

Si: No:	Name Of Student	Register	Year of	Title Of Thesis	Guide	Type Of Work	Place Of Work
		Number	Admission				
1.			2019	GREEN SYNTHESIS OF Au/PEG	Dr. Bini George	DISSERTATION	СИК
				NANOCOMPOSITES FOR ESPR			
	ALEESHA NABHAI	PCH051901		SENSING OF URIC ACID			
2.			2019	BIODEGRADABLE CROSSLINKED	Dr. Bini George	DISSERTATION	СИК
				HYBRID NANOCOMPOSITES OF			
				CHITOSAN-GELATIN AND			
				SILVER NANOPARTICLES FOR			
				ACTIVE FOOD PACKAGING			
	ANJALI N	PCH051902		APPLICATIONS			
3.			2019	Synthesis and characterization	Prof.Dr.M R	DISSERTATION	СИК
				of Co(II) and Ni(II) complexes	Prathapachandra		
				derived from 2-	Kurup		
				Benzoylpyridine-N4-methyl-3-			
	ANNMARY ANTO	PCH051903		thiosemicarbazone			
4.			2019	Mo doped perovskites of SrBO3	Prof.Dr. A Sakthivel	DISSERTATION	СИК
				type (B= Fe, Co, Ti, Mn)			
				for catalysing lignin derived			
				model compound oxidation			
				and photocatalytic degradation			
	ARCHANA I G	PCH051904		of organic dyes.			
5.			2019	SYNTHESIS AND	Dr.M.Bhagiyalakshmi	DISSERTATION	СИК
				CHARACTERISATION OF			
				[Cu3(BTC)2] MOF FOR			
				SUPERCAPACITOR			
	ASHNA GEORGE	PCH051905		APPLICATIONS			
6.			2019	Molybdenum Doping in	Prof.Dr. A Sakthivel	DISSERTATION	СИК
	ASWANI S	PCH051906		Strontium Iron Perovskite			



				Ovida Using Maluhdanum			
				Hexacarbopyl as Novel			
				Precursor: Synthesis			
				Characterization and Its			
				Characterization and its			
<u> </u>							
7.			2019	Ruthenium on α -nickel	Prof.Dr. A Sakthivel	DISSERTATION	CUK
				hydroxide-based support:			
				Preparation, Characterization			
				and its catalytic application on			
	ASWATHI P S	PCH051907		hydrotreating of anisole			
8.			2019	Biometric Sequestration of CO2	Dr. Bini George	DISSERTATION	СИК
				by Carbonic Anhydrase			
	ATHUL K V	PCH051908		Immobilized on Cu-MOF 199			
9.			2019	GREEN SYNTHESIS OF Au/ PVP	Dr. Bini George	DISSERTATION	СИК
				NANOCOMPOSITES FOR ESPR			
	BHUVANESWARAN R	PCH051909		SENSING OF GLUCOSE			
10.			2019	SYNTHESIS OF COPPER METAL	Dr.M.Bhagiyalakshmi	DISSERTATION	СИК
				ORGANIC FRAMEWORK FOR			
				DEGRADATION OF BISPHENOL			
	CHAITHRA RAIFEV	PCH051910		Α			
11.			2019	SYNTHESIS AND	Dr.M.Bhagiyalakshmi	DISSERTATION	СИК
				CHARACTERIZATION OF CO-		DIGOLINITION	
				MOE FOR SUPERCAPACITOR			
	ΠΑΡΣΑΝΙΑ Ε	PCH051011					
12		1 01031311	2010		Dr M Bhagiyalakchmi		CUK
12.			2019			DISSERTATION	
				CHARACTERIZATION OF NI-			
				IVIUE-199 FOR			
				SUPERCAPACITOR			
	DEEPA R DAS	PCH051913		APPLICATION			



13.			2019	SYNTHESIS,	Dr.Ravikumar Kanaparthi	DISSERTATION	СИК
				PHOTO-PHYSICAL STUDIES OF			
				ANTHRAQUINONE BASED			
				SENSITIZER FOR DYE-			
				SENSITIZED SOLAR CELL			
	IREEN MARIA PHILIP	PCH051914		APPLICATIONS			
14.			2019	Ruthenium containing layered	Prof.Dr. A Sakthivel	DISSERTATION	СИК
				ITQ-2 zeolite: Preparation and			
	JINO MATHEW	PCH051915		its catalytic application			
15.			2019	FABRICATION OF CROSSLINKED	Dr. Bini George	DISSERTATION	СИК
				CHITOSAN-PVA SILVER			
				NANO-COMPOSITES FOR			
				BIODEGRADABLE FOOD			
				PACKAGING			
	JITHUKRISHNAN R G	PCH051916		APPLICATIONS			
16.			2019	REACTIONS OF CRIEGEE	Dr. Deepa	DISSERTATION	СИК
				INTERMEDIATE WITH	Janardanan		
	JYOTI RAJ	PCH051917		GREENHOUSE GASES			
17.			2019	HETEROGENIZATION OF	Prof.Dr. A Sakthivel	DISSERTATION	СИК
				COBALT SCHIFFBASE COMPLEX:			
				PREPARATION,			
				CHARACTERIZATION AND ITS			
	KANCHANA N			CATALYTIC APPLICATIONS ON			
	KRISHNAN	PCH051918		BENZHYDROL OXIDATION			
18.			2019	SYNTHESIS AND	Dr.Ravikumar	DISSERTATION	СИК
				CHARACTERIZATION OF NEW	Kanaparthi		
				ELECTRON DONOR-ACCEPTOR			
	KANNA DIVYA	PCH051919		MOLECULES BASED ON			



				BENZOPYRAN ELECTRON			
				ACCEPTOR, AND ANTHRACENE			
10			2010		Dr. Bini Coorgo		
19.			2019	GREEN STINTHESIS OF AU / PEG	DI. DIII George	DISSERTATION	COR
		PCH051020		SENSING OF ASCORDIC ACID			
20		1 011031320	2019	Computational Study on Free	Dr Deena		СПК
20.			2015	Radical Scavenging Activity of	Janardanan	DISSERTATION	
		PCH051021		Honokiol & Magnolol			
21	KONTAL KOLLT	1 01051521	2019	Synthesis and spectral	Prof Dr M B		СПК
21.			2015	characterization of 2-benzoul	Prathapachandra	DISSERTATION	
	SURFSH	PCH051922		thiosemicarbazone complexes	Kurup		
22	50112511	1 011031322	2019	Synthesis and nhoto-physical	Dr Bavikumar		СПК
			2015	properties studies of DONOR- π -	Kanaparthi	DISSERTATION	
				ACCEPTOR based new			
	І ОНІТНА Н В	PCH051923		fluorophore Dve			
23.		1 011031323	2019	Reactions of Criegee	Dr. Deepa	DISSERTATION	СИК
				Intermediate with Acids – A	Janardanan	DISSERTATION	
	MADIGA DASTAGIRI	PCH051924		Theoretical Investigation			
24.			2019	SYNTHESIS OF COPPER AND	Prof.Dr.M R	DISSERTATION	СИК
				MANGANESE COMPLEXES OF 2-	Prathapachandra		
				BENZOYLPYRIDINE	Kurup		
	MANJU VS	PCH051925		SEMICARBAZONE			
25.	1		2019	PHOTOCATALYTIC DYE	Dr.M.Bhagiyalakshmi	DISSERTATION	СИК
				DEGRADATION STUDY OF			
				ALIZARIN RED USING MOF-199			
	MEGHNA	PCH051926		CATALYST			



26.			2019	CHITOSAN, PVA, SILVER NANOCOMPOSITES FILMS FOR BIODEGRADABLE FOOD	Dr. Bini George	DISSERTATION	СИК
	NANDU P	PCH051927		PACKING APPLICATIONS			
27.	NIMISHA S	PCH051928	2019	RUTHENIUM ON α-Ni(OH)2 AS POTENTIAL CATALYST FOR OXIDATION OF CINNAMYL	Prof.Dr. A Sakthivel	DISSERTATION	СИК
28.	RAVIKUMAR K	РСН051929	2019	Synthesis of organic electron donor acceptor based on carbazole and pyran and identifying its applicability in various fields	Dr.Ravikumar Kanaparthi	DISSERTATION	СИК
29.	RIMA RAPHY V	РСН051930	2019	SYNTHESISANDCHARACTERIZATIONOFCOPPER(I) AND MANGANESE(II)COMPLEXESOF2-BENZOYLPYRIDINESEMICARBAZONE	Prof.Dr.M R Prathapachandra Kurup	DISSERTATION	СИК
30.	RISHIKA DILEEP	PCH051931	2019	SYNTHESISANDCHARACTERIZATIONOFNEWELECTRONDONOR-ACCEPTORMOLECULESBASEDONBENZOPYRANELECTRON-ACCEPTORANDANDTRIPHENYLAMINEELECTRON-DONORS	Dr.Ravikumar Kanaparthi	DISSERTATION	СИК
31.	SARANYADAS M	PCH051932	2019	HYDRATION MECHANISM OF METHYL- ISOPROPENYL	Dr. Deepa Janardanan	DISSERTATION	СИК



				KETONE IN THE ATMOSPHERE-			
				A THEORETICAL			
				INVESTIGATION			
32.			2019	ANTIOXIDANT ACTIVITY OF	Dr. Deepa	DISSERTATION	CUK
				CAFFEIC ACID: A THEORETICAL	Janardanan		
				ELUCIDATION OF THE			
		DCU054033		OXIDATIVE DEGRADATION			
	SIVIRITHI S BABU	PCH051933					
33.			2019	SYNTHESIS OF NEW SENSITIZER	Dr.Ravikumar	DISSERIATION	CUK
				BASED ON INDOLE DONOR &	Kanapartin		
				NAPTHALDEHYDE AND PYRAN			
				ACCEPTOR FOR DYE SENSITIZER			
24	GANGAVARAPU	PCH051954	2010	SULAR CELLS			CUK
54.			2019	sparactorization of Eq.(11) Cu(11)	Prathanachandra	DISSERTATION	COK
				and Ni(II) complexes derived	Kurup		
				from 2-Benzovlpyridine-NA-			
	SREELEKHAU	PCH051935		methyl-3-thiosemicarbazone			
35.	SHEELERING	1 011031333	2019	Ruthenium containing MCM-22	Prof.Dr. A Sakthivel	DISSERTATION	СИК
				zeolites: Prenaration		DISSERTATION	
				Characterisation and its			
	SURABHIDEVI S	PCH051936		Catalytic Applications			
36.	-		2019	THEORETICAL EXPLORATION	Prof.Dr.M R	DISSERTATION	СИК
				ON THE ANTIOXIDANT ACTIVITY	Prathapachandra		
	SURYA N	PCH051937		OF HYDROXYCINNAMIC ACIDS	Kurup		
37.			2019	SYNTHESIS OF COPPER AND	Prof.Dr.M R	DISSERTATION	СИК
				MANGANESE COMPLEXES OF 2-	Prathapachandra		
				BENZOYLPYRIDINE	Kurup		
	SWAPNA	PCH051938		SEMICARBAZONE			



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•	GREEN SYNTHESIS OF Au/PEG NANOCOMPOSITES FOR ESPR SENSING
•	OF URIC ACID
,	Submitted to
•	CENTRAL UNIVERSITY OF KERALA
, ,	in partial fulfillment of the requirements for the degree of
•	M.Sc. CHEMISTRY
	by
•	ALEESHA NABHAI
	PCH051901
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	RUE BATH RATE
c.	Department of chemistry
)	School of Physical Sciences
	CENTRAL UNIVERSITY OF KERALA
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केरल केन्द्रीय विश्वविद्यालय DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Head of the Department

Central University of Kerala Thejaswini Hills, Periye-671316 Kasaragod, Kerala

Certificate

This is to certify that the dissertation entitled "GREEN SYNTHESIS OF Au/PEG NANOCOMPOSITS FOR ESPR SENSING OF URIC ACID" is an authentic record of the work done by Aleesha Nabhai(Reg.No.PCHO51901) submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. Bini George, Assistant Professor, Central University of Kerala.

Head, Department of Chemistry

प्रो. (यो.) ए. शनिनोल Prof. (Ur.) A. The THEVEL आवार्य एव अन्धर / Profitson & Head रसायन विज्ञान विभाग / Department of Chemistry श्रीतिक विज्ञान स्कूल / School of Physical Sciences केरल केंग्रीय विश्वप्रियालय / Central University of Kerala तेजरिवनी हिल्स, पेरिया / Tejaswini Hills, Periya P.O. कासरगोड, केरल-671326 / Kasaragod,Kerala-671 320

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BIODEGRADABLE CROSSLINKED HYBRID NANOCOMPOSITES OF CHITOSAN-GELATIN AND SILVER NANOPARTICLES FOR ACTIVE FOOD PACKAGING APPLICATIONS

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfillment of the requirements for the degree of

M.Sc. CHEMISTRY

by

ANJALI N

PCH051902



Department of chemistry

School of Physical Sciences

CENTRAL UNIVERSITY OF KERALA

May 2021



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केरल केन्द्रीय विश्वविद्यालय

D_C DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Thejaswini Hills, Periye-671316 Kasaragod, Kerala

Certificate

This is to certify that the dissertation entitled "Biodegradable crosslinked hybrid nanocomposites of Chitosan-Gelatin and silver nanoparticles for active food packaging applications" is an authentic record of the work done by Anjali N (Reg.No.PCHO51902) submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. Bini George, Assistant Professor, Central University of Kerala.

May 2020

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Head, Department of Chemistry

प्रो.(चौ.) पु. शासितांस Prof. (Dr.) A. SARTHIN, F आचार्य एवं अव्यक्ष / Professor & Han **प्रसारण विवास विगय / Drp trimest of Chan** भौतिक विजास रकुल / School of Program बेज्वस केंद्रीय विश्वविद्याला / School of Program बेज्वस केंद्रीय विश्वविद्याला / School of Program बेज्वस्थिती जिल्ला, मार्ट्र / School of Program बेज्यस्थिती जिल्ला, मार्ट्र / School of Program बेज्यस्थिती जिल्ला, मार्ट्र / School of Program बेज्यस्थानी जिल्ला, मार्ट्र / School of Program

Synthesis and characterization of Co(II) and Ni(II) complexes derived from 2-Benzoylpyridine-N⁴-methyl-3thiosemicarbazone

A DISSERTATION

Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfillment of the requirements for the degree of

M.Sc. CHEMISTRY

by

ANNMARY ANTO

PCH051903



DEPARTMENT OF CHEMISTRY

School of Physical Science

Central University of Kerala

MAY 2021



Central University of Kerala (Established by the Parliament of India under the Central Universities Act. 2009)

> केरल केन्द्रीय विश्वविद्यालय <u>DEPARTMENT OF CHEMISTRY</u> School of Physical Sciences

Head of the Department

Central University of kerala

Tejaswini Hills,

Periye, Kasaragod,

Kerala 671316

Certificate

This is to certify that the dissertation entitled "Synthesis and characterization of Co(II) and Ni(II) complexes derived from 2-Benzoylpyridine-N⁴-methyl-3-thiosemicarbazone" is an authentic record of the work done by ANNMARY ANTO, (Reg.No.PCH051903) submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Prof. (Dr.) M. R. PRATHAPACHANDRA KURUP, Associate Professor, Department of Chemistry, Central University of Kerala.

4.2.42

Head, Department of chemistry

May 2021

भो (जी) ए. शतिहोत Prof. (Dr.) A. SARTHIVEL आवार्य एव अववर/ Professor & Head प्रसायन विज्ञान दिभाग / Department of Chemistry भौतिक विज्ञान स्कृत / School of Physical Sciences ते. रल केंद्रीय विश्वविद्यालय / Central University of Kerala तेलरियनी हिल्ल, 'वेरावर / Taja shali (S. Pedya P.O. वासरगोब, केरल-671316 / Kasara godyKerala-671 320 Mo doped perovskites of SrBO3 type (B= Fe, Co, Ti, Mn) for catalysing lignin derived model compound oxidation and photocatalytic degradation of organic dyes.

A dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

M.Sc. (Chemistry)

by

ARCHANA IG

PCH051904

Under the supervision of

Dr. A. Sakthivel



DEPARTMENT OF CHEMISTRY

School of Physical Sciences

Central University of Kerala

May 2021

Central University of Kerala

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केरल केन्द्रीय विश्वविद्यालय DEPARTMENT OF CHEMISTRY School of Physical Sciences

Department of chemistry School of Physical sciences Sabarmati block Central university of Kerala Periya, Kasaragod, Kerala 671316

Certificate

This is to certify that the dissertation entitled Mo doped perovskites of SrBO3 type (B= Fe, Co, Ti, Mn) for catalysing lignin derived model compound oxidation and photocatalytic degradation of organic dyes is an authentic record of the work done by ARCHANA IG., (Reg.No.PCH-05-19-04) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. A. Sakthivel, Associate Professor, Central University of Kerala.

प्रो.(१८) १. चनिवोज Prol (१९) ४. चनिवोज आचार्य एवं २१ वर्ष ता ताति Sor & Head रसायन विज्ञान विभाग / २० व्यावतात्वत of Chemistry भौतिक विज्ञान स्वुल / २० व्यावतात्वत of Chemistry केरल केडीय विश्वविद्य तेजरियनी हिल्स, १ व्यावतात्व Society of Kerala तेजरियनी हिल्स, १ व्यावतात्व Society P.O. कासरगोड, केरल-6712 व्याव Societ

SYNTHESIS AND CHARACTERISATION OF [Cu3(BTC)2] MOF FOR SUPERCAPACITOR APPLICATIONS

Submitted to

CENTRAL UNIVERSITY OF KERALA in partial fulfillment of the requirements for the degree of

Master of Science

in

Chemistry

by ASHNA GEORGE PCH051905



Department of Chemistry School of Physical sciences CENTRAL UNIVERSITY OF KERALA May 2021



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केरलकेन्द्रीयविश्वविदयालय

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Tejaswini hills Periye, Kasargod

Certificate

This is to certify that the dissertation entitled "SYNTHESIS AND CHARACTERISATION OF [Cu₃(BTC)₂] MOF FOR SUPERCAPACITOR APPLICATIONS" is an authentic record of the work done by ASHNA GEORGE submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr.M. Bhagiyalakshmi, Assistant Professor, Central University of Kerala.

May 2020

Act

Head, Department of Chemistry

प्रो.(डॉ.) ए. शक्तियेल Prof. (Dr.) A. SAKTHIVEL आचार्य एवं अध्यक्ष / Professor & Head रसायन विज्ञान विभाग / Department of Chemistry भौतिक विज्ञान स्कूल / School of Physical Sciences केरल केंद्रीय विश्वविद्यालय / Central University of Kerala तेजरियनी हिल्स, पेडिया / Tejaswini Palls, Periya P.O. कासरगोड, केरल-671316 / Kasaragod, Kerala-671 320

Molybdenum Doping in Strontium Iron Perovskite Oxide Using Molybdenum Hexacarbonyl as Novel Precursor: Synthesis, Characterization and Its Catalytic Applications

A Dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

M.Sc. CHEMISTRY

by

ASWANI S PCH051906

Under the Guidance of

Prof. (Dr.) A. Sakthivel



DEPARTMENT OF CHEMISTRY

School of Physical Sciences Central University of Kerala May 2021



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केरल केन्द्रीय विश्वविद्यालय PC DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Department of Chemistry School of Physical Sciences Sabarmati Block, Central University of Kerala Periye, Kasaragod Kerala, 671316

Certificate

This is to certify that the dissertation entitled "Molybdenum Doping in Strontium Iron Perovskite Oxide Using Molybdenum Hexacarbonyl as Novel Precursor: Synthesis, Characterization and Its Catalytic Applications" is an authentic record of the work done by ASWANI S (Reg. No. PCH051906) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Prof. (Dr.) A. Sakthivel, Head of the Department of Chemistry, Central University of Kerala.

A

Head, Department of Chemistry May 2021

हो (२१) ए. अफिनेल Prot. 111 A. SARTHIVEL आवार्य एव अन्तर: / Protesson & Head रसायन विज्ञान विमाग / Department of Chemistry भौतिक विज्ञान स्कूल / School of F1 atol Sciences केरल केंद्रीय विश्वविद्यालय / Central From ty of Kerala होजांरेयनी हिल्स, पीरया / Tejaswim Har, Fariya P.O. कासरगोड, केरल-671316 / Kasaragod, Kerala-671 320

Ruthenium on α-nickel hydroxide-based support: Preparation, Characterization and its catalytic application on hydrotreating of anisole

A Dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

M.Sc. CHEMISTRY

by

ASWATHI PS PCH051907

Under the Guidance of

Prof. (Dr.) A. Sakthivel



DEPARTMENT OF CHEMISTRY

School of Physical Sciences Central University of Kerala May 2021



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केरल केन्द्रीय विश्वविद्यालय TMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Department of Chemistry School of Physical Sciences Sabarmati Block, Central University of Kerala Periye, Kasaragod Kerala, 671316

Certificate

This is to certify that the dissertation entitled "Ruthenium on a-nickel hydroxide-based support; preparation, characterization and its catalytic applications on hydrotreating of anisole." is an authentic record of the work done by ASWATHIP S (Reg. No. PCHO51907) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Prof. (Dr.) A. Sakthivel, Head of the Department of Chemistry, Central University of Kerala.

Head, Department of Chemistry May 2021



Biometric Sequestration of CO₂ by Carbonic Anhydrase Immobilized on Cu-MOF 199

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfillment of the requirements for the degree of

Master of Science

in

Chemistry

by

ATHUL K V

PCH051908

Under the supervision of

Dr.M.Bhagiyalakshmi



Department of Chemistry School of Physical sciences CENTRAL UNIVERSITY OF KERALA May 2021



CENTRAL UNIVERSITY OF KERALA (Established by the Parliament of India under the Central Universities Act, 2009)

केरलकेन्द्रीयविश्वविद्यालय

D_C DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Department of chemistry.

Central University of Kerala

Tejaswini hills

Periye, Kasargod-670316

Certificate

This is to certify that the dissertation entitled "Biometric sequestration of CO_2 by carbonic anhydrase immobilized on Cu-MOF 199" is an authentic record of the work done by Athul K V (reg.no.PCH051908) submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr.M.Bhagiyalakshmi, Assistant Professor, Central University of Kerala.

May 2021

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Head, Department of Chemistry

प्रो.(डॉ.) ए. शक्तियेल Prof. (Dr.) A. SAKTHIVEL आचार्य एवं अध्यक्ष / Professor & Head रसायन विज्ञान विभाग / Department of Chemistry भौतिक विज्ञान स्कूल / School of Physical Sciences केरल केंद्रीय विश्वविद्यालय / Central University of Kerala तेजरियनी हिल्म, पेरिमा / Tejanviai Fills Parcia P.D. ठारारगोड, येरल-671316 / Kashing, DU, Surala-671, 320

GREEN SYNTHESIS OF Au/ PVP NANOCOMPOSITES FOR ESPR SENSING OF GLUCOSE

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfilment of the requirements for the degree of

M.Sc. CHEMISTRY

by

BHUVANESWARAN R

PCH05109



Department of chemistry

School of Physical Sciences

CENTRAL UNIVERSITY OF KERALA

May 2021





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केरलकेन्द्रीयविश्वविदयालय DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Thejaswini Hills, Periye-671316 Kasaragod, Kerala

Certificate

This is to certify that the dissertation entitled "GREEN SYNTHESIS OF Au / PVP NANOCOMPOSITES FOR ESPR SENSING OF GLUCOSE" is an authentic record of the work done by BHUVANESWARAN R (Reg. no: PCH051909) submitted to central University of Kerala in partial fulfillment of the requirements for the degree of master science in chemistry and is based on his studies carried out under the supervision of Dr Bini George, Assistant professor, Central University of Kerala.

Head, Department of Chemistry

ते.(डी) ए. शकिवेल Prof. (Dr.) A. SAKTHIVEL आसाय एवं अध्यक्ष / Professor & Head रसायन विज्ञान विभाग / Department of Chemistry भौतिक विज्ञान स्कूल / School of Physical Sciences केरल केंद्रीय विश्वविद्यालय / Central University of Kerala त्तेजस्विनी हिल्स, मेरिया / Tejaswini Hills, Periy 3 P.O. Head, Department of Chemisity / Kasaragod, Kerala-671 320

May 2021

April 2021

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfillment of the requirements for the degree of

Master of Science

in

Chemistry

by CHAITHRA RAJEEV PCH051910



Department of Chemistry School of Physical sciences CENTRAL UNIVERSITY OF KERALA May 2021

3



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केरलकेन्द्रीयविश्वविद्यालय

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Tejaswini hills Periye, Kasargod

Certificate

This is to certify that the dissertation entitled "SYNTHESIS OF COPPER METAL ORGANIC FRAMEWORK FOR DEGRADATION OF BISPHENOL A" is an authentic record of the work done by CHAITHRA RAJEEV submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr.M.Bhagiyalakshmi, Assistant Professor, Central University of Kerala.

Head, Department of Chemistry

May 2021

भो (चौ) ए. शकियेल Prof. (....) A. SAKTHIVEL आचार्य एवं अध्यक्ष / Professor & Head रसायन विज्ञान पिनाग / Department of Chemistry भौतिक विज्ञान रुपूल / School of Physical Sciences केरल केंद्रीय विश्वी जनवा / र स्वर्ट में स्वर्धीय विश्वी विश्वन तेजनिनी हिन्म, 99 - स्वर्टन केंद्र की प्रकार 2000 कारारभोड, केरल क्रमी र स्वर्टन के केंद्र 2000

SYNTHESIS AND CHARACTERIZATION OF Co-MOF FOR SUPERCAPACITOR APPLICATION

Submitted to

CENTRAL UNIVERSITY OF KERALA in partial fulfilment of the requirements for the degree of

Master of Science

in

Chemistry

by DARSANA. E PCH051911



Department of Chemistry School of Physical sciences CENTRAL UNIVERSITY OF KERALA May 2021



(Established by the Parliament of India under the Central Universities Act, 2009)

केरलकेन्द्रीयविश्वविद्यालय

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Tejaswini hills Periye, Kasargod

Certificate

This is to certify that the dissertation entitled "SYNTHESIS AND CHARACTERIZATION OF Co-MOF FOR SUPERCAPACITOR APPLICATION" is an authentic record of the work done by DARSANA.E submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr.M. Bhagiyalakshmi, Assistant Professor, Central University of Kerala.

May 2021

Head, Department of Chemistry

रा (ते) व राशितेल Prof. (Dr.) A. SAKTHIVEL आचार्य एवं अन्. 17 Professor & dead परायम विज्ञान विभाग / Department of Chemistry भौतिक विज्ञान रकुल / School of Physical Sciences केरल केंद्रीय विश्वविद्यालय / central University of Kerala तेलरियनी हिल्ला, पेरिया / tejaswini Hills, Portya P.O. कालरगोड, केरल-671316 / Kasaragod, Kerala-671 320

SYNTHESIS AND CHARACTERIZATION OF Ni-MOF-199 FOR SUPERCAPACITOR APPLICATION

Submitted to CENTRAL UNIVERSITY OF KERALA in partial fulfillment of the requirements for the degree of

> Master of Science in Chemistry

by DEEPA R DAS PCH051913



Department of Chemistry School of Physical sciences CENTRAL UNIVERSITY OF KERALA May 2021

.



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केरलकेन्द्रीयविश्वविद्यालय

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Tejaswini hills Periye, Kasargod

Certificate

This is to certify that the dissertation entitled "SYNTHESIS AND CHARACTERIZATION OF Ni-MOF-199 FOR SUPERCAPACITOR APPLICATION" is an authentic record of the work done by DEEPA R DAS submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr.M.Bhagiyalakshmi, Assistant Professor, Central University of Kerala.

May 2021

Head, Department of Chemistry ग्रो.(डॉ.) ए. शक्तिवेल Prof. (Dr.) A. SAKTHIVEL आचार्य एवं अध्यक्ष / Professor & Head रसायन विज्ञान विभाग / Department of Chemistry भौतिक विज्ञान स्कूल / School of Physical Sciences केरल केंद्रीय विश्वविद्यालय / Central University of Kerala तेजरियनी हिल्स, पेरिया / Central University of Kerala तेजरियनी हिल्स, पेरिया / Central University of Kerala तेजरियनी हिल्स, पेरिया / Central University of Kerala

SYNTHESIS, CHARACTERIZATION AND PHOTO-PHYSICAL STUDIES OF ANTHRAQUINONE BASED SENSITIZER FOR DYE-SENSITIZED SOLAR CELL APPLICATIONS

Submitted to CENTRAL UNIVERSITY OF KERALA in partial fulfillment of the requirements for the degree of

> Master of Science in Chemistry

by IREEN MARIA PHILIP PCH051914



Department of Chemistry School of Physical Sciences CENTRAL UNIVERSITY OF KERALA May 2021



केरलकेन्द्रीयविश्वविद्यालय CENTRAL UNIVERSITY OF KERALA

(Established by the Parliament of India under the Central Universities Act, 2009)

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Tejaswini hills Periye, Kasargod

Head of the Department

CERTIFICATE

This is to certify that the dissertation entitled 'SYNTHESIS, CHARACTERIZATION AND PHOTOPHYSICAL STUIDES OF ANTHRAQUNINONE BASED SENSITIZER FOR DYE-SENSITIZED SOLAR CELL APPLICATIONS' is an authentic record of the work done by **IREEN MARIA PHILIP (PCH051914)** submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of **Dr. Ravi Kumar Kanaparthi,** Assistant Professor, Central University of Kerala.

Head, Department of Chemistry भारति के पा. एति केन Prof. (२) A. SAR HIVEL आवार्स पा राज्य / Professor & Head ररायन विज्ञान विशाग / Department of Chemistry भौतिक विद्यान श्कूल / School of Physical Sciences केरल केडीय किवविद्यालय / Central University of Kerala तेजारियनी हिल्ल, वेरिया / Teleswini Lills, Perlya P.O. कालरमोड, केरल-671326 / Kasaragod, Kerala-671 320

May 2020

Ruthenium containing layered ITQ-2 zeolite: Preparation and its catalytic application

A Dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfillment of the requirements for the degree of

M.Sc. CHEMISTRY

By

Jino Mathew

PCH051915

Under the Guidance of Prof. (Dr.) A. Sakthivel



DEPARTMENT OF CHEMISTRY

School of Physical Sciences Central University of Kerala May 2021



(Established by the Parliament of India under the Central Universities Act. 2009)

केरलकेन्द्रीयविश्वविद्यालय ^DC DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Department of Chemistry School of Physical Sciences Sabarmati Block Central University of Kerala Periye, Kasaragod Kerala, 671316

Certificate

This is to certify that the dissertation entitled "Ruthenium containing layered ITQ-2 zeolite: Preparation and its catalytic application" is an authentic record of the work done by JINO MATHEW (Reg. No. PCHO51915) submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on his studies carried out under the supervision of Prof. (Dr.) A. Sakthivel. Head of the Department of Chemistry, and Central University of Kerala.

Head, Department of Chemistry

May 2021

हो (जी.) ए. शकिवेल Prof. (Sr.) A. SAKTHIVEL आवार्य एवं अध्यक्ष / Professor & Head रसायन दिवान विभाग / Department of Chemistry भौतिक विज्ञान स्कूल / School of Physical Sciences केरल केदीय विभयंध्यालय / Central University of Kerala तेजरियनी शिल्स, वेशिल / School of Physical Sciences केरल केदीय विभयंध्यालय / Central University of Kerala तेजरियनी शिल्स, वेशिल / Sciences Verala-671 320

FABRICATION OF CROSSLINKED CHITOSAN-PVA SILVER NANO-COMPOSITES FOR BIODEGRADABLE FOOD PACKAGING APPLICATIONS

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfilment of the requirements for the degree of

M.Sc. CHEMISTRY

a dissertation submitted by

JITHUKRISHNAN R G

PCH051916

Under the guidance of

Dr. BINI GEORGE



Department of chemistry School of Physical Sciences CENTRAL UNIVERSITY OF KERALA

May 2021


(Established by the Parliament of India under the Central Universities Act, 2009)

केरल केन्द्रीय विश्वविद्यालय C DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Thejaswini Hills, Periye-671316 Kasaragod, Kerala

Certificate

This is to certify that the dissertation entitled "fabrication of crosslinked chitosan-pva silver nano-composites for biodegradable food packaging applications" is an authentic record of the work done by Jithukrishnan R G (Reg.No. PCHO51916) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on his studies carried out under the supervision of Dr. Bini George. Assistant Professor, Central University of Kerala.

Head, Department of Chemistry



REACTIONS OF CRIEGEE INTERMEDIATE WITH GREENHOUSE GASES

Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

Master of Science

In

Chemistry

By

JYOTI RAJ

PCH051917



Department of chemistry

School of physical sciences

CENTRAL UNIVERSITY OF KERALA

(Established by the Parliament of India under the Central Universities Act, 2009)

SCHOOL OF PHYSICAL SCIENCES

Tejaswini hills

Periya (PO)

Kasargod, Kerala- 671316

Head of the Department

CERTIFICATE

This is to certify that the dissertation entitled is "REACTIONS OF CRIEGEE INTERMEDIATE WITH GREENHOUSE GASES", an authentic record of the work done by **JYOTI RAJ** (PCH051917) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of **Dr. Deepa Janardanan**, Assistant Professor, Central University of Kerala.

May 2021

A.S.J.

Head, Department of Chemistry

Prof. (27.) A. SAKTHIVEL आचार्य एवं अध्यक्ष / Professor & Head रसायन विज्ञान विभाग / Department of Chemistry भौतिक विज्ञान स्कूल / School of Physical Sciences केरल केंद्रीय विश्वविद्यालय / Centrol University of Kerala तेलस्विनी हिल्म, पेरिया / Tejaswini Hills, Periya P.O. कासरमोड, केरल-671316 / Kasaragod, Kerala-671 320

HETEROGENIZATION OF COBALT SCHIFFBASE COMPLEX: PREPARATION, CHARACTERIZATION AND ITS CATALYTIC APPLICATIONS ON BENZHYDROL OXIDATION

A Dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

M.Sc. CHEMISTRY

by

KANCHANA N KRISHNAN PCH051918

Under the Guidance of Prof. (Dr.) A. Sakthivel



DEPARTMENT OF CHEMISTRY

School of Physical Sciences Central University of Kerala May 2021



(Established by the Parliament of India under the Central Universities Act, 2009)

केरलकेन्द्रीयविश्वविद्यालय DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Department of Chemistry School of Physical Sciences Sabarmati Block, Central University of Kerala Periye, Kasaragod Kerala, 671316

Certificate

This is to certify that the dissertation entitled "HETEROGENIZATION OF COBALT SCHIFFBASE COMPLEX: PREPARATION, CHARACTERIZATION AND ITS CATALYTIC APPLICATIONS ON BENZHYDROL OXIDATION" is an authentic record of the work done by KANCHANA N KRISHNAN (Reg. No. PCHO51918) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Prof. (Dr.) A. Sakthivel, Head of the Department of Chemistry, Central University of Kerala.

Head, Department of Chemistry

May 2021

प्रो. (टेंग्स्ट के हिंग्स् Prof 19 के के का स्टार आधार्य एवं के के के स्टार स्टार अधार्य एवं के के स्टार स्टार भारतिक विज्ञान स्कूल / School of 14 solid Sciences केस्त केंद्रीय विश्वयिद्यालय / Central University of Kerala तेजस्विनी हिल्ल, पेरिया / Teja wini Hills, Periya P.O. णासरगोड, केरल-671316 / Kasaragod, Kerala-671 320

2

SYNTHESIS AND CHARACTERIZATION OF NEW ELECTRON DONOR-ACCEPTOR MOLECULES BASED ON BENZOPYRAN ELECTRON ACCEPTOR, AND ANTHRACENE AND CARBAZOLE ELECTRON-DONORS

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfillment of the requirements for the degree of

Master of Science

in

Chemistry

by

KANNA DIVYA PCH051919



Department of Chemistry School of Physical Sciences CENTRAL UNIVERSITY OF KERALA



(Established by the Parliament of India under the Central Universities Act, 2009)

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Tejaswini hills Periye, Kasargod

Head of the Department

CERTIFICATE

Thus is to certify that the dissertation entitled 'SYNTHESIS AND CHARACTERIZATION OF NEW ELECTRON DONOR-ACCEPTOR MOLECULES BASED ON BENZOPYRAN ELECTRON-ACCEPTOR, AND ANTHRACENE AND CARBAZOLE ELECTRON-DONORS' is an authentic record of the work done by KANNA DIVYA (PCH051919) submitted to Central an authentic record of the work done by KANNA DIVYA (PCH051919) submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. Ravi Kumar Kanaparthi, Assistant Professor, Central University of Kerala.

Head, Department of Chemistry

May 2021

जो (.1.) K-mik-htt Prof. (0-.) A. SA - HEVEL आयार्थ (4 ajuta) / Professor & Head श्वायन विज्ञान (ajuta) / Department of Chemistry अधिक विज्ञान स्तृत्व / School of Physical Sciences कोरिक विज्ञान स्तृत्व / School of Physical Sciences केरल केंद्रीय विज्यावेयालय / Central University of Kerala केरल केंद्रीय विज्यावेयालय / Central University of Kerala केरल केंद्रीय विज्यान भारत / Telaswint Hills, Periya P.O. कारारमनी हिल्ला, भोरता / Telaswint Hills, Periya P.O.

GREEN SYNTHESIS OF AU / PEG NANOCOMPOSITES FOR ESPR SENSING OF ASCORBIC ACID

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfillment of the requirements for the degree of

M.Sc CHEMISTRY

by

KIRANRAJ B

PCH051920



Department of chemistry



(Established by the Parliament of India under the Central Universities Act,

2009)

केरलकेन्द्रीयविश्वविद्यालय

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala

Tejaswini hills

Periye, Kasargod

Certificate

This is to certify that the dissertation entitled "GREEN SYNTHESIS OF AU / PEG NANOCOMPOSITES FOR ESPR SENSING OF ASCORBIC ACID" is an authentic record of the work done by KIRANRAJ.B (Reg. no: PCH051920) submitted to central University of Kerala in partial fulfillment of the requirements for the degree of master science in chemistry and is based on his studies carried out under the supervision of Dr Bini George, Assistant professor, Central University of Kerala.

Head, Department of Chemistry

April 2021

प्रो (जी.) ए. व फिल Prof. (Dr.) A. SANTHITEL आचार्य एवं अज्यक्ष / Professor Aster एसायन विज्ञान विभाग / Department of Chemistry भौतिक विज्ञान फुल / Schulotten test services केलल केंडीय किस्तीणसंस्य / Central U. Schulotten test केवरिवनी दिला, केरेला / Se

Computational Study on Free Radical Scavenging Activity of

Honokiol & Magnolol

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfilment of the requirements for the degree of

Master of Science

In

Chemistry

By

KUNTAL KOLEY

Reg. No. PCH051921



Department of Chemistry

School of Physical Science

CENTRAL UNIVERSITY OF KERALA

May 2021

CENTRAL UNIVERSITY OF KERALA



केरल केन्द्रीय विश्वविद्यालय

CENTRAL UNIVERSITY OF KERALA

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DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Head of the Department

Tejaswini Hills Periye, Kasaragod-671316 Kerala, India

Certificate

This is to certify that the dissertation entitled "Computational Study on Free Radical Scavenging Ability of Honokiol and Magnolol" is an authentic record of the work done by Kuntal Koley, (Reg.No.-PCH051921) submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. Deepa Janardanan, Assistant Professor, Central University of Kerala.

Head, Department of Chemistry

May 2021 Strength Str

Synthesis and Spectral characterization of 2-benzoyl pyridine Thiosemicarbazone Complexes

> A DISSERTATION Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfillment of the requirements for the degree of

M. Sc. CHEMISTRY *by* Lakshmi Krishnaa Suresh



DEPARTMENT OF CHEMISTRY

School of Physical Science Central University of Kerala May 2021

(Established by the Parliament of India under the Central Universities Act, 2009) के रलकेन्द्रीयविश्वविद्यालय DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCE

Head of the Department

3

)

Central University of Kerala Tejaswini Hills, Periye Kasaragod, Kerala 671316

Certificate

This is to certify that the dissertation entitled "Synthesis and spectral characterization of 2-benzoyl thiosemicarbazone complexes" is an authentic record of the work done by LAKSHMI KRISHNAA SURESH (Reg.No.PCH051922) submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. M. R. PRATHAPACHANDRA KURUP, Associate professor, Central University of Kerala.

May 2021

Head, Department of Chemistry

Synthesis and photo-physical properties studies of DONOR-π-ACCEPTOR based new fluorophore Dye

Submitted to CENTRAL UNIVERSITY OF KERALA in partial fulfilment of the requirements for the degree of

> Master of Science in Chemistry

> > By

LOHITHA H R

PCH051923



Department of Chemistry

School of physical sciences CENTRAL UNIVERSITY OF KERALA



केरल केन्द्रीय विश्वविद्यालय CENTRAL UNIVERSITY OF KERALA

(Established by the Parliament of India under the Central University Act, 2009)

DEPARTMENT OF CHEMISRTY SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Tejaswini hills Periye, Kasargod

Head of the Department

CERTIFICATE

This is to certify that the dissertation entitled "SYNTHESIS AND PHOTO-PHYSICAL **PROPERTIES STUDIES OF ELECTRON DONOR-π-ACCEPTOR BASED ON NEW FLUOROPHORE DYE**" is an authentic work done by **Mr. LOHITHA H R (Regd. PCH051923)** submitted to the Central University of Kerala, in the partial fulfilment of the requirements for the degree of Master in Chemistry and it is based on the studies carried out under the supervision of **Dr. Ravi Kumar Kanaparthi**, Assistant Professor, Central University of Kerala.

4.gr

Head, Department of Chemistry

Date : 12th May 2021 Place : Periye

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Reactions of MACR Criegee Intermediate with Hydrogen Donor species- A Theoretical Investigation

Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

Master of Science

By

DASTAGIRI.M

PCH051924



Department of chemistry

School of physical sciences

CENTRAL UNIVERSITY OF KERALA

(Established by the Parliament of India under the Central Universities Act, 2009)

SCHOOL OF PHYSICAL SCIENCES

Tejaswini hills

Periya (PO)

Kasargod, Kerala- 671316

Head of the Department

CERTIFICATE

This is to certify that the dissertation entitled is "Reactions of Criegee Intermediate with Acids- A Theoretical Investigation", an authentic record of the work done by DASTAGIRI.M (PCH051924) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. Deepa Janardanan, Assistant Professor, Central University of Kerala.

Y. Jush

(Head, Department of Chemistry

प्रो.(डॉ.) ए. शतियेल Prof. (D.) २. इत्याप्रसार EL आचाने एव शब्दा , अत्य उत्याप्र E Head रसायन विडान विभाग / E-partment of Chemistry भोतिक विद्यम कारत / इत्यानी का महल्लवर sciences केरल केंद्रीय विश्वविद्यालय, control sciences, of 8 ज्या होनारेवमी हिल्ल विभिन्न / ज्याप्र का महल्लवर्य होनारेवमी हिल्ल विभिन्न / ज्याप्र का महल्लवर्य होनारेवमी हिल्ल विभिन्न / द्याप्र का महल्लवर्य होनारेवमी हिल्ल विभिन्न / द्याप्र का महल्लवर्य



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केरल केन्द्रीय विश्वविद्यालय

DEPARTMENT OF CHEMISTRY

School of Physical Sciences

CUK/ SPS/ CHE/GEN /2020-21/198 Head of the Department Sabarmati Block, Thejaswini Hills, Kasaragod, Kerala

07.09.2021

To whom so ever concern

This is to certify that Ms. MANJU VS (Reg. No. PCH051925) has successfully completed M.Sc. (Chemistry) course in the Department of Chemistry, School of Physical Sciences, Central University of Kerala, Tejaswini Hills, Periye, Kasaragod, in August 2021 with acquired CGPA of 7.75 with first class.



Head, Department of Chemistry

भो. (डी.) ए. श**ा**कवेल Prof. (Dr.) A. SAKIHIVEL आवार्य एवं अध्यक्ष / Professor & Head एसायन विज्ञान विभाग / Department of Chemistry भौतिक विज्ञान स्कूल / School of Physical Sciences केरल केंद्रीय विश्वविद्यालय / Central University of Kerala तेजरिवनी हिल्स, पेरिया / Tejaswini rills, Periya P.O. कासरगोड, केरल-671316 / Kasaragod, Kerala-671 320

CHITOSAN, PVA, SILVER NANOCOMPOSITES FILMS FOR BIODEGRADABLE FOOD PACKING APPLICATIONS

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfillment of the requirements for the degree of

M.Sc CHEMISTRY

by

NANDU P

PCH051927



Department of chemistry



(Established by the Parliament of India under the Central Universities Act. 2009)

केरलके-द्रीयविश्वविद्यालय

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala

Tejaswini hills

Periye, Kasargod

Certificate

This is to certify that the dissertation entitled "CHITOSAN, PVA, SILVER NANOCOMPOSITES FILMS FOR BIODEGRADABLE FOOD PACKING APPLICATIONS "is an authentic record of the work done by NANDU P (Reg. no: PCH051927) submitted to central University of Kerala in partial fulfillment of the requirements for the degree of master science in chemistry and is based on her studies carried out under the supervision of Dr Bini George, Assistant professor, Central University of Kerala.

Head, Department of Chemistry

April 2021



"RUTHENIUM ON α-Ni(OH)2 AS POTENTIAL CATALYST FOR OXIDATION OF CINNAMYL ALCOHOL"

A Dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

M.Sc. CHEMISTRY

by

NIMISHA S PCH051928

Under the Guidance of

Prof. (Dr.) A. Sakthivel



DEPARTMENT OF CHEMISTRY

School of Physical Sciences

Central University of Kerala



(Established by the Parliament of India under the Central Universities Act, 2009)

केरल केन्द्रीय विश्वविद्यालय DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Department of Chemistry School of Physical Sciences Sabarmati Block Central University of Kerala Periye, Kasaragod Kerala, 671316

Certificate

This is to certify that the dissertation entitled "Ruthenium on a-Ni(OH)₂ as potential catalyst for oxidation of cinnamyl alcohol" is an authentic record of the work done by NIMISHA S(Reg NO PCH051928) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Prof. (Dr.) A. Sakthivel. Head of the Degratment of Chemistry, Central University of Kerala.

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Head, Department of Chemistry

May 2021 Prof. Dr.) A. SAKTHIVEL Singid V. (2017) Professor & Head errora Daria (Carr / Department of Chemistry What fram (Carr / Department of Chemistry Synthesis of organic electron donor acceptor based on carbazole and pyran and identifying its applicability in various fields

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfillment of the requirements for the degree of

Master of Science

in

Chemistry

By

RAVIKUMAR K

PCH051929



DEPARTMENT OF CHEMISTRY

School of Physical Sciences

CENTRAL UNIVERSITY OF KERALA



CENTRAL UNIVERSITY OF KERALA (Established by the Parliament of India under the Central Universities Act, 2009) केरलकेन्द्रीयविश्वविद्यालय

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Tejaswini hills Periye, Kasargod

Head of the Department

CERTIFICATE

This is to certify that the dissertation entitled "Synthesis of organic electron donor acceptor based on carbazole and pyran and identifying its applicability in various fields" is an authentic record of the work done by RAVIKUMAR K (PCH051929) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. Ravi Kumar Kanaparthi, Assistant Professor, Central University of Kerala.

MAY 2021

Head, Department of Chemistry

मो (डॉ.) ए. शक्तिवेल .Prof. (D-) A. SAKTHIVEL आचार्य एवं अध्यक्ष Professor & Head रसायन विज्ञान विभाग / Derartment of Chemistry भौतिक विज्ञान स्कूल / School of Physical Sciences केरल केंद्रीय विश्वविद्यालन कार्गांवी University of Kerala तेजरिवनी क्रिल्स, सेन्स्र फांगां Hills, Periya P.O. कासरगोड, केरल-671 अट्रांट्रod, Kerala-671 320

SYNTHESIS AND CHARACTERIZATION OF COPPER(I) AND MANGANESE(II) COMPLEXES OF

2-BENZOYLPYRIDINE SEMICARBAZONE

A Dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

M.Sc. CHEMISTRY

by

RIMA RAPHY V PCH051930

Under the Guidance of

Prof (Dr) M.R. PRATHAPACHANDRA KURUP



DEPARTMENT OF CHEMISTRY

School of Physical Sciences Central University of Kerala May 2021



(Established by the Parliament of India under the Central Universities Act, 2009)

केरल केन्द्रीय विश्वविद्यालय

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Department of Chemistry School of Physical Sciences Sabarmati Block, Central University of Kerala Periye, Kasaragod Kerala, 671316

Certificate

This is to certify that the dissertation entitled "SYNTHESIS AND CHARACTERIZATION OF COPPER(I) AND MANGANESE(II) COMPLEXES OF 2-BENZOYLPYRIDINE SEMICARBAZONE" is an authentic record of the work done by RIMA RAPHY V, (Reg.No.PCH-05-19-30) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Prof (Dr) M.R. Prathapachandra Kurup, Professor, Central University of Kerala.

p-friz

Head, Department of Chemistry May 2021



SYNTHESIS AND CHARACTERIZATION OF NEW ELECTRON DONOR-ACCEPTOR MOLECULES BASED ON BENZOPYRAN ELECTRON-ACCEPTOR AND NAPHTHALENE AND TRIPHENYLAMINE ELECTRON-DONORS

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfillment of the requirements for the degree of

Master of Science

in

Chemistry

by RISHIKA DILEEP **PCH051931**



Department of Chemistry School of Physical Sciences CENTRAL UNIVERSITY OF KERALA May 2021



CENTRAL UNIVERSITY OF KERALA

(Established by the Parliament of India under the Central Universities Act, 2009)

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Tejaswini hills Periye, Kasargod

Head of the Department

CERTIFICATE

This is to certify that the dissertation entitled 'SYNTHESIS AND CHARACTERIZATION BASED ON MOLECULES DONOR-ACCEPTOR **ELECTRON** OF NEW NAPHTHALENE AND AND ELECTRON-ACCEPTOR BENZOPYRAN TRIPHENYLAMINE ELECTRON-DONORS' is an authentic record of the work done by RISHIKA DILEEP (PCH051931) submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. Ravi Kumar Kanaparthi, Assistant Professor, Central University of Kerala.

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May 2021

Head, Department of Chemistry

भा (जे.) ए. भांतनेल Prof. (Fr.) A. SAKTHIVEL आचार्य एवं अध्यक्ष / Professor & Head अवार्य एवं अध्यक्ष / Professor & Head प्रसायन विज्ञान रकूल / Department of Chemistry भीतिक विज्ञान रकूल / School of Physical Sciences भारत केंद्रीय विश्वविद्यालय / Central Physical Sciences सेजरियनी हिल्स, पेरिया / Tejaswares at , Periya P.O. स्वासरगोड, केरल-671316 / Kasara, Kerala-671 320

HYDRATION MECHANISM OF METHYL-ISOPROPENYL KETONE IN THE ATMOSPHERE- A THEORETICAL INVESTIGATION

A dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

M.Sc. (Chemistry)

by

SARANYADAS. M

PCH051932

Under the supervision of

Dr. Deepa Janardanan



C DEPARTMENT OF CHEMISTRY

School of Physical Sciences

Central University of Kerala

Central University of Kerala



(Established by the Parliament of India under the Central Universities Act. 2009)

केरल केन्द्रीय विश्वविद्यालय Po DEPARTMENT OF CHEMISTRY School of Physical Sciences

Department of chemistry School of Physical sciences Sabarmati block Central university of Kerala Periya, Kasaragod. Kerala 671316

Certificate

This is to certify that the dissertation entitled "Hydration Mechanism of Methyl Isopropenyl Ketone in the Atmosphere- A Theoretical Investigation" is an authentic record of the work done by SARANYADAS.M, (Reg.No.PCH-05-19-32) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. Deepa Janardanan, Assistant Professor, Central University of Kerala.

Head, Department of chemistry

May 2021 मो (जी.) ए. शतिने ज Prof. (Dr.) A. SAKHIIVEL आवार्य एवं आर्थारा / Profes or & Head रसायन विज्ञान विमान / Department of Chemistry भौतिक वि.जन रद्वल / School of Physical Sciences केरल बेंद्रीय कियोज्यादा / Central U. versity of Kerda केवन्दिनों नि.स. भोग / Ten toda and the sciences

ANTIOXIDANT ACTIVITY OF CAFFEIC ACID: A THEORETICAL ELUCIDATION OF THE OXIDATIVE DEGRADATION MECHANISM

A dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

M.Sc. (Chemistry)

by

SMRITHI S BABU

PCH051933

Under the supervision of

Dr. Deepa Janardanan



School of Physical Sciences

Central University of Kerala

Central University of Kerala



(Established by the Parliament of India under the Central Universities Act, 2009)

केरल केन्द्रीय विश्वविद्यालय DEPARTMENT OF CHEMISTRY School of Physical Sciences

Department of chemistry School of Physical sciences Sabarmati block Central university of Kerala Periya, Kasaragod, Kerala 671316

Certificate

This is to certify that the dissertation entitled "Antioxidant Activity of Caffeic Acid: A Theoretical Elucidation of the Oxidative Degradation Mechanism" is an authentic record of the work done by SMRITHI S BABU, (Reg.No.PCH-05-19-33) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. Deepa Janardanan, Assistant Professor, Central University of Kerala.

Head, Department of Chemistry

प्रो.(जी) ए. ^{करि}ेल Prof. (जत) २. २० - सांगटर आचार्य एवं करवर) किर्वालयक & Head रसायन विज्ञान विस्ता / Department of Chemistry ओतिक विज्ञान रुपूल / School of Pirysical Sciences केरल केंद्रीय विश्वनिधालन / Central University of Kerala रोगरिवनी हिल्ल. भी आ / Lejaswini Hills, Periya P.O.

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SYNTHESIS OF NEW SENSITIZER BASED ON INDOLE DONOR & NAPTHALDEHYDE AND PYRAN ACCEPTOR FOR DYE SENSITIZER SOLAR CELLS

Submitted to

CENTRAL UNIVERSITY OF KERALA

in partial fulfillment of the requirements for the degree of

Master of Science

in

Chemistry

by Sreekanth Reddy Gangavarapu PCH051934



Department of Chemistry School of Physical Sciences CENTRAL UNIVERSITY OF KERALA May 2021



केरलकेन्द्रीयविश्वविद्यालय CENTRAL UNIVERSITY OF KERALA

(Established by the Parliament of India under the Central Universities Act, 2009)

DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Central University of Kerala Tejaswini hills Periye, Kasargod

Head of the Department

CERTIFICATE

This is to certify that the dissertation entitled 'SYNTHESIS OF NEW SENSITIZER BASED ON INDOLE DONOR & NAPTHALDEHYDE AND PYRAN ACCEPTOR FOR DYE SENSITIZER SOLAR CELLS' is an authentic record of the work done by Sreekanth Reddy Gangavarapu (PCH051934) submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. Ravi Kumar Kanaparthi, Assistant Professor, Central University of Kerala.

May 2021

Head, Department of Chemistry

प्रो.(जॅ.) ए. शक्तिवेल Prof. (Dr.) A. SAKTHIVEL आचार्य एवं अध्यक्ष / Professor & Head रसायन विज्ञान विभाग / Department of Chemistry गौरिक विज्ञान स्कूल / School of Phracel Sciences केरल केंद्रीय विश्वविद्यालय / Central Caversity of Ker. Ia तेजरियनी हिल्स, वेरिया / Tejaswint Hills, Periya etc. कालरियनी हिल्स, वेरिया / Kasaragod, Kerata-etc. उन्न Synthesis and spectral characterization of Fe(III), Cu(II) and Ni(II) complexes derived from 2-Benzoylpyridine-N⁴-methyl-3-thiosemicarbazone

A DISSERTATION

Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfillment of the requirements for the degree of

M.Sc. CHEMISTRY

by

SREELEKHA U

PCH051935



DEPARTMENT OF CHEMISTRY

School of Physical Science

Central University of Kerala

MAY 2021



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केरल केन्द्रीय विश्वविद्यालय DEPARTMENT OF CHEMISTRY School of Physical Sciences

Head of the Department

Central University of kerala Tejaswini Hills, Periye, Kasaragod, Kerala 671316

Certificate

This is to certify that the dissertation entitled "Synthesis and spectral characterization of Fe(III), Cu(II) and Ni(II) complexes derived from 2-Benzoylpyridine-N⁴-methyl-3thiosemicarbazone" is an authentic record of the work done by SREELEKHA U, (Reg.No.PCH051935) submitted to Central University of Kerala in partial fulfillment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Prof. (Dr.) M. R. PRATHAPACHANDRA KURUP, Associate Professor, Department of Chemistry, Central University of Kerala.

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Head, Department of chemistry

May 2021

14.00

प्रो (सँ ९ ए. इन्होटोल Prof (ए. १९२० २०२० १९४६) आवार्य १२ २ २० २० २० २० १९४६ मुल्ल रसायन विद्यान दिवन / ए. २० १० २० १९ १९३८ अधिक भौतिक विज्ञान प्यूल / School of Prysical Sciences केरल कडीय विश्वविद्यालय / Cervial University of Kerala तेजरियनी हिल्ल, भेरिया / १, २०२५काम ७, Periya P.O. कासरगोड, केरल-671316 / Kasaragou, Kerala-671 320
Ruthenium containing MCM-22 zeolites: Preparation,

Characterisation and its Catalytic Applications

A Dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

M.Sc. CHEMISTRY

by Surabhidevi S PCH051936

Under the Guidance of Prof. (Dr.) A. Sakthivel



DC DEPARTMENT OF CHEMISTRY

School of Physical Sciences Central University of Kerala May 2021



CENTRAL UNIVERSITY OF KERALA

(Established by the Parliament of India under the Central Universities Act, 2009)

केरल केन्द्रीय विश्वविद्यालय DEPARTMENT OF CHEMISTRY

SCHOOL OF PHYSICAL SCIENCES

Department of Chemistry School of Physical Sciences Sabarmati Block, Central University of Kerala Periye, Kasaragod Kerala, 671316

Certificate

This is to certify that the dissertation entitled "Ruthenium containing MCM-22 zeolites: Preparation, Characterisation and its Catalytic Applications" is an authentic record of the work done by SURABHIDEVI S. (Reg. No. PCHO51936) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Prof. (Dr.) A. Sakthivel, Head of the Department of Chemistry, Central University of Kerala.

- -

420

Head, Department of Chemistry May 2021

प्रो.(डॉ.) ए. शक्तिवेल Prof. (Dr.) A. SAKTHIVEL आचार्य एवं अध्यक्ष / Professor & Head रसायन विज्ञान विभाग / Department of Chemistry भौतिक विज्ञान रकुल / School of Physical Sciences केरल केंद्रीय विश्वविद्यालय / Central University of Kerala तेजरिवनी हिल्ल, पेरिया / Tejaswini Hills, Periya P.O. जगरएगोड, केरल-671316 / Kasaragod,Kerala-671 320

THEORETICAL EXPLORATION ON THE ANTIOXIDANT ACTIVITY OF HYDROXYCINNAMIC ACIDS

A dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

M.Sc. (Chemistry)

by

SURYA N

PCH051937

Under the supervision of Dr. Deepa Janardanan



DEPARTMENT OF CHEMISTRY

School of Physical Sciences Central University of Kerala May 2021

Department of chemistry School of Physical sciences Sabarmati block Central university of Kerala Periya, Kasaragod, Kerala 671316

Certificate

This is to certify that the dissertation entitled "Theoretical Elucidation on the Antioxidant Activity of Hydroxycinnamic acids" is an authentic record of the work done by SURYA N, (Reg.No.PCH-05-19-37) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Dr. Deepa Janardanan, Assistant Professor, Central University of Kerala.

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Head, Department of Chemistry

May 2021 ... भो रहे के उन्हें ने प्र Prof Point State (MITEL STREE) Point State (MITEL STREE) Point State (MITEL STREE) Point State (MITEL STREE) Point (MITEL STREE)

SYNTHESIS AND CHARACTERIZATION OF COPPER(I) AND MANGANESE(II) COMPLEXES OF

2-BENZOYLPYRIDINE SEMICARBAZONE

A Dissertation Submitted to

CENTRAL UNIVERSITY OF KERALA

In partial fulfilment of the requirements for the degree of

M.Sc. CHEMISTRY

by

SWAPNA

PCH051938

Under the Guidance of

Prof (Dr) M. PRATHAPACHANDRA KURUP



^DC DEPARTMENT OF CHEMISTRY

School of Physical Sciences Central University of Kerala May 2021 Central University of Kerala



(Established by the Parliament of India under the Central Universities Act, 2009)

केरल केन्द्रीय विश्वविद्यालय Pc DEPARTMENT OF CHEMISTRY School of Physical Sciences

> Department of chemistry School of Physical sciences Sabarmati block Central university of Kerala Periya, Kasaragod, Kerala 671316

Certificate

This is to certify that the dissertation entitled "SYNTHESIS AND CHARACTERIZATION OF COPPER(II) AND MANGANESE(II) COMPLEXES OF 2-BENZOYLPYRIDINE SEMICARBAZONE" is an authentic record of the work done by SWAPNA(Reg.No. PCH051938) submitted to Central University of Kerala in partial fulfilment of the requirements for the Degree of Master of Science in Chemistry and is based on her studies carried out under the supervision of Prof (Dr) M. Prathapachandra Kurup, Professor, Central University of Kerala.

Head, Department of Chemistry