severity of the situation. The medical diagnostics using machine learning powered by computer vision and deep learning will help us to extract useful information by filtering out the non-essential and insignificant information from the diagnosis report. Computer vision, neural networks, and artificial intelligence methods like convolutional neural network will lead to identify and extract the useful information from the diagnosis report, and in turn, it will help to assist in medical diagnosis. In this regard, the main objective of this work is to classify disease based on symptoms. Clinical and laboratory symptoms are considered as the basic for this investigation.

ⓘ This is a preview of subscription content, [log in via an institution ↗](#) to check access.

Access this chapter

<div style="border:1px solid #ccc; padding:1em;">

Log in via an institution

</div>

∧ Chapter

EUR 29.95
Price includes VAT (India)

Available as PDF
Read on any device
Instant download
Own it forever

Buy Chapter →

∨ eBook

EUR 213.99

🔒 NO ACCESS

Auto-encoder-based technique for effective detection of frauds in social networks

S. Jamuna Rani and S. Vagdevi

ABOUT

Abstract

Detection of these spam accounts has recently attracted significant attraction in the literature. Most of the spam-account detection techniques presented in the literature employ supervised learning models to achieve their goal. These models require sufficient size of spam-account samples in their training set to be trained effectively. However, obtaining such large sample sizes is a significant challenge. In many real-world scenarios, the number of such available samples is extremely limited. Due to this limitation in the training set, the spam-account detection techniques can exhibit extremely poor detection accuracy. Hence, in this paper, an effective supervised learning model-based spam-account detection technique is presented, which utilises only limited size of spam-account samples in its training set, and to achieve this desired goal, the dimension of the feature vectors in the training set is reduced through the aid of auto-encoders. Further, the spam-accounts are detected based on their corresponding hazard rates. The hazard rates are generated through recurrent neural network. An empirical analysis study is presented, in which, the proposed spam-account detection technique is compared against the contemporary technique. In this study, the proposed technique exhibits relatively superior performance in-terms of classification accuracy.

Keywords

social networks, survival analysis model, fraud detection

Collections

Computing and Mathematics

Economics and Finance

Education, Knowledge and Learning

Energy and Environment

Healthcare and Biosciences

Management and Business

Public Policy and Administration

Risk, Safety and Emergency Management

Science, Engineering and Technology

Society and Leisure

Information

Help / FAQs

For Librarians

Interested in publishing with Inderscience? ⊠

About Inderscience ⊠

Connect

Contact us

✉ **Newsletter** (subscribe for free ⊠)

🖹 **Blog**

🔊 **RSS**

f **Facebook**

© 2024 Inderscience Enterprises Ltd.

Privacy Policy