



LAKIREDDY BALI REDDY COLLEGE OF ENGINEERING

(An Autonomous Institution since 2010)

Approved by AICTE, New Delhi and Permanently Affiliated to JNTUK, Kakinada

L.B. Reddy Nagar, Mylavaram, NTR District, Andhra Pradesh - 521230



Department of Mechanical Engineering

Thermal Science Research Group

Head of the Group: Dr.P.VijayKumar, Professor

The success of any organization depends greatly on the group work or collaborative work. The innovative ideas from a small group of people eventually will be transformed in to a reality in the form of a quality research work or a project work or a patent or working/prototype model. The group members can contribute their wisdom in research group interactions and periodical meetings. Also the collaborative working environment not only bring out the inherent potential, skills and expertise of the faculty members but also provide an opportunity to develop leadership qualities, team work, sharing of ideas and knowledge. This will improve the interest and confidence levels of the faculty members, when they have inclination towards R&D activities. With this motto, the Department of Mechanical Engineering created Thermal sciences group which will function with the following aims.

Aim:

Thermal science group aims at developing innovative, energy efficient, environment friendly thermal and renewable systems on thermo-economic perspective for the needs of domestic, industrial and commercial domains.

Objectives:

- ❖ To identify the burning topics and key areas of research in thermal sciences and work seriously in that direction.
- ❖ To develop a system/experiments beyond the curriculum.
- ❖ To have the updated information regarding project proposals from different funding agencies(DST, UGC, AICTE,MNRE,ISRO,DRDO etc.) and motivate the faculty to prepare and submit quality project proposals for the above funding agencies.
- ❖ To have collaborative work among the members and produce quality paper publications with mutual sharing of skills and expertise.
- ❖ To motivate the young faculty towards developing interest in R&D activities and guide them register for Ph.D programmes under IIT/NIT/IIIT/JNTUK/AU.

Thermal Science group key areas of research

- IC engines & Alternate fuels
- Heat transfer applications
- Phase change materials
- Solar systems
- Biomass Utilization

Thermal Science Research Group members:

S.No	Faculty members	Qualification	Email ID	Designation
1	Dr.K.Appa Rao	M.Tech,Ph.D	apparaokandimalla@gmail.com	Professor
2	Dr.P.Vijaya Kumar	M.Tech,Ph.D	pjoel2013@gmail.com	Professor
3	Dr.P.Ravindra Kumar	M.Tech,Ph.D	pasupuletirk@gmail.com	Professor
4	Dr.K.Dilip Kumar	M.Tech,Ph.D	dilip_011@yahoo.co.in	Professor
5	Dr.V.Dhana Raju	M.Tech,Ph.D	dhanaraju1984@gmail.com	Assoc.Professor
6	Dr.S.Rami Reddy	M.Tech,Ph.D	ramireddy.mec@gmail.com	Asst. Professor
7	K.Lakshmi Prasad	M.Tech ,(Ph.D)	klprasad1108@gmail.com	Asst. Professor
8	D.Mallikarjuna Rao	M.Tech,(Ph.D)	malliaug01@gmail.com	Asst. Professor
9	B.Kamala Priya	M.Tech,(Ph.D)	kamala.jkp@gmail.com	Asst. Professor
10	K.Saibabu	M.Tech ,(Ph.D)	kolahalamsaibabu332@gmail.com	Asst. Professor
11	S.Uma Maheswara Reddy	M.Tech	umr341@gmail.com	Asst. Professor

Research facilities available in the Department

- PC based Four stroke diesel engine test rig
- Four stroke variable compression ratio engine test rig
- Exhaust gas analyzer, Smoke meter

- Fuel testing facility
- Thermal conductivity of liquids
- Solar concentrating parabolic collector
- CRDI Diesel Engine and AVL five gas analyzer

Thermal Science research Group members acted as reviewers for following Journals:

S.No	Name of journal	Reviewed (Nos)
1	International Journal of Ambient Energy	10
2	Bio fuels	4
3	Environmental Progress and Sustainable Research	2
4	Fuel	4
5	Environmental progress & sustainable Energy	2
6	Journal of Thermal Engineering, Yildiz University	2
7	Current journal of applied science and Technology	2
8	International Journal of Green Energy	2
9	Alexandria Engineering Journal	1
10	Biomass Conversion and Biorefinery	2

Thermal Science Group members guiding research scholars for Ph.D

S.No	Faculty members	Designation	Under university
1	Dr.K.Appa Rao	Professor	JNTUK- Kakinada
2	Dr.P.Vijay Kumar	Professor	JNTUK- Kakinada
3	Dr.P.Ravindra Kumar	Professor	JNTUK- Kakinada
4	Dr.K.Dilip Kumar	Professor	JNTUK- Kakinada, KLEF-Vaddeswaram
5	Dr.V.Dhana Raju	Assoc.Professor	JNTUK- Kakinada, KLEF-Vaddeswaram

Thermal Science research Group members Received Sponsored Project/Grants:

S.No.	Name of project	Name of Faculty	Amount	Funding Agency	Sanctioned Year
1	AICTE IDEA LAB	Dr.K.Appa Rao	30,00,000	AICTE,	2024-25
2	AICTE ATAL online FDP	Dr.P.Vijaya Kumar	1,00,000	AICTE,	2024-25
3	Evaluation of engine parameters affecting the performance of enzymatic transesterification Process using test fuel blends	Dr.N.Sunil Naik	22,81,000	DST-SERB	2019-20
4	Experimental Investigation on Homogeneous Charge Compression Ignition(HCCI) Engine	Dr.K.Appa Rao	1,55,000	UGC	2016-17
5	Modernization and Removal of Obsolescence of Thermal Engineering Laboratory	Dr.K.Appa Rao	12,50,000	AICTE	2017-18

Thermal Science research Group members List of Publications:

S.No	Name of the author/s	Title of the paper	Name of journal	Year of publication	ISBN/ISSN number
1	Jayashri N. Nair T. Nagadurga , V. Dhana Raju , Harish Venu, Sameer Algburi, Sarfaraz Kamangar, Amir Ibrahim Ali Arabi, Abdul Razak, Narasimha Marakala	Impact of fuel additives on the performance, combustion and emission characteristics of diesel engine charged by waste plastic bio-diesel	Case Studies in Thermal Engineering	2024-25	2214-157X
2	Harish Venu, ManzooreElahi M Soudagar, TiongSiehKiong, NM Razali, Hua-Rong Wei, Armin Rajabi, V Dhana Raju , TM Yunus Khan, NaifAlmakayeel, ErdemCuce, HuseyinSeker	Nanotechnology and LSTM machine learning algorithms in advanced fuel spray dynamics in CI engines with different bowl geometries	Scientific Reports	2024-25	2045-2322
3	K. Yamini, P. S. Kishore, V. Dhana raju	Effect of diethyl ether and isobutanol as fuel additives on the diesel engine attributes fueled with subabul seed biodiesel	Journal of Thermal Engineering	2024-25	2148-7847
4	Jayashri N Nair, V. Dhana Raju T. Nagadurga	Solar Ddryers for Food Preservation: An In-Depth Review of Design, Fabrication and Barriers	Food Engineering Reviews	2024-25	1866-7929 1866-7910
5	KPV Krishna Varma, NS Naveen, PS Kishore, Satish Pujari, Krishna Jogi, V Dhana Raju	Optimizing the thermal performance of a double-pipe heat exchanger using twisted tapes with variable cuts and Fe3O4 nanofluid	Journal of Thermal Engineering	2024-25	2148-7847
6	Lakshmi KanthCh, P. Ravindra Kumar , Bypaneni Krishna Chaitanya, N. VenkataSairam Kumar, Naga Sai Rama Krishna Thati, N. Satya Vijay Kumar, B. Ravi, AnnamdasuNagesawara Rao	Prediction of Mechanical and Tensile Properties of Self-Compacting Concrete Incorporating Fly Ash and Waste Copper Slag by Artificial Neural Network-ANN	Annales de Chimie - Science des Matériaux	2024-25	0151-9107 / 1958-5934
7	Lakshmi KanthCh, P. Ravindra Kumar , Bypaneni Krishna Chaitanya,	Prediction of Mechanical and Tensile Properties of Self-Compacting	Annales de Chimie - Science des Matériaux	2024-25	0151-9107 / 1958-5934

	N. VenkataSairam Kumar, Naga Sai Rama Krishna Thati, N. Satya Vijay Kumar, B. Ravi, Annamdasu Nagesawara Rao	Concrete Incorporating Fly Ash and Waste Copper Slag by Artificial Neural Network-ANN			
8	B Nikhil Chakravarthy, P Vijay Kumar, V Dhana Raju, K Appa Rao , RamalingamSenthil	Evaluation of performance, emissions and combustion attributes of diesel engines powered by Palmyra biodiesel blends with distinct injection pressures and EGR rates	International Journal of Ambient Energy	2024-25	0143-0750
9	P. Venkataramana, PVijaya Kumar B. Balakrishna	Numerical Investigation of a Pulsating Heat Pipe Using Different Nanofluids for Electronic Cooling	Journal of The Institution of Engineers (India): Series C	2024-25	2250-0545
10	PinjalaTejomurthi, K.Dilip Kumar , BhanavathuBalakrishna	Experimental investigation of the using graphene oxide and titanium dioxide nanolubricant for a refrigeration system operated by mixed refrigerant	Journal of Thermal Analysis and Calorimetry	2023-24	1388-6150
11	Vallapudi Dhana Raju IbhamVeza Harish Venu ManzooreElahi M. Soudagar , M. A. KalamTansirAhamad PrabhuAppavu Jayashri N. Nair and S. M. Ashrafur Rahman	Comprehensive Analysis of Compression Ratio, Exhaust Gas Recirculation, and Pilot Fuel Injection in a Diesel Engine Fuelled with Tamarind Biodiesel	Sustainability	2023-24	2071-1050
12	Seelam Rami Reddy , Saroj Kumar Sarangi	Influence of zinc oxide and graphene nanoparticles on diesel engine's emission and vibration while fuelled with waste mango seed oil biodiesel	International Journal of Chemical Reactor Engineering	2023-24	2194-5748
13	Konka Dilip Kumar , GanesanRamya, NarayanasamyAmbikeswari, SathyamurthyRavishankar, JayaprakashVenugopal, RavitejaSurakasi, UthirapathyTamilarasan, T. Sathish V. Vijayan	Investigation on the influence of the MWCNT, Al ₂ O ₃ and CuOnano fluid in the ETSC	Thermal Science	2023-24	2334-7163
14	S. Rami Reddy Saroj Kumar Sarangi	Emission and performance investigation of mango seed oil biodiesel supplied with n-pentanol and n-hexanol additives and optimization of fuel blends using modified deep neural network	International Journal of Chemical Reactor Engineering	2023-24	2194-5748

15	Harish Venu , TiongSiehKiong , ManzooreElahi M. Soudagar , N.M. Razali , S. Ramesh, Yasser Fouad, Armin Rajabi, Prabhu Appavu, V. DhanaRaju , IbhamVeza, LingesanSubrmani, M.A. Kalam, ÜmitAğbulut	A comprehensive combustion, performance, and environmental analyses of algae biofuel, hydrogen gas, and nano-sized particles (liquid-gas-solid mix) in agricultural CRDI engines	International Journal Of Hydrogen Energy	2023-24	0360-3199
16	Harish Venu, PrabhuAppavu, Venkatesan Krishnan, JayaprabakarJayaraman, Mudhu Krishnan Manimuthu, SudhakarKosinapogu, Dhana Raju Vallapudi	Emission study on a direct injection diesel engine powered with blends of Moringaoleifera biodiesel-diesel	Environmental Quality Management	2023-24	1088-1913
17	M.BalaChennaiaG.DilliBabuM.Sumalatha K.Dillip Kumar T Srinivasarao	Tribological and Mechanical properties of Al6061/SiC/ GO Hybri composites produced with stir casting	Journal of Mines, Metals and Fuels	2023-24	0022-2755
18	PinjalaTejomurthi, K.Dilip Kumar , BhanavathuBalakrishna	Experimental Investigation on Vapour Compression Refrigerator System Using Propane as Working Fluid with Graphene Oxide Nanoparticles &Pag Lubricant	Journal of Harbin Engineering University	2023-24	1006-7043
19	S. Sivarajeswari, Soumya Nikhil Hublikar, Yogendra Kumar, Shobana D.,A. Deepak, Meduri Oliva	Multiple Level Inverter Scheme for Improved Power Quality of Renewable Energy Solar Panel	International Journal of Intelligent Systems and Applications in Engineering	2023-24	2147-6799
20	K Yamini, PS Kishore, V Dhana Raju	Experimental studies on performance, combustion, and emission characteristics of diesel engine powered with subabul seed biodiesel blends	International Journal of Ambient Energy	2023-24	2162-8246
21	K Srinivasa Reddy, Y VenkataHanumantha Rao, V Dhana Raju	Experimental assessment of copper oxide nanoparticles on the attributes of diesel engines fuelled with waste plastic biodiesel	International Journal of Ambient Energy	2023-24	2162-8246
22	GundreddiDeepika Reddy, Nageswara Rao Medikundu, T. Vijaya Kumar, VinjamuriVenkata Kamesh, Perumalla Vijaya Kumar	Smart Factory Navigation: Sensor-Driven Access Point Selection for Automated Guided Vehicles	Journal Of Nano- And Electronic Physics	2023-24	2077-6772/2306-4277.

23	Kolahalam Sai Babu, T. N.Charyulu	An Intense Study on The Efficiency and Effectiveness of Gilled Tube Economizer in Thermal Power Plant by Using LMTD And NTU Methods	United International Journal of Engineering and Sciences (UIJES)	2023-24	2582-5887
23	N. R. Medikondur; Kona Ram Prasad; Olive Meduri, K. Prakash Babu; A. Sri Harsha; B. V. Dharmendra	Data mining-based prediction for operational completion time and mean flow time	AIP Conference Proceedings	2023-24	1551-7616
22	N. R. Medikondur; Olive Meduri; K. Prakash Babu; Kona Ram Prasad; A. Sri Harsha; B. V. Dharmendra	A data mining based heuristic algorithm implementation for intelligence system	AIP Conference Proceedings	2023-24	1551-7616
23	Mallikarjuna Rao Dandu; K. Sai Babu; M. Bhuvaneshwari; V. Dhana Raju; B. Udaya Lakshmi; K. V. Viswanadh	The experimental research on diesel engine characteristics with annonasquamosa biodiesel	AIP Conference Proceedings	2023-24	1551-7616
24	Md. K. M. Farokhi; N. R. Medikondur; P. V. Chalapathi; A. Sri Harsha; P. Vijaya Kumar; B. V. Dharmendra	Soft computing techniques for task scheduling	AIP Conference Proceedings	2023-24	1551-7616
25	A. Sri Harsha; P. Vijaya Kumar; ArumallaNagaraju; K. Prakash Babu; N. R. Medikondur; B. V. Dharmendra	Mining knowledge for NP-complete scheduling problems	AIP Conference Proceedings	2023-24	1551-7616
26	Md. K. M. Farokhi; P. V. Chalapathi; N. R. Medikondur; P. Vijaya Kumar; A. Sri Harsha; B. V. Dharmendra	Artificial intelligence technique for industry 4.0	AIP Conference Proceedings	2023-24	1551-7616
27	N. R. Medikondur; N. MadhuBindu; P. Vijaya Kumar; Kareemulla Shaik; A. Sri Harsha; B. V. Dharmendra	Implementation of beam search algorithm for expert system	AIP Conference Proceedings	2023-24	1551-7616

28	P.Venkataramana, P.Vijaya Kumar , B.Balakrishna,	Experimental Investigation of Aluminum oxide Nanofluid on Closed loop Pulsating Heat Pipe Performance	Journal of Applied Fluid Mechanics	2022-23	1735-3572 / 1735-3645
29	Vallapudi Dhana Raju , Jayashri N Nair, Harish Venu, LingesanSubramani, ManzooreElahi M. Soudagar, MA Mujtaba, T.M. Yunus Khan, Khadiga Ahmed, Ismail, Ashraf Elfasakhany, Abdulfatah Abdu Yusuf, Badr A Mohamed, Islam M. R. Fattah,	Combined assessment of injection timing and exhaust gas recirculation strategy on the performance, emission and combustion characteristics of algae biodiesel powered diesel engine	Energy Sources, Part A: Recovery, Utilization, and Environmental Effects	2022-23	1556-7036 / 1556-7230
30	S. Rami Reddy , Saroj Kumar Sarangi	Hybrid controller for battery operation in photovoltaic assisted EV charging station	International Journal of Electronics	2022-23	0020-7217 / 1362-3060
31	Harish Venu, PrabhuAppavu, Dhana Raju V	Influence of Zr2O3 nano additives on particle size diameter (PSD), mass fraction burnt (MFB) and engine characteristics of Jatropha biodiesel fuelled DI diesel engine	Australian Journal of Mechanical Engineering	2022-23	1448-4846 / 2204-2253
32	Srinivasa Reddy Kunduru,Hanumantha Rao YarrapathruniVenkata, Dhanaraju Vallapudi , NarmathaDeenadayalan, Arul Raj Kumaravel	Prediction of recital characteristics of a ci diesel engine operated by bio-fuel extracts from cotton seed oil, linseed oil and mahua seed oil using ANN method	Journal of Thermal Engineering	2022-23	2148-7847
33	A Prabhu, V Harish, J Jayaprabakar, K Venkatesan, V Dhana Raju	Emission analysis in an EGR-equipped DI diesel engine fueled by butanol-diesel blends	Environmental Quality Management	2022-23	1088- 1913/1520-6483
34	K.Maheswari, Oluwadare Joshua Oyeboode, M. Priscilla, VikasMaheshkar, K. Lakshmi Prasad , Ch. Venkata Krishna Reddy, Sandeep Kumar	Design of Green IoT for Sustainable Smart Cities and Eco-friendly Environment	European Chemical Bulletin	2022-23	2063-5346

35	P. Venkataramana, P. Vijaya Kumar , B. Bala Krishna	Thermal and flow performance in a CLPHP with Al ₂ O ₃ /copper nanofluids: Application in microelectronics and power generation	Materials Today Proceedings	2022-23	2214-7853
36	Mallikarjuna Rao Dandu , K. Sai Babu, Nelakuditi Naresh Babu, A. Dhanunjay Kumar, K. Venkateswara Reddy, B. Sai Rama Krishna and V. Dhana Raju	Experimental Investigation on Water Cooler Test Rig With And Without Diffusers	E3S Web of Conferences	2022-23	2267-1242
37	T Srinivasa Rao, K Dilip Kumar , Sk Abdul Saleem, N Kishan, ChRaghavendra, M Avinash	Effect of Heat Transfer Performance of Shell and Tube Heat Exchanger Equipped With VCR System Using Different Baffle Angles and Operated With Different Graphene Oxide Nanoparticle Shapes	AIP Conference Proceedings	2022-23	0094-243X
38	Sai Babu, K. , Sai Rama Krishna, B., Djana Raju V , Rama Krisna, N.,	Comparative Analysis for Performance Characteristics of a Compression Ignition Engine Running on Microalgae Methyl Ester and Diesel Blends with Base Engine and Coated Engine	Green Energy and Technology	2022-23	1865-3529
39	Pratyush A , Dhana Raju V. , Sai BabuK. , Oliva M. ,	Liquid Suction Heat Exchanger Used with Vapour Compression Refrigeration System by the Application of Twisted Strip Inserted Condenser	Green Energy and Technology	2022-23	1865-3529
40	ArunaNayudu, Rama Krishna Yajjala, Vengal Rao Pachava, Meharaj Shaik, Pratyush Aginipathi , Vayu Nandana Kishore Pabbiseti	Detection of chromium using polymer coated etched FBG	Materials Today: Proceedings	2022-23	2214-7853
41	M.A.Mujtaba, M.A.Kalam, H.H.Masjuki, LuqmanRazzaq, HarisMehmood Khan, ManzooreElahiM.Soudagar,M.Gul, Waqar Ahmed, V. DhanaRaju , Ravinder Kumar, HwaiChyuan Ong	Development of empirical correlations for density and viscosity estimation of ternary biodiesel blends	Renewable Energy	2021-22	0960-1481

42	Ravindra Kumar Pasupuleti, Nelakuditi N Babu, K Lakshmi Prasad	Computational comparison and experimental performance analysis on heat pipes using concentrating solar parabolic trough collector	Proc IMechE Part A: J Power and Energy	2021-22	0957-6509
43	Harish Venu, IbhamVeza, LokeshSelvam, PrabhuAppavu, V. Dhana Raju, LingesanSubramani, Jayashri N. Nair	Analysis of particle size diameter (PSD), mass fraction burnt (MFB) and particulate number (PN) emissions in a diesel engine powered by diesel/biodiesel/n-amyl alcohol blends	Energy	2021-22	0360-5443
44	Perumalla Vijaya Kumar B. Ashok M. Senthilkumar R. Vignesh J. Pradeep Bhasker A. Naresh Kumar	Evaluation of performance, emissions and combustion attributes of CI engine using palmyra biodiesel blend with distinct compression ratios, EGR rates and nano-particles	FUEL	2021-22	0016-2361
45	V.Dhana Raju ManzooreElahi M.Soudagari Harish Venu JayashriNNair M.B.S.Sreekar Reddy J.Subba Reddy T.Srinivasa Rao T.M.Yunus Khan Khadiga Ahmed Ismail Ashraf Elfasakhany	Experimental assessment of diverse diesel engine characteristics fueled with an oxygenated fuel added lemon peel biodiesel blends	Fuel	2021-22	0016-2361
46	Mohamad Reda A. Refaai, U. Tamilarasan, K. Dilip Kumar, M. Karthe , C. Anbu, and Simon Yishak	Mechanical Behaviour and Thermal Properties of Pine Apple Leaf Fiber Reinforced Vinyl Ester Composites	Advances in Polymer Technology	2021-22	1098-2329
47	Ravindra Kumar Pasupuleti, ManindraBedhapudi, Subba Reddy Jonnala, Appa Rao Kandimalla	<u>Computational Analysis of Conventional and Helical Finned Shell and Tube Heat Exchanger Using ANSYS-CFD</u>	International Journal of Heat and Technology	2021-22	0392-8764
48	M.BalaChennaiah, K Dilip Kumar, G DilliBabu, Srinivasa Rao Tanneru, B Kamala Priya	An Experimental Investigation on emission characteristics and vibration analysis of a diesel engine	Advances in Materials and Processing Technologies	2021-22	2374-068X

49	R Ranjith, V P Pradeep, B R Senthil Kumar, K Somasundaram, K Lakshmi Prasad	Investigation on mechanical and tribological properties of AA6061/ Gr composites for solar header pipes	Engineering Research Express	2021-22	2631-8695
50	D. Malikarjuna Rao , Venkatasomi Reddy Janga, V. Dhanaraju Syed Arifa	Impact of Graphene Nanoparticles Addition to Jatropha Biodiesel Blend on the Performance and Emission Characteristics of a Diesel Engine	Leacture Notes in Mechanical Engibneering	2021-22	--
51	Nitin Kamitkar BasavarajuAlenahallyNingegowda Vallapudi Dhana Raju	Assessment of Indian black berry biodiesel characterization and its suitability for the diesel engine applications with oxygenated fuel additives	International Journal of Ambient Energy	2021-22	0143-0750
52	Nitin Kamitkar BasavarajuAlenahallyNingegowda Vallapudi Dhana Raju	Experimental assessment of dibutyl ether on the performance, combustion and emission characteristics of the diesel engine fuelled with Indian black berry biodiesel	International Journal of Ambient Energy	2021-22	0143-0750
53	Satish Kumar BasavarajuAlenahallyNingegowda Vallapudi Dhana Raju	Combined influence of injection pressure and exhaust gas recirculation on the characteristics of the diesel engine fueled with juliflora biodiesel	International Journal of Ambient Energy	2021-22	0143-0750
54	K. Dilip Kumar , T. Srinivasa Rao, S. Kiran Kumar, S.K. Smadhil, G. Subhash	Energetic and Exergetic performances of a parabolic solar trough collector working with TiO ₂ & Al ₂ O ₃ nanofluids for variable temperature applications	International Journal of Ambient Energy	2021-22	0143-0750
55	Jayashri N. Nair, ThokchomSubhaschandraSingh, Vallapudi Dhana Raju	Effect of addition of bio-additive clove oil to ternary fuel blends (Diesel- Biodiesel- Ethanol) on compression ignition engine	Journal of Physics: Conference Series	2021-22	1742-6596
56	Kunduru Srinivasa Reddy, Yarrapathruni venkata Hanumantha Rao, Vallapudi Dhana Raju	Influence of diethylether on the diesel engine diverse characteristics fuelled with waste plastic biodiesel	Materials Today Proceedings	2021-22	2214-7853

57	M. Bala Chennaiah, K. DilipKumar,B.Sudheer Kumar & Srinivasa Rao Tanneeru	Characterisation of zinc oxide nanoparticles– herbal synthesised coated with Ocimum tenuiflorum	Advances in Materialsand Processing Technologies	2020-2021	2374-068X
58	Fayaz Hussain, Manzoore Elahi M. Soudagar, Asif Afzal,M.A.Mujtaba,I.M. Rizwanul Fattah, Bharat Naik, Mohammed Huzaifa Mulla, Irfan Anjum Badruddin, T. M. Yunus Khan, Vallapudi Dhana Raju, Rakhamaji S. GavhaneandS.M. Ashrafur Rahman	Enhancement in combustion, performance and Emission characteristics of a Diesel engine fueled with Ce- zno Nano particle additive added to soybean biodiesel blends	Energies	2020-2021	1996-1073
59	Manzoore Elahi M. Soudagar, M.A. Mujtaba, Mohammad Reza Safaei, AsifAfzal,DhanaRajuV, Waqar Ahmed, N.R. Banapurmath, Nazia Hossain, Shahid Bashir,Irfan Anjum Badruddin, Marjan Goodarzi, Kiran Shahapurkar,Syed NoemanTaqui	Effect of Sr@ZnO nanoparticles and Ricinus communis biodiesel-diesel fuel blends on modified CRDI diesel engine characteristics	Energy	2020-2021	0360-5443
60	V. Dhana Raju, Harish Venu, LingesanSubramani, P.S. Kishore, P.L. Prasanna,D.VinayKumar	An experimental assessment of prospective oxygenated additives on the diverse characteristics of diesel engine powered with waste tamarind biodiesel	Energy	2020-2021	0360-5443
61	KaturiBalaPrasad,Oliva Meduri,VallapudiDhana Raju, Aruna Kumari Azmeera, Harish Venu, Lingesan Subramani and Manzoore Elahi M.Soudagar	Effect of split fuel injection strategies on the diverse characteristics of CRDI diesel engine operated with tamarind biodiesel	Energy Sources, Part A: Recovery, Utilization,and Environmental Effects	2020-2021	1556-7036
62	HarishVenu,V.Dhana Raju,S.Lingesanand ManooreElahiMSoudagar	InfluenceofAl ₂ O ₃ nano Additives in ternary fuel (diesel-biodiesel-ethanol) blends operated in a single cylinder diesel engine: Performance, combustion and emission characteristics	Energy	2020-2021	0360-5443

63	MA Majtaba, Haeng Muk Cho, HH Masjuki, MA Kalam, M.Farroq, Manzoore Elahi M.Soudagar, M Gul, WaqarAhmed,AsifAfzal, Shahid Bashir, V.Dhanaraju, HAseeb YaqoobandA.Z.Syahir	Effect of alcoholic and nano-particles additives on tribological properties of diesel-palm-sesame biodiesel blends	Energy Reports	2020-2021	2352-4847
65	A.ArunaKumari,G.Sivaji, SyedArifa,O.SaiMahesh, T.Raja Rao, S.Venkata Kalyan, V.Dhana Raju, K.Bhargava and K.LakshmanReddy	Experimental assessment of performance, combustion and emission characteristics of diesel fuelledwithlemonpeel oil	International Journal of Ambient Energy	2020-2021	2162-8246
66	RadhaKrishnaGopidesi, Premkartikkumar Sr & Vallapudi Dhana Raju	Mitigation of harmful exhaust pollutants of DI diesel engine using emulsified fuel and hythanegasinadual-fuel mode	Energy Sources, Part A: Recovery, Utilization,and Environmental Effects	2020-2021	1556-7036
67	K.BalaPrasad,V.Dhana Raju,Areef Ahamad Shaik, Radha Krishna Gopidesi, M.Bala Satya Sreekara Reddy,ManzooreElahiM Soudagar , andMuhammadAbbas Mujtaba	Impact of Injection timings and exhaust gas recirculation rates on the characteristics of diesel engine operated withneat tamarind biodiesel	Energy Sources, Part A: Recovery, Utilization,and Environmental Effects	2020-2021	1556-7230
68	A.Naresh Kumar, P.S.Kishore, K.Brahma Raju,B.Ashok,R.Vignesh, A.K.Jeevanantham, K.Nanthagopal, A.Tamilvanan	Decanolproportioneffect prediction model as additive inpalmbiodiesel using ANN and RSM techniquefordiesel engine	Energy	2020-2021	0360-5442
69	A. Naresh Kumar, B. Ashok,K.Nanthagopal,H. C. Ong, M. J. Geca, John Victor, R.Vignesh,A. K. Jeevanantham,C.Kannan, P. S.Kishore	Experimental analysis of higher alcohol-based ternary biodiesel blendsin CI engine parameters throughmultivariateand desirabilityapproaches	Biomass Conversionand Biorefinery	2020-2021	2190-6823

70	AreefAhamadShaik , Seelam Rami Reddy , VallapudiDhana Raju &MuraliGovindarajan	Combined influence of compression ratio and EGR on diverse characteristics of a research diesel engine fueled with waste mango seed biodiesel blend	Energy Sources, Part A:Recovery, Utilization,and Environmental Effects	2020-2021	1556-7036
71	S. Rami Reddy , G. Murali&V.DhanaRaju	Assessment of diethyl ether as afueladditive on thediversecharacteristics of diesel engine powered withwastemangoseed biodieselblend	International Journal of Ambient Energy	2020-2021	2162-8246
72	S.RamiReddy,G.Murali, AreefAhamadShaik, V. Dhana Raju, M.B.S. Sreekara Reddy	Experimental evaluation of diesel engine powered with waste mango seed biodiesel at different injection timingsand EGRrates	Fuel	2020-2021	0016-2361
73	MSivaramkrishna,AVGA Marthanda, K Lakshmi Prasad, Syed Abdul Mujeer, UdayaKumarDurairaj, MohammadSalim	SimulationofPVAnd WECS Using CUK and Sepic Converter	IEEEExplore	2020-2021	978-1-6654-4834-5
74	Syed.Unees Babu, PerumallaVijayKumar,K. Lakshmi Prasad	Experimental and Cfd AnalysisofHeatTransfer Rate in Multi Air Jet ImpingementOverAFlat PlateandPin-FinHeat Sink	International Journal of Innovative Technology andExploring Engineering	2020-2021	2278-3075
75	TanneeruSaiGanesh,P. Ravindra Kumar, K. V.Viswanadh	Computational PerformanceAnalysisof anIndirectEvaporative Cooler(IDECE)Unit	Test Engineering and Management	2020-2021	0193-4120
76	K.Dilip Kumar, Ch. ChandraSekharReddy, T.Srinivasa Rao, B.PrasannaNagasai	Experimentalinvestigation on performance of vapour compressionrefrigeration system with integrated sub-cooling	Test Engineering and Management	2020-2021	0193-4120

77	P.ParabrahmaSai, K.Lakshmi Prasad, P.RavindraKumar,K. Srinivasa Rao	Experimental Study of Heat Transfer Rate in SingleandSeriesCross Flow Heat Exchanger using Matlab Coding	International Journal of Engineering andAdvanced Technology	2020-2021	2249-8958
78	GunaSahithiMadala,Dilip Kumar K, Jaya Prakash Chilaka, Lakshmi Prasad Kadari	Experimental research on fixed tube type shell and tube heat exchanger	Journal of emerging technologies andInnovative Research	2019-2020	2349-5162
79	G.Naga Raju, K.Dilip Kumar,T.SrinivasaRao	Enhancement of COP of vapour compression refrigeration system by using Diffusers	International journal of Recent technologyand Engineering	2019-2020	2277-3878
80	E.RamakrishnaReddy, Y.Subbalakshmi, V.Dhana Raju K.Appa Rao, M.Harun Kumar,S.RamiReddy, P.Tharun Sai	Assessment of, performance combustion and emission characteristics of the diesel engine powered with corn biodiesel blends	International Journalof	2019-2020	2162-8246
81	V.DhanaRaju,K.Saibabu, K.Appa Rao, S.Rami Reddy, P.Tharun Sai	Experimental studies on the influence of antioxidant additive with waste tamarind biodiesel on the diverse characteristics of diesel engine	International Journal of Ambient Energy.(Taylor &Francis)	2019-2020	2162-8246
82	Karthikeyan Alagu, Harish Venu, JayaprabhakarJayaraman, V.Dhana Raju, LingesanSubramani, PrabhuAppavu, Dhanasekar S	Novel Water Hyacinth biodiesel as a potential alternative fuel for existing unmodified diesel engine: Performance,Combustion and Emission characteristics	Energy (Elsevier)	2019-2020	0360-5442

83	HarishVenu,L.Subramani, V.DhanaRaju	Emission reduction in DI diesel engine using exhaust gas recirculation (EGR) of palm biodiesel blendedwithTiO2nano additives	Renewable Energy (Elsevier)	2019-2020	0960-1481
84	K.Madhubabu,B.Prasanth Kumar, A.Naresh Kumar, K.Somasekhar	Experimental study onthe performance and emission characteristicsof corn seed oil methyl ester along with Decanol as an Additive in Diesel engine	International Journal of Advanced Research in Science, Engineering and Technology	2019-2020	2350-0328
85	Ch.JayaPrakash,K.Dilip Kumar, T.Srinivasa Rao	Fabrication and experimental analysis of Absorber based LiBr- Water absorption refrigeration system	International Journal of Engineering andAdvanced Technology	2019-2020	2249-8958
86	B.Sairamkrishna,P.Vijaya Kumar, Y.Appala Naidu	Energy, Exergy and EnergyAudit Analysis of Vijayawada Thermal Power Station	International Journal of Engineering andAdvanced Technology	2019-2020	2249-8958
87	KamalaPriyaB,B.Udaya Lakshmi, A.Hari Krishna	Numerical Simulation of shell and Tube heat exchanger using Ansys Fluent	International Journal of Innovative technologyand Exploring Engineering	2019-2020	2278-3075
88	PilliUdayKumar,P.Vijay Kumar, A.Naresh Kumar	Experimental Evaluation of Palmyra oil blends in VCR diesel engine by using EGR systems	International Journal of Innovative technologyand exploring Engineering	2019-2020	2278-3075

89	M.P.V.L. Prasanna, P.Ravindra Kumar, B.Emmanuel,K.Lakshmi Prasad	Experimentation on Augmenting Heat Transfer Characteristics of (Ethylene Glycol + Water) Mixture in a combined (pipe in pipe andShell&Tube)Heat Exchanger	International Journal of Recent Technology and Engineering	2019-2020	2277-3378
90	K.Srinivasa Rao, K.Lakshmi Prasad, P.TharunSai,M.Pullarao	Mat Lab Coding and Experimental Analysis of Heat Transfer Rate in Multi Air Jet Impingement	International Journal of Recent Technology and Engineering	2019-2020	2277-3378
91	B.Emmanuel, P.Ravindra Kumar,M.P.V.L.Prasanna	Fabrication and Experimental Analysis Characteristics of Acetone/Water by using TubeinTubeandShell andTubeHeatExchanger	International Journal of Innovative technologyand exploring Engineering	2019-2020	2278-3075
92	DLSVN Swamy, Y.Kowsik, V.Dhanaraju, K.AppaRao,HarishVenu, L.Subramani, K.Bala Prasad	Effect of1-butanolonthe characteristics diesel engine powered with novel tamarind biodiesel forthefuturesustainable energysource	EnergySources Part A: Recovery, Utilization and Environmental effects	2019-2020	1556-7230, 1556-7036
93	Harish Venu, V.Dhana Raju,LingesanSubramani	Experimental assessment on the regulated and unregulated emissions of DIdieselenginefuelled with Chlorella emersonii methyl ester (CEME)	Renewable Energy	2019-2020	0960-1481
94	B.PrasanthKumar,K.Appa Rao, V.Dhanaraju, S.Rami Reddy, D.Mallikarjuna Rao, J.Subba Reddy	Experimental investigation on the performance and emission characteristics of a diesel engine powered with waste mango seed biodiesel blends	International Journal of Ambient Energy(Taylor & Francis)	2019-2020	2162-8246

95	T.Srinivas Rao, Sk.JakeerHussain, V.Dhanaraju,HarishVenu, LingesanSubramani	Experimental assessment of various fuel additives on the performance and emission characteristics of the spark ignition engine	International Journal of Ambient Energy(Taylor &Francis)	2019-2020	2162-8246
96	P. Ravindra kumar, G. Vijay kumar, K. Naga Murali,R.B.S.S.Kishore	Experimental investigation of Ultrasonic flaw defects in weld clad materials using NDT technique	A Book Chapter in Lecture Notes in Mechanical Engineering- Springer	2019-2020	2195-4356
97	E.Rama Krishna Reddy, BVS Keerthana,V.Dhana Raju, A.SaiMahith and B.Dhanush	Effect of EGR on diverse characteristics of diesel engine operated with corn seed biodiesel blend	International journal of Ambient Energy	2019-2020	2162-8246
98	K.Dilip Kumar, T.Srinivasa Rao, M.Srinivas,K.Ashok Reddy	Enhancement of Efficacy and heat transfer characteristics of TiO ₂ Nano fluids under turbulent flow conditions in parabolic trough collector	International journal of Mechanical Engineering and Technology	2019-2020	0976-6359
99	A.Naresh Kumar,K.MadhuBabu,B.Prasanth Kumar, S.Kiran Kumar, P.S.Kishore	Optimization of Diesel Engine performance by Taguchi Grey Relational analysis using fuel blends	International Journal of Recent Technology and Engineering	2019-2020	2277-3878
100	A.Naresh Kumar, P.S.Kishore,K.Brahma Raju, K.Nanthagopal, B.Ashok	Experimental study on engine parameters variation in CRDI engine fuelled with palm biodiesel	Fuel- Elsevier	2019-2020	0016-2361
101	S.Rami Reddy,G.Murali, V.Dhana Raju	Influence of decanol as fuel additive on the diverse characteristics of the diesel engine powered with mango seed biodiesel blend	International journal of Ambient Energy	2019-2020	2162-8246

Patents Published by Thermal Science Group members A.Y.2024-25

SI.	Patent Title	Applicants/ Inventors	Patent No.	Filed Date	Published Date	Agency Category
Utility Published -01						
1.	Solar Radiation based commodities drying device	Dr.Jayashri N Nair Dr.Sachin Lotan Borse Dr.Abhilash Suryan R Dr.Charushila Axay Patel Dr.V.Dhanaraju Vishv Axay Patel Hemantkumar Jayantibhai Patel Hirenkumar Jaynathi Patel Hirenkumar Rashmikant Patel Urvsiben Hirenkumar Parel	202541001885 A	08.01.2025	24.01.2025	IPR India
Design Granted -01						
2.	Self Adjusting systems for off road vehicles	Dr.Jayasri N Nair Dr.V.dhanaraju SpoumyaRanjan Pradhan Dr.AbedalrzaqAisqirate	422510-001	06.07.2024	22.08.2024	IPR India

Patents Published by Thermal Science Group members A.Y.2023-24

Sl.	Patent Title	Applicants/ Inventors	Patent No.	Filed Date	Published Date	Agency Category
Utility Granted -01						
1	A Localized Intelligent Vehicle for Disabled Individuals	Vallapudi Dana Raju	202141007160 Patent Grant Ref. No.: 534426	20/02/2021	23/04/2024	IPR India
Utility Published-04						
2	Effect of fuel injection pressure on performance and emission characteristics of DI-CI engine with sheaolein biodiesel	Dr. K.BhaskarMutyalu Mr. V.Venkatrami Reddy Mr. K.V.Jawahar Mr. K.Lakshmi Prasad Dr. Gopala Rao Thellaputta Dr. Kiran Kumar Billa Seelam Umamaheswara Reddy K. Sai Babu Mr. K.Ramprasad VidyaSagari K	202341082074	02/12/2023	22/12/2023	IPR India
3.	An IoT Enabled Smart Electric Bicycle	Lakireddy Bali Reddy College of Engineering, Dr. V.DhanaRaju , SeelamPichi Reddy, Dr. M.B.S.Sreekar Reddy, J.Subba Reddy, Dr. Y. Amar Babu, G.Jitendra, Sai Vyshnavi, Dr.P.Rakeshkumar, Dr. G.Nageswararao	202441014564 A	28/02/2024	08/03/2024	IPR India
4.	Fabrication of Aqua Oxidizer	K. Lakshmi Prasad V.Venkatramireddy Dr.V K Viswandha Raju S Rama Krishna M.Sundar Rao D.Sridevi Ch.Usha K. BhaskarMutyalu	202441040681 A	24/05/2024	31/05/2024	IPR India
5.	A Novel method for fabricating leaf spring using E glass/ Epoxy composites for light	Gandham Yedukondalu Dr.T srinivasa Rao Dr. K. Dileep Kumar Dr.Sk. Jakeer Hussain	202441008457 A	07/02/2024	08/03/2024	IPR India

Sl.	Patent Title	Applicants/ Inventors	Patent No.	Filed Date	Published Date	Agency Category
	Heavy Vehicles	Dr.K.Satyanarayana M.Avinash M.LakshmiVinitha				

Patents Published by Thermal Science Group members A.Y.2022-23

SI.	Patent Title	Applicants/ Inventors	Patent No.	Filed Date	Published Date	Agency Category
Utility Published-03						
1	Design And Fabrication of Multi Functional Air Conditioning System	Kamala Priya. B Dr.Dilipkumar.K Mounika.p L.Bindu B.Sudheerkumar B.Udayalakshmi A.Dhanunjaykumar Kiran saigorle C.trishit	202341011370	20/02/2023	24/03/2023	IPR India
2	A Smart and Collapsible Space-Saving Head Guard for Riders	Dr. Venkateswarlu Reddy Siripireddy M. Anand Dr. K. Anandan Dr. AvinashGudimetla Seelam Rami Reddy Dr. Sanjit Kumar Dash	202341020328	23/03/2023	07/04/2023	IPR India
3	Smart and Compact Foldable Storage System	Ch. Leela Naga Deepika Dr. KattaSubba Rao Seelam Rami Reddy Dr. Reema Mathew A. Dr. H. Parthasarathi Patra Dr. Punyaban Patel	202341020183	22/03/2023	31/03/2023	IPR India

Patents Published by Thermal Science Group members A.Y.2021-22

Sl.No	Patent Title	Applicants/ Inventors	Patent No.	Filed Date	Published Date	Agency Category
1	IOT based smart control and Monitor various aspects of automobile system	C.Lakshmi, Dr.R.Murugan, R.Ragul, Dr.A.V.G.A. Marthanda, Dr.K.Appa Rao , K.Lakshni Prasad, Dr. R. Saravana, Dr.Arunbharathi, Dr. Ram subbaiah, Dr.MarkarandiUpadhyaya, Shelly Garg, S. Balamurugan	202141033541	26.07.2021	06.08.2021	IPR India
2	Design and Fabrication of Treadmill bicycle	Dr.V.Dhana Raju Dr.MBSSreevara Reddy Mr.J.Subba Reddy Dr.S.Pichi Reddy Dr.J.N.Nair Dr.HarishVenu Mr.S.Rami Reddy Mr. K.V.Viswanadh Dr.K.Bala Prasad Mr.R.AnjaneyuluNaik	202141051863	12.11.2021	24.11.2021	IPR India
3	Design of Hydro-Pneumatic ISD Suspension In Heavy Multi-Axle Vehicles	DrBodaSuryaVenkataRamarao, Dr. Anil Kumar Bodukuri, Mr. Sudhan A, Mrs.KamalaPriya Bysani , Mr.Venkata Raghavendra Rao Mullapudi, Mr. G.VenkatRamana, Mrs.ArunaKunda, Mr.Subrahmanyam Vasamsetti	202241005023	30.01.2022	30.03.2022	IPR India
Design Patents Published -03						
4	Two Wheeled Barrel Moving Cum Pouring Hand Truck	Dr.M.Nageswara Rao, Dr.P.Vijaya Kumar , Dr.S.N.Padhi, Dr.K.S.Raghuram, Dr.R.Vaikunta Rao, Dr.HemalathaSomireddi, Mr.B.Sreedhar	352802-001	11.10.2021	21.01.2022	IPR India
5	TWO WHEELED BARREL	Dr.M.Nageswara Rao,	352803-001	09.11.2021	21.01.2022	IPR India

	MOVING CUM POURING HAND TRUCK	Dr.P.Vijaya Kumar, Dr.S.N.Padhi, Dr.K.S.Raghuram, Dr.R.Vaikunta Rao, Dr.HemalathaSomireddi, Mr.B.Sreedhar				
6	Two Wheels self balancing scoter	Dr.M.Nageswara Rao, M.Oliva, Dr.Md.KhajaMoinuddinFarikh Dr.V.Venkata Kamesh P.Bharath Varma	361409-001	28.03.2022	13.6.2022	IPR India

Patents Published by Thermal Science Group members A.Y.2020-21

S.No	A.Y.	Name of the Inventor	Title of the patent	Published Date	Patent Application ID	Status
1	2020-21	Dr.P.Ravindra Kumar	Prevention of food harmfulness from production to customer For centralized kitchen facility using IoT	03.04.2021	2020103242	Published
2	2020-21	Dr.K.Dilip Kumar	An Agricultural Smart Robot Device	28.04.2021	2021101399	Published
3	2020-21	Dr.K.Dilip Kumar	A Sensor Fusion PrecisionTechnologyin Agricultural and its methodand Controlling parameters	10.5.2021	202121021172	Published
4	2020-21	Dr.V.Dhana Raju	Aerial Manipulative OmniDirectionalDrones For Building Construction	11.11.2020	2020102606	Published
5	2020-21	Dr.V.Dhana Raju	Localised Intelligent vehicleelectric(LIV-E)	26.02.2021	20202141007160A	Published

6	2020-21	K.Lakshmi Prasad	Generation of E-Bill Transaction Number Using Block chain Technology	05.03.2021	202141007828A	Published
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THERMAL SCIENCE RESEARCH GROUP
BOOKS CHAPTERS AUTHORED

S.No.	Name of the Authors	Title of the book	Name of the publisher, Place	Month & Year	ISBN Number
1	V. Dhana Raju , Harish Venu., Jayashri N Nair, M.B.S. Sreekar Reddy and J. Subba Reddy.	Book: Nanotechnology for Advanced Biofuels: Fundamentals and Applications, A Volume in Micro and Nano Technology Chapter 10: CNTs based nano-fuels: Performance, combustion and emission characteristics	Elsevier Science Direct	Mar-2023	978-0-323-91759-9
2	Jayashri N.Nair, Y.V.V. Satyanarayana Murthy, V. Dhana Raju and V. Sivaramakrishna.	Book: Nanotechnology for Advanced Biofuels: Fundamentals and Applications, A Volume in Micro and Nano Technology Chapter 8: Ultrasonic dispersion of algae oil blends on diesel engine	Elsevier Science Direct	Mar-2023	978-0-323-91759-9
3	Pranta Barua, V.Dhana Rau , Manzoore Elahi M.Sodagar, Nazia Hossain	Book: Novel Feedstocks for Biofuels Production Part of the Book series: <u>Clean Energy Production Technologies</u> (CEPT) Animal Fat-Derived Biodiesel and Nano-Technology Applications	Springer, Singapore	Oct-2022	978-981-19-3581-7
4.	B.Ashok, A.Naresh Kumar , Ashwin Jacob, R.Vignesh	Combustion Engines, Approaches toward NOx Free Automobiles	Emission formation in IC engines, Elsevier	9 Nov 2021	978-0-12-823955-1

5.	K. Soma Sekhar, Dr. P. Vijay Kumar , B. Kamala Priya	Theoretical, Computational, and Experimental Solutions to Thermo-Fluid Systems (Book Chapter)	Springer, Singapore	10.03.2021	978-981-33-4164-7
6.	Dr.V.Dhana Raju , S.Rami Reddy, Harish Venu , LingesanSubramani , ManzooreElahi M. Soudagar	Liquid Biofuels: Fundamentals, Characterization, and Applications (Book Chapter)	Wiley Publishers, USA	07.05.2021	978-1-119-79198-0
7.	V.Dhana Raju , P.S.Kishore and R.Subba Rao	Advances in Energy Research, Vol. 2 (Book Chapter)	Springer, Singapore	01.05.2020	978-981-15-2661-9, 978-981-15-2662-6
8.	V.Dhana Raju , Harish Venu, LigesanSubramani and S.Rami Reddy	Recent Technologies for Enhancing Performance and Reducing Emissions in Diesel Engines(Book Chapter)	IGI Global, USA	Feb 2020	ISBN10: 1799825396
9.	P. Ravindra Kumar ,G. Vijay Kumar, K. Naga Murali, R. B. S. S. Kishore	Advances in Applied Mechanical Engineering (Book Chapter)	Springer, Singapore	02.02.2020	978-981-15-1200-1, 978-981-15-1201-8
10.	K. N. D. Malleswara Rao , R. Praveen Kumar, T. Venkateswararao, B. Sudheer Kumar, G. Babu Rao	Advances in Materials and Metallurgy (Book Chapter)	Springer, Singapore	02.09.2018	978-981-13-1779-8, 978-981-13-1780-4

THERMAL SCIENCE RESEARCH GROUP
PROJECTS SUBMITTED -DETAILS

S.No	Name of the Investigator	Project Title	Funding Agency	Amount in Lakhs	Academic Year
1.	Dr.P.VijayaKumar Dr.V.Dhana Raju	Emerging Green Hydrogen Energy Techniques for SocietalSustainability and Climate Mitigation	ATAL- AICTE	1.0	2024-25
2.	Dr.K.Appa Rao Dr.MurahariKolli Dr.B.Rambabu	IDEA Lab	AICTE	114.3	2024-25
3.	Dr.V.Dhana Raju Dr.K.Apparao	Application of LSTM-based machine learning algorithm and DIESEL-RK software in studying diverse attributes of diesel engine with different piston bowl geometries	SERB-SUR	26.44	2023-24
4.	Dr. K Appa Rao (PI) Dr.M.B.S.Sreekar Reddy (C0-PI)	AcademicLeadership and Excellence in Higher Educational institutions in India	1651819034	3.0	2021-22
5.	Dr.P.Vijay Kumar	Artificial Neural Network based Machine learning approach for predicting and performance optimization of hybridthermal energy storage system using nano phase change materials	CRG/2022/009292	25.97	2021-22
6.	Dr. V. Dhanaraju	Portable Atmospheric Water Generator using Solar Energy: To meet the household drinking water requirements in coastal regions of Andhra Pradesh	CRG/2022/008377	22.46	2021-22

7.	Dr.N.SunilNaik	Increasing the reliability of wire insulation using self healing materials in vehicles	UGC STRIDE	45.64	2019-20
8.	Dr.N.SunilNaik	Synthesis of green catalysts &Its applications in Biodiesel production	DST SERB	32.14	2019-20
9.	Dr. V. Dhanaraju	Waste-to- energy approach for utilizing non edible biodiesel as a fuel and investigation of its influence on diverse characteristics of agricultural diesel engine	SERB	26.74	2019-20
10.	Dr. V. Dhanaraju	Production of novel Tamarind seed methyl ester (TSME) as potential alternative green fuel for direct injection diesel engine : performance , combustion and emission characteristics	AICTE-RPS	17.38	2019-20
11.	Dr.P.Ravindra Kumar	Safety health monitoring identification of Azeotropic refrigerant mixtures in domestic refrigerators using solar energy with data acquisition system	ISHRAE	10.00	2019-20
12.	Dr. K. Appa Rao Dr.K.Dilip Kumar	A critical study on contribution of Andhra Pradesh Government for Entrepreneurship Development in Science and Technology	CHORD (NSTMIS)	33.00	2018-19
13.	Dr.P.Vijay Kumar	Skill and personality development programme(SPDP) centre for SC/ST students	AICTE	24.67	2018-19
14.	Dr.V.Dhana Raju	Viability of waste Tamarind seed methyl ester as a sustainable green fuel for diesel engine applications and validation of engine characteristics with diesel-RK simulation software	DST	NA	2018-19

THERMAL SCIENCE RESEARCH GROUP
PROJECTS COMPLETED –DETAILS

Sl No.	Name of the Investigator	Title of the Project	Funding Agency	Amount Sanctioned	Year of Completion
1.	Dr.P.Vijaya Kumar	AICTE ATAL FDP	AICTE	1,00,000	2025
2.	Dr.P.Vijaya Kumar	AICTE PRERANA	AICTE	4,80,000	2022
3	Dr.N.SunilNaik	Evaluation of engine parameters affecting the performance of enzymatic transesterification process using test fuel blends	DST/SERB /EEQ	22,81,000	2022
4	Dr.K.Appa Rao	Experimental Investigation on Homogeneous Charge Compression Ignition Engine	UGC	1,55,000	2019