LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : PROSIDING

Judul Karya Ilmiah (Prosiding)	:	**Removal of Pb2+ metal ion using electrolysis system of Fe(s)/NaCl(aq), Pb(NO3)2(aq)//H2O(aq)/C(s)**		
Nama/ Jumlah Penulis	:	**Gunawan/5**		
Status Pengusul	:	penulis ke-3		
Identitas Prosiding	:	a. Judul Prosiding	:	Journal of Physics: Conference Series
		b. ISBN/ISSN	:	1742-6588 atau 1742-6596
		c. Thn Terbit, Tempat Pelaks.	:	2019, Semarang
		d. Penerbit/Organiser	:	Institute of Physics Publishing
		e. Alamat Repository/Web	:	https://iopscience.iop.org/issue/1742-6596/1524/1
		Alamat Artikel	:	https://iopscience.iop.org/article/10.1088/1742-6596/1524/1/012088/pdf
		f. Terindeks di (jika ada)	:	SJR (Scimago Journal & Country Rank)

Kategori Publikasi Makalah (beri ✓pada kategori yang tepat) : [√] *Prosiding* Forum Ilmiah Internasional
[ ] *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional [30]	Nasional [ ]	
a. Kelengkapan unsur isi prosiding (10%)	3		3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		9
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9		8
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	9		8
Total = (100%)	**30**		**28**
Nilai Pengusul =			

Catatan Penilaian artikel oleh Reviewer:

1. **Kesesuaian dan kelengkapan unsur isi jurnal:**
   Artikel yang dimuat sesuai dengan kepakaran penulis. Isi unsur jurnal lengkap sesuai yang dipersyarakan oleh jurnal internasional dari Journal of Physics: Conference Series. Dengan similarity sangat baik (8%).
2. **Ruang lingkup dan kedalaman pembahasan:**
   Ruang lingkup jurnal ini tentang Pemisahan ion logam Pb^{2+} menggunakan electrolysis dengan sistem Fe(s)/NaCl(aq), $Pb(NO_3)_2$(aq)//H_2O(aq)/C(s). Pembahasannya cukup mendalam dengan menggunakan instrumentasi pengujian yg baik. Belum terlihat noveltynya dari artikel ini
3. **Kecukupan dan kemutakhiran data/informasi dan metodologi:**
   Data/informasi yang disampaikan cukup baik dan mutakhir dan metodologinya disampaikan secara detil sehingga peneliti lain bisa mengacu penelitian ini. Referensi yang digunakan up to date hanya 11% referensi kurang dari 5 th artikel terbit dari 9 jurnal.
4. **Kelengkapan unsur dan kualitas terbitan:**
   Unsur artikel lengkap, kualitas jurnal sangat bagus dari IOP Conference Series: Journal of Physics: Conference Series yang diterbitkan oleh IOP Publishing terindex Scopus.

Semarang, 25 Juli 2021
Reviewer I

Prof. Dr. Dra. Meiny Suzery, M.S.
NIP. 196005101989032001
Unit Kerja :FSM Universitas Diponegoro
Bidang Ilmu: Kimia Organik

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : PROSIDING

Judul Karya Ilmiah (Prosiding)	:	**Removal of Pb2+ metal ion using electrolysis system of Fe(s)/NaCl(aq), Pb(NO3)2(aq)//H2O(aq)/C(s)**		
Nama/ Jumlah Penulis	:	**Gunawan/5**		
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Identitas Prosiding	:	a. Judul Prosiding	:	Journal of Physics: Conference Series
		b. Nomor ISBN/ISSN Cetak	:	1742-6588
		Nomor ISBN/ISSN Online		1742-6596
		c. Thn Terbit, Tempat Pelaks.	:	2019, Semarang
		d. Penerbit/Organiser	:	Institute of Physics Publishing
		e. Alamat Repository/Web	:	https://iopscience.iop.org/issue/1742-6596/1524/1
		Alamat Artikel	:	https://iopscience.iop.org/article/10.1088/1742-6596/1524/1/012088/pdf
		f. Terindeks di (jika ada)	:	SJR (Scimago Journal & Country Rank)

Kategori Publikasi Makalah (beri ✓pada kategori yang tepat) : [√] *Prosiding* Forum Ilmiah Internasional
[ ] *Prosiding* Forum Ilmiah Nasional

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Maksimal Prosiding		Nilai Akhir Yang Diperoleh
	Internasional [30]	Nasional [ ]	
a. Kelengkapan unsur isi prosiding (10%)	3		3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9		8,5
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	9		8,5
d. Kelengkapan unsur dan kualitas terbitan /prosiding (30%)	9		9
Total = (100%)	**30**		**29**
Nilai Pengusul = 0,4/4x29=2,9			

1. **Kesesuaian dan kelengkapan unsur isi jurnal:**
   Artikel sesuai dengan kepakaran penulis, lengkap unsur dalam isi jurnal (4) yaitu judul, abstrak (berisi latar belakang, metode dan hasil),Grafik dan tabel disitasi dan dibahas, penulisan sesuai dengan panduan IOP Conference Series: Journal of Physics: Conference Series. Kelengkapan jurnal meliputi editor, anggota, reviewer, petunjuk penulisan juga ada. Tata penulisan terjadi cukup baik (3)
2. **Ruang lingkup dan kedalaman pembahasan:**
   Ruang lingkup artikel terkait untuk meneliti penelitian tentang ozonisasi **Pemisahan ion logam Pb2+ menggunakan electrolysis dengan sistem Fe(s)/NaCl(aq), Pb(NO3)2(aq)//H2O(aq)/C(s),** pembahasan penelitian sudah dilakukan dengan cukup mendalam dalam membahas nya, Instrumen yang digunakan cukup memadai yaitu FTIR, SEM EDX, Hasil yang diperoleh sesuai dengan yang diinginkan, namun sisi kebaruannya masih belum ditampilkan/terekspose. (8,5)
3. **Kecukupan dan kemutakhiran data/informasi dan metodologi:**
   Referensi yang digunakan menunjang pembahasan dan metodologi yang digunakan uptodate hanya (11% referensi dengan tahun terbit sebelum 5 tahun artikel ini terbit (2020) dari 9 jurnal. Metodologi singkat telah ditulis dan dibahas (8,5)
4. **Kelengkapan unsur dan kualitas terbitan:**
   Secara umum kelengkapan unsur artikel lengkap. Kualitas jurnal IOP Conference Series: Journal of Physics: Conference Series yang diterbitkan oleh IOP Publishing terindex di Inspec, Scopus serta scimago dengan SJR 0,227 (2019),(9)

   Catatan: Turnitin 8%

Semarang, 2 Februari 2021
Reviewer II

Prof. Dr. M. Cholid Djunaidi, S.Si, M.Si
NIP. 197007021996031004
Unit Kerja :FSM Universitas Diponegoro
Bidang Ilmu: Kimia Analitik

LEMBAR
HASIL PENILAIAN SEJAWAT SEBIDANG ATAU *PEER REVIEW*
KARYA ILMIAH : PROSIDING

Judul Jurnal Ilmiah (Artikel)	:	**Removal of Pb2+ metal ion using electrolysis system of Fe(s)/NaCl(aq), Pb(NO3)2(aq)//H2O(aq)/C(s)**		
Nama/ Jumlah Penulis	:	**Gunawan/5**		
Status Pengusul	:	penulis ke-3		
Identitas Jurnal Ilmiah	:	a. Judul Prosiding	:	Journal of Physics: Conference Series
		b. ISBN/ISSN	:	1742-6588 atau 1742-6596
		c. Thn Terbit, Tempat Pelaks.	:	2019, Semarang
		d. Penerbit/Organiser	:	Institute of Physics Publishing
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		Alamat Artikel	:	https://iopscience.iop.org/article/10.1088/1742-6596/1524/1/012088/pdf
		f. Terindeks di (jika ada)	:	SJR (Scimago Journal & Country Rank)
Kategori Publikasi Jurnal Ilmiah (beri ✓pada kategori yang tepat)	:	[√] *Prosiding* Forum Ilmiah Internasional		
		[ ] *Prosiding* Forum Ilmiah Nasional		

Hasil Penilaian *Peer Review* :

Komponen Yang Dinilai	Nilai Reviewer		Nilai Rata-rata
	Reviewer I	Reviewer II	
a. Kelengkapan unsur isi prosiding (10%)	3	3	3
b. Ruang lingkup dan kedalaman pembahasan (30%)	9	8.5	8.75
c. Kecukupan dan kemutahiran data/informasi dan metodologi (30%)	8	8.5	8.25
d. Kelengkapan unsur dan kualitas penerbit (30%)	8	9	8.5
Total = (100%)	28	29	28.5
Nilai untuk Pengusul : 0.4/4x28.5=2.85			

Semarang,

Reviewer 1

Prof. Dr. Dra. Meiny Suzery, M.S.
NIP. 196005101989032001
Unit Kerja :FSM Universitas Diponegoro
Bidang Ilmu: Kimia Organik

Reviewer 2

Prof. Dr. M. Cholid Djunaidi, S.Si, M.Si
NIP. 197007021996031004
Unit Kerja :FSM Universitas Diponegoro
Bidang Ilmu: Kimia Analitik

Document details

Journal of Physics: Conference Series
Volume 1524, Issue 1, 22 June 2020, Article number 012088
9th International Seminar on New Paradigm and Innovation of Natural Sciences and Its Application, ISNPINSA 2019; Semarang, Central Java; Indonesia; 22 October 2019 through ; Code 161297

Removal of Pb^{2+} metal ion using electrolysis system of Fe(s)/NaCl(aq), $Pb(NO_3)_2$(aq)//H_2O(aq)/C(s)

(Conference Paper) (Open Access)

Suyati, L., Efendi, D., Gunawan, G., Haris, A., Widodo, D.S.

Chemistry Department, Fsm, Diponegoro University, Semarang, Indonesia

Abstract

View references (9)

Lead2+ is very dangerous heavy metal for the environment due to its toxicity and it requires a serious handling. A more efficient and effective method for handling is electrolysis using electrocoagulation. This method provides an electric current to the system, a redox reaction occurs followed by a coogulation process, which then absorbs Pb2 + metal ions to form flocculants. the study covered electrocoagulation of artificial waste containing Pb2+, characterization of functional groups and compounds contained in flocculants. The two compartment reactor was used. It consisted of an anode (iron) and cathode (graphite) parts separated by a salt bridge. The anode was filled with 0.1M NaCl electrolyte solution, artificial waste of Pb(NO3)2. The cathode contained H2O. Potential was set in the range of 1-6 V. Then the filtrate at the anode was analyzed by AAS and the precipitate was characterized by FTIR and SEM EDX. The results showed Pb metal waste was removed 43.2% by electrocoagulation method at a maximum voltage of 6 V. FITR result shows Fe-O in the wave numbers of 1117 and 111.99 cm-1 and Pb-O in the wave numbers of 482.22 and 474.82 cm-1. SEM analysis shows that the morphology has slightly changes. Elements contained by EDX analysis of the floc are iron, lead, oxygen, silica and sodium. © Published under licence by IOP Publishing Ltd.

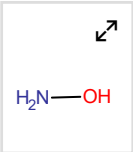
SciVal Topic Prominence

Topic: Electrocoagulation | Textile Wastewater | Decolorization

Prominence percentile: 98.857

Chemistry database information

Substances



Indexed keywords

Engineering controlled terms: Anodes, Cathodes, Coagulation, Electrolysis, Electrolytes, Flocculation, Heavy metals, Iron, Iron compounds, Metal ions, Redox reactions, Silica, Sodium chloride

Engineering uncontrolled terms: EDX analysis, Electro coagulations, Electrolysis systems, Electrolyte solutions, Salt bridges, SEM analysis, SEM-EDX, Wave numbers

Engineering main heading: Lead compounds

Funding details

Funding text

Financial support From Diponegoro University (APBN FSM Universitas Diponegoro) 2018, Ministery of Research and Higher Education Republic of Indonesia is acknowledged.

ISSN: 17426588
Source Type: Conference Proceeding
Original language: English

DOI: 10.1088/1742-6596/1524/1/012088
Document Type: Conference Paper
Volume Editors: Suryono
Publisher: Institute of Physics Publishing

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Removal of lead and zinc from battery industry wastewater using electrocoagulation process: Influence of direct and alternating current by using iron and stainless steel rod electrodes

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Suyati, L.; Chemistry Department, Fsm, Diponegoro University, Semarang, Indonesia;
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Source details

Journal of Physics: Conference Series

Scopus coverage years: from 2005 to Present

Publisher: Institute of Physics Publishing

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Subject area: Physics and Astronomy: General Physics and Astronomy

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Category	Rank	Percentile
Physics and Astronomy └ General Physics and Astronomy	#186/224	17th

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Faculty of Sciences and Mathematics
Diponegoro University

9th ISNPINSA

International Seminar on New Paradigma and Innovation on Natural Science and Its Application

CONTRIBUTION OF SCIENCE TOWARD INDUSTRY 4.0 ERA

Date and Venue :
October 22, 2019
Gets Hotel Semarang - Jl. MT. Haryono No.312 - 316, Sarirejo, Kec. Semarang Timur, Kota Semarang, Jawa Tengah 50124

LIST OF SPEAKER

I. Keynote Speaker

No.	Name	Research Field	Institution	Country
1.	Prof. Emmanuel Cornillot	Biotechnology	Universite de' Monpellier	Perancis
2.	Prof. Dr. Baba Musta	Geochemistry	Faculty of Science, UMS	Malaysia
3.	Prof. Dr. Ir. Rokhmin Dahuri, MS.	Marine Resource and Environmental Studies	President of Indonesian Aquaculture Society; Proffesor in Marine Resource and Environmental Studies	Indonesia
4.	Sapto P. Putro, M.Si., Ph.D.	Marine Ecology and Aquaculture	Faculty of Science and Mathematics, Diponegoro University	Indonesia

II. Invited Speaker

No.	Name	Department	Institution	Country
1.	Dinar Mutiara Kusumo Nugraheni, S.T., M.InfoTech.(Comp).	Computer Science	FSM UNDIP	Indonesia
2.	Dr. Eng. Ali Khumaeni, S.Si., MS	Physics	FSM UNDIP	Indonesia
3.	Dr. M. Cholid Djunaidi, M.Si.	Chemistry	FSM UNDIP	Indonesia
4.	Dr. Lilih Khotimperwati, S.Si., M.Si.	Biology	FSM UNDIP	Indonesia
5.	Dr. Tarno, M.Si.	Chemistry	FSM UNDIP	Indonesia
6.	Farikhin, M.Sc. Ph.D.	Mathematics	FSM UNDIP	Indonesia

D. Conference Organizers

Organizing Committee:

Prof. Dr. Widowati, M.Si (Steering Committee)
Farikhin, S.Si., M.Si., Ph.D. (Steering Committee)
Dr. Kusworo Adi, S.Si., MT. (Steering Committee)
Drs. Sapto P. Putro, M.Si., Ph.D (Steering Committee)
Dr. Suryono, M.Si. (Chairman)
Nor Basid Adiwibawa Prasetya, S.Si., M.Sc., Ph.D. (Secretary)
Dinar Mutiara K. Nugraheni, S.T., M.InfoTech.(Comp). (Secretary)
Nurdin Bahtiar, S.Si., M.Kom. (member)
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Dr. Di Asih I Maruddani, S.Si., M.Si. (member)
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Herman Aprianto, S.Kom. (member)
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Choiriyah, SE (member)
Nur Azizah, SE (member)
Alik Maulidiyah, S.Si. M.Sc. (member)
Rahmawan Bagus Trianto, S.Kom. (member)
Deby Yuniarto (member)
Siswoyo (member)

Scientific Committee:

Prof. Emmanuel Cornillot, Universite de' Monpellier, France
Prof. Dr. Baba Musta, Universiti Malaysia Sabah, Malaysia
Prof. Dr. Ir. Rokhmin Dahuri, MS, President of Indonesian Aquaculture Society; Proffesor in Marine Resource and Environmental Studies

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2020

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The 9th International Seminar on New Paradigm and Innovation of Natural Sciences and its Application 22 October 2019, Central Java, Indonesia

Accepted papers received: 16 April 2020
Published online: 22 June 2020

Open all abstracts

Preface

Papers

S U Handayani, I S Atmanto, F T Putri and S Fujiwara

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Characterization of negative corona plasma discharge reactor using point-to-plane electrode configuration in atmospheric pressure and its application in the treatment of woven natural silk

Z Muhlisin, I Rahmawati, F Arianto and P Triadyaksa

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Growth of collagen-nanosilver (Co-AgNP) biocomposite film with electrospinning method for wound healing applications

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Construction of lyapunov function using gradient method to stability analysis of the nitrogen-phosphate-phytoplankton-sediment interaction model

Widowati, S P Putro and E Triyana

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K-nearest neighbor (KNN) with global GINI diversity index for classification subsidy food in Semarang city, Indonesia

D Ispriyanti, A Prahutama and Mustafid

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Hoax news validation using similarity algorithms

S Y Yuliani, S Sahib, M F Abdollah, Y S Wijaya and N H M Yusoff

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Rice crop management expert system with forwarding chaining method and certainty factor

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Pictures on the second homotopy module of the group from Kronecker product on the representation quaternion group

A M Zakiya, Y Yanita and I M Arnawa

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The first fundamental group of Kronecker quaternion group

A Adrianda and Y Yanita

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Village classification index prediction using geographically weighted panel regression

A S Ningrum, A Rusgiyono and A Prahutama

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OPEN ACCESS 012041

Efficiency nonminimally supported design for three parameters weighted exponential model

T Widiharih, M A Mukid and Mustafid

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Γ – semigroup generated by a semigroup

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An analytic solution of the uncoupled multi-agent model and its benefit through optimal control system with attractor and repellant

R H Tjahjana

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The algebraic structure on the neutrosophic triplet set

S Suryoto, Harjito and T Udjiani

Ramadiani, R Syahrani, I F Astuti and Azainil

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OPEN ACCESS 012052

Globally stability analysis of the mathematical model in the IMTA system by using the energy-Casimir method

E Triyana, Widowati and S P Putro

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OPEN ACCESS 012053

Stability analysis of mathematical model (*sirb*) in the spread of cholera with vaccination and disinfection

A Fitriyani, Widowati and Farikhin

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OPEN ACCESS 012054

Secondary metabolites in elaeocarpus grandiflorus cell culture in WPM medium with various concentrations of PGR

Y U Anggraito, W H Nugrahaningsih, F Musafa, K Mukhtar, Wijawati, Y Rostriana, Safitri and N A Habibah

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The impact of mangrove plantation in ponds on the secondary metabolite content

E D Hastuti, M Izzati and S Darmanti

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OPEN ACCESS 012056

Analysis total plate count (tpc) and organoleptic test on seaweed chips

M Zainuri, H Endrawati, S Winarni, F Arifan, A Setyawan and H P Hapsari

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Characterization of citronella grass essential oil of *Cymbopogon winterianus* from Batang region, Indonesia

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I Rukmi and S Purwantisari

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OPEN ACCESS 012059

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E Agustina, T R Saraswati and S Tana

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Antibacterial activity of basil oil (*Ocimum basilicum* L) and basil oil nanoemulsion

E Fachriyah, P J Wibawa and A Awaliyah

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OPEN ACCESS 012061

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OPEN ACCESS 012062

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The density of microplastic in sea cucumber (*Holothuria* sp.) and sediment at Tidung Besar and Bira Besar island, Jakarta

B H Sayogo, M P Patria and N D Takarina

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Subsurface mapping of University Diponegoro Tembalang campus based on resistivity data

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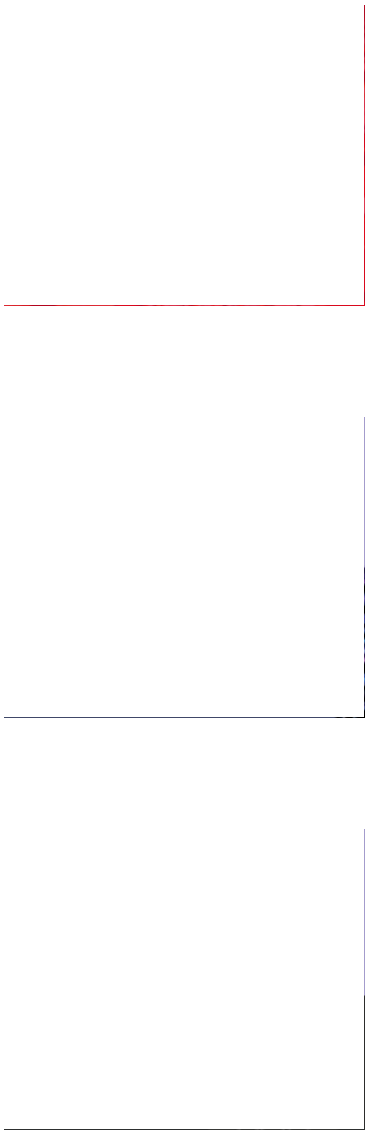

Isolation and identification of rare actinomycete-like bacteria from soil-based on 16S ribosomal RNA gene sequences

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Abstract. The rare actinomycete-like bacteria are mycelium-forming bacteria other than phylum *Actinobacteria* that difficult to isolate and cultivate. This group of bacteria was recently speculated by many scientists as a potential new microbial resource for the discovery of novel compounds, as a substitute for actinomycetes. In this study, we isolate and identify rare actinomycete-like bacteria from forest soil collected under bamboo trees, near the CisolokGeysers, Sukabumi, Indonesia. The isolation of bacteria was performed using Reasoner's 2A (1:10 dilution) medium with 2% gellan gum instead of agar and incubated at 30 °C for three weeks. The 16S rRNA gene sequences of the isolates were examined to determine their taxonomic position. Four isolates designated K17-1, K17-2, K42, and K44 showed pale oranges colonies and formed mycelia were obtained. The results of 16S rRNA gene sequences of these isolates showed high similarity to members of the genus *Dictyobacter* in the family *Dictyobacteraceae* of the class *Ktedonobacteria* of the phylum *Chlorofexi*, with values 97.16-98.02%, and most closely related to the species *Dictyobacteraurantiacus* S-27^{T} (97.16-98.02% similarities). This result suggested that the member of the class *Ktedonobacteria*, which considered as rare actinomycete-like bacteria, such as *Dictyobacter* could be found in the forest soil of the geothermal area.

1. Introduction

Actinobacteria are gram-positive bacteria that have a high percentage of guanine and cytosine in their genome [1]. This group morphologically comprises unicellular organisms to mycelium-forming bacteria which called Actinomycetes [1,2]. However, bacteria that have filamentous appearance also could be found in the phylum *Chlorofexi*. The member of this phylum which has actinomycete-like morphology is present in the four different class namely *Chlorofexi*, *Anaerolineae*, *Caldilineae*and *Ktedonobacteria* [3]. Among these class, *Ktedonobacteria* has some obvious morphological features which distinguish themselves from others. The member of *Ktedonobacteria*are aerobic organism and forming branched mycelia with spores like actinomycetes [3,4]. Moreover, most validly published strains of *Ktedonobacteria*budding their multiple spores per cell on the aerial mycelium which unique among bacteria [5]. All of*Ktedonobacteria*identified as gram-positive bacteria while almost of the member in phylum *Chlorofexi* were gram-negative [3,6]. Based on these exceptional characters, class *Ktedonobacteria* could be included as the rare actinomycete-like bacteria.

Rare actinomycete-like bacteria could provide an alternative for the discovery of new compounds derived from microorganisms because spore formation usually would be followed by the production of secondary metabolites [7,8]. Further analysis of the genomic of nine members of rare actinomycete-like bacteria

Hoax news validation using similarity algorithms

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Abstract. News that is presented every day on social media dramatically affects the feelings, feelings, thoughts, or even actions of a person or group. Hoax News is one of them which is disturbing the public and raising noise in various fields, ranging from politics, culture, security, and order, to the economy. Inseparable from social media users. How every day, there is information on social media, which is not necessarily true so that people are provoked by hoax on social media. The news detection system in this study was designed using Unsupported Learning so that it does not require data training. The system was built using the Equation algorithm to calculate the validity of document similarity. Extraction results used to search for content related to user input using a detection engine, then the similarity value and the time needed to utilize hoax news are calculated. System validation testing by using a four text similarity algorithm called the Equation algorithm, the Levenshtein algorithm, the Smith-Waterman algorithm, the Damerau Levenshtein algorithm; this algorithm is used to find the best analytical solution of news hoaxes and submissions needed to find the news hoax password. The final results of the deception detection research using a script that has been done for Validation using an algorithm, get the value of accuracy in detection using the Smith-Waterman algorithm, which produces an accuracy value of text similarity of 99.29% and can be used a process of 6, 57 seconds, followed by the second sequence that is the similarity algorithm produces an accuracy of 75% and requires a processing time of 4.94 seconds, then the third sequence is the Levenshtein algorithm with an accuracy of 55.02% and requires a processing time of 5.49 seconds, and is used today is Damerau Levenshtein algorithm is 55.02% and requires a processing time of 7.54%. The results of research tests on this text can conclude the more text on the detection engine, the higher the verification value and the higher the time needed to process hoax news.

1. Introduction

Sharing information is a positive thing, but not all information disseminated through social media is in the form of facts. There have been various cases of spreading the news that is not facts or often called hoaxes. Whereas hoax is critical information that misleads human perception by spreading false information but considered as valid, No wonder then the intensity of fake news and hoax news on social media is so viral on social media [1]. For personal and group benefit by spreading harmful content that caused unrest and mutual suspicion in the community [2]. The ease and speed of dissemination on social media make this hoax news known to many people in a relatively short period, and can to more people.

Subsurface mapping of University Diponegoro Tembalang campus based on resistivity data

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Abstract. Subsurface mapping using the geoelectric method has been carried out in the area of Undip Campus, Tembalang to determine the distribution of subsurface layers resistivity. This study employs the Wenner configuration geoelectric method. Data were collected at seven points with a track length of 100 meters and a distance among electrodes of 5 meters. Data processing is carried out using RES2DINV software packages that produce rock resistivity values and depth estimates, then the interpretation of each track is carried out in detail by taking into account the geological information available in the Undip campus, Tembalang. The results of the interpretation show that the study area is dominated by breccias which are Kaligetas formations. The breccia rocks themselves are claystone which tends to be water-resistant and there is also sandstone. Nearly every data collection point has the same cross-section. Claystone with resistivity ranges from 3.05 Ωm to 26.5 Ωm. Sandstones with resistivity range from 20.0 Ωm to 135 Ωm. The rest found alluvium and sand with a resistivity of almost more than 100 μm.

1. Introduction

Diponegoro University was located in Tembalang District, Semarang is one of the best public universities in Indonesia. Construction of infrastructure facilities on campus is continuously carried out to support the learning process and the progress of Diponegoro University. Development activities include the construction of: reservoirs, parking buildings, lecture buildings, sports facilities, irrigation, final disposal, etc. The development requires the preparation of land and carrying capacity of the region. Integrated mapping is needed not only on the surface but also on the subsurface is very important. So in this study, we focus on mapping the subsurface conditions based on the distribution of resistivity values using resistivity geoelectric method. The principle of resistivity geoelectrical method is injection the current through the subsurface to obtain the potential value of the rocks and to get resistance value [1][2][3]. Wenner configuration selection is preferred for mapping with shallow depth. Furthermore, Sudarsono 1984, revealed the need to study the characteristics of the land and its functions so that they could predict what to do when loading occurred on the land.

The results of the mapping are expected to provide information about soil conditions including soil layers, soil structure, soil conditions, bedrock depth, stability. The information obtained will be used as a reference for the next infrastructure work.