GreenTech

2019
Book of Abstracts

10th International Conference on Green Technology 2019

Empowering the 4.0 Industrial Revolution Through Green Science and Technology

Malang, October 2nd- 3rd, 2019

Organized by :

IOP Conference Series Materials Science and Engineering

ALCHEMY Journal of Chemistry

CAUCHY Jurnal Matematika Murni dan Aplikasi

JURNAL NEUTRINO Jurnal Fisika dan Aplikasinya

MATICS Jurnal Ilmu Komputer dan Teknologi Informasi

Sponsored by :

PT. Dharma Karya Makmur Sentosa

Ruko Surya Inti Permata Jl. Jemur Andayani 50 Blok D 8-9 Surabaya- Indonesia

Phone. 62 (31) 8418284, 8476971 Fax. 62 (31) 8418476

thermoscientific

GeneCraft Labs

PREFACE

THE DEAN OF FACULTY OF SCIENCE AND TECHNOLOGY

UNIVERSITAS ISLAM NEGERI MAULANA MALIK IBRAHIM MALANG

It is our pleasure to very warm welcome all participant to the 2019 10th International Conference on Green Technology (ICGT 2019) in Faculty of Science and Technology, Universitas Islam Negeri Maulana Malik Ibrahim Malang. The ICGT have started ten years ago and this year, the theme of the conference is "*Empowering the Fourth Industrial Revolution through Green Science and Technology*". Now, we are entering the fourth industrial revolution which will influence all aspect in the civilization of humankind. Thus, we hope through this conference we can contribute by the result of green science and technology in Empowering the Fourth Industrial Revolution through Green Science and Technology. And also, we hope this conference can bring academic scientists, engineers, industry researchers together to discuss, exchange and share their experiences and research results about green technology.

We would like to thank:

1. Rector and Vice-Rector of Universitas Islam Negeri Maulana Malik Ibrahim for their assistance and support for 10th International Conference on Green Technology.
2. Academic board committee for work in abstract and paper review.
3. The event organizing committee for managing this conference.
4. All the keynote speaker who willingly attended this conference.
5. Special Thanks to IOP Conference Proceeding Series, Journal of Islamic Architecture, ALCHEMY Journal of Chemistry, NUTRINO Journal, CAUCHY, and MATICS.

We wish all participants of 10th ICGT an enjoyable scientific meeting in Malang, Indonesia. We look forward to seeing all of you next year at 11th ICGT

Dean of Faculty of Science and Technology
UIN Maulana Malik Ibrahim Malang

Dr. Sri Harini

ORGANIZED BY

FACULTY OF SCIENCE AND TECHNOLOGY

UNIVERSITAS ISLAM NEGERI MAULANA MALIK IBRAHIM MALANG

SPONSORED BY

TABLE OF CONTENT

PREFACE THE DEAN OF FACULTY OF SCIENCE AND TECHNOLOGY UNIVERSITAS ISLAM NEGERI MAULANA MALIK IBRAHIM MALANG ..... *i*
PREFACE THE CHAIRPERSON 10TH INTERNATIONAL CONFERENCE ON GREEN TECHNOLOGY ..... *ii*
ORGANIZED BY ..... *iii*
SPONSORED BY ..... *iii*
CONFERENCE COMMITTEE ..... *iv*
KEYNOTE SPEAKER ..... *v*
TABLE OF CONTENT ..... *vi*

ABSTRACT OF KEYNOTE SPEAKER

IDENTIFICATION OF NEUROPEPTIDES IN GASTROPOD MOLLUSKS. - CLASSICAL AND BRAND-NEW APPROACHES- ***1***

Fumihiro Morishita[1], Toshio Takahashi[2], Takehiro Watanabe[2], Takuya Uto[3], Kazuyoshi Ukena[4], Megumi Furumitsu[4], Toshihiro Horiguchi[5]*

CONSTRUCTION OF BIO-TEMPLATE C- DOPED g-C_3N_4-BASED HYBRID NANOCOMPOSITES WITH ENHANCED VISIBLE-LIGHT PHOTOCATALYTIC ACTIVITY ***2***

Mohamad Saufi Rosmi[1], Mohamad Azuwa Mohamed[2], Siti Munirah Sidik[1], Illyas Md Isa1, Suriani Abu Bakar[1] and Mohammad Kassim[2]*

THE POTENCY OF 10-GINGEROL AS A PRIMARY CANDIDATE TO BECOME AN ANTI-CANCER AGENT: STUDY OF CUMULUS CELL ***3***

Dr. Kiptiyah, M.Si[1]*

BENEFICIAL ROLE OF TRICHODERMA IN AGRICULTURE: A STUDY IN LEGUMINOUS PLANTS ***4***

Eriyanto Yusnawan[1], Alfi Inayati[1], Yuliantoro Baliadi[1]*

A GENETICALLY DEFINED VIRUS INOCULUM FOR PRODUCTION OF* SPODOPTERA EXIGUA *MULTIPLE NUCLEOPOLYHEDROVIRUS IN INSECT CELL CULTURE WITH ENHANCED INSECTICIDAL ACTIVITY ***5***

Kanokwan Poomputsa[1]

ENDOGLUCANASE ACTIVITY OF CELLULOLYTIC BACTERIA INDIGENOUS RICE BRAN BY IN VITRO AND IN SILICO ***6***

Akyunul Jannah[1], Aulanni'am[2], Tri Ardyati[3], Suharjono[3]*

APPLICATION OF ELECTRON ACCELERATOR FOR FLUE GAS TREATMENT OF COAL POWER PLANT TO SUPPORT GREEN TECHNOLOGY ***7***

Darsono[1]*

THE IMPLEMENTATION OF BEHAVIORAL ARCHITECTURE IN THE DESIGNING OF SPECAIL-NEEDS SCHOOLS ***8***

Wasilah[1]*

ABSTRAC SCOPE A ENVIROMENTAL IMPACT EVALUATION

CONVERSION DAU CITRUS FARM TO ORGANIC: AN IMPROVEMENT DISCOURSE.* A REVIEW** ***9

L Mufidah[1], S Widyaningsih[1], E Budiyati[1]*

EFFECT OF PRECIPITATION TIME ASSISTED BY ULTRASONICATION FOR SYNTHESIS OF ZnO PHOTOCATALYST ***88***

S Setiadji[1], S Sanusi[1], D G Syarif[2]*

UTILIZATION OF GEOTHERMAL SLUDGE AS A MATERIAL FOR MAKING ZEOLITE POLYMER NANOPARTICLES ***89***

Yuastutik[1], L Ilmiyah[1], Y A Putri[1], Sumari[1]*

SYNTHESIS OF MATERIAL COMPOSITE rGO-TiO_2 FROM COCONUT SHELLS BY SOL-GEL METHOD ***90***

U Hikmah[1], D R Yanti[1], N Aini[2], A Prasetyo[2], E Hastuti[1]*

THE EFFECT OF MICROWAVE IRRADIATION ON REDUCED GRAPHENE OXIDE FROM COCONUT SHELLS ***91***

D R Yanti[1], K Nikmah[1], U Hikmah[1], A Prasetyo[2], E Hastuti[1]*

TRANSESTERIFICATION OF COCONUT OIL USING MgO DOPED ZEOLITE-Y PREPARED FROM RICE HUSK SILICA.....***92***

G G Pangesti[1], K D Pandiangan[1], W Simanjuntak[1]*

METHYL ROCAGLATE FROM THE STEMBARK OF Aglaia minahassae (Meliaceae) AND ITS CYTOTOXIC ACTIVITY AGAINST HELA CERVICAL CANCER CELL LINES ***93***

N Kurniasih[1,2], A Supriadin[1], R Abdulah[3], D Harneti[2], U Supratman[2,4], M N A B M Taib[5]*

ANTICANCER ACTIVITY IN 2-METHOXY-4-((4 METHOXYPHENILIMINO)METHYL)PHENOL COMPOUND ON T47D BREAST CANCER CELLS ***94***

L Sukria[1], E K Hayati[1], A Hanapi[1]*

GREEN SYNTHESIS OF GOLD NANOPARTICLES USING BIOMOLECULS EXTRACT OF KETAPANG LEAF (Terminalia catappa) AND NONI (Morinda citrifolia L.) FRUIT ***95***

D C Dewi[1], D E Rahma[1], M W Hidayat[1], S Amalia[1]*

POTENTIAL OF EXTRACT RICE BRAN FERMENTED BY Rhizopus oryzae AS ANTIBACTERIAL AGAINST Salmonella typhi ***96***

A Jannah[1], H Barroroh[1], A Ma'unatin[1]*

SYNTHESIS AND CHARACTERIZATION OF ALGINATE-CELLULOSE BEADS FROM CORN STALK AND APPLICATION AS ADSORBENT FOR METHYLENE BLUE ***97***

E Yulianti[1], N Qosim[1], A Prasetyo[1], W A P Rohmatullah[1], L M Khoiroh[1], R Mahmudah[1]*

POROUS ALGINATE/CELLULOSE XANTHATE BEADS FROM CORN STALK WITH $CaCO_3$ AND NaCl AS POROGENS ***98***

N W Azizah[1], E Yulianti[1], C N Hidayah[1], L M Khoiroh[1], R Mahmudah[1], A Prasetyo[1]*

SYNTHESIS AND CHARACTERIZATION OF SILICA GEL FROM LAPINDO MUD SIDOARJO ***99***

A Rahmayanti[1], Q A'yuni[2], Hartati[3], Purkan[3]*

PRELIMINARY STUDY ON THE SITE-SPECIFIC NUTRIENT FERTILIZATION EFFICIENCY THROUGH SEVERAL TOOLS ***100***

D Sihombing[1]*

ID ABSTRACT: ABS-119

Transesterification of Coconut Oil Using MgO Doped Zeolite-Y Prepared from Rice Husk Silica

G G Pangesti[1*], K D Pandiangan[1], W Simanjuntak[1]

[1]Graduate Student, Lampung University, Bandar Lampung, Indonesia

*e-mail: gesagustami@gmail.com

In this investigation, zeolite-Y prepared from rice husk silica was doped with MgO using impregnation method and then tested as catalyst for transesterification of coconut oil. Four zeolite samples were prepared by varied crystallization time of 48, 72, 96, and 120 h at fixed temperature of 100 °C. The impregnation process was conducted by placing the zeolite in magnesium nitrate solution with a concentration of 1.5% and stirred for 6 h by a magnetic stirrer. The mixture was aged for 22 h at room temperature then washed with distilled water and dried in oven at 80 °C. The dried sample was then calcined at 550 °C for 6 h to form MgO doped zeolite-Y and then tested as catalyst for transesterification of coconut oil. To confirm the presence of MgO, the samples were characterized using XRF. The establishment of zeolite structure was verified using XRD technique and microstructure using SEM. The experimental results demonstrated that MgO was successfully doped into zeolite, with the relative amount varied with crystallization time. The presence of samples as multiphasic material was suggested by the XRD and SEM analysis. The composites exhibit decent catalytic performance as revealed by the results of transesterification with the highest conversion of 70% was achieved.

Keywords: MgO, zeolite, transesterification

CERTIFICATE

NO: 2821/FST/PP.09/10/2019

This certificate is hereby awarded to:

GESA GUSTAMI PANGESTI

Our sincerest gratitude for your contribution as

Oral Presenter

during the conduct of

INTERNATIONAL CONFERENCE ON GREEN TECHNOLOGY

"Empowering the 4.0 Industrial Revolution through Green Science and Technology"

Held on October 2th - 3rd, 2019 at Savana Hotel & Convention Malang, East Java, Indonesia

Chairperson

Rachmawati Ningsih, M.Si

Dean,
Faculty of Science and Technology

Dr. Sri Harini, M.Si

IOP Conference Series
Earth and Environmental Science

GeneCraft Labs

thermoscientific