Curriculum vitae

Prof. Dr. SABU THOMAS *PhD, FRSC, FEurASc,DSc(UL,France), DSc(UBS,France)*

Vice Chancellor,

Mahatma Gandhi University, Priyadarshini Hills,Kottayam, Kerala, India -686 560

Director,School of Energy Materials,

Founder Director ,International and Inter University

Centre for Nanoscience and Nanotechnology,

Former Director, Professor, School of Chemical Sciences

Mahatma Gandhi University, Kottayam,

Kerala, India -686 560

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Email id: [*sabuthomas@mgu.ac.in*](mailto:sabuthomas@mgu.ac.in)

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| *Website* | : | [*www.sabuthomas.com*](http://www.sabuthomas.com) *&   www.mgu.ac.in* |
| *Google Scholar* | : | *https://scholar.google.co.in/citations?user=74VyKRYAAAAJ* |
| *Scopus* | : | *https://www.scopus.com/authid/detail.uri?authorId=7404654376* |
| *Researcher id* | : | *http://www.researcherid.com/rid/G-7310-2016* |
| *Orchid-id* | : | *0000-0003-4726-5746* |
| *Vidwan* | : | *https://vidwan.inflibnet.ac.in/profile/21829* |

Nationality: Indian, Date of Birth:14th March 1960

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| **Major Achievements** | * Vice Chancellor * Professor in Charge of Vice Chancellor and Pro-Vice Chancellor |
|  | * Full Professor from 25/03/1998 onwards |
|  | * Fellow of the Royal Society of Chemistry, London * Fulbright Fellow,USA * Professor at University of Lorraine, Nancy, France. |
|  | * h-index- 112 (*google scholar*) and 94 (*Scopus* ) |
|  | * Total number of publications- 1000 |
|  | * Total number of citations- 60742+(*google scholar*) |
|  | * Patents 15 (granted- 4, filed -11) |
|  | * Edited Books- 158 |
|  | * Ph.D. theses supervised 115 - (National)97; (International))16 |
|  | * Projects - 40 ; Funds Received- Rs.2298.62 lakhs |
|  | * Cited in the list of Most Productive Researchers in India- 5th Position, 2008 |
|  | * Listed in the Most Cited Researchers in Materials Science and Engineering by Elsevier Scopus Data 2016 |
|  | * Best Faculty Research Award-2018 * Chief Editor,Nanostructurs and Nano-Objects, Elseveir * Editorial Advisory Board member. ACS Macromolecules * TRILA Academician of the year-2018 * Foreign Fellow of the European Academy of Sciences (EurASc) * Fellow of International Association of Advanced Materials, FIAAM (Sweden) of year 2020] * Cited among top 2% Scientists in India by Stanford University Professors * Kairali Lifetime Research Award 2021 by Kerala Government. |

**Research Areas:** *Nanomaterials,polymer blends, fiber filled polymer composites, and polymer nanocomposites, ageing and degradation, pervaporation phenomena, sorption and diffusion, interpenetrating polymer systems, recyclability and reuse of waste plastics and rubbers, elastomer crosslinking, dual porous nanocomposite scaffolds for tissue engineering, polymer nanocomposites for electronic applications, water purification,energy storage*.

**Educational Qualifications**

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| S.No | Qualification | University | Year | Subject (s)/ Topics (s) |
|  | Post Doctoral Fellow | Katholieke University, Leuven, Belgium | 2004 | Polymer Blends |
|  | Post Doctoral Fellow | Katholieke University, Leuven, Belgium | 1996 | Polymer Blends |
|  | Post Doctoral Fellow | Macromol. Sci. Eng. Research Centre, Laval University, Quebec, Canada | 1989 | Polymer Blends |
|  | Ph. D (*Doctor of Philosophy in Engineering*) | Indian Institute of Technology, Kharagpur | 1988 | Polymer Blends Thermoplastic Elastomers from PVC/Copolyester EVA/PP blends |
|  | B. Tech (*Bachelor of Technology*) | University of Cochin | 1983 | Polymer Science & Rubber Technology |
|  | B.Sc (*Bachelor of Science*) | University of Kerala | 1980 | Chemistry  (Main), Physics & Maths (Sub) |

**Visiting Professorship Abroad:**

* 2002 September- 2002 November, Visiting Professor- CNRS Lab, Laboratoire de Recherche surles, Thiais, Paris, France
* 2003 September - 2003 November, Visiting Professor, Lab. of Macromol. Structural Chemistry, Dept of Chemistry, Katholieke University, Leuven, Belgium
* 2004 April - 2004 July, Visiting Professor, Lab. of Macromol. Structural Chemistry, Dept. of Chemistry, Katholieke University, Leuven, Belgium
* 2005 April- 2005 June, Visiting Professor- Polymers Nanotextures&Nanocomposites, Centre de Recherche sur la MatiereDivisee, Orleans Cedex 2, France
* 2005 June- 2005 July, Visiting Professor- Laboratoire Polymères, Propriétés aux Interfaces et Composites, Centre de Recherche, University de Bretagne Sud, Lorient Cedex, France
* 2006 May- 2006June, Visiting Professor, **Beijing University of Chemical Technology, China.**
* **2006 October- 2006 December, Visiting Professor, IPF Dresden, Germany**
* **2007 April- 2007 June, Visiting Professor, Paris 12 University,Paris, France**
* **2008 April-2008 May, Visiting Professor, University du Maine,Le Mans, France**
* **2009 April-2008 June, Visiting Professor, University Paris 12, Creteil, France**
* **2010 October-2010 Nov, Distinguished Professorship, Josef Stefan Institute, Slovenia**
* **2010 December, Senior Visiting Professor, University Technology Mara (UiTM), Malaysia**
* **2011 April- 2011 June, Visiting Professor,University of Strasbourg, Strasbourg, France,**
* **2011 July, Visiting Speaker, Uni of Burgos, Burgos, Spain**
* **2011 December, Senior Visiting Professor, University Technology Mara (UiTM), Malaysia**
* 2012 Feb, Invited Guest Professor, Changwon University, Pusan, Korea
* 2012 April, 2012 May, Visiting Professor, UniversiteLorraine, Nancy, France
* 2012 June, Visiting Professor, University of Strasbourg, France
* 2012 July, Visiting Professor, University of Paris 12, France
* 2013 Feb, Visiting Professor, Adam Mickiewicz University, Poznan, Poland
* 2013 October, **Senior Visiting Professor, University Technology Mara (UiTM), Malaysia**
* **2013 December,Senior Visiting Professor, University Technology Mara (UiTM), Malaysia**
* **2014 April, Senior Visiting Professor, University Technology Mara (UiTM), Malaysia**
* **2014 June, Visiting Professor,**Warsaw University of Technology, Warsaw, Poland.
* 2015 March, **Visiting Professor,LIMATB, France**
* 2015 May**,**Visiting Fellow, Institute of Chemistry, University of GRAZ, Austria
* 2015 September, Visiting Professor at the University of Armenia.
* 2015 December, Visiting Professor,Qilu University of Technology,Jinan, China.
* 2015 December, for the course titled “Key parameters in Science Park Management” organized by Inter-Islamic Network on Science and Technology Parks (INSTP) Guilan, Iran.
* 2016 August/SeptemberVisiting Professor, Hong Kong Polytechnique, Hong Kong,
* 2016 September,Visiting Professor, Federal University of Uberlandia, Brazil
* 2016 October, Visiting Professor,Institute of Biophysics of Russian Academy of Science, Siberian Federal University,Russia.
* 2017 September,Visiting Professor,University Loarraine France
* 2018 June 4th - 9th, Visiting Professor,Siberian Federal University,Russia
* 2018 27th October -2nd  Nov 2018 ,Visiting Professor,Siberian Federal University,Russia
* 2019 1st May- 14h May 2019, Visiting Professor,Institute Jean Lamour ,University of Lorraine ,Nancy France
* 2019 1st May-15th May 2019, Visiting Professor,,University of Pau , France
* 2019 1st July -5thJuly, Visiting Professor,Siberian Federal University,Russia
* 2019 5th July -9thJuly, Visiting Professor,Institute Jean Lamour ,University of Lorraine ,Nancy, France
* 2019,12th July, Visiting Professor,University of Stockholm ,Sweden
* 21st October 2019 IMDEA-Materials Institute, Madrid, Spain.
* 23rd October 2019,Dpto. SistemasAeroespaciales, TransporteAéreo y Aeropuertos (SATAA),EDIFICIO B, ETSI Aeronautica y del Espacio – UPM,Madrid, Spain
* 25th October 2019, Surface Phenomena Researches Group Scientific Enterprise Russia
* 24th October 2019, National University of Science and Technology MISIS, Department of Physical Chemistry,Moscow,Russia
* October 29th- 31st Saint-Petersburg State University,Institute of Chemistry, Saint-Petersburg Russia
* Nov 1st- Nov 4th Institute of Biophysics of Russian Academy of Science, SD,Siberian Federal University

**Industrial Positions:**

* 1983 June - 1984 June - Rubber Production Officer, Bata India Ltd., 24- Parganas, West Bengal
* 1987 June - 1987 December - Technical Officer, Bayer India Ltd., Thane, Kolshet Road, Bombay

**Administrative Experience in India:**

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| S.  No | Post | Organization/ university | Duration | |
| From(Date) | To(Date) |
| 1. | **Director** | School of Energy Materials | Sept.2019 | Till Date |
| School of Chemical Sciences | 01/11/2010 | 31/12/2013 |
| International and Inter university Centre for Nanoscience and Nanotechnology | 28/03/2009 | 11/09/2015 |
| 02/02/2016 | 11/10/2017 |
| 2. | **Chairman,Board of Studies** | NIL | N.A | N.A |
| 3. | **Member,**  **Board of Studies** | School of Chemical Sciences | 07/12/1987 | Till date |
| St. Berchmans College, Changanassery (Autonomous college) | 27/10/2014 | Till date |
| 4. | **Dean of Faculty** | Faculty of Technology and Applied Sciences | 04/05/2010 | 03/05/2012 |
| 5 | **Member**  **of Academic Council** | Mahatma Gandhi University | 11/02/2011 | 03/05/2012 |
| 6. | **Member**  **of Executive Council** | Syndicate Member, Mahatma Gandhi University, Kottayam | 11/02/2011 | 03/05/2012 |
| 7 | **Member of Professional/Academic Bodies** | Senate member, CUSAT | 14/02/2011 | 13/02/2015 |
| 23/05/2015 | Till date |
| Director, IQAC, MG university | 31/10/2015 | 27/09/2017 |
| Vice Chairman , IQAC, MG university | 27/09/2017 | 31/08/2018 |
| URC Member, Mahatma Gandhi University | 08/01/2016 | Till date |
| 8 | **Others** | Research Council Member, SreechitraThirunnal Institute for Medical Sciences and technology ,Trivandrum | 26/10/2015 | Till date |
| Academic Committee Member -IUCNMD | 7/12/2015 | Till date |
| Planning Board Member -MGU | 23/03/2011 | 30/8/2017 |

**Academic/Teaching Experience & responsibilities (In chronological order from latest to oldest)**

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| S.No | Post | Organization/  University | Duration | |
| From(Date) | To(Date) |
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|  | **Vice Chancellor** | Mahatma Gandhi University. Kottayam | 28/03/2019 | Till date |
|  | **Professor in Charge of Vice Chancellor** | Mahatma Gandhi University. Kottayam | 01/09/2018 | 27/03/2019 |
|  | **Pro Vice-chancellor** | Mahatma Gandhi University. Kottayam | 31/08/2017 | 31/08/2018 |
|  | **Director** | School of Enegry Materials | Sep 2019 | Till Date |
|  | **Director** | School of Chemical Sciences, Mahatma Gandhi University. Kottayam | 01/11/2010 | 31/12/2013 |
|  | **Honorary Director** | International and Inter UniversityCenter for Nanoscience and Nanotechnology, Mahatma Gandhi University. Kottayam | 28/03/2009 | 11/09/2015 |
| 02/02/2016 | 11/07/2017 |
|  | **Professor** | School of Chemical Sciences, Mahatma Gandhi University, Kottayam, Kerala | 25/03/1998 | Till now |
|  | **Regional Director** | School of Technology and Applied Sciences, Kottayam (Additional Charge) | 16/06/ 1994 | 1996 |
|  | **Reader** | Mahatma Gandhi University, Kottayam, Kerala | 28/12/1992 | 24/03/1998 |
|  | **Lecturer** | Mahatma Gandhi University, Kottayam, Kerala | 07/12/1987 | 27/12/1992 |

**Involvement with formulation of academic programmes:**

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| S.No | Nomenclature of Innovative Academic Programmes Formulated | Date of Approval by Academic Council | Introduction |
|  | M.Tech in Nanoscience and Nanotechnology | 06/05/2017 | - |
|  | Integrated M.S-Ph.D programme in Nanoscience and Nanotechnology | 10/01/2013 | 2014 |
| 1. 2 | Integrated M.Sc-Ph.D programme at School of Chemical Sciences | 15/03/2012 | 2012 |
| 1. 3 | M.Tech Polymer Science and Technologyat School of Chemical Sciences | 15/03/2012 | 2012 |
| 1. 4 | M.Phil Nanoscience ad Nanotechnology | 31/07/2010 | 2011 |
| 1. 5 | M.S programme in Nanoscience and Nanotechnology | 31/07/2010 | 2011 |

**Invited Lectureship Abroad:**

* 1990 December - 1991 January - Invited speaker, several universities in Austria and Germany
* 1991 May - July - Invited speaker, several universities in Germany, Austria, France, Switzerland, Italy, Netherlands and Belgium
* 1993 October - November - Invited speaker, several universities in Singapore and Taiwan
* 1999 February - March - Invited speaker, several universities in Germany, Austria, and France
* 1999 May - June - Invited speaker, several universities in Germany
* 2000 July - August - Invited speaker, several universities in the USA
* 2000 October - November - Invited speaker, Several universities in France, Germany, Belgium
* 2001 February - Invited speaker, several universities in Australia
* 2001 March - Invited speaker, several universities in Malaysia
* 2001 July - Invited speaker, several universities in Singapore
* 2002 May – June - Invited speaker, several universities in Belgium, France, and Germany
* 2002 September - November- Invited speaker, several universities in Belgium, Germany and France
* 2003 November - Invited speaker, several universities in Belgium, Germany and Japan
* 2004 March - Invited speaker, several universities in Belgium, France and Germany
* 2005 June - Invited speaker, several universities in Belgium, France, Germany and Austria
* 2005 September - Invited speaker, several universities in China
* 2005 October - Invited speaker, several universities in South Africa
* 2006 April, - Invited speaker, several universities in China
* 2007 April, - Invited speaker, several universities in Europe
* 2008 April, - Invited speaker, several universities in Europe
* 2009 April, - Invited speaker, several universities in France, Slovenia and Croatia
* 2010 Nov. Invited Speaker,Universities in Croatia and Slovenia
* 2011 June. Invited Speaker, Universities in France
* 2012 Feb. Invited Speaker, Universities in Korea
* 2012 April, Invited Speaker, University of Strasbourg, France
* 2013 Feb, Invited Speaker, Adam Mickiewicz University, Poznan, Poland
* 2014 March, Plenary Speaker, Univerity of Basra, Iraq
* 2014, April, Invited Speaker, University Technology, Mara, Malaysia
* 2014 May, Invited Speaker, Warsaw University of Technology, Warsaw, Poland
* 2014 July, Invited Speaker, Durban University of Technology, Durban, South Africa
* 2014, July, Invited Speaker, CSIR, Port Elizabeth, South Africa
* 2014 July, Invited Speaker, Cape Peninsula University of Technology, Cape Town, South Africa
* 2015,March, Invited Speaker,LIMATB, University of South Brittany, France
* 2015 March,InvitedSpeaker, University of Strasbourg, France
* 2015 March, Institute for Polymer Research Dresden (IPF), Dresden, Germany
* 2015 June,ICMAT2015 & IUMRS-ICA2015, 8th International Conference on Materials for Advanced Technologies of the Materials Society of Singapore and 16th IUMRS - International Conference in Asia together with 4th Photonics Conference 2015
* 2015 August 9th National Affinity Techniques Symposium” (AFFTECH 2015); “4th Nanomedicine World Congress (NANOMED 2015)” and “2nd International NanoBioTechnology Symposium” focusing also Nanomedicine (NANOBIOTECH 2015), Dalaman, Turkey & AFFTECH 2015.
* 2015, Invited Speaker,Durban University of Technology, Durban, South Africa
* 2015 October, Plenary Talk on my research work titled “Recent Advances in Polymer Nanocomposites” attheDurban University of Technology in Durban, South Africa, ICCBN 2015.Plenary Session at ICCBN 2015
* 2015 May,Invited speaker Institute of Chemistry, University of GRAZ, Austria
* 2015 September,Invitedspeaker,University of Armenia
* 2015 December, Invited speaker,Qilu University of Technology,Jinan, China
* 2015 December,Invited speaker for the course titled “Key parameters in Science Park Management” organized by Inter-Islamic Network on Science and Technology Parks (INSTP) Guilan, Iran
* 2016 April, Plenary speaker for“XXI IUPAC CHEMRAWN - Solid Urban Waste Management, Rome, Italy
* 2016 April, Invited speaker for (The World Academy of Sciences) TWAS Research Grants Conference - Shaping Careers in Science, Trieste, Italy
* 2016 May, Plenary speaker for WasteEng2016, Conference, Albi, France
* 2016June, Invited speaker,King Mongkut’s University of Technology, Bangkok, Thailand
* 2016 August/September,Invitedaspeaker, Hong Kong Polytechnique, Hong Kong
* 2016 September,Invited speaker, Federal University of Uberlandia, Brazil
* 2016 October,Institute of Biophysics of Russian Academy of Science, Siberian Federal University,Russia
* 2016 October 23 –26, Plenary lecture at The International Rubber Conference (IRC 2016), Kitakyushu, Japan
* 2017April 23- 27,Keynote lecture at Eurofillers Polymer Blends 2017 conference, Greece
* 2017 June 7-9,Keynote lecture,Fifth International Conference on Natural Polymers, Biopolymers, Bio Materials, their composites, Nanocomposites, Blends IPNs, Polyelectrolytes, and Gels: Macro to Nano Scales (ICNP 2017 Rio)
* 2017 June 21-23,Plenary speaker at ICNF 2017.3rd International Conference On Natural Fibers– Advanced Materials for a Greener World, Braga – Portugal

* 2017July 19 – 20,Plenary speaker at Malaysia Polymer International Conference 2017 (MPIC 2017) at UniversitiKebangsaan Malaysia
* 2017 September Keynote Speaker, The 13th Global Rubber Conference 2017, Istana Hotel, Kuala Lumpur, Malaysia
* 2017 September,Invitedspeaker,University Loarraine France
* 21-23 November 2017, Keynote Speaker Wood and Biofiber International Conference 2017(WOBIC2017),Malaysia.
* 7-9, January 2018, Plenary speaker, “Biomaterials For Tomorrow (B4T)” Kochi, India
* 3rd May 2019,Plenary speaker,2nd Franco-Indian Workshop on Polymers, Nanoparticles and Nanocomposites on Friday 3rd May 2019 .
* July 11th 2019, Keynote speaker, IUPAC Congress, Paris,France
* 22nd - 25th November 2019.Keynote Talk on “The 10th China International Conference on Functional Materials and Applications, The 6th International Conference on Multi-Functional Materials and Structures and International Conference on Frontier Development of New Materials”(ICFM & MFMS & INM 2019), Chongqing, China
* 21st October 2019 IMDEA-Materials Institute,Getafe 28906, Madrid, Spain.
* 23rd October- 2019,Dpto. SistemasAeroespaciales, TransporteAéreo y Aeropuertos (SATAA),EDIFICIO B, ETSI Aeronautica y del Espacio – UPM,Madrid, Spain
* 25th October 2019, Surface Phenomena Researches Group Scientific Enterprise Russia
* 24th October 2019, National University of Science and Technology MISIS, Department of Physical Chemistry,Moscow,Russia
* October 29th- 31st  Saint-Petersburg State University,Institute of Chemistry, Saint-Petersburg Russia
* Nov 1st - Nov 4th Institute of Biophysics of Russian Academy of Science, SD,Siberian Federal University

**National Conferences attended**

1. APT-2008 (Advanced in Polymer Technology-2008),Conducted by Rubber Technology, CUSAT, Kerala, INDIA
2. International Seminar on Nanotechnology and Nanomaterials –Current Status and Emerging trends (Nanotech 2010)
3. Resource person in DST-INSPIRE Science Camp (Innovation of Science Pursuit for Inspire Research) on 28th Dec 2012 at IIT Delhi.
4. Invited talk at the National Conference on Composites (INCCOM-11), 3rd Nov 2012 at Amrita ViswavidyaPeetam, Coimbatore.
5. Attended the “International Rubber Conference and IRRDB Meetings” as an Invitee during.2012 at Hotel Samudra, KTDC Kovalam.
6. Invited speaker on IVth International Conference on “Advanced Nanomaterials (ANM 2012)” 2012 at IIT Madras.
7. Plenary speaker at the National Seminar on Advanced Polymers, SCIENTIA-2012, held at the Department of Polymer Engineering, MG University, College of Engineering, Thodupuzha. 2012.
8. Plenary speaker at the seminar at St. Thomas College, Pala on “Emerging trends in Nanotechnology and Microbiology” 2012.
9. Resource Person at Environmental conservation and living” organized by Nirmala college, Kuravilangad on 11th November 2013.
10. Resource Person at XVth Refresher Course in “Chemistry” organized by Nirmala college, Muvattupuzha on 9th November 2013.
11. Resource Person at Refresher Course in “Nano Science” organized by UGC-Academic Staff College, University of Kerala 2013.
12. Invited speaker at Advances in Nanoscience and Nanotechnology NIIST on 23rd March, 2013.
13. Plenary speaker at National Seminar on Green Materials organized by Department of Chemistry, Bishop Moore College, Mavelikara 2013.
14. Resource Person at XVth Refresher Course in “Chemistry” organized by UGC-Academic Staff College, University of Kerala 2013.
15. Special Invitee at NANO INDIA 2013 at National Institute for Interdisciplinary Science and Technology during 2013.
16. Invited speaker at National Conference on Advanced Materials 2013 at PSN College of Engineering and Technology,Tamilnadu 2013.
17. Invited speaker at IIIrd National Conference on Advanced Materials at PSN College of Engineering and Technology, Tirunelveli 2013
18. Invited Lecture at Inaugural Ceremony of the Chemistry Association of the Sree Narayana College, Nattika, Thrissur on October 15, 2014
19. National Seminar on Nanotechnology and renewable Energy ,K.E College ,Oct 30-31st 2013
20. National Seminar on Current trends Chemistry(CTric 2014),Cochin University of Science and Technology,2014
21. National Seminar on Perspectives in Material Sceince , Marthoma College of Science and Technology Ayur,7th Novemeber 2014
22. National Seminar on Recent Approaches in Biochemical Research (RABR -2014),Department of Biotechnology,Thiruvanthapuram,Kerala. 2014
23. National Seminar on Recent Advances in Nanoscience RANSS 14,Auxillum College Vellore Tamil Nadu,21st -22nd November 2014
24. Advances in Biotechnology 2014 (CUSAT) ,Cochin University of Science and Technology ,15th -16th December 2014
25. Resource Person for the UGC sponsored National Seminar on Nanochemistry and Nano Biotechnology, NANOCHEMBIO 2014 at St. Thomas College, Palai on October 9, 2014.
26. Resource Person at the New Paradigms in Chemistry,AbInitio,AdFuturum at St.Marys College ,SulthanBathery on 10thMarch 2014
27. Plenary lecture at Fostering Scientific Temper -Trends and Opportunities in Chemistry at St.Berchamans College , Changanachessery on 28th Feb 2014
28. Key Note address at The Emerging Trends in Nano science and Technology at Newman College Thodupuzha on 28th Feb 2014.
29. Plenary lecture at the Emerging trends in polymeric materials at Christian college, Chengannur on 24th Jan 2014.
30. UGC SponsorredNatinal Seminar “Adavanced topic in Chemistry-ATC 2015 Sree Narayana College Natika,19-20 August 2015
31. Recent Advances in Spectroscopy: A Chemical and Biological perspective -IINewman College ,Thodupuzha ,14-15 September 2015
32. Recent Advance in Spectroscopy a chemical and Biological perspective -2,Newman College Todupuzha ,14th -15th September 2015
33. Resource Person at Green Nanotechnology in Material Engineering & Energy application under Tequip programme at College of Engineering, Adoor on December 18, 2015
34. Plenary Talk at Green Technology for Green Environment at Sreenarayanan Mangalam College, Eranakulam on December 04, 2015
35. Plenary Talk at Nano Technology & Space Application (AICTE Sponsored) at Amaljyothi College of Engeneering, Kanjirapalli on April 27, 2015
36. Resource Person at Polymers & Its Application at Indian Naval Academy, Ezhimala on March 25, 2015
37. Plenary talk at New Frontiers in Nano Technology & Material Science at Sreenarayana College , Chengannur on March 20th , 2015
38. Resource Person at the Interaction Programme for PhD Scholars at UGC-Academic Staff College, Calicut on March 16th , 2015
39. Plenary lecture at the National Seminar on Emerging Nano Meterials, NSEN-2015 at Devamatha College, Kottayam on January 1st , 2015
40. Emerging Nanomaterials NSEN -2015,Deva MATHA College ,Kuruvilangad ,6th January 2015
41. International CONFERENCE ON Understanding Contemporary India ,ICCS, Mahatma Gandhi University ,14-15 January 2016
42. International Conference on Advances in applied Mathematics, Materials Science and Nanotechnology for Engineering and Industrial application.IC-AMMA-2K16
43. Federal INSTITUTE OF Science and technology (FISAT),January 2016
44. Recent Advances in Material Sciences ,Government College ,Kottayam,January 2017
45. Expert Mentor at India-UK joint workshop on 'Nano-Biomaterials for water Purification at M.G University, Kottayam from December12, 2016 to December 16, 2016
46. Chief Guest at the Inauguraion of the Centre for Nanotechnology and Smart Materials at Viswajyothi College of Engineering & Technology, Muvattupuzha on November 29, 2016
47. Plenary lecture at the National Conference on Biopolymers & Green Composites (BPCG 2016 - 4th in Series) at Centre for Biopolymer Science and Technology (CBPST-CIPET), Kochi on September 29, 2016
48. Plenary lecture at the International Conference on Functional Materials at Centre for Scientific and Applied Research, PSN College of Engineering and Technology, Tirunelveli on September 10, 2016
49. Chief Guest at National Science Day Celebrations 2016 at Sree Narayana College, Chengannur on February 25, 2016
50. Keynote address at the KSCSTE Sponsored National Seminar on Emerging Trends in Nanocomposites at St. Thomas College, Palai on October 12, 2017
51. Plenary lecture at the National Conference on Recent Advances in the Applications of Macromolecular Materilas (RAAMM - 2017), at Gandhigram Rural Institute, Dindigul, Tamil Nadu on March 02, 2017
52. Plenary talk at National Conference on " Recent trends in Biomaterials (BIOMEET 2017) at Bishop Moore College, Mavelikara on February 17, 2017
53. Plenary talk at National Conference on "Nanomedicine Current Scenerio and Future Opportunities" at SN College, Chenganoor on February 17, 2017
54. Chief Guest/Keynote Speaker at the Inauguraion of Dalton's Conclave & Award ceremony 2016-2017 at Catholic College, Pathanamthitta on January 23, 2017
55. Chief Guest/Keynote Speaker at the Art Festival inauguration at Travancore Medical College, Kollam on January 15, 2017
56. Invited talk for four days at International Conference on Polymer Science and Technology [MACRO 2017] on January 8, 2017
57. International Conference on Chemistry and Physics of Materials (ICCPM 2018),  
    by the Research & Post Graduate Department of Chemistry, St. Thomas’ College, Thrissur, Kerala, 2018 September 17 to 19 ,,  St. Thomas’ College.
58. Plenary talk at National conference on "Emerging Frontiers in Chemical Science (EFCS2018) at Farook College Campus, Kozhikide on November 24, 2018
59. Plenary talk at the International Conference on Advances in Materials Science  ICAMS 2018 at SreeSankaraCollege,Kalady,Ernakulam on October 24, 2018
60. Plenary lecture on'Super Toughened Epoxy Nanocomposited for Space Applicatons' in the National Seminar on Recent Trends in Nanotechnology, Sponsored by Kerala State Council for Science Technology ad Environment (KSCSTE-TVM) at Newman College, Thodupuzha on October 15, 2018
61. Resource person at the two day National seminar on 'Recent Advance in Materials Science' at NSS Hindu College, Changanacherry on September 06, 2018
62. Plenary talk at Bishop Moore College, Mavelikara in connection with the DBT Star College Scheme on March 22, 2018
63. Plenary talk on 'Surface Engineered Nanosystems for Bio-Medical Applictions' in the International Conference on Advanced Nanostructures  (ICAN - 2018) at Catholicate College, Pathanamthitta on March 14, 2018
64. Plenary talk at the National Seminar on Recent Trends in Material Science and Technology at St. Berchmans College, Changanassery on February 7, 2018
65. Invited talk for two days on biobased composites at the Biomaterials for Tomorrow (B4T) conference at Kochi Marriot Hotel, Kochi on January 08, 2018
66. Plenary talk on 'Nanotechnology: Boon or Bane ' for Sastrapadham ( Science Enrichment Programme for Higher Secondary Education)organized by S.S.A. and  Directorate of Higher Secondary Education, Trivandrum at St. Berchmans College, Changanassery on January 20th , 2019
67. Invited speaker at 3rd International Conference on Optoelectronic and Nano Materials for Advanced Technology (icONMAT - 2019) at CUSAT, Cochi on January 5, 2019
68. Annual symposium iNNCOTECH on 28th February 2019 inTata Chemicals Innovation Center, Pune
69. Invited Speaker to present your keynote talk during ICRACM-2019 Conference, which will be held at Indian Institute of Technology (BHU), India from 25-28th February 2019.
70. International Conference "Chemistry and Physics of Materials: Glorious Past and Exciting Future", scheduled during February 20 to 22, 2019, and hosted by the School of Advanced Materials, JNCASR, Bangalore.

**Awards and Prizes Won:**

* Universite Laval Post-DoctoralFellowship, 1989-1991
* Fellow of the Royal Society of Chemistry, London, Chartered Chemist, C Chem FRSC,2000
* KatholiekeUniversityVisiting Research Fellowship, Leuven, Belgium,1996-1997
* KatholiekeUniversityVisiting Research Fellowship, Leuven, Belgium,1997-1998
* CNRS Research Fellowship, Thie, France, 2002
* Prof. Sukumar Maithy National Award for Best Polymer Researcher, 2007
* Listed in the Panel of most Productive Researchers in India (5th Position), 2008 by National Institute of Science, Technology, and Development, New Delhi
* **Distinguished Professorship Award, Josef Stefan Institute, Slovenia,2010**
* Fellow of the Royal Society of Chemistry, London, FRSC,2012
* **Awarded Bronze Medal of Chemical Research SocietyofIndia(CRSI), 2013**
* **Awarded Materials Research Society of India Award (MRSI), 2013**
* **Awarded Society For Educational & Scientific Research. (SESR) Nanotech Scientist Award- 2014**
* **Awarded Doctorate Honoris Causa-LIMATB,** University of South Brittany,**France 2015**
* **Awarded** Loyalty Award “International Materials Technology Conference Exhibition” May 2016&Honourable member of IMTCE, Loyalty Award Club (Membership Number-IMTCE-LC-017)
* **Awarded Dr. APJ Abdul Kalam Award for Scientific Excellence –2016**
* **Mahatma Gandhi University- Award for Outstanding Contribution–Nov. 2016**
* **Awarded** Lifetime Achievement *Award,* Indian NanoBiologists2017
* **Awarded Doctorate Honoris Causa-**Université de Lorraine**France 2017**
* **Fullbright scholarship-Nehru –Fulbright fellowship for 2017**
* **National Education Leadership Award – 2017for Excellence in Education**
* **Won** 6th contest of "mega-grants".**The grant competition of the Government of the Russian Federation (**Ministry of Education and Science of the Russian Federation) **designed to support research projects implemented under the supervision of the world’s leading scientists as Leading Scientist-2017**
* ‘F**aculty Research Award’ of India’s brightest minds in the field of academic research. “Most outstanding Researcher” in the field of Materials Science,2018**
* **Trila Award – Academician of The Year, 2018**
* **H.G. Puthenkavu Mar Philoxenos Memorial Best Scientist Award 2018**
* Professor@Lorraine, University of Lorraine ,Nancy France,**2018**
* **“C.N.R Rao Award** Prize Lecture In Advanced Materials”by Materials Research Society of India (MRSI) **-2019**
* "Fellow of International Academy of Physical Sciences"24th International Conference (CONIAPSXXIV) at Chaudhary Charan Singh University, Meerut, UP-2019
* Foreign Fellow of the European Academy of Sciences (EurASc)-2019
* National Researcher Award -DST Nanomission-2020
* Honourary Professorship from Siberian Ferderal University- May 2020
* Fellow of International Association of Advanced Materials, FIAAM (Sweden) of year 2020
* Bailey Medal Award
* Kairali Lifetime Research Award 2021 by Kerala Government.

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| --- | --- | --- |
| **Major Scientific Fields of Interest:** | | |
| Polymer blends | : | Miscibility, phase separation and crystallization of polymer blends, morphology, mechanical properties, rheology, fracture toughness, compatibilization of immiscible blends, bio - degradable polymer blends |
| Fiber filled polymer composites | : | Short natural and synthetic fiber-filled thermoplastics, thermosets, rubbers, polymer-fiber interfacial adhesion, fiber surface modification, characterization, hybrid composites,trans-crystallization, cellulose nanocomposites and biocomposites |
| Nanomaterials and polymer nanocomposites | : | Clay, silica, mica and carbon black filled thermoplastics and rubbers, effect of coupling agents, polymer-filler interactions, inorganic/organic hybrid nanocomposites |
| Ageing and Degradation | : | Thermo-oxidative ageing, high-energy radiation ageing, ozone cracking, environmental degradation, ion-beam irradiation, electron beam irradiation |
| Pervaporation phenomena, sorption, and diffusion | : | Membrane assisted sorption, diffusion, transport of liquids and gases through polymer membranes, blends, composites, pervaporation through polymer membranes |
| Interpenetrating polymer systems | : | Natural and synthetic rubber and epoxy based semi-interpenetrating networks |
| Recyclability and reuse of waste plastics and rubbers | : | Recycling of waste plastics and rubbers, reuse of latex waste as potential filler for thermoplastics and rubbers |
| Elastomer crosslinking | : | Double network in elastomers, synthesis of accelerators, vulcanization |
| Dual porous nanocomposite scaffolds for tissue engineering  Polymer Nanocomposites for Electronic Applications  Water purification | :  :  : | Engineering of dual porous scaffolds by electrospinning  Sensing Applications, Flexible polymeric strainsensors,solvent sensors, EMI Shielding  For removing toxic materials from water,dye removal using biomaterials. |

**Research Students - Ph.D. Thesis:**

* Ph.D. Thesis completed(National ) –93(International) -10
* Current Ph.D. students- 8
* Post Docscompleted-25, Current Post Docs-2
* Projects

|  |  |  |  |
| --- | --- | --- | --- |
| **Sl.No.** | **Funding agency** | **No :** | **Amount Sanctioned (in Lakhs)** |
|  | DST –Nano mission | 2 | 468.01 |
|  | DST Department of Science & Technology | 5 | 316.72 |
|  | DST-International collaboration | 8 | 83.47 |
|  | AICTE(All India Council for Technical Education) | 1 | 15.50 |
|  | DBT (Department of Biotechnology) | 1 | 58.59 |
|  | DRDO(Defence Research and Development Organization | 3 | 84.66 |
|  | UGCUniversity Grants Commission | 2 | 12.52 |
|  | MeitY(The Ministry of Electronics and Information Technology | 2 | 131.60 |
|  | KSCSTE(Kerala State Council for Science, Technology & Environment | 3 | 45.23 |
|  | ISRO(Indian Space Research Organisation) | 1 | 10.00 |
|  | BRNS(Board of Research In Nuclear Sciences) | 2 | 42.16 |
|  | CSIRCouncil of Scientific & Industrial Research | 2 | 36.51 |
|  | ICMR (The Indian Council of Medical Research) | 1 | 23.70 |
|  | Russian Mega grant | 1 | 950.00 |
|  | Industry | 5 | 19.95 |
|  | **Total** |  | **2298.62** |

**Recent selected projects**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Sl.No. | Client /organization name | Nature of Project | Duration of project | Amount of grant (Rupees) | |
|  | SPARC | Bio-filler-Interfaced Electrospun PVDF Hybrid Piezoelectric Generator for MechanicalEnergy Harvesting(Co-PI) | 2019-2021 | 78,93,348 | |
|  | SPARC | Study of urea oxidation electrocatalysis for energy conversion from waste(Co-PI) | 2019-2021 | 66,69,785 | |
|  | SPARC | Vachellianilotica based biocompatible hybrid nanostructured coatings/films for seeds  and fruits(Co-PI) | 2019-2021 | 66,30,385 | |
|  | SPARC | Nanoscale Contrast Agents For Diagnostic Biomedical  Imaging(Co-PI) | 2019=2021 | 59,88,299 | |
|  | UGC DAE | Gamma Ray/Heavy Ion Assisted Cross linked Silicone Rubber Based EMI Shielding Materials (PI) | 2019-2020 | | 3, 75.000 |
|  | UGC DAE | Heavy Ion/Gamma Ray Engineered Vertically Oriented Graphene Hybrid Systems for Environmental Remediation(Co-PI) | 2019-2020 | | 3, 75.000 |
|  | BRFST-BRNS | Novel thermoplastic elastomer composition for neutron shelding application (PI) | 2016-2018 | 34,66,580 | |
|  | DRDO | Graphene-Silica conjugated epoxy nanocomposites for protective coating and repair applications(PI) | 2018-2020 | 30,00,000 | |
|  | MeitY | Visvesvaraya PhD Scheme for Electronics and IT(PI) | 2015-2020 | 89,77,800 | |
|  | DRDO | Development of super tough thermoset from self-assembled nanostructured block copolymer/epoxy resin blends(PI) | 2014- 2017 | 29,62,800 | |
|  | CSIR | Engineering of nano-structured high performance epoxy/liquid rubber blends with controlled nanoparticle localization(PI) | 2014- 2017 | 14,92,000 | |
|  | MeitY | Development of multi walled carbon nanotube filled polycarbonate/polypropylene double percolating conductive polymer blend nanocomposites for electromagnetic interference shielding gaskets for mobile phones (PI) | 2012 -2015 | 41,00,000 | |
|  | DST -Nanomission | Development of engineered nanostructured materials for high performance application(PI) | 2010-2013 | 4,68,01,600 | |
|  | MRF Tyres | Miscibility, morphology and properties of NR/SBR and BR based binary and ternary rubber blends and the influence of carbon black and silica filler distribution on blend properties (PI) | 2014-2016 | 3,00,000 | |

**Consulting experience**

List key consulting assignments undertaken:Recent Projects

|  |  |  |  |
| --- | --- | --- | --- |
| Sl.No. | Client / Organisation's name | Nature of assignment | Duration of assignment |
| 1 | SAID Project | Experimental work | 2017-2018 |
| 2 | ETG Associates, Vadodara, | Experimental work | 2016-2017 |

**a. National Research Projects/Funds:**

* Completed -30
* Ongoing-4

**b. International Research Projects**

* Completed – 7
* Ongoing-2

**c. Industry Supported Projects**

* Du Pont, USA (completed)
* General Cables, USA, (completed)
* Harisson Malayalam, India (completed)
* Apollo Tyres, India (completed)
* MRF Tyres, India(completed)
* **Surface Treat, Czech Republic, (Running)**
* **Plant Lipids Pvt.Ltd, India (Running)**
* **Andani Ventures (Running)**

**Alumni -Ph.D Scholars-India**

|  |  |  |
| --- | --- | --- |
|  | **Name of the Student** | **Thesis Title and Year of Award** |
|  | Dr. Alex T. Koshy | Studies on blends of natural rubber & Ethylene-vinyl copolymer with special reference to effects of crosslinking systems (1992) |
|  | Dr. Kuruvilla Joseph | Short sisal fiber reinforced LDPE composites (1993) |
|  | Dr. Siby Varghese | Studies on short sisal fibre reinforced Natural rubber composites (1994) |
|  | Dr. G. Unnikrishnan | Transport of organic liquids through crosslinked Natural rubber membranes (1997). |
|  | Dr. Zacharia Ommen | Compatibilising effect of Natural rubber-g-Poly (Methyl methacrylate) in Heterogeneous Natural rubber/Poly (Methyl methacrylate) blends (1997) |
|  | Dr. P.P Lizymol | Binary and ternary blends Based on Poly (Vinyl chloride), Poly (Ethylene-co-vinylacetate) and Poly (Styrene-co-acrylonitrile) (1998) |
|  | Dr. Jayamol George | Short pineapple leaf fibre reinforced low density Polyethylene composites (1998) |
|  | Dr. N. Radhakrishnan Nair | Studies on depolymerized Natural rubber (1998) |
|  | Dr. Ashaletha | Studies on thermoplastic elastomers from Natural rubber/Polystyrene and Natural rubber/Polystyrene/Natural rubber-graft-Polystyrene blends (1998) |
|  | Dr. Jyothi T. Varkey | Studies on Natural Rubber (NR) and Styrene Butadiene Rubber (SBR) Latices and their blends (1998) |
|  | Dr. T. Johnson | Transport of small molecules through Natural rubber, Epoxidised Natural rubber and Natural Rubber/epoxidised Natural rubber blends (1998) |
|  | Dr. Hima Varghese | Studies on Acrylonitrile Butadiene Rubber/Poly (Ethylene-co-vinyl/Acetate) (NBR/EVA) blends (1999) |
|  | Dr. Soney C. George | Transport phenomena through elastomers and blends (1999) |
|  | Dr. Snoopy C. George | Thermoplastic elastomers from isotactic Polypropylene/Nitrile rubber blends: Effect of compatibilisation and dynamic vulcanization (1999) |
|  | Dr. G. Kalaprasad | Studies on short sisal/glass hybrid fibre reinforced low Density Polyethylene composites (2000) |
|  | Dr. R. Prasanth Kumar | Short natural fibre reinforced elastomer composites from sisal fibre and Styrene-Butadiene Rubber (2000) |
|  | Dr. C. Radhesh Kumar | Thermoplastic elastomers from Nylon/Acrylonitrile-co-butadiene Rubber blends: The role of compatibilisation and dynamic vulcanisation on blend properties (2000) |
|  | Dr. Aji. P. Mathew | Interpenetrating polymer networks based on Natural rubber and Polystyrene (2000) |
|  | Dr. M.S Sreekala | Oil palm fibres: A potential reinforcement in phenolic resins (2001) |
|  | Dr. Moncy Mathew | Thermoplastic elastomers from blends of Styrenic plastics and Nitrile rubber (2002) |
|  | Dr. C.G. Bandobadhyaya | Dynamic mechanical analysis of multiphase Polymer systems: Application of models (2002) |
|  | Dr. P.V. Joseph | Studies on short sisal fibre reinforced isotactic Polypropylene composites (2002) |
|  | Dr. Abi Santosh Aprem | Studies on the effect of 1-phenyl-2, 4-dithiobiuret as a binary accelerator in elastomers (2002) |
|  | Dr. Laly Pothen | Banana fibre reinforced Polyester composites (2003) |
|  | Dr. K.C Manikantan Nair | Short Sisal fibre reinforced Polystyrene composites (2003) |
|  | Dr. George Mathew | Utilisation of Natural Rubber latex waste as a potential filler in synthetic elastomers and plastics (2003) |
|  | Dr. Asha. E. Mathai | Transport phenomena through membranes of Nitrile Rubber and its blends (2004) |
|  | Dr. Josephine George | Compatibilisation of high density Polyethylene/Nitrile Rubber blends (2004) |
|  | Dr. Susan Joseph | Compatibilisation of Polystyrene/Polybutadiene blends (2004) |
|  | Dr. V.G .Geethamma | Short coir fibre reinforced natural rubber composites (2005) |
|  | Dr. Moly K A | Thermoplastic elastomers from linear low density Polyethylene (LLDPE) and Ethylene vinyl acetate copolymer (EVA) blends (2006) |
|  | Dr. Bejoy Francis | Studies on Epoxy resin systems modified with Ether ketone/Ether sulfone containing polymers (2006) |
|  | Dr. Ranimol Stephen | Studies on the properties of Natural Rubber, Carboxylated Styrene Butadiene Rubber lattices and their blends with micro and nano filters (2006) |
|  | Dr. Seena Joseph | Banana fibre: A potential reinforcement in Phenol Formaldehyde resin (2006) |
|  | Dr. Maya Jacob | Studies on Lignocellulosic fibre reinforced Natural Rubber composites (2006) |
|  | Dr. Sobha V Nair | Polyamide/Polystyrene blends: The role of reactive compatibilisation on blend properties (2007) |
|  | Dr. Seno Jose | Compatibilisation of Polypropylene/high density Polyethylene and Polypropylene/Polyamide 12 blends (2007) |
|  | Dr. Maries Idicula | Banana and Sisal fibre reinforced Polyester composites (2008) |
|  | Dr. Anil Kumar S | Pervaporation diffusion and transport through polymer (2008) |
|  | Dr. Biju John | Morphology and properties of high density Poly ethylene/ ethylene Vinyl Acetate co-polymer blends (2009) |
|  | Dr. Cibi Komalan | Thermoplastic elastomers from Nylon copolymer (PA6, 66) and Ethylene propylene diene rubber (EPDM) blends: Effect of compatibilisation and dynamic vulcanization (2008) |
|  | Dr. Selvin Thomas | Polymer Nanocomposites based on Polystyrene and Ethylene vinyl acetate copolymers (2008) |
|  | Dr. Aju Joseph | Crystallization, morphology and ultimate properties of Polypropylene based Thermoplastic elastomers (2008) |
|  | Dr. Jesmy Jose | Reaction induced phase separation of epoxy/ Styrene co- Acrylonitrile blends: Morphology, structure and properties (2009) |
|  | Dr. Indose Aravind | Miscibility, phase behaviour, mechanics and viscoelastic behaviour of new multi component polymer systems (2009) |
|  | Dr. Sherly Annie Paul | Banana fiber reinforced polypropylene commingled composites (2009) |
|  | Dr. Mary Kutty | Study on accelerators in the vulcanisation of elastomers (2009) |
|  | Dr. Raju Thomas | Miscibility, phase behaviour morphology and mechanical properties of liquid rubbers toughened epoxy resin (2009) |
|  | Dr. Roslin Abraham | Studies on ceramic polymer composites (2010) |
|  | Dr. Shaji Joseph (2010) | Oil palm fiber reinforced natural rubber and nitrile rubber composites (2010) |
|  | Dr. P. C. Thomas | Studies on the properties of nitrile rubber nanocomposites (2010) |
|  | Dr. Meera A.P. | Effect of spherical and layered type fillers on the morphology and physicomechanical properties of Natural rubber nanocomposites (2010) |
|  | Dr. Jayanarayanan K | Studies on microfibrillar based composites (2011) |
|  | Dr. Indira K.N | Studies on fibre reinforced polymer composites (2011) |
|  | Dr. Uma Devi | Pineapple leaf/ glass hybrid fibre reinforced Polyester composites (2011) |
|  | Dr. Viju Susan | Toughening of epoxy resins using liquid rubbers (2011) |
|  | Dr. Anil Kumar P.V. | Diffusion and transport character of EPDM and its blends with HDPE (2012) |
|  | Dr. Jyothish Kumar P | Developments of high performance epoxy resin/engineering thermoplastic blends (2012) |
|  | Dr. M. Kannan | Studies on thermoplastic polyurethanes (Segmented P U) based blends (2012) |
|  | Dr. Eldho Abraham | Studies on bionanocomposites (2013) |
|  | Dr. Poornima Vijayan | Role of nanofillers on processing, morphology and properties of epoxy/carboxyl terminated poly (butadiene-co-acrylonitrile) blends (2013) |
|  | Dr. Hanna J. Maria | Effect of nanofillers on incompatible polymer blends (2014) |
|  | Dr. Runcy Wilson | Morphology and transport characteristics of poly (ethylene-co-vinyl acetate)/clay nanocomposites (2015) |
|  | Dr. Josmine P .Jose | Cross-linked polyethylene based inorganic hybrid nanocomposites (2014) |
|  | Dr. Cintil Jose Chirayil | Development of high performance polymer nanocomposites using cellulose nanofibrils from isora fibers: A wood substitute (2014) |
|  | Dr. Vishak P.M. | Preparation and characterization of bionanocomposites (2015) |
|  | Dr. Sarathchandran C. | Morphology and properties of Polymer blend systems based on Epoxy systems (2015) |
|  | Dr. Anu Tresa Sunny (2016) | Synthesis, Characterization and Physicochemical Studies of Copper Oxide and Calcium Phosphate Based Epoxy Nanocomposites (2016) |
|  | Dr. Sajeev Martin George | Micro and nanostructured thermosetting blends from Epoxy Resin (2016) |
|  | Dr. Srinivasarao Yaragalla | Graphene and Carbon Nanotube Reinforced Elastomer Nanocomposites (2016) |
|  | Dr. Robin Augustine | Design and development of polymer nanocomposites for biomedical applications (2016) |
|  | Dr. Ajesh K. Zachariah | Development of Organically Modified Nanoclay Filled Natural Rubber, Chlorobutyl Rubber and Their Blend Nanocomposites (2016) |
|  | Dr. Jiji Abraham | Liquid Modified MWCNT Based SBR Nanocomposites |
|  | Dr. Nithin Chandran | Polypropylene based blends and composites (2017) |
|  | Dr. Joshy K.S |  |
|  | Dr. Mohammed Arif P | Development of carbon nanotube based polymer blend nanocomposites for electromagnetic interference shielding (2018) |
|  | Dr. Arunima R. | Recyled polyurethane toughened epoxy resin (2018) |
|  | Dr Elizebeth Francis | Design and development of nanocomposite based on poly vinyl chloride system (2018) |
|  | Dr.Deepa B (2018) | Development of Nanocomposites Based on Natural Fibres (2018) |
|  | Dr Maya M G (2019) | Development of high performance graphene/Polychloroprene rubber nanocomposites (2018) |
|  | Dr Preetha Balakrishanan (2019) | Starch based bionanocomposites (2019) |
|  | Dr Jose James (2019) | Development of high performing interpenetrating polymer networks (2019) |
|  | Dr Akhina H (2019) | Study on polyvinyl chloride/graphene nanocomposites (2019) |
|  | Dr Shalini (2019) | Development of elastomeric Nanocomposites (2019) |
|  | Dr.Lakshmi Priya (2019) | Polyhedral Oligomeric Silsesquioxane (POSS) Filled Natural Rubber Nanocomposites (2019) |
|  | Dr Ajitha A R (2019) | Morphology and Properties of Poly (trimethylene terephthalate)/Polypropylene/Carbon Nanotube Blend Nanocomposites (2019) |
|  | Dr.Indu V (2019) | Synthesis and characterizations of metal and metal oxide nano particle/cluster polymer composites for their uses in craniofacial prosthesis and prosthodontic and dental applications (2019) |
|  | Dr.Sandhya P.K (2019) | Graphene/Phenol Formaldehyde Nanocomposites: Synthesis, Morphology and Properties (2019) |
|  | Dr.Eldo Elias (2019) | Development of Biodegradable Polymer Nanocomposites for Various Applications (2019) |
|  | Dr.Ashwathi M.K(2019) | Multiwalled Carbon Nanotube Reinforced Poly (trimethylene terephthalate) and their Blend Nanocomposites |
|  | Dr.Anu (2019) | Morphology, Processing and Properties of Epoxy Resins Modified with Poly-  (Styrene-co-Acrylonitrile) (SAN) and Cloisite 20A |
|  | Dr.Bicy .K(2020) | Microporous Polymeric Membranes as Lithium ion battery srparators |
|  | Dr.Sandhya Gopalakrishnan (2020) | Development and characterization of engineered metal and metal oxide nanoparticle/ cluster polymer composite for prosthodontic application |
|  | Dr Rajkumari Rajendran | Dietary Supplements and Nutraceutical formulations- |
|  | Dr.Merin Sara Thomas | Studies on Electrospun Chitosan and its Composites |
|  | Dr.Sharika T | Role Of Multiwall Carbon Nanotubes On The Morphology, Rheology And Properties Of Natural Rubber/Polypropylene Blends |

**Alumni -Ph.D Scholars-International**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Dr. Aneesa Padinjakkara | The role of modified nano fumed silica and nanocellulose in epoxy based polymer blend | Deakin University , Australia | 2020 |
|  | Dr Joby Jacob | Cellulose nanofibers isolation from ginger rhizomes and preparation of its nanocomposites to enhance mechanical strength and their characterization, antimicrobial activities, magnetite incorporation and copper (II) removal abilitie | Politechnika Gdańska, Poland | 2020 |
|  | Dr Sajith Rahman | Development of Flexible Thermoplastic Elastomer Composition for Neutron Shielding Application | Universiti Teknologi MARA, Malaysia | 2020 |
|  | Dr Jemy James | Refractive index engineering using polymernanocomposites. | University of South Brittany, France. | 2019 |
|  | Dr Sari P.S | Effect of plasma modification of Polyethylene on natural fiber composites | Czech Technical | 2019 |
|  | Dr.Praveen Kosappallyillom | Plasma modified polypropylene (PP) / Coir fibre composites for automobile applications | University of South Brittany, France. | 2017 |
|  | Dr Sreeraj Gopi | Research on polymer and rubber recycling.-Polymer nanomaterials, composites, nanocomposites polyurethane adhesives and foams: | Gdansk University of Technology, Poland | 2017 |
|  | Dr.[Yasir BeeranPottathara](http://www.theses.fr/229944892) | Graphene based Composites with Cellulose Nanofibrils for Energy storage applications | University of South Brittany, France. | 2018 |
|  | Dr.[Deepu Ambika Gopakumar](http://www.theses.fr/230810667) | [Nanocellulose Based Functional Constructs for Clean water and Microwave Suppression](http://www.theses.fr/2017LORIS469) | University of South Brittany, France. | 2018 |
|  | Dr.Sneha Mohan | Green synthesis, characterization and applications of CdSe based Core-shell quantum dots and silver nanocomposites | Cape Peninsula University of Technology, South Africa | 2016 |
|  | Dr.[AparnaBeenaUnni](http://www.theses.fr/197703941) | Structuration and glass transition temperature of the adsorbed polymer layer : some insights in the property deviations of the ultra-thin polymer film | University of South Brittany, France. | 2016 |
|  | Dr.HarinarayananPulliyial | Plasma selective etching of polymeric materials | Jozef Ste-fan Institute, Slovenia | 2016 |
|  | Dr.DeepalekshmiPonnamma | Development of high performance materials based on smart elastomer nanocomposites | Deakin University, Australia | 2014 |
|  | Dr.[NeethuNinan](http://www.theses.fr/167368648) | [Synthesis, characterisation and biological evaluation of tissue engineering scaffolds for wound healing](http://www.theses.fr/2013LORIS306) | University of South Brittany, France | 2013 |
|  | Dr.[Kishor Kumar Sadasivuni](http://www.theses.fr/168212064) | [Development of high performance Poly (isobutylene-co isoprene) nanocomposites for mechanical, sensing and barrier applications](http://www.theses.fr/2012LORIS271) | University of South Brittany, France | 2012 |

**Post DoctoralFellowoships Sanctioned**

|  |  |  |  |
| --- | --- | --- | --- |
|  | Name | Funding agency | Order number |
|  | Dr.BindhuPanampally | DST-SERC | SR/FTP/CS-47/2006 |
|  | Dr. K R Chithra | DST-WoS-A | SR-WoS-A/CS 39/07 |
|  | Dr.Giable George | UGC-DSK | F4-2/2006(BSR)/13-462/2011 |
|  | Dr. Mahesh S | UGC-DSK | F4-2/2006(BSR) /13-539/2011 |
|  | Dr.Sreekanth J Varma | UGC-DSK | F4-2/2006(BSR) /13-959/2013 |
|  | Dr. Kajal Ghosal | UGC-DSK | F4-2/2006(BSR)/13/874/2013 |
|  | Dr. N Angulakshimi | UGC-DSK | F4-2/2006(BSR) /13-1123/2013 |
|  | Dr. Hanna J Maria | UGC-DSK | F4-2/2006(BSR) /13-14/0174 |
|  | Dr.Praveen Govind | UGC-DSK | F4-2/2006(BSR) /13-14/0435 |
|  | Dr. Jiya Jose | UGC-DSK | F4-2/2006(BSR)/BL /14-15/0016 |
|  | Dr. Obey Koshy | UGC-DSK | F4-2/2006(BSR)/PH/13-14/0052 |
|  | Dr.Sravanthi L | UGC-DSK | F4-2/2006(BSR)/EN/15-16/0020 |
|  | Dr.Asha Krishan | UGC-DSK | F4-2/2006(BSR)/EN/14-15/0030 |
|  | Dr.ProsenjithSaha | UGC-DSK | F4-2/2006(BSR)/CH/14-15/0113 |
|  | Dr.Suvendu Manna | UGC-DSK | F4-2/2006(BSR)/CH/15-16/0004 |
|  | Dr.Dhanya K R | M G University | Uo. No.4412/AVI/2/PDF/2016/Acad |
|  | Dr.Jayalakshmy M S | UGC-DSK | F4-2/2006(BSR)/PH/15-16/0111 |
|  | Dr.Renji R Reghu | UGC-DSK | F4-2/2006(BSR)/CH/15-16/0203 |
|  | Dr.KanchanUpaadhyay | SERB-NPDF | PDF/2017/000095 |
|  | Dr.Praveen GL | SERB-NPDF | PDF/2017/001196 |
|  | Dr.Sanal P Sebastian | SERB-NPDF | PDF/2016/004115 |
|  | Dr.Ajith | KSCTE-PDF | PDF/2016 |

**Awards and Prizes Received by the Research Group**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl.**  **No** | Award | Authors | Paper | |
|  | Young Scientist Award in Kerala Science Congress, 1993 for the best paper in Engg Sciences. | S. Varghese, B. Kuriakose, S. Thomas | Effect of acetylation of sisal fiber bonding agent on mechanical properties of natural rubber/short fiber composites | |
|  | Young Scientist Award in Kerala Science Congress, 1993 for the best paper in natural resources utilization | K. Joseph,C.Pavithran, S. Thomas | Sisal/PE composites: Effect of fiber length orientation | |
|  | Shankar Lal Memorial Lecturer Award, 1993 IIT, Kharagpur | G. Unnikrishnan,S. Varghese, S. Thomas | Diffusion transport of aromatic hydrocarbon through natural rubber | |
|  | Best poster presentation award in Polymer'94 Vadodara, 1994. | G. Unnikrishnan, S. Thomas | Diffusion transport of aromatic hydrocarbon through natural rubber | |
|  | Shankar Lal Memorial Lecturer Award, 1994 IIT, Kharagpur | Z. Oommen, S. Thomas, M.R.G Nair | Compatibilizing effect of natural rubber-g-poly(methyl methacrylate natural rubber/poly (methyl methacrylate) blends | |
|  | Shankar Lal Memorial Lecturer Award, 1994 IIT, Kharagpur | J. George, S. Thomas, K.T. Varughese | Morphological properties of high-density polyethylene nitrile rubber blends | |
|  | Young Scientist Award in Kerala Science Congress, 1994 for the best paper in Natural Resources Utilization | V. G. Geethamma, S. Thomas | Short coir fiber reinforced natural rubber composites | |
|  | Shankar Lal Memorial Lecturer Award, 1995 IIT, Kharagpur | Aji P. Mathew, S. Thomas | Transport of styrene through cross-linked natural rubber | |
|  | Young Scientist Award in Indian Science Congress, 1995,Calcutta for the best paper presentation in Material Science. | V. G. Geethamma, S. Thomas | Effect of Surface treatment on the properties of NR-coir composites | |
|  | Young Scientist Award in Indian Science Congress, 1995,Calcutta for the best paper presentation in Engineering Science | Josephine George, K.T. Varughese, S. Thomas | Impact properties of compatibilized blends of polyethylene/nitrile rubber | |
|  | Young Scientist Award in Indian Science Congress, 1996, Patiala, Punjab, for the best paper presentation in Material Science. | R. Asaletha M. G. Kumaran, S. Thomas | Natural rubber/polystyrene blend Interfacial activity of NR-graft-PS | |
|  | Young Scientist Award in Indian Science Congress, 1996, Patiala Punjab, for the best paper presentation in Material Science. | Siby Varghese, Baby Kuriakose, S.Thomas | Design & Development of electronic timer belt from NR-sisal fiber composites | |
|  | Young Scientist Award in Indian Science Congress, 1996, Patiala Punjab, for the best paper presentation in Chemistry. | G. Unnikrishnan & S. Thomas | Pervaporation of organic solvents through crosslinked natural rubber membranes | |
|  | Young Scientist Award in Kerala Science Congress, 1996 Cochin for the best paper presentation in Engineering Science. | Monsy Mathew, K.N. Ninan, S. Thomas | Development of Nitrile rubber/styrene plastics based thermoplastic elastomers | |
|  | Charles Goodyear Memorial Quiz Competition held at IIT, 1996, Kharagpur | R. Prasanthakumar, Josephine George | Polymer Science & Technology | |
|  | Best Paper Award for the Annual Conventional of Chemists, Tamilnadu | R. Prasanthakumar, S. Thomas | Sisal fiber reinforced rubber composites | |
|  | Young Scientist Award in Indian Science Congress, 2000, Pune for the best paper presentation in Engineering Science | Abi Santhosh Aprem, S. Thomas | Accelerated sulfurvulcanization of natural rubber using DTB/TBBS as a novel binary system | |
|  | Best paper award in a National Level Technical Symposium ELASTOFEST `99`, held at Chennai | M. S. Sreekala, S. Thomas | Oil Palm fiber reinforced Phenol Formaldehyde composites for high impact applications: Influence of fiber surface modifications on the mechanical performance | |
|  | Vasudeva Award | Z. Oommen, S. Thomas | Best Project on natural resources (Investigators: Z. Oommen, S. Thomas) | |
|  | Second Prize in the Technical seminar CRESMER 2000 held at Chennai | Bejoy Francis, S. Thomas | Epoxy resin/engineering thermoplastic blends | |
|  | Young Scientist Award in Indian Science Congress, 2001, Delhi for the best paper presentation in Engineering Science | Soney C. George, S. Thomas | Molecular transport of aromatic hydrocarbons through nylon-6/ ethylene propylene rubber blends: Relationship between phase morphology and transport characteristics | |
|  | Young Scientist Award in Indian Science Congress, 2003, Bangalore for the best paper presentation in Materials Science | Sobha V. Nair, S. Thomas | Influence of processing parameters in the phase morphology development of Nylon-6/PS blends | |
|  | Young Scientist Award in Indian Science Congress, 2008, Calicut for the best paper presentation in epoxy rubber blends | Jesmy Jose, S. Thomas | Epoxy/ rubber blends | |
|  | Academic excellence award 2009 from AKRSA, (M.G.University Unit). | JyotishkumarParameswaranpillai, S. Thomas | Thermal and mechanical properties of poly(acrylonitrile butadiene styrene)modified epoxy/amine systems. | |
|  | The best presentation award, UGC contest for the best paper presentation, Mamo, Calicut,2007. | Jyotishkumar Parameswaranpillai, S. Thomas | Morphology and thermal properties of ABS modified Epoxy/DDS blends | |
|  | Nominated for the Young Scientist Award, Govt of Kerala. India 2008 (Kerala Science Congress) | Jyotishkumar Parameswaranpillai, , S. Thomas | New binary and tertiary phase morphologies in ABS modified epoxy/DDS blends |
|  | Best poster award-Presented poster in Plast - India International Conference, New Delhi, 2009 | Jyotishkumar Parameswaranpillai, S. Thomas | Complex phase separation in ABS modified epoxy/DDS blends generation of new micro and nano substructures. | |
|  | Best poster award- International conference, ICMST October 29-31, 2010 Trivandrum (IIST). | Jyotishkumar Parameswaranpillai, S. Thomas | Thermal and mechanical properties of poly(acrylonitrile butadiene styrene)modified epoxy/amine systems. | |
|  | Selected as an invited speaker for the "Polymer Conference for Young Researchers (PCYR-14)” held at CSIR-NIIST | Deepalekshmi Ponnamamma, S. Thomas | Elastomer nanocomposites | |
|  | Best poster award, International Conference on Membranes (ICM-2013) | Robin Augustine, S. Thomas | Tissue engineering | |
|  | Best poster presentation at Second International Conference on Nanomaterials: Synthesis, Characterization and Application India- 2013 | Robin Augustine, S. Thomas | Tissue engineering | |
|  | Best Poster Presentation Award -International Conference on Advanced Nanocomposite for Construction Materials (ICNC-2013) 2013 | Robin Augustine, S. Thomas | Tissue engineering | |
|  | Best Paper Award,National Seminar On Advanced Polymer Materials(SCENTIA) | Runcy Wilson, S. Thomas | EVA/clay nanocomposites | |
|  | Best Poster Presentation Award,National Seminar on Recent Advances in Polymer Science and Technology-2012 | Deepalekshmi Ponnamamma,S. Thomas | Natural rubber/CNT nanocomposites | |
|  | Best Oral Presentation Award,National Conference on Nanostructured materials and Nanocomposites (NCNM) 2012 | Deepalekshmi Ponnamamma, S. Thomas | Natural rubber/CNT nanocomposites | |
|  | Young researcher award, the international conference on ‘Functional Polymers 2011’ | Cintil Jose, S. Thomas | A cost effective approach for the development of cellulose nanowhiskers | |
|  | Best paper award, National Seminar on ‘Emerging Trends in Chemistry’ 2012 | Cintil Jose, S. Thomas | Novel approach to the development of cellulose nanowhiskers from Isorafiber | |
|  | Best oral presentation award -International Conference on Tissue Engineering and Regenerative Medicine (ICAPM-2013) National Institute of Technology, Rourkela, Odisha | Robin Augustine, S. Thomas | Biomedical | |
|  | Best poster award-Bioradiance 2014 (National level seminar), organized by the Pushpagiri Research Centre, Tiruvalla, Kerala | Robin Augustine, S. Thomas | Biomedical | |
|  | Best Oral Presentation - International Conference On Plasma Science And Nanotechnology, & 29th National Symposium On Plasma Science And Technology | Jemy James­, S. Thomas | Plasma Science | |
|  | Third prize for poster presentation,2nd International Conference on Nano Materials(ICNM)2014 | Robin Augustine, S. Thomas | Biomedical | |
|  | Best Oral Presentation Award -National Seminar on Material Science and Modern Analytical Techniques on 26th&27th of  March 2014 | Preetha Balakrishnan, S. Thomas | Fully  Biodegradable Potato Starch Composites: Effect Of Nano Fiber Reinforcement On Mechanical  And Water-Sorption Characteristics | |
|  | Best Oral Presentation Award, National Seminar On Biopolymers And Green Composites (BPGC-14) | Dr.Praveen.G, S. Thomas | Biomedical | |
|  | Best Oral Presentation Award, National Seminar On Nanochemistry And Nanobiotechnology (Nanochembio-14) | Dr.Praveen.G, S. Thomas | Biomedical | |
|  | EUPHRATES Erasmus Mundus scholarship by the European Union from Institution: University of Maribor, Slovenia | Sreerag Gopi, S. Thomas | Bionanocomposites | |
|  | Best Paper Award - National Seminar on Nanostructured Materials (NSM2014) | Jiji Abraham , S. Thomas | Elastomer nanocomposites | |
|  | Best Paper Award,National Seminar On Advanced Polymer Materials(Hesperos 2015) | Jiji Abraham , S. Thomas | SBR/CNT nanocomposites | |
|  | Best Poster Prize International Conference On Holistic Medicine -ICHM 2015 | Blessy Joseph, S. Thomas | Cordyceps- a potent antidote for cancer | |
|  | Best Poster Presentation Award (Prof. D.M. Vasudevan Award),In Bioradiance-2015 'National Conference On Frontiers In Diabetic Research and Treatment' | Praveen.G, S. Thomas | Biomedical | |
|  | Best Oral Presentation Award, UGC Sponsored National Seminar On “Emerging Trends In Nanomaterials” | Praveen.G, S. Thomas | Biomedical | |
|  | Best poster award -Deakin India Research Initiative – International Symposium on Translational Research 2015 | Aneesa .P, S. Thomas | Epoxy nanocomposites | |
|  | Best paper award,28th Kerala Science Congress,2016 | Praveen.G, S. Thomas | Biomedical Engineering | |
|  | Best Poster award, ICPPC,2016 | Jiji Abraham , S. Thomas | Rubber Nanocomposites | |
|  | Best paper award,KETCON | Jiji Abraham, S. Thomas | Basic Engineering Track | |
|  | Best paper award  Biomedical Engineering Track | Praveen G | Biomedical Engineering | |
|  | Best poster award  International Conference on Biomaterials For Tomorrow 2018 | AvinashPai,S. Thomas | Nanocellulose | |
|  | Best poster award (Recent Trends in Materials Science and Technology conducted by MRSI ) | Remya Vasudevan, S. Thomas | Epoxy nanocomposites | |
|  | Best poster award –31stKerala Science Congress. | Avinash R Pai | Enginering and Technology Section | |
|  | Best Paper Award (National Conference on Changing Trends in Polymer Science and Technology (CTPST-2021)) | Blessy Joseph | Insights into the biomechanical properties of 3D printed scaffolds | |
|  | Best poster award –33rd Kerala Science Congress | Abitha V K | Carbon black distribution in rubber blends. | |

**Membership in Professional Bodies:**

* Member of American Chemical Society (Rubber Division)
* Royal Society of Chemistry (Membership number: 473990)
* Honorable member of IMTCE Loyalty Award Clubtyuis(Membership Number-IMTCE-LC-017)
* Member of Indian Membrane Society
* Member of Polymer Society of India
* Member of Society of Disordered Materials
* Member of Society of Polymer Technologists, University of Cochin
* Member of Mahatma Gandhi University, Chemical Society
* Fellow of New York Academy of Sciences, USA
* Actively engaged in the People’s Science Movement for the Popularization of science to villages and rural areas
* Director-Nanomedicine, Centre for Biomaterials, Cellular and Molecular Theranostics (CBCMT),VIT –Vellore
* Quarterly Franklin Membership" (Membership ID#KI16599).London Journal of Research in Science: Natural and Formal (LJRS)
* Fellow of International Academy of Physical Sciences (IAPS)
* Foreign Fellow of the European Academy of Sciences (EurASc)

**Collaborating Institutes:**

**a) In India**

* Dept of Materials Engineering, Indian Institue of Science (IISc), Banglore
* Rubber Research Institute of India, Kottayam, Kerala, India - 686 009
* NIIST, Trivandrum, Kerala, India - 695 012
* Central Power Research Institute, Bangalore, India - 56094
* Vikram Sarabhai Space Research Centre, Trivandrum, India
* Rubber Technology Centre, Indian Institute of Technology, Kharagpur, India
* Polymer Chemistry Division, National Chemical Laboratory, Pune, India
* Sree Chitra Thirunal Institute of Medical Sciences and Technology, Trivandrum, Kerala, India
* Central Institute of Plastic Engineering and Technology, Guindy, Madras, India
* Department. of Polymer Science & Rubber Technology, Cochin University of Science & Technology, Cochin - 22, Kerala, India
* Indian Institute of Chemical Technology, Hyderabad, India
* Laboratory of Condensed Matter Physics, Department of Physics, University of Rajasthan, Jaipur, India
* Reliance Industries Limited, Maker Chambers IV, 3rd Floor, 222, Nariman Point, Bombay
* Elastomers Technical Services, Madurai, India
* High Polymer Engineering Division, Department of Chemical Engineering, Indian Institute of Technology, Madras, India
* Department of Chemistry, Karnatak University, Dharwar, Karnataka, India
* Department of Civil Engineering, Indian Institute of Technology, New Delhi, India
* Common Facility Service Centre, Industrial Estate, Changanacherry, Kottayam, Kerala, India
* Department of Physics, University of Mysore, Mysore
* MRF Tyres Ltd, Chennai
* Apollo Tyres Ltd, Vadodara

**b) Abroad**

* Macromolecular Science & Engineering Research Centre, Laval University, Quebec, Canada GIK7P4. (Prof. Prud ’homme)
* Abt. Kunststoffee/Verbundwerkstoffe, TU Hamburg-Harburg, AB 5-09, Denickestraβe 15, D-21073 Hamburg, Germany (Prof. V. Alstädt)
* Technische Universitat Chemnitz, Polymerchemiie, Straβe der Nationen 62, 0911 Chemnitz, Germany (Prof. Steffan Spange)
* Directeur de ENSCCF, 24 avenue des Lais, BP - 187 - 63174 Aubiere, Cedex, France (Prof. Jacques Lacoste)
* Laboratory of Macromolecular Structure Chemistry, Department of Chemistry, Katholieke University of Leuven, Belgium (Prof. Gabriel Groninckx)
* Martin-Luther-Universitat Halle Witenberg, FB Physik, Fridemann-Bach Platz 6, 06108, Halle, Germany (Prof. Manfred Knorgen)
* Assoc. Prof. of Polymer Physics, University of Chemical Technology Metallurgy, 8, KilmentOhridski Blvd., 1756 Sofia, Bulgaria (Dr. Christo Betchev)
* Institute of Material Science & Technology, Martin-Luther-Universitat, Halle-Wittenberg, Postanschrift D-06099 Halle, HaussanschriftGeusaerStraβe, Germany (Prof. (Dr.) Ing. Hans-Joachim Radusch)
* Institute of Composite Materials Ltd., University of Kaiserslautern, Kaiserslautern, Germany (Prof.(Dr.) Jozef Karger Kocsis)
* Institute of Polymer Research, Hohe Strasse 6, D- 01069 Dresden, Germany (Prof. Manfred, Stamm, Dr. Jurgen Pionteck, Dr. Petra PoetschkeDr. Cornelia Bellman)
* CNRS Lab, Laboratoire de Recherche surles, Polymers, UMR 7581- CNRS, 2-8 rue Henri Dunant, 94320 Thiais, Paris, France (Prof. (Dr.) Francoise Laupretre)
* R&D, Du Pont, Wilmington, Delaware, USA (Dr. Joseph V. Kurian)
* Institut des Matériaux de Rouen, faculté des sciences, BP12, 76801 Saint Etiennedurouvray, responsable de LECAP, équipe de l'UMR6522 Polymères-Biopolymères-Membrane, France (Prof. Jean Marc Saiter)
* Laboratoire L2PIC, University of South Brittany, Rue Saint Maude, Lorient Cedex, France (Prof. Yves Grohens)
* PolymersNanotextures&Nanocomposites, Centre de Recherche sur la Matiere Divisee1B, rue de la Ferollerie, 45071 Orleans Cedex 2, France (Dr. Christophe Sinturel)
* Beijing University of Chemical Technology International Exchanges and Cooperation Dept, Add. No.15 Beisanhuan East Road, Beijing 100029,P.R.China (Dr.Yang Weimin)
* Thermal lab, UIT, University of Paris 12, Creteil Campus, France( Prof. Dr.YvesCandau and Prof. Dr. Abdel Boudenne)
* Department of Chemical Engineering, CIT, Katholieke University of Leuven, Belgium (Prof. Paula Mouldnaers)
* CNRS, Strasbourg, France, (Prof. Dr. Rene Muller)
* Department ofChemistry, Walter SisuluUniversity, Mthatha, South Africa. (Dr.Oluwatobi S Oluwafemi)
* Department of Chemical Engineering, Katholieke University of Leuven, Belgium (Prof.Dr. Paula Moldnaers)
* Jozef Stefan Institute, Ljubljana, Slovenia ( Prof. Miran, Prof. Dr. Uros Cvelbar)
* General Cables, Indianapolis, USA (Dr. Vijay)
* University Technology Mara (UiTM), Malaysia (Dr. Chan Chin Han)
* Chemistry Institute, Federal University of Uberlandia−UFU, Av. João Naves de Ávila, 2121, Campus Santa Mônica, Bloco 1D, 38400-902, Uberlândia-MG, Brazil. (Prof. Daniel Pasquini)
* Universidade Federal do TriânguloMineiro (UFTM), Av. DoutorRandolfo Borges, 1400, Secretaria do ICENE−SALA 109,Uberaba, MG, Brazil. ( Prof. Luis Carlos)
* Université Cheikh Anta DIOP de Dakar ,Senegal, (Prof.CoumbaThiandoume and Prof Modou Fall)
* Siberian Federal University,Russia (Prof.TatianaVolova)
* Institut Jean Lamour, Université de Lorraine(Prof Didier Rouxel)
* IMT Mines Albi France (Prof Ange Nzihou)

**Reviewer for International Refereed Journals:**

**ACS Journals:**Macromolecules, Biomacromolecules,ACS Applied Materials & Interfaces, ACS Sustainable Chemistry &Engineering,Langmuir, ACS Omega

**RSC Journals:** Physical Chemistry Chemical Physics, RSC Advances

**Wiley Journals:**Polymer Composites, Journal of Biomedical Materials Research Part A, Advances in Polymer Technology, Polymer Engineering & Science, Polymer International,

**Elsevier Journals:**Advanced Drug Delivery ReviewsApplied Surface Science  
apt: Advanced Powder Technology: Arabian Journal of Chemistry: Biomaterials: Biosensors and Bioelectronics: Bioresource Technology: Biotechnology Reports: CARBON: Carbohydrate Polymers: Ceramics International: Chemical Engineering Science: Applied Clay ScienceColloids and Surfaces A: Physicochemical and Engineering Aspects: Colloids and Surfaces B: Biointerfaces: Composites Part A: Composites Science and Technology: Egyptian Journal of Basic and Applied Sciences: European Polymer Journal: Food and Chemical Toxicology t: Journal of Hazardous Materials: International Journal of Biological Macromolecules: International Journal of Pharmaceutics: Industrial Crops and Products: Biomass and Bioenergy: Journal of Colloid and Interface Science: Composites Part B: Journal of Environmental Chemical Engineering: Materials and Design: Polymer: Journal of Saudi Chemical Society: Materials Chemistry and Physics;MembraneScience;MaterialsLetters;Materials Science and Engineering C; Nanomedicine: Nanotechnology, Biology, and Medicine; Polymer Degradation and Stability; Progress in Materials Science  
Sensors & Actuators: A. Physical; Sensors & Actuators: B. Chemica: Surface and Coatings Technology

**Springer Journal :** Critical Reviews in Environmental Science and Technology;Fibers and Polymers; Cellulose; Polymer Bulletin; Archives of Physics Research;Emergent Materials; Journal of Thermal Analysis and Calorimetry; Journal of Polymers and the Environment; Colloid and Polymer Science; Macromolecular Research;International Journal of Plastics Technolog;Polymer Science, Series D;PolymerBulletin;Journal of Polymer Research;Polymer Science, Series C;Fibers and Polymers;Iranian Polymer Journal;ColloidJournal;Polymer Science, Series B;Polymer Science, Series A; Polymer Science;Fibre Chemistry

**IOP Publishing:** Nanotechnology, Materials Research Express, Journal of Physics D: Applied Physics, Measurement Science and Technology,

**SAGE Journals:**Journal of Industrial Textiles,

**MDPI Publisher:**Biosensors, International Journal of Molecular Sciences, Materials, Polymers

**Future Science Group:**Nanomedicine,

**Scientific Research Publishing**

**Academic Referee for Universities and Funding Agencies:**

* University of Sains, Malaysia
* University of Calcutta, Calcutta, India
* University of Rajasthan, Jaipur, India
* DST, India
* DBT, India
* CSIR, India
* NRF, South Africa
* REPRISE,Italian Ministry of Education
* Polish Academy of Sciences
* DST/NSF
* Slovenian Research Agency (ARRS)
* Pole of Innovation Grant Scheme,Mauritius

**Editorial Board Memberships**

* SM Journal of Nanotechnology and Nanomedicine
* Nano Advances
* Materials Science and Engineering (Editorial Key Reviewers Committee)
* International Journal Of Advances In Engineering Research
* World Journal of Biotechnology
* Journal of Emerging Materials Technology
* Associate Editor, Bulletin of Materials Science
* Regional Editor - Current Smart Materials
* Editor in-Chief of Editorial Board-International Journal of Science World (IJSW)
* Editorial Member -Flat Chem, Elsevier
* International Advisory Board (IAB) for the Springer Nature, Book Series Gels Horizons: From Science to Smart Materials
* Editorial Review Board Member - International Journal of Surface Engineering and Interdisciplinary Materials Science
* Editorial Member -[Journal of Molecular and Applied Bioanalysis](http://clytoaccess.com/journal-molecular-and-applied-bioanalysis)
* Editorfor the Journal Nano-Structures & Nano-Objects .Elsevier /Global STM Journals
* Editorial Board Member for the Journal of Powder Metallurgy &Mining
* Editorial Board Member for the [Acta Materialia Turcica](http://dergipark.gov.tr/actamat) (ActaMAT)
* Editorial Board Member for- SciFed Journal of Petroleum
* Co-Editor-in-Chief ,International journal, ’Functional Composites and Structures’, Korean Society of Composite Materials (KSCM)
* Editorial Board Member  Advances in Higher Education,Director of Editorial Office,Universe Scientific Publishing
* Editorial board Member - Nigerian Journal of Materials Science and Engineering.
* Editorial Advisory Board member. ACS Macromolecules
* Editorial/Reviewer Board Member- JSM Clinical Research in HIV and AIDS
* Senior Editor Advanced Applied Materials, Sweden
* Editorial Board Member, Journal of Traditional Medicine & Clinical Naturopathy
* Editorial Board Member,International Journal of Nanoparticles & Nanotechnology
* Editorial Board Members,Journal of Materials Science
* Editorial Board of Journal of Chemical Engineering and Materials Science
* Associate Editorial Board member in our Cohesive Journal of microbiology & infectious disease (ITERM)
* Editorial Board of ASTM's Journal of Materials Performance and  
  Characterization (MPC)
* International Journal of Nanotechnology and Nanomedicine Research of Clyto Online Publishing Inc
* Editor-in-Chief -Asian Journal of Nanoscience and Materials
* Editorial Board - Emergent Materials, Springer

**Conferences Organised (2005-2019)**

1. First International Conference on Polymer Blends and Composites,ICBC-2005,March 21-23 ,51, 2005.School of Chemical Sciences, Mahatma Gandhi University, Kottayam, Kerala, INDIA
2. International Conference on Natural polymers-2007,ICNP-2007,November 19-21, 2007, Mahatma Gandhi University, Kottayam, Kerala, INDIA
3. International Conference on Advanced Materials-2008, ICAM-2008,School of Chemical Sciences, Mahatma Gandhi University, Kottayam, Kerala, INDIA
4. Second International Conference on Polymer Blends and Composites-2008,ICBC-2008, September 22-24, 2008, Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
5. International Conference on Nano Materials -2009ICNM-2009April 6-8,2009, Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
6. National Workshop on Synthesis and Applications of Nanometarials-2010, NWNM-2010,Nanoscience and Nanotechnology,12-14 January 2010)Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
7. First international Conference on Nanostructured Materials and Nanocomposites (ICNM 2009) April 6-8, 2009.Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
8. First International Conference on Nanomaterials (ICN 2010) April 27-29, 2010.Mahatma Gandhi University, Kottayam, Kerala , INDIA**(Convener)**
9. Second International Conference on Polymer Processing and Characterization (ICPPC – 2010) January 15, 16 and 17, 2010,Mahatma Gandhi University, Kottayam, Kerala, INDIA**(Convener)**
10. International Conference on Nanomaterials: Synthesis, Characterization and Applications (ICN 2010) held on April 27-29, 2010,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
11. First International Conference on Composites and Nanocomposites (ICNC 2011): January 7, 8 and 9, 2011, Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
12. Second International Conference on Recycling and Reuse of Materials (ICRM 2011) 5-7 August 2011, Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
13. First International Conference on Plasma Processing of Organic Materials and Polymers (PPOMP 2011) 25-27 November 2011,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
14. Third International Multicomponent Polymer Conference (IMPC 2012) 23-25 March 2012,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
15. The First Indo-US International Conference on Polymers for Packaging Applications (ICPPA 2012), 31st March – 2nd April 2012,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
16. Second International Conference on Nanomaterials - Synthesis, Characterization and Applications (ICN – 2012) 13-15, January 2012,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
17. Third International Conference on Natural Polymers (ICNP 2012) 26-28 October 2012,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
18. The India-Israel Meeting On Material science And Nanoscience, (Iimmn-2013) , 31st January to 1st February 2013,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
19. First International Conference on Advanced Nanocomposites for Construction Materials (ICNC 2013) 12-14 March 2013,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
20. Third Euro-India International Conference on Nanomedicine and Tissue Engineering (ICNT 2013) 9-11 August 2013,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
21. Seminar on Polymers and Environment, 4th September 2013,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
22. International Conference on Advanced polymeric materials (ICAPM 2013) 11-13 October 2013,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
23. Third International Conference on Recycling and Reuse of Materials (ICRM 2014) held on 11-13 April 2014Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
24. First World Conference on Fracture and Damage Mechanics (FRACTURE 2014) 9-11 August 2014Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
25. Third International Conference on Polymer Processing and Characterization (ICPPC 2014) 11-13 October 2014,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
26. 29th National Symposium on Plasma Science & Technology (PLASMA 2014) 8-11 December 2014,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
27. Second International Conference on Nanostructured Materials and Nanocomposites (ICNM 2014) 19-21 December 2014,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
28. Fourth International Conference on Natural Polymers and Biomaterials (ICNP 2015) 10-12 April 2015,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
29. World Congress on Microscopy (WCM 2015) 9-11 October 2015,Mahatma Gandhi University, Kottayam, Kerala INDIA
30. International Conference on Nanostructured Polymeric Materials and Polymer Nanocomposites (ICNPM 2015) 13-15 November 2015,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
31. First International Conference on Advanced Materials for Power Engineering (ICAMPE 2015) 11-13 December 2015,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
32. International conference on Macromolecules: Synthesis, Morphology, Processing, Structure, Properties and Applications (ICM-2016) 13-15 May 2016,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
33. Fourth International Conference on Nanomedicine and Tissue Engineering (ICNT 2016) 12-14 August 2016,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
34. Second International Conference Advanced Materials for Power Engineering (ICAMPE 2016) 11-13 November 2016,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
35. Fourth International Conference on Polymer Processing and Characterization (ICPPC 2016) 9-11 December 2016,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
36. Fourth International Conference on Nanostructured Materials and Nanocomposites (ICNM 2017) 10-12 February 2017),Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
37. Second International Conference on Advanced Polymeric Materials (ICAPM 2017) 7-9 April 2017,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
38. Euro-India International Conference on Experimental and Clinical Medicine (ICECM- 2017) on 10-12 November, 2017,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
39. International Conference on Molecular Spectroscopy (ICMS 2017) to be held on 8, 9 & 10 December 2017,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
40. Fourth International Conference on Reuse and Recycling of Materials (Polymers, Wood, Paper, Leather, Glass, Metals, Ceramics, Semi Conductors, Water etc) and their products (ICRM – 2018) 9-11 March 2018,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
41. International Conference on Nanomaterials: Synthesis, Characterization and Applications (ICN 2018) to be held on 11, 12 and 13 May 2018,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
42. Second World Congress on Microscopy: Instrumentation, Techniques and Applications in Life Sciences and Materials Sciences (WCM-2018): 10-12 August 2018,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
43. Fifth International Conference on Nanomedicine and Tissue Engineering (ICNT 2018) 12-14 October 2018, Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
44. Sixth International Conference on Natural Polymers, Bio-Polymers, Bio-Materials, their Composites, Nanocomposites, Blends, IPNs, Polyelectrolytes and Gels: Macro to Nano Scales (ICNP – 2018) 7-9 December 2018,Mahatma Gandhi University, Kottayam, Kerala INDIA**(Convener)**
45. Fourth International Conference on Nanomaterials: Synthesis, Characterization and Applications (ICN 2019) on 12, 13 and 14 April 2019 at Mahatma Gandhi University, Kottayam, Kerala, India.**(Convener)**
46. Nano India Mahatma Gandhi University, Kottayam, Kerala on April 26 & 27th, 2019**(CO- PATRON)**
47. International Workshop & Conference on Nutraceuticals, Herbals Supplements and Nano Formulations (ICNH-2019) on 13-15 September, 2019**(Chairman)**
48. Third International Conference on Advanced Materials (ICAM 2019) at Mahatma Gandhi University, Kottayam, Kerala, India on 9-11 August 2019 **(Chairman)**
49. Fifth International Conference on Polymer Processing and Characterization (ICPPC 2019) on 11, 12 and 13 October 2019 at Mahatma Gandhi University, Kottayam, Kerala, India.**(Chairman)**
50. International Conference on  Natural Polymers, Bio-Polymers, Bio-Materials, their Composites, Nanocomposites, Blends, IPNs, Polyelectrolytes and Gels: Macro to Nano Scales (ICNP – 2019) 6- 8 December 2019 at Mahatma Gandhi University, Kottayam, Kerala, India**(Chairman)**
51. International Conference on Liquid Crystals, Liquid Crystalline Polymers and Nanosystems: From Macro to Nano Length Scales (ICLCP 2019) on 13, 14 and 15 December 2019 at Mahatma Gandhi University, Kottayam, Kerala, India**(Chairman & Convenor )**
52. International Conference on Natural Polymers, Bio-Polymers, Bio-Materials, their Composites, Nanocomposites, Blends, IPNs, Polyelectrolytes and Gels: Macro to Nano Scales (ICNP – 2019) 16-18 December 2019, (**Chairman)**
53. First International Online Conference on  Blends, Composites, Bio-Composites and Nanocomposites (ICNC–2020) on 9,10 and 11 October 2020 (**Chairman)**
54. International Online Conference on Macromolecules 13th-15th November 2020- “100 YEARS OF POLYMERSCIENCE – FROM PAST TO FUTURE”( **Chairman)**
55. Fifth International Online Conference on Reuse and Recycling of Materials (Polymers, Wood, Paper, Leather, Glass, Metals, Ceramics, Semi Conductors, Water etc) and their products (ICRM – 2020) to be held from 11,12 and 13 December 2020 **(Chairman)**
56. International Webinar on Advances in Physics, Chemistry, Mathematics, Computer Sciences & Biological Sciences((CONIAPS XXVI) on 18, 19 and 20 December 2020 (**Chairman)**
57. International Online Congress on Membranes and Membrane Assisted Processes (ICMMAP 2021) on 12, 13 and 14 February 2021 at Mahatma Gandhi University, Kottayam, Kerala, India (**Chairman)**
58. International OnlineConference on Nano Materials (ICN 2021) 9-11 April 2021 (**Chairman)**

**Outstanding Contributions of Prof.Thomas and Group**

1. ***Dynamics of phase separation in nano scale polymer blends***

The dynamics of phase separation of the epoxy based nano scale blends was investigated by high resolution scanning electron microscopy (SEM), transmission electron microscopy, atomic force microscopy, and time-resolved light scattering.  *T*he morphologies of the blends showed a wide spectrum of new structures ranging from dispersed to co-continuous type, exhibiting irregular shapes In most cases, the time-resolved light scattering results display clearly that the phase separation takes place according to a spinodal decomposition mechanism and the evolution of scattering vector *q*m corresponding to epoxy droplets follows a Maxwell-type relaxation equation. However, very complex phase separation process was also seen certain blend compositions involving both nucleation and growth and spinodal decomposition. The temperature-dependent relaxation time τ obtained for these blends can be described by the Williams−Landel−Ferry equation. It demonstrates experimentally that the coarsening processes of epoxy droplets and the final morphologies obtained in these thermoplastic−epoxy systems are affected by viscoelastic behavior

1. ***Development of high-performance polymer nanocomposites***

In the area of polymer nanocomposites, Prof.Thomas’ group synthesized several nanofillers and fabricated high-performancenanocomposites based on natural rubber, PS, EVA, NR and epoxy resin. The morphology, mechanical properties, rheology and failure properties of these composites have been carefully analyzed

1. ***Processability-morphology-property relationship in nanostructured polymer blends and nanocomposites***

Processability- structure- morphology- characteristics of a large number of nano scale polymer blends and nanocomposites have been established. .

1. ***Development of nano-scale fiber reinforced green polymer composites***

Cost effective and eco-friendly composite materials have been developed from nano cellulose nano chitin and nano starch based on several polymers. Fundamental investigations have been performed on fiber-matrix interface adhesion, mechanical properties, and viscoelastic behavior.  A new method has been proposed for the estimation of fiber-matrix interface adhesion by analyzing the kinetics of transport of solvents through the composite samples.

1. ***Design of nano scale polymeric membranes for transport and selective separation***

In the area of diffusion and transport, Dr. Thomas has developed several cost effective and trouble free nanocomposite membranes as well as polymer blend membranes for the restricted transport of solvents, vapours, gases and for the selective separation of liquid mixtures. Jointly with Apollo tyres, the group of Prof. Thomas invented new inner liners and inner tubes for auto tyres.

1. ***Development of nano-scale interpenetrating polymer systems***

Prof.Thomas group could do excellent work on the preparation and processing of interpenetrating polymer networks from natural rubber/PS, NR/PMMA and SBR/PMMA. The cross-linked rubber was swollen in styrene or PMMA first, followed by polymerization and crosslinking.

1. ***Dual porous polymer nano-scale scaffolds for tissue engineering***

Very recently electrospinning has been made use of for the development of dual porous new bio-degradable polymer nanocomposites scaffolds for tissue engineering. Biodegradable polymers such as PLA, PHB and polyesters were used for this purpose. Nanofillers such as clay, carbon nanotube are being used.

1. ***Micro and nano fibrillar polymer nano composites from waste plastics***

The group of Prof. Thomas developed a new class of microfibrillar polymer composites from PP/PBT and nylon12/PP blends. Morphology, mechanics, crystallization, dynamic viscoelastic properties have been analyzed as a function of temperature, draw ratio and blends composition.

1. ***Development of a new green adsorbent material from cellulose nanofibers for water purification.***

A new high performance adsorbent material has been developed for the adsorption of positively charged crystal violet dyes from CNFs via a nonsolvent- assisted methodology using Meldrum’s acid as an esterification agent. It is also demonstrated that the Meldrum’s modified cellulose nanofiber-based PVDF nanofibrous membrane can be successfully used to remove the crystal violet dyes and Fe2O3 nanoparticles (with the rejection of over 99%) from the water.

1. ***Self assembled nano scale hybrid filler system for reinforcing polymer systems***

Surface modified hybrid nano-scale fillers were used for the reinforcement of many polymer system where the functional groups present at the filler surface self assemble to form three dimensional net work structure in the polymer system leading to dramatic improvement in the mechanical properties**.**

1. ***Interpenetrating polymer systems***

We could do excellent work on the preparation and processing of interpenetrating polymer networks from natural rubber and PS. The cross-linked rubber was swollen in styrene first, followed by polymerization and crosslinking

1. ***Recycling and reuse of waste rubbers***

In the area of recycling, we have developed a cost –effective technique for the recycling of cross-linked waste rubbers  (prophylactics) obtained from the latex industries

1. ***Synthesis of new accelerators and their use in rubber vulcanization***

A series of accelerators based on 1-phenyl-2, 4-dithiol biuret has been synthesized and their effect on vulcanization has been studied. These accelerators act asanexcellent binary system for the vulcanization of rubbers

**Patents Granted:**

1. [Fibre reinforced composites with toughened epoxy matrix and a process for preparing the same](http://www.sabuthomas.com/wp-content/uploads/2019/05/patent.jpg), Application 940/CHE/2006, published 2007-12-07. Vattikuti Lakshmana Rao, Bejoy Francis, Rajagopal Ramaswamy, KavoorNinanNinan, Sabu Thomas. (Granted)
2. Highly Gas Impermeable Elastomeric Rubber-Rubber Blend Nanocomposites, Patent No. : 317124, Application No. : 135/CHE/2012, Sabu Thomas, Ajesh K. Zachariah, P.K. Mohammad, Arup Kumar Chandra.(Granted)
3. A polymer Nanocomposite,  Process, And Application there-of ,WIPOPublication number: WO2016142848 A1, Publication date: Sep 15, 2016, and Indian patent Application No:  638/DEL/2015 Mohammed Arif P, Sabu Thomas, Nandakumar Kalarikkal
4. MWCNTs reinforced polymer blend nanocompositenof Poly(trimethylene terephthalate) and Polypropylene for EMI shielding application; Patent ApplicationNo:201841003768Ajitha A R, AswathiM K, Dr.SabuThomas, Dr.NandakumarKalarikkal, LovelyMathewP,Geethamma V G Application No. : 201841003768,Date of Filing : 01/02/2018,/ Patentee : Mahatma Gandhi University

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1. Biodegradable, Biocompatible Wound Healing Dressing Film and ointment from the Biocomposite of Marine Origin, Indian Patent application: 840/DEL/2013, M.Kurup, and Sabu Thomas.
2. New Poly(trimethyleneterephthalate) basednanocomposite formulation for EMI Shielding;Patent ApplicationNo:201841003767Aswathi M.K, AjithaA.R , Dr.SabuThomas, Dr.NandakumarKalarikkal,M.Padmanabhan,Lovely P. Mathew 355927
3. Method for improving the comparative tracking index of polymer composites, Indian patent Application No:4239/CHE/2014,HarinarayananPuliyalil, Uros Cvelbar,MiranMozetic, Sabu Thomas.
4. Filler localization in rubberblends for tyre applications; Patent Application No: 201841040330;Dr. Sabu Thomas, Abitha V K
5. Invention of High Performance EMI Shielding Coating From Low Cost Carbon Black with XLPE;Patent Application No: 201841040343;Apparao Gudimalla, Jince Thomas, Dr.Sabu Thomas, Dr.NandakumarKalarrickal, Zakiah Ahmad
6. Nano Cellulose based EMI shields preparation and thereof ;.; Patent Application No: 201841040344;Deepu A Gopakumar, Avinash R Pai, Dr.NandakumarKalarikk al and Dr. Sabu Thomas
7. Flexible polymer nanocomposites for EMI Shielding;Patent Application No: 201841040348;Dr. Sabu Thomas, Agna Joy, Hanna J Maria
8. Designing of Superior Nanodielectric XLPE/Al 2 O Nanocomposite; Prof. Dr. Sabu Thomas Dr.Josmin P. Jose; Patent Application No: 201841040356
9. Solid one dimensional conducting polymer fibers using electrospinning ;Dr.Sanal Sebastian Payyappilly, JayeshCherusseri, Prof. Sabu Thomas, Dr.NandakumarKalarikkal;Patent Application No: 201841040346
10. High K-dielectric modified Multi-walled Carbon nanotube/Poly Vinyl Chloride nanocomposites based on for temperature sensor applications ; Patent Application No: 201841040345;Elizabeth Francis, Dr.SabuThomas,KimJaehwan;
11. Phytochemicals incorporated Dendrimer systems for anticancer drug delivery applications, Patent Application No: 201841040349;Sabu Thomas, Mereena Luke
12. A Sustainable water purification system based on coir fiber coupled with UV treatment; Patent Application No: 201841040341t MeldinMathew,Deepu A Gopakumar, Sayju Karim Andani, Dr.Sabu Thomas

**Books (**[**http://www.sabuthomas.com/books/**](http://www.sabuthomas.com/books/)**)**

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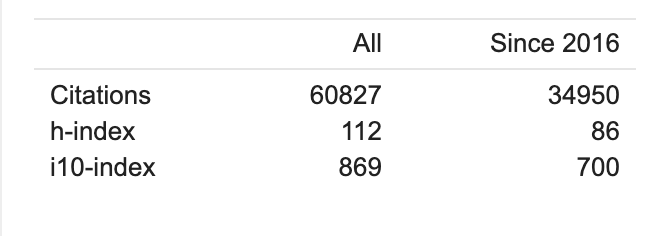
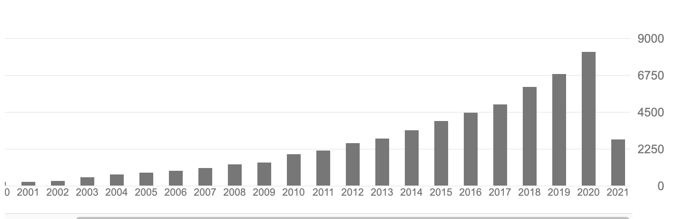
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