Faculty of Science
Chemistry Department

SYNTHESIS, CHARACTERIZATION AND APPLICATION OF NANO-CATALYST SYSTEMS IN SOME PETROLEUM REFINING REACTIONS

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Ph.D. Thesis

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ARABIC SUMMARY

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LIST OF ABBREVIATIONS

SCS	Solution combustion synthesis
CTAB	Cetyl trimethylammonium bromide
PVP	poly (vinylpyrrolidone)
APES	3-aminopropyl-triethoxysilane
TEOS	Tetraethyl orthosilicate
NP-10	Nonyl phenol ethoxylated decylether
MCM-41	(Mesoporous silica) Mobil Catalytic Material Number 41
TPA	Tetrapropyl ammonium^{+}
SN	Silica nanospheres
US	Ultrasound
M(NPs)	Metal Nanoparticles
CNF	Carbon nanofibers
TBAB	Tetrabutyl ammonium bromide
SMNPs	Supported metal nanoparticles
MWI	Microwave irradiation
PLA	Pulsed laser ablation
CVD	Chemical vapor deposition
USP	Ultrasonic spray pyrolysis
OA	Oleylamine
TTAB	Trimethyl tetradecyl ammonium bromide
PVP	Polyvinlypyrrolidone
WI	Wetness impregnation
EADC	Ethylaluminumdichloride
MCP	Methylcyclopentane
CH	Cyclohexane

DEE	Diethyl ether
MOFs	Metal Organic Frameworks
MIL-101	MOFs - chromium terephthalate
PTA	Phosphotungstic acid
TMAOH	Tetramethyl ammonium hydroxide
$(C_2H_5)_3N$	Triethylamine
C_2H_7N	Dimethylamine
MAS	Microwave assisted solution irradiation
RCE	Rotary chemical evaporation method
Pluronic (P123)	(PEG-PPG-PEG)
DMF	Dimethylformamide
XRD	X-ray diffraction analysis
TGA	Thermal Gravimetric Analysis
DSC	Differential Scanning Calorimetry
BET	Brunauer, Emmett and Teller
PSD	Pore size distributions
TEM	Transmission Electron Microscopy
FT-IR	Fourier Transform Infra Red
FID	Flame ionization detector

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