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ID	Submit Track	Authors	Title	Status
56	07-21 MAT	Subagyo, Tamjidillah, Irawansyah,...	Experimental Study the effect of surface roughness of a...	Paper In Review: Revisions Required

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Submissions for this conference were closed on 2020-08-01.

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#56 Summary

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Submission

Authors	Rachmat Subagyo, Mastiadi Tamjidillah, Herry Irawansyah, Abdul Ghofur, Muchsin Muchsin
Title	Experimental Study the effect of surface roughness of a material on its hydrophobicity
Original file	56-131-1-SM.docx 2020-07-21
Supp. files	None
Submitter	Rachmat Subagyo
Date submitted	July 21, 2020 - 07:45 PM
Track	Materials
Director	Teguh Widodo, ST., M.Eng., Ph.D (Track Director)

Status

Status	Paper In Review
Initiated	2020-08-05
Last modified	2020-08-06

Submission Metadata

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Bio statement	—
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Name Muchsin Muchsin 
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Title and Abstract

Title Experimental Study the effect of surface roughness of a material on its hydrophobicity

Abstract To investigate the effect of trapped gas and surface roughness, it is necessary to study more deeply the hydrophobic nature of a material which has a different surface roughness value. This research was conducted experimentally, by first preparing materials that have different grain sizes. Then measuring contact angles, mapping surface roughness, and observing droplets when in contact with the material. This study shows that the increase in droplet volume affects the contact angle formed, the greater the droplet volume the droplet surface tension capability is getting weaker. The smaller the grain size, the higher the contact angle formed, this is due to the particle size that supports the droplet surface, when the particle size is small, the surface tension formed is greater so that the droplet has a high contact angle. Micro/nano size bubbles that spread evenly on the surface of hydrophobic material strongly support the occurrence of hydrophobic properties in a material.

Indexing

Academic discipline Materials
 and sub-disciplines

Keywords trapped gas, surface roughness, hydrophobic nature, grain size

Type, method or approach Experimental

Language en

Supporting Agencies

Agencies —

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#56 Paper Review


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Submission

Authors Rachmat Subagyo, Mastiadi Tamjidillah, Herry Irawansyah, Abdul Ghofur, Muchsin Muchsin 

Title Experimental Study the effect of surface roughness of a material on its hydrophobicity

Track Materials

Director Teguh Widodo, ST., M.Eng., Ph.D 

Peer Review

Review Version [56-132-1-RV.docx](#) 2020-07-21

Initiated 2020-07-21

Last modified 2020-08-02



Uploaded file Reviewer A [56-479-1-RV.docx](#) 2020-08-02

Director Version None

Author Version [56-541-1-DR.docx](#) 2020-08-06

Director Decision

Decision Revisions Required 2020-08-05

Notify Director  Director/Author Email Record  2020-08-06

Director Version None

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