Dr. Poornima Vijayan P

Assistant Professor, Department of Chemistry

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**QUALIFICATION**

MSc, PhD

**DATE OF JOINING**

17-01-2019

**EXPERIENCE IN YEARS**

Teaching: 4.5 years

Research: 5 years

**AREA OF SPECIALIZATION:**

Polymer science and technology



**ADMINISTRATIVE DISTINCTION**

**IQAC Member**

**Research Committee Member**

**Vice-president-** Institutions Innovation Council (IIC)

**Nodal Officer-** AIIRA ATAL Ranking

**Managing Editor,** International Journal of Advanced Interdisciplinary Sciences (IJAIS), online journal from SN college for Women.

**PAPER PRESENTATIONS**

* Presented a Plenary lecture on **‘Sustainable Coating Solutions from Biowaste’** in the International Conference on Green Composites for a Sustainable Society (GCSS 2023) organised by Bhoomithra Sena Club, Sacred Heart College, Thevara, Kochi, India in collaboration with Directorate of Environment and Climate Change, Govt. of Kerala, India. 26-27 May 2023.
* Presented a research paper entitled ‘**Biowaste- derived chitosan/nanocellulose/nanocurcumin coating for banana**’ in the International Conference on Science for Sustainable Development on December 9-10, 2022 organised by Organized by Department of Science & Centre of Excellence- Water Research, Alliance University, Bengaluru, Karnatka-562106, India
* Presented (oral) a paper titled ‘**EXTRACTION OF CELLULOSE NANOFIBERS FROM AGRICULTURAL WASTE AS FUTURE NANOMATERIALS**’ at the ICTSGS-1 conference led by Yamagata University Japan on November 29-30, 2021-Online.
* Presented (Oral) a paper entitled ‘Fabrication of epoxy composites: The role of micro-fillers on morphology and solvent diffusion.’ In National Seminar on Emerging Trends in Chemical Science and Engineering organized by Department of Chemistry, CET, Thiruvananthapuram, Kerala, India, 26-27 February 2021.
* Presented a poster entitled “Bio-waste filled epoxy protective coating for metals” in International Conference on Energy and Environment (iCEE *2*K*19*), at TKM College of arts and sciences, Kollam, Kerala, **India**, December 12-14, 2019.
* Presented a poster entitled “Cellulose nanofibers to assist the release of healing agents in epoxy coating”, in Qatar University Annual Research Forum & Exhibition 2017, May 3-4, **Qatar**.
* Presented a poster entitled “Inorganic porous materials-based epoxy self-healing coatings” in Qatar Foundation Annual Research Conference (**ARC**), 22-23 March 2016, **Qatar**.
* Presented a poster entitled “Self-healing epoxy coatings” in Materials Science and Engineering Symposium, March10th, 2016, **Qatar**.
* Presented a poster entitled “Self-healing epoxy coatings: TiO2 nanotube and mesoporous silica as containers for healing agents” in 4th Nano Today Conference, 6th‐10th December 2015, Dubai, **UAE**.
* Presented PhD thesis during the ‘Best PhD Paper Award- 2014’ contest conducted by Society for Polymer Science (SPS), India, Thiruvananthapuram Chapter during Formation Day Lecture on 16th January 2015 of SPSI, Thiruvananthapuram.
* Presented a poster entitled “Carboxyl Terminated (Butadiene-Co-Acrylonitrile) Liquid Rubber Modified Epoxy/Clay Nanocomposite: Liquid Rubber−Clay Interaction, Liquid Rubber Assisted Dispersion And Orientation Of Nanoclay” in 3rd International Symposium - Frontiers in Polymer Science 2013, 21 - 23 May 2013, Sitges, **Spain**
* Oral presentation of paper entitled “Liquid Rubber Assisted Dispersion and   
  Orientation of Nanoclay in Liquid Rubber Modified Epoxy/Clay Nanocomposite” at 25th Kerala Science congress, Thiruvananthapuram, Kerala, **India**, January 29 –February 1, 2013.
* Presented a poster entitled “Synthesis and characterization of silicon carbide nanofiber reinforced epoxy” in 14th CRSI National Symposium in Chemistry (NSC-14), Thiruvananthapuram, Kerala, **India**, February 3-5, 2012
* Oral presentation of paper entitled “Rubber Toughened Epoxy Clay Nanocomposites” in National Conference on Nanostructured materials and Nanocomposites (NCNM- 2010), Ottapalam, Palakkad, Kerala, **India**, March 17- 18, 2011
* Oral presentation of paper entitled “Effect of Nanoclay on Morphology & Physical Properties of Diglycidyl Ether of Bisphenol-A Epoxy/ Carboxyl-Terminated (Butadiene-*co*-Acrylonitrile) (CTBN) Blend” in National Conference on Advances in Nanoscience and Technology (NANOSAT-10), Amal Jyothi College of Engineering, Kanjirapally, Kottayam, Kerala, **India**, April 22-23, 2010
* Oral presentation of paper entitled “Rubber toughened epoxy nanocomposites; Dynamic mechanical and rheological studies'' in International Conference on Polymer Processing and Characterization-2010 (ICPPC-2010), Nanoscience and Nanotechnology, M. G. University, Kerala, **India**, January 15-17, 2010
* Presented a paper entitled “Effect of nanoclay on rubber toughened epoxy  
  Morphological and thermo-mechanical studies” in ICNM-2009 (International Conference on Nano Materials -2009), School of Chemical Sciences, M. G. University, Kerala, **India**, April 6-8, 2009

**PARTICIPATION IN SEMINARS/ CONFERENCES/ WORKSHOPS**

* Participated in the One-week Faculty Development Programme (FDP) on Edu. Tech Hands-on Online Workshop conducted by the Faculty Development Centre of the Kerala State Higher Education Council (KSHEC), Thiruvananthapuram from 23th to 28th June 2021.
* Participated in online short term Faculty Development Program on Nanomaterials Characterization Techniques and Results Analysis Methodology: Ideas, Innovations & Initiatives (chemistry) of five days Under the scheme of **Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching** conducted by MHRD’S Faculty Development center HRDC, Savitribai Phule Pune University, Pune, Maharashtra. 27-31 July 2020
* Successfully completed a 4-Week Induction/Orientation Programme conducted by Teaching Learning Centre, Ramanujan College, University of Delhi, under the aegis of Ministry of Human Resource Development Pandit Madan Mohan Malaviya National Mission on Teachers and Teaching for "Faculty in Universities/Colleges/Institutes of Higher Education" from June 26 - July 24, 2020 and obtained grade A.
* Attended Five day faculty development programme on ‘A century of polymer science: Developments and challenges organised by PG department of chemistry, Vimala College, Thrissur 17-21 August 2020
* Secured 83 % in external examination conducted by Swayam for Annual Refresher Programme in Teaching (ARPIT) – 2020
* Certificate of Excellence from Elsevier Research Academy for the successful completion of Certified Peer Review Course-November 2019
* Participated in International seminar on Supra and Nano chemistry of bioactive molecules 2019, Christian college, Kattakkada, Thiruvananthapuram, Kerala, **India**, 19-20 August, 2019.
* One day training on ‘Biological Evaluation Based On ISO10993’ on 1st October 2018 at Biomedical Technology Wing, Sree Chitra Institute for Medical Sciences and Technology, Thiruvananthapuram, Inida.
* Attended ‘Second Young Polymer Scientists Conference and Sixth Short Course on Nanostructured Polymer Materials: From Chemistry to Applications’, Terni, **Italy**, April 13-15, 2008

**INVITED LECTURES AS RESOURCE PERSON**

* Resource person for certificate course on ‘Step into Research’ – session 9 ‘ The art of Writing Research Publication’ organized by St. Joseph’s college for Women, Alappuzha, Kerala, India on 24 Jan 2022.
* Resource person in the National Webinar on Thermal Analysis of Materials organized by the Post Graduate Department of Chemistry, Vimala College (Autonomous) Thrissur on 6th February 2021
* Delivered an invited lecture on ‘Self-healing coatings and composites’ at International and Inter University Centre for Nanoscience and Nanotechnology (IIUCNN) on 16th January 2021 in online mode.
* Invited talk on “Self-healing Epoxy Coating for Metal Substrate” in Sustainable Materials and Materials for Sustainability Workshop held under the Qatar-UK Research Networking Programme (Q-UKRNP), 8-10 May 2016, **Qatar**.
* Delivered guest lectures for **‘**Materials Science and Technology Master Program’, College of Arts and Sciences, Qatar University. on 21-04-201

**PUBLICATIONS IN BOOKS OR JOURNALS**

**Original Research Papers**

* Jomon Joy, Krzysztof Winkler, Anna Bassa, **Poornima Vijayan P**, Seno Jose, Saithalavi Anas and Sabu Thomas, Miscibility, thermal degradation and rheological analysis of epoxy/MABS blends, Soft Matter, 2023, **19**, 80-89
* [**Poornima Vijayan P**](https://www.tandfonline.com/author/Vijayan+P.%2C+Poornima), [Chithra P.G](https://www.tandfonline.com/author/Chithra+P.+G), [Anjana Krishna S V](https://www.tandfonline.com/author/Krishna+S+V%2C+Anjana), [Ansar E.B](https://www.tandfonline.com/author/Ansar+E.+B) & [Jyotishkumar Parameswaranpillai](https://www.tandfonline.com/author/Parameswaranpillai%2C+Jyotishkumar), Development and Current Trends on Ion Exchange Materials, Separation & Purification Reviews, DOI: [10.1080/15422119.2022.2149413](https://doi.org/10.1080/15422119.2022.2149413)
* [Vijayalekshmi V](https://journals.sagepub.com/doi/full/10.1177/20412479221122271), [**Poornima Vijayan P**](https://journals.sagepub.com/doi/full/10.1177/20412479221122271), [Midhun Dominic CD](https://journals.sagepub.com/doi/full/10.1177/20412479221122271), [Sabu Thomas](https://journals.sagepub.com/doi/full/10.1177/20412479221122271), Understanding the role of TEMPO-oxidized cellulose nanofiber on natural rubber latex nanocomposites. Polymers from Renewable Resources. August 2022. doi:[10.1177/20412479221122271](https://doi.org/10.1177/20412479221122271)
* Jesiya Susan George, Arya Uthaman, Arunima Reghunadhan, Hiran Mayookh Lal, Sabu Thomas, **Poornima Vijayan P**, Bioderived thermosetting polymers and their nanocomposites: current trends and future outlook. emergent mater. **5,**3–27 (2022).
* C.D. Midhun Dominic, Vandita Raj, K.V. Neenu, P.M. Sabura Begum, Krzysztof Formela, Mohammad Reza Saeb, Deepak D. Prabhu, **P. Poornima Vijayan**, T. G. Ajithkumar, Jyotishkumar Parameswaranpillai, Chlorine-free extraction and structural characterization of cellulose nanofibers from waste husk of millet (*Pennisetum glaucum*), International Journal of Biological Macromolecules 206 (2022) 92–104
* **Poornima Vijayan, P**., Formela, K., Saeb, M.R. *et al.* Integration of antifouling properties into epoxy coatings: a review. *J Coat Technol Res* **19**, 269–284 (2022). https://doi.org/10.1007/s11998-021-00555-0
* **Poornima Vijayan P**, Jesiya Susan George and Sabu Thomas, The Effect of Polymeric Inclusions and Nanofillers on Cure Kinetics of Epoxy Resin: A Review, Polymer Science, Series A, 2021, Vol. 63, No. 6, pp. 637–651.
* **Poornima Vijayan P**, P. G. Chithra, Pinky Abraham, Jesiya Susan George, Hanna J. Maria, Sreedevi T, Sabu Thomas, Nanocoatings: Universal antiviral surface solution against COVID-19, Progress in Organic Coatings, <163>, 1066702021, 2022
* [Elssa George](https://onlinelibrary.wiley.com/action/doSearch?ContribAuthorRaw=George%2C+Elssa), [Jomon Joy](https://onlinelibrary.wiley.com/action/doSearch?ContribAuthorRaw=Joy%2C+Jomon), [**Poornima vijayan P.**](https://onlinelibrary.wiley.com/action/doSearch?ContribAuthorRaw=Vijayan+P.%2C+Poornima), [Sarath P. S.](https://onlinelibrary.wiley.com/action/doSearch?ContribAuthorRaw=P.+S.%2C+Sarath), [Soney C. George](https://onlinelibrary.wiley.com/action/doSearch?ContribAuthorRaw=C.+George%2C+Soney), [Saithalavi Anas](https://onlinelibrary.wiley.com/action/doSearch?ContribAuthorRaw=Anas%2C+Saithalavi), Development, characterization, and tribological behavior of polymeric carbon nitride/acrylonitrile butadiene styrene nanocomposites, Polymer Composites 2021, <https://doi.org/10.1002/pc.26415>
* Pournami Vijayan P, **Poornima Vijayan P**, Anoop Chandran and K. C. George, Anomalous Dielectric Behavior in Co-Doped TiO2 Nanotubes: Effect of Oxygen Vacancy Mediated Defect Dipole Pairs, ECS Journal of Solid-State Science and Technology, 2021 10 113006
* Jesiya Susan George, **Poornima Vijayan P**, Jibin Keloth Paduvilan, Nisa Salim, Jaka Sunarso, Nandakumar Kalarikkal, Nishar Hameed, Sabu Thomas, Advances and future outlook in epoxy/graphene composites for anticorrosive applications, [Progress in Organic Coatings](https://www.sciencedirect.com/science/journal/03009440),Volume 162, January 2022, 106571
* Balaji Krishnakumar, Debajyoti Bose, Manjeet Singh, RV Sanka, Velidi VSS Gurunadh, Shailey Singhal, Vijay Parthasarthy, Liberata Guadagno, **Poornima Vijayan P**, Sabu Thomas, Sravendra Rana, [Sugarcane Bagasse-Derived Activated Carbon-(AC-) Epoxy Vitrimer Biocomposite: Thermomechanical and Self-Healing Performance](https://scholar.google.com/scholar?oi=bibs&cluster=10559358335806873711&btnI=1&hl=en), International Journal of Polymer Science, **2021**, <https://doi.org/10.1155/2021/5561755>
* Asha Bhanu A.V, **Poornima Vijayan P**, Sabu Thomas, Jyotishkumar Parameswaranpillai, Debora Puglia, Suchart Siengchin, Aryakrishna L, Aiswarya Manohar, Fabrication of water-resistant epoxy nanocomposite with improved dynamic mechanical properties and balanced thermal and dimensional stability: Study on dual role of graphene oxide nanosheets and barium oxide microparticles, Colloids and Surfaces A: Physicochemical and Engineering Aspects, 617, **2021**, 126405
* Sharika T. Nair, **Poornima Vijayan P.**, Soney C. George, Nandakumar Kalarikkal and Sabu Thomas, Enhanced mechanical and thermal performance of multiwalled carbon nanotubes-filled polypropylene/natural rubber thermoplastic elastomers, New Journal of Chemistry (RSC), **2021**, Advance Article,<https://doi.org/10.1039/D0NJ05437B>
* Nicolas Augusto Paolini, Alexandre Gonçalves Cordeiro Neto, Alana Cristine Pellanda, Agne Roani de Carvalho Jorge, Bryan de Barros Soares, João Batista Floriano, Marcos Antonio Coelho Berton, **Poornima Vijayan P**, Sabu Thomas, "Evaluation of Corrosion Protection of Self-Healing Coatings Containing Tung and Copaiba Oil Microcapsules", International Journal of Polymer Science, vol. 2021, Article ID 6650499, 13 pages, **2021**. https://doi.org/10.1155/2021/6650499
* Alana Cristine Pellanda, Alexandre Gonçalves Cordeiro Neto, Agne Roani de Carvalho Jorge, Marcos Antonio Coelho Berton, João Batista Floriano, Sabu Thomas, **Poornima Vijayan P**, "Performance Evaluation of Layered Double Hydroxides Containing Benzotriazole and Nitrogen Oxides as Autonomic Protection Particles against Corrosion", International Journal of Polymer Science, vol. 2021, Article ID 6630194, 16 pages, **2021**. https://doi.org/10.1155/2021/6630194
* **P. Poornima Vijayan**, A.V. Asha Bhanu, S.R. Archana, Anila Babu, Suchart Siengchin, Jyotishkumar Parameswaranpillai, Development of chicken feather fiber filled epoxy protective coating for metals, Materials Today: Proceedings, 2020, https://doi.org/10.1016/j.matpr.2020.05.229.
* Behzad Shirkavand Hadavand, Maryam Jouyandeh, Seyed Mohamad Reza Paran, Reza Khalili, Henri Vahabi, Hamed Fakharizadeh Bafghi, Fouad Laoutid, **P. Poornima Vijayan**, Mohammad Reza Saeb, Silane‐functionalized Al2O3‐modified polyurethane powder coatings: Nonisothermal degradation kinetics and mechanistic insights. J Appl Polym Sci. **2020**; 137:e49412.
* Karami, Z.; Paran, S.M.R.; **Vijayan P., P.**; Ganjali, M.R.; Jouyandeh, M.; Esmaeili, A.; Habibzadeh, S.; J. Stadler, F.; Saeb, M.R. A Comparative Study on Cure Kinetics of Layered Double Hydroxide (LDH)/Epoxy Nanocomposites. *J. Compos. Sci.* **2020**, *4*, 111.
* Jouyandeh, M.; Karami, Z.; Paran, S.M.R.; Mashhadzadeh, A.H.; Ganjali, M.R.; Bagheri, B.; Zarrintaj, P.; Habibzadeh, S.; **Vijayan P., P**.; Saeb, M.R. Effect of Nickel Doping on the Cure Kinetics of Epoxy/Fe3O4 Nanocomposites. *J. Compos. Sci.* **2020**, *4*, 102
* Pinky Abraham, Renjini S, **Poornima Vijayan**, Nisha V, Krishna Sreevalsan and V. Anithakumary, Review on the Progress in Electrochemical Detection of Morphine Based on Different Modified Electrodes, Journal of The Electrochemical Society, 2020, 167, 037559.
* **Poornima Vijayan P**, Debora Puglia, Biomimetic multifunctional materials: a review. Emergent materials, **2,** 391–415 (2019)
* **Poornima Vijayan P**, Mariam Al-Maadeed, Self-Repairing Composites for Corrosion Protection: A Review on Recent Strategies and Evaluation Methods. *Materials*, 2019, *12*, 2754.
* **Poornima Vijayan P**, Aisha Tanvir, Miroslav Mrlik, Michal Urbanek, Mariam Al-Maadeed, TiO2/Halloysite hybrid filler reinforced epoxy nanocomposites, Polymer Composites, 2018. doi:10.1002/pc.24731.
* **Poornima Vijayan P**, Yara Mohamed Hany El-Gawadya, Mariam Ali S A Al-Maadeed, A comparative study on long term stability of self-healing epoxy coating with different inorganic nanotubes as healing agent reservoirs, [eXPRESS Polymer Letters](http://www.expresspolymlett.com/), 2017, 11, 863–872.
* Mohammad Reza Saeb, Milad Nonahal, Hadi Rastin, Meisam Shabanian, Mehdi Ghaffari, Ghasem Bahlakeh, Samira Ghiyasi, Hossein Ali Khonakdar, Vahabodin Goodarzi, **Poornima Vijayan P**, Debora Puglia, Calorimetric Analysis and Molecular Dynamics Simulation of Cure Kinetics of Epoxy/Chitosan-modified Fe3O4 Nanocomposites, Progress in organic coating, Progress in Organic Coatings, 2017, 112, 176-186.
* **Poornima Vijayan P**, Aisha Tanvir, Yara Mohamed Hany El-Gawadya, Mariam Ali S A Al-Maadeed, Cellulose nanofibers to assist the release of healing agents in epoxy coatings, Progress in Organic coating, 2017, 112, 127–132.
* **Poornima Vijayan P**, Debora Puglia, Mariam Ali S A Al-Maadeed, José M. Kenny, Sabu Thomas, Elastomer/thermoplastic modified epoxy nanocomposites: the hybrid effect of ‘micro’ and ‘nano’ scale, Materials Science & Engineering - R: Reports, 2017, 116, 1–29.
* **Poornima Vijayan P**, Debora Puglia, Hadi Rastin, Mohammad Reza Saeb, Behrouz Shojaei, Krzysztof Formela, Cure Kinetics of Epoxy/MWCNTs Nanocomposites: From Isothermal Calorimetric to Rheological Analysis, Progress in Organic Coatings, 2017, 108, 75-83.
* Seyed Mohammad Reza Paran, Mohammad Reza Saeb, Krzysztof Formela, Vahabodin Goodarzi, **Poornima Vijayan P**, Debora Puglia, Sabu Thomas, To what extent can hyperelastic models make sense the effect of clay surface treatment on the mechanical properties of elastomeric nanocomposites?, Macromolecular Materials and Engineering, 2017*, 1700036.* DOI: 10.1002/mame.201700036.
* **Poornima Vijayan P**, Mariam Ali S A Al-Maadeed, TiO2 nanotubes and mesoporous silica as containers in self-healing epoxy coatings, Scientific Reports, 2016, 6, 38812.
* Mohammad Reza Saeb, Mehdi Ghaffari, Hadi Rastin, Hossein Ali Khonakdar, Frank Simon, Vahabodin Goodarzi, **Poornima Vijayan P**, Debora Puglia, Krzysztof Formela, Biowaste Chicken Eggshell Powder as a Potential Cure Modifier for Epoxy/Anhydride: Competitiveness with Terpolymer-modified Calcium Carbonate at Low Loading Levels, RSC advances, 2017, 7, 2218.
* Aisha  Al-Saygh, Deepalekshmi  Ponnamma, Mariam  Al-Maadeed, **Poornima  Vijayan P**, Alamgir Karim, Mohammad  Hassan, Flexible Pressure Sensor based on PVDF nanocomposites containing Reduced Graphene Oxide-Titania Hybrid Nanolayers, *Polymers* 2017, *9*(2), 33.
* Deepalekshmi Ponnamma, **Poornima Vijayan P**, Mariam Ali S A Al-Maadeed, 3D Architectures of Titania Nanotubes and Graphene with Efficient Nanosynergy for Supercapacitors, Materials and Design, 2017, [117](http://www.sciencedirect.com/science/journal/02641275/117/supp/C), 203–212.
* **Poornima Vijayan P**, Yara Hany El-Gawady, Mariam Al-Maadeed, Halloysite Nanotube as Multifunctional Component in Epoxy Protective Coating, ACS Industrial & Engineering Chemistry Research, 2016, 55, 11186−11192.
* **Vijayan PP**, Al-Maadeed MASA. Inorganic Porous Materials Based Epoxy Self-Healing Coatings. Qatar Foundation Annual Research Conference Proceedings 2016, https://doi.org/10.5339/qfarc.2016.EEPP2129
* Anu Tresa Sunny, **Poornima Vijayan P**, Rameshwar Adhikari, Suresh Mathew, and Sabu Thomas, Copper oxide nanoparticles in an epoxy network: microstructure, chain confinement and mechanical behavior, Physical Chemistry Chemical Physics, 2016,18, 19655- 19667.
* **Poornima Vijayan P,** Debora Puglia, Pournami Vijayan P, Jose M. Kenny and Sabu Thomas,The role of clay modifier on cure characteristics and properties of epoxy/clay/carboxyl-terminated poly(butadiene-co-acrylonitrile) (CTBN) hybrid, Materials Technology: Advanced Performance Materials,2016, doi:10.1080/10667857.2016.1161946.
* **Poornima Vijayan P** and Mariam Ali S A Al-Maadeed, 'Containers' for self-healing epoxy composites and coating: trends and advances, eXPRESS Polymer Letters, 2016,10 (6), 506–524.
* **Poornima Vijayan P**, M.G. Harikrishnan, Debora Puglia, Pournami Vijayan P, Jose M. Kenny, Sabu Thomas, Solvent uptake of liquid rubber toughened epoxy/clay nanocomposites, Advances in Polymer Technology, 2016, 35, *21531.*
* Anu Tresa Sunny, **Poornima Vijayan P**, Thresiamma George, Kim Pickering, Suresh Mathew, Sabu Thomas, Cuprous oxide nanoparticles in epoxy network: Cure reaction, morphology and thermal stability,Polymer Engineering and Science, 2015, 55, 2293-2306.
* Sharika Thankappan Nair, **Poornima Vijayan P**, Priti Xavier, Suryasarathi Bose, Soney C. George, Sabu Thomas, Selective localisation of multi walled carbon nanotubes in polypropylene/natural rubber blends to reduce the percolation threshold, Composites Science and Technology, 2015, 116, 9–17.
* Sajeev Martin George, Debora Puglia, Jose` M. Kenny, Jyotishkumar Parameswaranpillai, **Poornima Vijayan P**, Jurgen Pionteck, Sabu Thomas, Volume shrinkage and rheological studies of epoxidised and unepoxidised poly(styrene-blockbutadiene- block-styrene) triblock copolymer modified epoxy resin–diamino diphenyl methane nanostructured blend systems, Physical Chemistry Chemical Physics, 2015, 17, 12760.
* **Poornima Vijayan P**,Jurgen Pionteck and Sabu Thomas, Volume shrinkage and cure kinetics in carboxyl-terminated poly(butadiene-co-acrylonitrile) (CTBN) modified epoxy/clay nanocomposite,Journal of Macromolecular Science, Part A: Pure and Applied Chemistry, 2015, 52, 353–359.
* **Poornima Vijayan P**, Debora Puglia, Jürgen Pionteck, Jose M. Kenny, Sabu Thomas, Liquid-rubber-modified epoxy/clay nanocomposites: effect of dispersion methods on morphology and ultimate properties, Polymer Bulletin, 2015,72, 1703-1722.
* **Poornima Vijayan P**, Debora Puglia, Agnieszka Dąbrowska, Pournami Vijayan P, Andrzej Huczko, Jose M. Kenny and Sabu Thomas, Mechanical and thermal properties of epoxy/silicon carbide nanofiber composites, Polymers for Advanced Technologies, 2015, 26 (2), 142–146.
* **Poornima Vijayan P**, Jürgen Pionteck, Andrzej Huczko, Debora Puglia, Jose M. Kenny, Sabu Thomas, Liquid rubber and silicon carbide nanofiber modified epoxy nanocomposites: volume shrinkage, cure kinetics and properties,Composites Science and Technology, 2014,102, 65–73.
* Pournami Vijayan P, Marykutty Thomas, Lakshmi Nair, **Poornima Vijayan P**, George K C, Optical and AC conductivity studies of Co doped TiO2 nanotubes, Int. J. Materials Engineering Innovation, 2014, 5 (3), 205-215
* Poornima Vijayan P, Debora Puglia, Hanna J. Maria, Josè Kenny, Sabu Thomas, Clay nanostructure and its localisation in epoxy/liquid rubber blend, RSC Advances*,* 2013, 3 (46), 24634 – 24643.
* **Poornima Vijayan P**,Debora Puglia*,* Jose. M. Kenny,and Sabu Thomas, Effect of organically modified nanoclay on the miscibility, rheology, morphology and physical properties of epoxy/ carboxyl-terminated (butadiene-co-acrylonitrile) blend, Soft Matter, 2013, 9, 2899-2911.
* **Poornima Vijayan P**, Debora Puglia, Jyotishkumar P, Jose M. Kenny, Sabu Thomas, Effect of nanoclay and carboxyl-terminated (butadiene-co-acrylonitrile) (CTBN) rubber on the reaction induced phase separation and cure kinetics of an epoxy/cyclic anhydride system, Journal of Material Science, 2012, 47, 5241–5253.
* AP Meera, R Tlili, A Boudenne, L Ibos, **V Poornima**, S Thomas, and Y Candau, Thermophysical and mechanical properties of TiO2 and silica nanoparticle-filled natural rubber composites, Journal of Elastomers & Plastics, 2012, 44, 369-382
* **Poornima Vijayan P**, Sabu Thomas, Andrzej Huczko, Epoxy resin/SiC nanocomposites: Synthesis and Characterisation, Composites, 2010,10,11-14

**Book Chapters**

* **Poornima Vijayan, P.,** George, J.S., Revathy, R.V. (2023). Self-healing Epoxy Resin with Multi-Stimuli-Responsive Behavior. In: Hameed, N., Capricho, J.C., Salim, N., Thomas, S. (eds) Multifunctional Epoxy Resins. Engineering Materials. Springer, Singapore.
* **Vijayan P, Poornima**, Anu Surendran, and Sabu Thomas. "311 Radiation curing of epoxy composites and coatings." In *Radiation Technologies and Applications in Materials Science*, pp. 311-330. CRC Press, 2023.
* **Vijayan P, P.,** George, J.S., P R, S., Thomas, S. (2022). Morphology and Mechanical Properties of Epoxy/Natural Fiber Composites. In: Mavinkere Rangappa, S., Parameswaranpillai, J., Siengchin, S., Thomas, S. (eds) Handbook of Epoxy/Fiber Composites. Springer, Singapore. <https://doi.org/10.1007/978-981-15-8141-0_27-1>
* **P. Poornima Vijayan**, Archana Samaras Radhamany, Ansar Ereath Beeran, Maryam Jouyandeh, Mohammad Reza Saeb, Chapter 16 - Magnetic nanoparticles-based coatings, Editor(s): Huaihe Song, Tuan Anh Nguyen, Ghulam Yasin, Nakshatra Bahadur Singh, Ram K. Gupta, In Micro and Nano Technologies, Nanotechnology in the Automotive Industry, Elsevier, 2022, Pages 317-343,
* **Vijayan, P.P.** (2021). Spectroscopy and X‐ray Scattering Studies of Epoxy Composites. In Epoxy Composites (eds J. Parameswaranpillai, H. Pulikkalparambil, S.M. Rangappa and S. Siengchin). <https://doi.org/10.1002/9783527824083.ch8>
* **P. Poornima Vijayan**, Sharika T. Nair, [Self-Healing Polymer Coatings](https://www.taylorfrancis.com/books/e/9780429199226/chapters/10.1201/9780429199226-12) (Ch 12), in Polymer Coatings: Technologies and Applications. Rangappa, S. (Ed.), Parameswaranpillai, J. (Ed.), Siengchin, S. (Ed.). (2021). Boca Raton: CRC Press, ISBN9780429199226<https://doi.org/10.1201/9780429199226>
* **Poornima Vijayan P**, (2020) Scattering studies of compatibilized polymer blends. In: Compatibilization of Polymer Blends, Elsevier, pp-331-347.
* **Poornima Vijayan P**. (2020) Mechanical Properties of Shape-Memory Polymers, Polymer Blends, and Composites. In: Parameswaranpillai J., Siengchin S., George J., Jose S. (eds) Shape Memory Polymers, Blends and Composites. Advanced Structured Materials, vol 115. Springer, Singapore
* **Poornima Vijayan P**. ‘Morphology of Epoxy/Rubber Blends’. In ‘Handbook of Epoxy Blends’, Springer International Publishing, 2015, pp 1-46.
* R. Arunima, **Poornima Vijayan P**, Sabu Thomas, Sect. 10.4, ‘Miscibility and Solubility’, In ‘Properties and Performance of Polymer Blends’ by S. F. Xavier, in ‘Polymer Blends Handbook’, Second edition, Springer Science+Business Media Dordrecht, 2014
* Vincent Sobotka, Didier Delaunay, Nicolas Boyard, Sabu Thomas, and **Poornima Vijayan P**, ‘Thermal Properties’, in ‘Micro and Nanostructured Epoxy/Rubber Blends’, John Wiley & Sons, Inc. 2014, ch-14, pp 289-304
* S M George, **Poornima Vijayan**, S Thomas, **‘**Nanostructures and the toughening of thermosets’, in ‘Thermosets: Structure, properties and applications.’ Woodhead Publishing in Materials, 2012, ch-5, pp 118-162
* **Poornima Vijayan P**, Siby Varghese, Sabu Thomas, **‘**Mechanical and Viscoelastic Characterization of Multiphase Polymer Systems’, in ‘Handbook of Multiphase Polymer Systems’, Wiley, USA, 2011, ch-7, pp 251–310.
* Raju Thomas, **Poornima Vijayan P** and Sabu Thomas, **‘**Recycling of thermosetting polymers: Their blends and composites’, in ‘Recent Developments in Polymer Recycling’, Transworld Research Network, 2011, ch-4, pp 121-153.
* Proceedings of ICNM-2009 (Open Access Book)**,** Editors: Sabu Thomas and **Poornima Vijayan;** ISBN : 978-81-906027-5-4 Publisher : Applied Science Innovations Private Limited, India. August 2009

**MEMBERSHIP IN PROFESSIONAL BODIES**

* **American chemical society (ACS)** community member (Membership number -30831098)
* **ACT (Academy of Chemistry teachers )**State level professional body

**OTHER ACHIEVEMENTS**

* Financial support for the patent filing by TIPS@SCTIMST TIMed, Thiruvananthapuram, Kerala as per the BIRAC NBM project (2022-23).
* Kerala state council for science technology and environment (KSCSTE) funded Student project entitled ‘Extraction of cellulose nanocrystals from vegetable wastes to develop edible coating for fruits and vegetables’; Ref: 00654/SPS 65/2021/KSCSTE; Duration: 01-12-2021 to 6-5-2022; Cost:10,000/-
* **Approved research guide** of **University of Kerala.**
* **Best Researcher Poster Award** in Materials Science and Engineering Symposium 2016, Qatar, on 10th March, 2016.
* Qatar National Research Fund **Post-Doctoral Research Award** (QNRF-PDRA) for the period of 25th Jan 2015– 24th Jan 2017
* **Travel grant** for attending International Conference from Department of Science & Technology, New-Delhi, India. May 2013
* **Visiting research student** at Organization: Leibniz-lnstitut fur Polymerforschung (IPF), Dresden, Germany during Sep 2011-Dec 2011
* Visiting research student under MIUR programme Italy - India (2007) - **Grants for Young Researchers in the field of Nanoscience and Nanotechnology** at University of Perugia, Italy during April 2008 –March 2009
* Acting as **Peer-Reviewer** of prestigious International Journals: Progress in polymer coating (Elsevier), Polymer (Elsevier), Macromolecular Symposia (Wiley), eXPRESS Polymer Letters, Industrial & Engineering Chemistry Research (ACS), Applied Physics A and Applied surface science, SN Applied Science (Springer)
* Acting as **guest editor** of the Special Issue on ‘Self-healing Nanocomposites’ published by International Journal of Polymer Science
* Programme co-ordinator, online Inauguration of International Journal of Advanced Interdisciplinary Sciences (IJAIS) by Prof. Dr Sabu Thomas, Hon’ble Vice Chancellor, M G University, Kerala India on 7th Jan 2021.
* Co-ordinator, International webinar on the topic ‘How to publish scientific papers: why you win or lose’ on 31-10-2020.
* Convenor, International webinar on ‘Nanotechnology against COVID-19’ on 23 rd July 2020

**Group Awards**

* **Sreedevi T, Devi Ganga G and Ponnu Krishna,** State Level Winners of Young Innovators Programme (YIP), Kerala Development and Innovation Strategic Council (**K**-**DISC**), an Initiative by Government of Kerala, India.
* **Sreedevi T,** Research Award (Aspire Scholarship) 2022-23, Directorate of Collegiate Education, Government of Kerala, March 2023.
* **Arsha M R**, (BSc Group Project March 2021) bagged Third Prize among UG Projects in National Conference RICERCA 2021 organized by IQAC & Research Committee, St. Joseph’s College for Women, Alappuzha in association with Kerala Sastra Sahithya Parishad & Society of Biotechnologists, India during 5th – 11th October 2021

**RESEARCH OUTPUT**

* Published 53 research papers in prestigious international journals
* Published 16 Book chapters.
* Active research collaboration with University of Perugia, Terni, Italy and Faculty of Chemistry, University of Warsaw, Poland

**CITATIONS AND INDEXING, IF ANY**

* **JOURNAL CITATIONS** 
  + **1326 (Scopus)**

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* + **1523 (Google scholar)**

<https://scholar.google.com/citations?user=Fp9zGDwAAAAJ&hl=en>

* **INDEXING (h-INDEX)** 
  + **22 (Scopus)**
  + **22 (Google scholar)**