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[ICASMI'18] Under review
#1570466663 ('The Effect Of
Seed Oil Ratios On The Chemical
Composition Of Liquid Fuels Produced By Zeolite-

 **icasmi18-chairs@edas.info**
to Agustina, Wasinton, me, Zipora

Dear Ms. **Agustina** Simanjuntak,

We apologize for the long process. Your paper
'The Effect Of Sugarcane Bagasse To Rubber Seed Oil
Ratios On The Chemical Composition Of Liquid Fuels Produced By Zeolite-Y
Catalyzed Pyrolysis' is now being reviewed.
The reviews are below or can be found in the attached files.
Thank you very much.

Regards

from: **icasmi18-chairs@edas.info**
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subject: [ICASMI'18] Under review-Your Paper Manuscript #1570466663 ('The Effect Of Sugarcane Bagasse To Rubber Seed Oil Ratios On The Chemical Composition Of Liquid Fuels Produced By Zeolite-Y Catalyzed Pyrolysis')
mailed-by: edas.info

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Effect Of
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Abstract. The discovery of bacterial resistance to antibiotics drew the attention of chemists to discover new types of chemical compounds that have antibacterial activity to overcome the resistance. Handling the problem of antibiotic resistance is the most pressing public health problem challenging modern medicine. Increased antibiotic resistance is a consequence of the evolution and adaptation of microbes, caused by excessive anthropogenic antibiotic consumption. Increased cases of bacterial resistance will be a bigger problem if not treated with the discovery of new antibiotics. The discovery of medicinal chemicals may contribute to the advancement of treatment, especially antibiotic resistant. Organotin compounds (IV) is part of organometallic compounds that have been studied pharmacological effects on several types of bacteria. The derivatives of organotin (IV) benzoate

Keywords: organotin (IV) benzoate; bacterial resistance; medicinal chemistry; antibiotics

15. **Biosorption of Cr (VI) in tannery model effluent by non-living biomass of *Spirulina fusiformis***

Heli Munawaroh

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Abstract. This study aims at investigating the removal of Cr (VI) from tannery effluent model by dried biomass of *Spirulina fusiformis*. The research stages consist of preparing the biomass and determining the influence of acidity, contact time, and temperature on biomass biosorption capacity. The *Spirulina fusiformis* adsorbed appreciable amount of Cr (VI) from the aqueous waste model within 10 min of initial contact with the metal solution. The *Spirulina fusiformis* biomass adsorption capacity was strongly dependent on the decrease in the acidity of the aqueous as the maximum Cr (VI) biosorption occurred at pH 4. The capacity of *Spirulina fusiformis* to adsorb was time-dependent and increases as the increase of temperature from 150C to 450C. The biosorption phenomenon of Cr (VI) by *Spirulina fusiformis* described the Freundlich model than the Langmuir, with the r^2 value of 0.9743. Fourier transform infrared spectrophotometry identified that the amine group of *Spirulina fusiformis* biomass is responsible for binding of Cr (VI). The results showed that the biomass of *Spirulina fusiformis* displayed high adsorption on Cr (VI) with capacity reach to 26.38 mg/g and potential to be used in processing waste contaminated Cr (VI).

Keywords: Biosorption; Cr(VI); *Spirulina fusiformis*; tannery effluent

16. **Synthesis, Characterizations and Computational Modeling of Paeonol (2-hydroxy-4-methoxyacetophenon)**

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Abstract. Paeonol (2-hydroxy-4-methoxyacetophenon) compounds that have important biological activities such as anti-inflammatory, allergic, and as a corrosion inhibitor. The synthesis of paeonol compound was performed using 2,4-dihydroxyacetophenon and dimethyl formamide (DMF) as solvent. The synthesis was carried out using dimethyl sulfate and potassium carbonate as catalyst. The reaction was carried out for 4 hours at room temperature. The crude product was extracted with mixture of H₂O:ethylacetate (1:1) and then washed with distilled water and then separated, filtered off and evaporated until the crude extract was obtained. The crude extract was then separated by column chromatography with eluents of n-hexane: EtOAc (30: 1) producing white powder with a melting point of 47-50 oC with a yield of 85.94%. This research could also be performed by computational method Hartree-Fock with SP 6-31G basis-set. The synthesis of paeonol produced two possibility products, i.e. 2-hydroxy-4-methoxyacetophenon and 2,4-dimethoxyacetophenon. Thermodynamic studies showed that the 2-hydroxy-4-methoxyacetophenon and 2,4-dimethoxyacetophenon have energy changes of -130,688 kJ/mol and -112,562 kJ/mol respectively, which indicated that 2-hydroxy-4-methoxyacetophenon was more stable than 2,4-dimethoxyacetophenon. The result of computational studies showed that the synthesis of paeonol produced the stable compounds in exothermic conditions.

Keywords: 2-hydroxy-4-methoxyacetophenon; 2,4-dihydroxyacetophenon; biological activities; Hartree-Fock Method

17. **THE Effect Of Sugarcane Bagasse To Rubber Seed Oil Ratios On The Chemical Composition Of Liquid Fuels Produced By Zeolite-Y Catalyzed Pyrolysis**

Agustina

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Abstract. In this research, co-pyrolysis of sugarcane bagasse and rubber seed oil using zeolite-Y as catalyst was carried out, with the main purpose to study the effect of raw material compositions on chemical composition of liquid fuel produced. For this purpose, the mixture of sugarcane bagasse and rubber seed oil with different mass ratios of bagasse to oil of 1:1; 1:2; 1:3 and 1:4 was subjected to pyrolysis at 450 ° C in the presence of zeolite-Y as catalyst, and the liquid fuels were analyzed by GC-MS. The results show that liquid fuel contains hydrocarbons as main components, with several additional components include alcohol, ester, ketone, aldehyde, and acid. The liquid fuel produced from the raw material with the ratio of 1:3 was found to contain hydrocarbon with the highest relative percentage (87.91%), and consists of gasoline fraction (42.60%), kerosene fraction (43.59%), and residual fraction (1.72%).

Keyword: Sugarcane bagasse; rubber seed oil; pyrolysis; liquid fuel