

**BRIEF RESUME :: Dr. S. KALAISELVAM., M.E., Ph.D.,**  
**Professor and Head, Department of Applied Science and Technology**  
**Anna University, Chennai**

**Name** : **Dr. S. KALAISELVAM**  
**Date of birth** : 12 March 1976  
**Designation and Affiliation** : **Professor & Head,**  
 Department of Applied Science and Technology,  
 Anna University, Chennai-25.



**Academic Qualification**

<b>Ph.D</b>	College of Engineering, Guindy Anna University	Mechanical Engineering	Aug 2006	Highly Commended
<b>M.E</b>	College of Engineering, Guindy Anna University	Refrigeration and Air Conditioning	Jan 2001	First Class
<b>B.E</b>	Government College of Engineering, Salem	Mechanical Engineering	May 1997	First Class

**Additional responsibilities:**

- (a) **Head of the Department**, Department of Applied Science and Technology from 14<sup>th</sup> March 2013 to Till date
- (b) National Social Service (NSS) **Programme officer** – Unit VI from August 2007 to September 2014
- (c) **Assistant Director**, Centre for Entrepreneurship development, Anna University from 18<sup>th</sup> March 2008 to 25<sup>th</sup> October 2013.
- (d) **Director in-charge**, Centre for Nanoscience and Technology from June 2011 to December 2011
- (e) **Placement officer AC Tech** campus from Jan 2010 – March 2011

**Research Projects:**

<b>Funding Agencies</b>	<b>Title of the Project</b>	<b>Amount (Rs in Lakhs)</b>
DST-SERC, New Delhi	Solidification and melting characteristics of PCMs with dispersed nano particles inside finned encapsulation	14.4 (Completed)
UGC, Major Research Project	Development of hybrid solar drying systems using sustainable multifunctional nanostructured phase change materials	5.595 (Completed)
CSIR - Extramural Research Division, New Delhi	Investigation of compositional, structural and mechanical properties of nanocrystalline TiN/VN multilayer coatings using reactive	13.82 (Completed)

	magnetron sputtering	
DST-International Division, New Delhi	Dr. Kokou Nwuitcha from University of Lome, Togo, West Africa for the award of CV Raman International fellowship under Post Doctoral Fellowship	2.6 (Completed)
DST-SERB, New Delhi	Development of multifunctional thermophysical property analyzer to study the thermo-kinetic behaviour of phase change thermal storage materials	49.12 (Completed)
DST- Solar Energy Research Initiative	Simultaneous power and cooling production using solar operated absorption refrigeration system for cold storage applications	50.22 (Completed)
DST-CERI, New Delhi	Green buildings and energy efficient cooling system for sustainable buildings in India	60.222 (Ongoing)
DST - Women Scientist Scheme A (WOS- A) Scientist Mentor	Sustainable energy storage materials for green buildings	22.40 (Ongoing)
DST – Fist (Coordinator) (2017 – 2021)		103.00 (Ongoing)
DST - Women Scientist Scheme A (WOS- A) Scientist Mentor	Design and fabrication of dye sensitized solar cells with exceeding 15% efficiency : experimental and theoretical approach	21.30 (Ongoing)
DST-TDT New Delhi	Low Cost Energy Efficient Green Building Using Nano PCM with Desiccant Based Passive Cooling System	37.75403 (Ongoing)
DST-SERB, New Delhi	Development of Energy Efficient TEG Integrated Form Stable PCM Heat Sinks for Transient Passive Cooling of Electronic Device	33.49 (Ongoing)
Total		413.921

(Details in Annexure 1)

### **Consultancy Assignments:**

Funding Agencies	Number of Projects	Amount (Rs in Lakhs)
Tamilnadu Textbook and Educational Services Corporation	Govt. of Tamilnadu	12.94 ( Completed )
Tamilnadu Medical Services Corporation Limited	Technical bid – Evaluation	0.4 ( Completed )
ISHRAE Chennai Chapter	IAQ study in Chennai	1.7 ( Completed )

### **Patent:**

Granted	:	01
Filed	:	07

### **Book publications:**

(a)	International Standard	:	02
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### **Book Chapter publications:**

(a)	International Standard	:	06
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### **Research publications:**

(a)	International Journals	:	90
(b)	National Journals	:	02
(c)	International / National Conferences	:	68

### **Awards/Recognitions:**

- (a) Listed in the Top 2 % Scientist across the world according to an analysis compiled by Researchers from Stanford University, USA, in the year 2020
- (b) **Tamilnadu Young Scientist award - 2014** by Science City, Government of Tamilnadu Gandhi Mandapam Road, Chennai from the Honorable Minister for Higher Education Thiru.P.Palaniappan.
- (c) **Active Researcher Award – 2013** by CTDT, Anna University, Chennai from the Former President of India Honorable **A. P. J. Abdul Kalam**.
- (d) **Best NSS Programme officer 2010-2011** - Anna University, Chennai.
- (e) **Young MECHANICAL Engineer 2010** Award – Institute of Engineers India, Calcutta.
- (f) **Young SCIENTIST 2009 – 2010** Department of Science and Technology, Govt of India.
- (g) **MRSI Prize for the Best Poster Paper** “Structural characteristics and Mechanical properties of Reactive DC magnetron sputtered Nanocrystalline TiN Thin films at Target power of 50 W, Materials Research Society of India, Kalpakkam.
- (h) **Reviewer** - Solar Energy, Applied Energy, International Journal of Heat and Mass Transfer, International Journal of Energy, Journal of Thermo physics and Heat Transfer, Journal of the Taiwan Institute of Chemical Engineers,

Materials Chemistry and Physics, Energy and Buildings, Applied Energy, Desalination and Water Treatment, Materials Science and Engineering: C - Materials for Biological Applications

**Post doctoral research / Ph.D /M.Tech / MS Guidance:**

<b>PDF</b>	<b>: 01</b> Completed (Student from Togo, West Africa)
<b>Ph.D</b>	<b>: 07</b> Students Completed <b>11</b> Students Registered Currently
<b>M.E and B. E</b>	<b>: 92</b> Dissertations

**Membership, Committees, Boards, etc.**

1. Life Member LM - 121993, Indian Society for Technical Education (ISTE), New Delhi.
2. Annual Member, CN/00/AM/0505, The Indian Society of Heating, Refrigerating and Air Conditioning Engineers (ISHRAE)
3. Life Member LM -60292 (2017), The Indian Institute of Chemical Engineers (IChE)
4. Life Member, LM – 529 (2017), Safety Engineers Association ( SEA) India
5. Member (2015 - till date), Site Appraisal Committee, Industrial Safety and Health, Labour and Employment (M2) Department, Government of Tamil Nadu.
6. Expert Member – Technical (2014 - Till date), Tamil Nadu Textbook And Educational Services Corporation, Government of Tamil Nadu
7. Member, Board of Studies K.S.R. College of Engineering, 2015
8. University Nominee of Governing Body of Sengunthar Engineering College, Tiruchengode, 2020

## BOOKS

1. Title : Thermal Energy Storage Technologies for Sustainability Systems Design, Assessment and Applications  
Publisher : Elsevier (ISBN: 978-0-12-417291-3)  
Year : 2014  
Authors : **Dr. S. Kalaiselvam**, Dr. R. Parameshwaran
2. Title : Nano and Biotech Based Materials for Energy Building Efficiency (Print Book ISBN 978-3-319-27505-1)  
Publisher : Springer International Publishing  
Editors : F Pacheco Torgal, Cinzia Buratti, **Siva Kalaiselvam**, Claes-Goran Granqvist, Volodymyr Ivanov

## CHAPTERS

1. Title : Nearly Zero Energy Building Refurbishment  
Publisher : Springer (ISBN 978-1-4471-5522-5)  
Contribution : A chapter - Thermal Energy Storage Technologies, 483-536.  
Authors : **Dr. S. Kalaiselvam**, Dr. R. Parameshwaran
2. Title : Eco-efficient Materials for Mitigating Building Cooling Needs: Design, Properties and Applications (Print Book ISBN :9781782423805)  
Publisher : Woodhead Publishing; 1 edition (March 9, 2015)  
Contribution : A chapter - Nanomaterial-embedded phase-change materials (PCMs) for reducing building cooling needs, 2015, Pages 401-439  
Authors : **Dr. S. Kalaiselvam**, Dr. R. Parameshwaran
3. Title : Nano and Biotech Based Materials for Energy Building Efficiency (Print Book ISBN 978-3-319-27505-1)  
Publisher : Springer International Publishing  
Contribution : A chapter - Nanomaterial-Based PCM Composites for Thermal Energy Storage in Buildings, 2016, Pages 215  
—  
243.  
Authors : **Dr. S. Kalaiselvam**, Dr. R. Parameshwaran
4. Title : Handbook of Composites from Renewable Materials, Volume 4, Functionalization (Print Book ISBN 978-1-119-22367-2)  
Publisher : Wiley, Scrivener Publishing  
Contribution : A chapter - Thermal and Mechanical Behaviors of Biorenewable, Fibers-Based Polymer Composites 2017, Pages 491 - 520

- Authors : **Dr.S. Kalaiselvam**, Mrs. K. Anbukarasi
5. Title : Biopolymer Grafting (Print Book ISBN 978-0-12-810462-0)
- Publisher : Matthew Deans, Elsevier
- Contribution : A chapter - Processing and Characterization of Grafted Bio-composites: A Review, 2018, Pages 473–511
- Authors : **Dr.S. Kalaiselvam**, K. Anbukarasi
6. Title : Novel Technologies and Systems for Food Preservation (Print Book ISBN13 : 978-1522578949 )
- Publisher : IGI Global; 1 edition (30 March 2019)
- Contribution : A chapter - Thermal Technologies and Systems for Food Preservation, 2019, Pages 140 – 159
- Authors : **Dr.Siva. Kalaiselvam**, Dinesh Rajan, Imran Hussain Showkath Ali

## TECHNICAL RESEARCH PUBLICATIONS

### INTERNATIONAL JOURNALS

1. G. Sriharan, S. Harikrishnan, **S. Kalaiselvam**, Hakan F. Oztop, · Nidal Abu-Hamdeh, Experimental investigation on the heat transfer performance of MHTHS using ethylene glycol-based nanofluids, Journal of Thermal Analysis and Calorimetry Journal of Thermal Analysis and Calorimetry (2021) 143:61–71 (Impact Factor: 2.471)
2. J. Sandhya, **S. Kalaiselvam** UV responsive quercetin derived and functionalized CuO/ZnO nanocomposite in ameliorating photocatalytic degradation of rhodamine B dye and enhanced biocidal activity against selected pathogenic strains, Journal of Environmental Science and Health, Part A, 2021/5/25, 1-14 (Impact Factor: 1.563)
3. Selvakumar Veeralakshmi, **Siva Kalaiselvam**, Murugan Ramadurai, Pandurangan Prabhu, Selvan Nehru, Subramanian Sakthinathan, Te-Wei Chiu, An approach to develop high performance supercapacitor using Bi<sub>2</sub>O<sub>3</sub> based binary and ternary nanocomposites, Journal of Materials Science: Materials in Electronics, (Impact factor - **2.220 -2019**)
4. Anbukarasi. K, Imran Hussain. S, **Kalaiselvam.S** Investigation of thermal conductivity of luffa and luffa-coir reinforced epoxy composites, International Journal of Research – GRANTHAALAYAH, December 2020, Vol 8( 12), 69- 79
5. S. P. Subin David, S. Veeralakshmi, S. Nehru, and **S. Kalaiselvam** A highly sensitive, selective and room temperature operatable formaldehyde gas sensor using chemiresistive g-C<sub>3</sub>N<sub>4</sub>/ZnO, Materials Advances (DOI: 10.1039/d0ma00529k)

6. S. P. Subin David, S. Veeralakshmi, J. Sandhya, S. Nehru, **S. Kalaiselvam**, Room temperature operatable high sensitive toluene gas sensor using chemiresistive Ag/Bi<sub>2</sub>O<sub>3</sub> nanocomposite, *Sensors & Actuators: B. Chemical* 320 (2020) 128410 (Impact Factor: 7.100)
7. R. Pramoth, S. Sudha, **S. Kalaiselvam**, Resilience-based Integrated Process System Hazard Analysis (RIPSHA) approach: Application to a chemical storage area in an edible oil refinery, *Process Safety and Environmental Protection* (<https://doi.org/10.1016/j.psep.2020.05.028>) (Impact Factor: 4.384)
8. R. Dinesh, S. Imran Hussain, Ameelia Roseline, **S. Kalaiselvam** Experimental investigation on heat transfer behavior of the novel ternary eutectic PCM embedded with MWCNT for thermal energy storage systems, *Journal of Thermal Analysis and Calorimetry* (DOI: 10.1007/s10973-020-09726-4, 17 April 2020 (Impact Factor: 2.471)
9. S Nehru, S Veeralakshmi, **S Kalaiselvam**, SP Subin David, J Sandhya, S Arunachalam, DNA binding, antibacterial, hemolytic and anticancer studies of some fluorescent emissive surfactant-ruthenium (II) complexes, *Journal of Biomolecular Structure and Dynamics*, 2020/3/27, 1-19 (Impact Factor: 3.310)
10. J Sandhya, S Veeralakshmi, **S Kalaiselvam**, Tripolyphosphate crosslinked Triticum aestivum (wheatgrass) functionalized antimicrobial chitosan: Ameliorating effect on physicochemical, mechanical, invitro cytocompatibility and cell migration properties, *Journal of Biomolecular Structure and Dynamics*, 2020,1-10 19 (Impact Factor: 3.310)
11. S Dhivya, S Imran Hussain, **S Kalaiselvam**, Novel metal coated nanocapsules of ethyl esters fatty acid eutectic mixture as phase change material with enhanced thermal conductivity for energy storage applications, *Thermochimica Acta*, Volume 687, May 2020, 178581
12. S Nehru, S Veeralakshmi, **S Kalaiselvam**, SP Subin David, J Sandhya, S Arunachalam, Protein binding and antioxidant studies of diimine based emissive surfactant–ruthenium (II) complexes, *Journal of Biomolecular Structure and Dynamics*, *Journal of Biomolecular Structure and Dynamics*,1-12, 19 (Impact Factor: 3.310)
13. J Sandhya and **S Kalaiselvam**, Biogenic synthesis of magnetic iron oxide nanoparticles using inedible borassus flabellifer seed coat: characterization, antimicrobial, antioxidant activity and in vitro cytotoxicity analysis, *Materials Research Express*,7 (2020) 015045 (Impact Factor: 1.449)
14. S. Imran Hussain, **S. Kalaiselvam**, Nanoencapsulation of oleic acid phase change material with Ag<sub>2</sub>O nanoparticles-based urea formaldehyde shell for building thermal energy storage, *Journal of Thermal Analysis and Calorimetry*, 140, pages133–147(2020) (Impact

Factor: 2.471)

15. S. Anbukarasi, S Imran Hussain, Ameelia Roseline A, **S Kalaiselvam**, "Effect of SiO<sub>2</sub> nanospheres on mechanical, thermal and water absorption behaviours of luffa-coir/epoxy hybrid composites" *Materials Research Express*, 6 (12), 125618 (Impact Factor: 1.449)
16. S Hussain Imran, Ameelia Roseline, **S. Kalaiselvam**, Enhancement of thermal conductivity and thermal stability of capric-lauric acid eutectic phase change material using carbonaceous materials, *Materials Research Express*, *Materials Research Express*, Volume 6, Number 11,2019 (Impact Factor: 1.449)
17. S Dhivya, S I Hussain, S Jeyasheela, **S Kalaiselvam**, Experimental study on microcapsules of Ag doped ZnO nanomaterials enhanced Oleic-Myristic acid eutectic PCM for thermal energy storage, *Thermochimica Acta* Volume 671, January 2019, Pages 70-82 (Impact Factor: 2.251)
18. P. Sivasamy, S. Harikrishnan, Jayavel Ramasamy, Hussain Imran, **S. Kalaiselvam**, Lu Li, "Preparation and thermal characteristics of caprylic acid based composite as phase change material for thermal energy storage, *Materials Research Express*, Volume 6, Number 10,2019 (Impact Factor: 1.449)
19. P Sivasamy, S Harikrishnan, S Imran Hussain, **S Kalaiselvam**, L Ganesh Babu, Improved Thermal Characteristics of Ag Nanoparticles Dispersed Myristic Acid as Composite for Low Temperature Thermal Energy Storage, *Materials Research Express*, Volume 6, Number 8, 2019, (Impact Factor: 1.449)
20. S. Harikrishnan, A. Devaraju, G. Rajesh Kumar, and **S. Kalaiselvam**, Improved thermal energy storage behavior of a novel nanofluid as phase change material (PCM), *Materials Today: Proceedings* 9 (2019) 410–421
21. S. Harikrishnan, A. Devaraju, P. Sivasamy, and **S. Kalaiselvam**, Experimental Investigation of Improved Thermal Characteristics of SiO<sub>2</sub>/myristic acid Nanofluid as Phase Change Material (PCM), *Materials Today: Proceedings* 9 (2019) 397–409
22. **S. Kalaiselvam**, R Dinesh, A Ameelia Roseline, Experimental investigation on heating and cooling cycle of NEPCM based composite plate fin heat sinks for transient electronic cooling, *International Journal of Advances in Science Engineering and Technology*, 2321–9009 Vol-7, Iss-2, Spl. Issue-1 May-2019
23. Imran Hussain S, Ameelia Roseline A., **Kalaiselvam S.**, Bifunctional nanoencapsulated eutectic phase change material core with SiO<sub>2</sub>/SnO<sub>2</sub> nanosphere shell for thermal and electrical energy storage, *Materials and Design* 154 (2018) 291–301
24. D. Dinesh Kumar, N. Kumar, **S. Kalaiselvam**, R. Thangappan, R. Jayavel, Film thickness effect and substrate dependent tribo-mechanical characteristics of titanium nitride films,



25. R Thangappan, M Arivanandhan, **S Kalaiselvam**, R Jayavel, Y Hayakawa, Molybdenum Oxide/Graphene Nanocomposite Electrodes with Enhanced Capacitive Performance for Supercapacitor Applications, *Journal of Inorganic and Organometallic Polymers and Materials* 28 (1), 50-62, 2018
26. K.R. Suresh Kumar, R. Parameshwaran and **S. Kalaiselvam**, Preparation and characterization of hybrid nanocomposite embedded organic methyl ester as phase change material, *Solar Energy Materials and Solar Cells* 171 (2017) pp. 148-160. (Impact Factor: 6.019)
27. D. Dinesh Kumar, N. Kumar, **S. Kalaiselvam**, R. Radhika, Arul Maximus Rabel and R. Jayavel, Tribo-mechanical properties of reactive magnetron sputtered transition metal carbide coatings, *Tribology International* 114 (2017) pp. 234-244.
28. S. Harikrishnan, S. Imran Hussain, A. Devaraju, P. Sivasamy and **S. Kalaiselvam**, Improved performance of a newly prepared nano-enhanced phase change material for solar energy storage, *Journal of Mechanical Science and Technology* 31 (10) (2017) pp. 4903-4910.
29. K.R. Suresh Kumar, R. Dinesh, A. Ameelia Roseline and **S. Kalaiselvam**, Performance analysis of heat pipe aided NEPCM heat sink for transient electronic cooling, *Microelectronics Reliability* 73 (2017) pp. 1-13. (Impact Factor: 1.483)
30. K.R. Suresh Kumar and **S. Kalaiselvam**, Experimental investigations on the thermophysical properties of CuO-palmitic acid phase change material for heating applications, *Journal of Thermal Analysis and Calorimetry* (2017) pp. 1-11. (Impact Factor: 1.483)
31. D. Dinesh Kumar, N. Kumar, **S. Kalaiselvam**, S. Dash and R. Jayavel, Wear resistant super-hard multilayer transition metal-nitride coatings, *Surfaces and Interfaces* 7 (2017) pp. 74-82.
32. S. Imran Hussain, R. Dinesh, A. Ameelia Roseline, S. Dhivya and **S. Kalaiselvam**, Enhanced thermal performance and study the influence of sub cooling on activated carbon dispersed eutectic PCM for cold storage applications, *Energy and Buildings* 143 (2017) pp. 17-24.
33. R. Thangappan, M. Arivanandhan, **S. Kalaiselvam**, R. Jayavel and Y. Hayakawa, Molybdenum Oxide/Graphene Nanocomposite Electrodes with Enhanced Capacitive Performance for Supercapacitor Applications, *Journal of Inorganic and Organometallic Polymers and Materials* (2017) pp. 1-13.
34. K.R. Suresh Kumar , S.P. Subin David and **S. Kalaiselvam**, Preparation and Thermal

Characterization of CuTiO<sub>2</sub>/ Stearic Acid Composite Mixture as Phase Change Material for Solar Energy Storage Journal of Energy Research and Environmental Technology (JERET) ,Volume 4, Issue 3; July-September, 2017; pp. 221-224

35. **S. Kalaiselvam**, J. Sandhya, K.V. Hari Krishnan, A. Kedharnath, G. Arulkumar and A. Ameelia Roseline, Investigation of Structural, Compositional and Anti-Microbial Properties of Copper Thin Film Using Direct Current Magnetron Sputtering for Surgical Instruments, International Journal of Nanoscience (2016) pp. 1650025.
36. **Kalaiselvam. S**, K. R. Suresh Kumar and V. Sriram, Study of heat transfer and pressure drop characteristics of air heat exchanger using PCM for free cooling applications, Journal Thermal Science, 20 (2016) pp. 1543-1554. (Impact Factor: 1.093)
37. S. Maheswaran, **S. Kalaiselvam**, G.S. Palani and Saptarshi Sasmal, Investigations on the early hydration properties of synthesized  $\beta$ -belites blended cement pastes, Journal of Thermal Analysis and Calorimetry 125 (1) (2016) pp. 53-64.
38. S. Maheswaran, **S. Kalaiselvam**, S. Arunbalaji, G.S. Palani and Nagesh R Iyer, Influence of SiO<sub>2</sub> Nano Particles Towards the Synthesis of  $\beta$ -Belite ( $\beta$ -C<sub>2</sub>S) Using Calcined Lime Sludge by Mechanochemical Method, Advanced Science Letters 22 (4) (2016) pp. 995-1002.
39. D. Madhesh, R. Parameshwaran, and **S. Kalaiselvam**, Experimental Studies on Convective Heat Transfer and Pressure Drop Characteristics of Metal and Metal Oxide Nanofluids Under Turbulent Flow Regime, Heat Transfer Engineering 37 (5) (2016) pp. 422-434.
40. S. Maheswaran, **S. Kalaiselvam**, S.K.S. Saravana Karthikeyan, C. Kokila, and G.S. Palani,  $\beta$ -belite cements ( $\beta$ -dicalcium silicate) obtained from calcined lime sludge and silica fume, Cement and Concrete Composites 66 (2016) pp. 57-65.
41. Thangappan, R, **Kalaiselvam, S**, Elayaperumal, A, Jayavel, R, Arivanandhan, M, Karthikeyan, R and Hayakawa, Y, Graphene Decorated with MoS<sub>2</sub> Nanosheets: Synergetic Energy Storage composite electrode for Supercapacitor Applications, Dalton Transactions, 45 (2016) pp. 2637 – 2646.
42. G. Arulkumar, K.V.Hari Krishnan, A. Kedharnath, **S. Kalaiselvam**, copper thin film sputtered on AISI 316l for antimicrobial property, International Journal of Science and Engineering Applications, 2016, pp. 79 – 82.
43. S. Maheswaran, Nagesh R Iyer, G.S. Palani, Alagu Pandi, Divina D. Dikar, and **S. Kalaiselvam**, Effect of high temperature on the properties of ternary blended cement pastes and mortars, Journal of Thermal Analysis and Calorimetry, 122 (2015) pp. 775–786.
44. D. Madhesh, and **S. Kalaiselvam**, Experimental study on heat transfer and rheological characteristics of hybrid nanofluids for cooling applications, Journal of Experimental

Nanoscience 10 (15) (2015) pp. 1194 – 1213.

45. D. Dinesh Kumar, N. Kumar, **S. Kalaiselvam**, S. Dash, and R. Jayavel, Substrate effect on wear resistant transition metal nitride hard coatings: microstructure and tribo-mechanical properties, *Ceramics International*, 41 (2015) pp. 9849-9861.
46. D. Dinesh Kumar, N. Kumar, **S. Kalaiselvam**, S. Dash, and R. Jayavel, Micro-tribo-mechanical properties of nanocrystalline TiN thin films for small scale device applications, *Tribology International*, 88 (2015) pp. 25–30
47. S. Maheswaran, **S. Kalaiselvam**, S. Arunbalaji, G. S. Palani, and Nagesh R. Iyer, Low-temperature preparation of belite from lime sludge and nanosilica through solid-state reaction, *Journal of Thermal Analysis and Calorimetry*, 119 (2015) pp. 1845–1852
48. Anbukarasi. K, and **Kalaiselvam. S**, Study of effect of fibre volume and dimension on mechanical, thermal, and water absorption behaviour of luffa reinforced epoxy composites, *Materials and Design* 66 (2015) pp. 321–330
49. D. Dinesh Kumar, Niranjana Kumar, **S. Kalaiselvam**, Radhika Ramadoss, R. Jayavel, S. Dash and Ashok Kumar Tyagi, “Reactive magnetron sputtered wear resistant multilayer transition metal carbide coatings: Microstructure and tribo-mechanical properties”, *Royal Society of Chemistry (RSC) advances*, 5 (2015) pp. 81790-81801.
50. D. Madhesh and S. Kalaiselvam, Experimental Analysis of Hybrid Nanofluid as a Coolant, *Procedia Engineering*, 97 (2014) pp. 1667 – 1675.
51. R. Thangappan , **S. Kalaiselvam**, A. Elayaperumal, and R. Jayavel, Synthesis of graphene oxide/vanadium pentoxide composite nanofibers by electrospinning for supercapacitor applications, *Solid State Ionics*, 268 (2014) pp. 321–325
52. Dinesh Kumar Devarajan, **Kalaiselvam Sivakumar**, and Jayavel Ramasamy, Microstructure characteristics of copper single layer and copper/titanium multilayer coatings: Nanomechanical properties and bactericidal activities, *Materials Express*, 4(6) (2014) pp. 453-464
53. D. Madhesh and **S. Kalaiselvam**, Experimental study on the heat transfer and flow properties of Ag-ethylene glycol nanofluid as a coolant, *Heat Mass Transfer*, 50 (2014) pp. 1597–1607.
54. S. Harikrishnan, M Deenadhayalan, and **S. Kalaiselvam**, Experimental investigation of solidification and melting characteristics of Composite PCMs for building heating application, *Energy Conversion and Management*, 86 (2014) pp. 864–872.
55. Parameshwaran. R, K. Deepak, Saravanan. R and **Kalaiselvam. S**, Preparation, thermal and rheological properties of hybrid nanocomposite phase change material for thermal energy storage, *Applied Energy* 115 (2014) pp. 320-330

56. S. Harikrishnan, K. Deepak, and **S. Kalaiselvam**, Thermal energy storage behavior of composite using hybrid nanomaterials as PCM for solar heating systems, *Journal of Thermal Analysis and Calorimetry*, 115 (2014) pp. 1563–1571.
57. Madhesh .D, Parameshwaran. R, and **Kalaiselvam. S**, Experimental investigation on convective heat transfer and rheological characteristics of Cu-TiO<sub>2</sub> hybrid nanofluids, *Experimental Thermal and Fluid Science* 52 (2014) pp. 104-115.
58. Parameshwaran. R, and **Kalaiselvam. S**, Thermal Energy Storage Properties of Hybrid Nanocomposite - Embedded Phase Change Material for Sustainable Buildings, *Advanced Materials Research Vol. 935* (2014) pp. 251-254
59. D. Madhesh and **S. Kalaiselvam**, Energy efficient hybrid nanofluids for tubular cooling applications, *Applied Mechanics and Materials Vols. 592* (2014) pp. 922-926.
60. D. Madhesh and **S. Kalaiselvam**, Preparation and Characterization of MWCNT -Water Nanofluids for Heat Transfer Applications, *International Journal of Advanced Mechanical Engineering*, 4(2) (2014) pp. 193-198.
61. Parameshwaran. R, and **Kalaiselvam. S**, Energy conservative air conditioning system using silver nano-based PCM thermal storage for modern buildings, *Energy and Buildings* 69 (2014) pp. 202–212.
62. Parameshwaran. R, Dhamodharan.P and **Kalaiselvam. S**, Study on thermal storage properties of hybrid nanocomposite-dibasic ester as phase change material, *Thermochimica Acta*, 573 (2013) pp. 106-120.
63. Parameshwaran. R, and **Kalaiselvam. S**, Effect of aggregation on thermal conductivity and heat transfer in hybrid nanocomposite phase change colloidal suspensions, *Applied Physics Letters, and materials* 103 (2013) pp. 193113
64. R. Parameshwaran, R. Jayavel, and **S. Kalaiselvam**, Study on thermal properties of organic ester phase change material embedded with silver nanoparticles, *Journal of Thermal Analysis and Calorimetry*, 114(2) (2013) pp. 845-858.
65. Parameshwaran. R, and **Kalaiselvam. S**, Energy efficient hybrid nanocomposite-based cool thermal storage-air conditioning system for sustainable buildings, *Energy* 59 (2013) pp. 194 - 214.
66. S. Harikrishnan, S. Magesh, and **S. Kalaiselvam**, Preparation and thermal energy storage behavior of Stearic acid- TiO<sub>2</sub> nanofluids as a phase change material for solar heating systems, *Thermochimica Acta*, 565 (2013) pp. 137– 145.
67. S. Harikrishnan, A. Ameelia Roseline, and **S. Kalaiselvam**, Preparation and thermophysical properties of Water-Glycerol mixture based CuO nanofluids as PCM for cooling applications, *IEEE Transactions on Nanotechnology*, 12(4) (2013) pp. 629-635

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69. S. Harikrishnan, and **S. Kalaiselvam**, Experimental investigation of solidification and melting characteristics of nanofluid as PCM for solar water heating systems, *International Journal of Emerging Technology and Advanced Engineering*, 3 (2013) pp. 628-635
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