PREPARATION AND CHARACTERISATION OF MgO NANOPARTICLE INCORPORATED BIORESIN USING PALM OIL

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SUPERVISOR'S DECLARATION

We hereby declare that we have checked this thesis and in our opinion, this thesis is adequate in terms of scope and quality for the award of the degree of Bachelor of Chemical Engineering.

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Date	: 10 JANUARY 2017

STUDENT'S DECLARATION

I hereby declare that the work in this thesis is my own except for quotations and summaries which have been duly acknowledged. The thesis has not been accepted for any degree and is not concurrently submitted for award of other degree.

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DEDICATION

Highest gratitude to
my supervisor, my family members and my friends
for all your care, support and trust on me.
Special dedication to
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on providing all the related environment
and appropriate equipment
on finishing my research.

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LIST OF SYMBOLS

D	Average crystalline size
Λ	CuKα radiation
β	Full width at half maximum (FWHM)
θ	Braggs angle
X	Conversion of triglycerides
S	Selectivity of monoglycerides
P	Extent of reaction
C_o	Initial acid value
C_t	Acid value at time t
W_{oil}	Weight of oil
W_{alkyd}	Weight of finished alkyd
W_{H20}	Weight of water evolved during esterification

LIST OF ABBREVIATIONS

AV	Acid value
DG	Diglycerides
DP	Degree of polymerisation
FTIR	Fourier Transform Infrared
HPLC	High performance liquid chromatography
MG	Monoglycerides
NMR	Nuclear magnetic resonance
TG	Triglycerides
XRD	X-ray diffraction