

## Dr. V. Kalyanavalli

Email id :kalyanavalli@jmc.edu

Google Scholar :

<https://scholar.google.com/citations?user=IKxOAlwAAAAJ&hl=en>

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### EDUCATIONAL QUALIFICATIONS

- Ph.D.** : Non-Destructive Evaluation  
Thesis Title : Non- Destructive Evaluation of Basalt fiber reinforced composites using Infrared Thermography.  
Awarded Year : 2019  
Position : Research Scholar  
Funding Agency : Technical Education Quality Improvement Programme (TEQIP) Government of India.  
Institute : Department of Physics, National Institute of Technology, Tiruchirappalli
- M. Sc.** : Material Science and Technology  
Institution : Thiagarajar College of Engineering, Madurai  
Percentage of Marks : 8.58/10.00 CGPA  
Year of Passing : 2004
- B. Sc. (Hons)** : Physics  
Institution : Sri Sathya Sai Institute of Higher learning , Anantapur  
Percentage of Marks : 4.21/5.00 CGPA  
Year of Passing : 2002

### RESEARCH EXPERIENCE

- 1. Position** : Research Scholar  
Institution : National Institute of Technology, Tiruchirappalli.  
Title : *Non- Destructive Evaluation of Basalt fiber reinforced composites using Infrared Thermography.*  
Period : March 2013- July 2019  
Mentor : Dr. D. Sastikumar, Professor, Department of Physics, National Institute of Technology, Tiruchirappalli.

- 2. Position** : Project Assistant- B  
 Institution : Central Electro-chemical Research Institute – Karaikudi  
 Title : *Development of fuel cells on hydrogen*  
 Period : May 2005 to August 2006  
 Mentor : Shri N. U. Nayak, Scientist, Instrumentation Department, CECRI
- 3. Position** : Project Fellow  
 Institution : Indian Institute of Science, Bangalore  
 Title : *Electrical switching characteristics of chalcogenide glasses*  
 Period : December 2003 to April 2004  
 Mentor : Dr. S. Ashokan, Professor, Instrumentation and Applied physics Department, IISc, Bangalore

### TEACHING EXPERIENCE

1. **Position** : Lecturer, Department of Physics  
 Institution : J.J. College of Engineering, Tiruchirappalli  
 Period : December 2006 to august 2007
2. **Position** : Senior Lecturer, Department of Physics  
 Institution : CARE group of Institutions, Tiruchirappalli  
 Period : March 2011 to August 2012

### RESEARCH INTERESTS

- ✓ Non-Destructive Evaluation
- ✓ Polymer composites
- ✓ Chalcogenide glasses
- ✓ Infrared Thermography
- ✓ Thermal properties characterization
- ✓ Ultrasonic

### HAND ON EXPERIENCE TECHNIQUES

- ✓ Infrared thermal camera
- ✓ Lock-in thermography
- ✓ Eddy current setup
- ✓ XRD
- ✓ Laser Flash
- ✓ Pulse and long pulse thermography
- ✓ Immersion C-scan setup
- ✓ Vacuum bagging composite Fabrication
- ✓ Simulation using COMSOL Multiphysics
- ✓ Softwares such as Origin, Matlab

## LIST OF PUBLICATIONS

S.No.	Author(s)	Title	Name of Journal	Volume	Page	Year
1.	Gaurav Kumar Yogesh, EP Shuaib, A KalaiPriya, P Rohini, SathyanVivekanandAn andhan, Uma Maheswari Krishnan, <b>V</b> <b>Kalyanavalli</b> ,Shivam Shukla, D Sastikumar	<i>Synthesis of water- soluble fluorescent carbon nanoparticles (CNPs) from nanosecond pulsed laser ablation in ethanol</i>	Optics & Laser Technology <b>(SCI, IP 3.233)</b>	135	106717	2020
2.	DR Rajkumar, K Santhy, <b>V</b> <b>Kalyanavalli</b>	<i>Scratch characteristics of particle and fiber reinforced polymer composite</i>	Materials Today: Proceedings	In press		2020
3.	Jack J Kenned ,Sankaranarayananasamy K, <b>V Kalyanavalli</b> and Suresh Kumar C	<i>Characterization of indentation damage resistance and thermal diffusivity of needle-punched Musa sapientum cellulosic fiber/unsaturated polyester composite laminates using IR thermography</i>	Polymer Composites <b>(SCI, IP 2.264)</b>	41	2933- 2946	2020
4.	<b>V Kalyanavalli</b> , PM Mithun, D Sastikumar	<i>Analysis of long-pulse thermography methods for defect depth prediction in transmissionmode</i>	Measurement Science and Technology <b>(SCI, IP 1.806)</b>	31	014002	2019
5.	<b>V. Kalyanavalli</b> , T.K. AbilashaRamadhas, D. Sastikumar	<i>Determination of thermal diffusivity of Basalt fiber reinforced epoxy composite using infrared thermography</i>	Measurement <b>(SCI, IP 2.791 )</b>	134	674- 678	2019
6.	<b>V. Kalyanavalli</b> , T.K. AbilashaRamadhas, D. Sastikumar	<i>Long pulse thermography investigations of basalt fiber reinforced composite</i>	NDT and E International <b>(SCI, IP 2.934 )</b>	100	84-91	2018

7.	P. Porkodi, V. Yegnaraman, P. Kamaraj, V. <b>Kalyanavalli</b> , and D. Jeyakumar	<i>Synthesis of NASICON</i> - <i>A molecular</i> <i>precursor- based</i> <i>approach</i>	Chemistry of Materials ( <b>SCI,IP</b> <b>10.159</b> )	20	6410– 6419	2008
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## AWARDS & RECOGNITIONS

### Professional Recognition/ Award/ Prize/ Certificate, Fellowship received by the applicant.

S.No	Name of Award	Awarding Agency	Year
1.	Received award for securing Class topper	Thiagarajar College of Engineering, Madurai, Tamilnadu	2004
2.	GATE Qualified in XE – Engineering Sciences	Ministry of Human Resource Development (MHRD).	2012
3.	Level-II certification in Infrared Thermography	Indian Society of Non- Destructive Testing (ISNT)	2016

## PAPER PRESENTED IN CONFERENCES

1. Kalyanavalli. V, T.K. Abilasha Ramadhas and D. Sastikumar “A Comparative Study Of Basalt And Glass Fiber Reinforced Composites By NonDestructive Evaluation”. NDE 2014-conference on Non-Destructive Testing from 04th - 06nd December 2014, Pune.

2. Kalyanavalli. V, T.K. Abilasha Ramadhas and D. Sastikumar. “Nondestructive studies of basalt fiber reinforced composites”. International Symposium for Research scholars on Metallurgy, Materials Science and Engineering from 11th to 13th 2014, IITM Chennai.

3. Kalyanavalli. V, T.K. Abilasha Ramadhas and D. Sastikumar” A Comparative Study of Basalt and Glass Fiber Reinforced Composites by Thermography”. QIRT-ASIA conference on Quantitative infrared thermography from 6 th to 10th of July 2015, Chennai.

4. Kalyanavalli. V, T.K. Abilasha Ramadhas and D. Sastikumar “Pulsed Thermography for Non-Destructive Evaluation of Adhesive Bonds in Basalt Composites”. QIRT-ASIA conference on Quantitative infrared thermography from 6th to 10th of July 2015, Chennai.

5. Kalyanavalli. V, T.K. Abilasha Ramadhas and D. Sastikumar. “Nondestructive evaluation of basalt fiber reinforced composites- Material and Defect characterization”. NDE 2018, Frontiers in NDE: Science and technology from 19th – 21st of December 2018, Mumbai.