PSGR
Krishnammal College for Women

Name : Dr. Ramesh Subramani

Designation : Assistant Professor

Department : Chemistry

Qualification : Ph. D

Experience : Teaching -6 Years

Research : 14 Years

AreaofSpecialization(s) : Advanced materials

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Academic Qualifications

Degree	Branch	Institution/UniversityName	Year of Graduation
Ph.D.	Chemistry	Aarhus University, Denmark	Feb 2008 – Jan 2011
M. Sc.	Chemistry	NIT, Trichy, India	Aug 2005 – July 2007
B.Sc.	Chemistry	Bharathidasan University, India	May 2002 – June 2005

Research Guidance

Programme	No.of Scholars	
	Completed	Pursuing
Ph.D	2	1

Research Publications (Indexed)

International

1. Almond gum-chitosan nanocomposite as edible formulation for advancing postharvest longevity of fruits and vegetables SN Suresh, P SenthilKumar, C Pushparaj, PK Sarangi, VR Regina, R Subramani, **Polymers for Advanced Technologies** 35 (6), e6453, **2024**

2. Converting vegetable and fruit mixture waste into eco-friendly bioplastic sheets and films using a solution casting method SR Sivakumar, SN Suresh, K Winifrida, R Subramani, C Pushparaj, **Biomass Conversion and Biorefinery**, 1-11, **2024**

3. Improving therapeutic potential in breast cancer via histone deacetylase inhibitor loaded nanofibrils P Senthilkumar, B Gogoi, SS Dhan, R Subramani, C Pushparaj, A Mahesh, **Drug Development Research** 85 (2), e22172, **2024**

4. Kinetic modelling of Okra and Gracilaria Corticata hydrocolloid mucilage polysaccharides, R Subramani, C Pushparaj, A Ganesan, J***ournal of research and innovation in food science and technology***, 13(1), 17-222023, **2024**

5. Utilizing protein nanofibrils as a scaffold for enhancing nutritional value in toned milk P Senthilkumar, A Natarajan, SH Salmen, SA Alharbi, V Shavrov, P Lega, R Subramani, C Pushparaj, **Environmental Research** 239, 117420, **2023**

6. Comprehensive review on tailoring factors of porous bismuth oxyhalide photocatalysts for wastewater treatment application P Kar, G Sathiyan, KE Vivekanandan, G Venkatesan, G Siva, R Subramani, S Kandasamy, **Journal of the Taiwan Institute of Chemical Engineers**, 105234, **2023**

7. Assessing pollutant sorption efficiency of modified and unmodified biochar with Bacillus cereus on contaminated lake water: implications for Oryza sativa seedling and Artemia, M Narayanan, R Subramani, S Kandasamy **Biomass Conversion and Biorefinery**, 1-12, 202

8. Development of Almond gum/alginate composites to enhance the shelf-life of post-harvest Solanum Lycopersicum L, SN Suresh, C Puspharaj, R Subramani ***Food Hydrocolloids for Health*** 2, 100087, **2022**

9. 9.Gum acacia/pectin/pullulan-based edible film for food packaging application to improve the shelf-life of ivy gourd, SN Suresh, C Puspharaj, A Natarajan, R Subramani **International Journal of Food Science & Technology** 57 (9), 5878-5886, **2022**

10. Synthesis of novel luminescent cyclometallated platinum (IV) complexes with a quinoline Schiff bases ligand and their photophysical properties, G Sathya Priyadarshini, R Subramani, S Elakkiya, S Gopal ***Inorganic and Nano-Metal Chemistry***, 1-8, **2022**
11. Preparation and Chemical/Physical Characterization of Individual Nanoscaled Fibrils, P Senthilkumar, S Chandran, A Kartsev, V Shavrov, P Lega, R Subramani, ***Nanoscience & Nanotechnology-Asia*** 12 (2), 15-24, **2022**

12. Thermoelastic Martensitic Transformation and Shape Memory Effect in Nanoplates Based on Ti–Ni Alloys: Experiment, Modeling by Density Functional Theory and Molecular Dynamics, PV Lega, AI Kartsev, L Shuhui, R Subramani, VV Koledov, ***Journal of Surface Investigation: X-ray, Synchrotron and Neutron Techniques***, **2022**

13. Synthesis of eco-friendly nanocomposite with silver nanoparticle to increase the antimicrobial activity, S Maxwalt, K Rahupathy, SN Suresh, R Subramani, C Pushparaj ***Materials Today: Proceedings*** 62, 2822-2828, **2022**

14. Evaluation of the Synthesized Novel Iridium (III) Complexes Against HeLa Cell Lines Through In-Silico, In-Vitro and DNA Nicking, GS Priyadarshini, A Muthusankar, R Subramani, S Gopal ***Asian Pacific Journal of Cancer Prevention:*** APJCP 22 (2), 447, **2021**

15. Resveratrol-loaded β-Lactoglobulin Nanofibrils to Prevent Enzymatic Browning on Sliced Apple, P Senthilkumar, V Shavrov, P Lega, R Subramani ***Applied Food Biotechnology*** 9 (1), 9-16, **2021**

16. Recent development in preparation of food packaging films using biopolymers R Suresh, S., Pushparaj, C. and, Subramani **Food Research** 5 (6), 12-22, **2021**

17. Towards mimicking the fetal liver niche: the influence of elasticity and oxygen tension on hematopoietic stem/progenitor cells cultured in 3D fibrin hydrogels, C Garcia-Abrego, S Zaunz, B Toprakhisar, R Subramani, O Deschaume, ... ***International Journal of Molecular Sciences*** 21 (17), 6367, **2020**

18. The influence of swelling on elastic properties of polyacrylamide hydrogels, R Subramani, A Izquierdo-Alvarez, P Bhattacharya, M Meerts, ***... Frontiers in Materials*** 7, 212, **2020**

19. 3D Nanomanipulation: Design and applications of functional nanostructured bio-materials, P.V. Lega, A.P. Orlov, A.V. Frolov, R. Subramani, A.V. Irzhak, V.V ... **Journal of Physics: Conference Series** 1461 (1), 012082, **2020**

20. Spatiotemporal analyses of cellular tractions describe subcellular effect of substrate stiffness and coating , A Izquierdo-Álvarez, DA Vargas, Á Jorge-Peñas, R Subramani, ***... Annals of biomedical engineering*** 47, 624-637, **2019**

21. Robust scalable synthesis of a bis-urea derivative forming thixotropic and cytocompatible supramolecular hydrogels, LAJ Rutgeerts, AH Soultan, R Subramani, B Toprakhisar, H Ramon, ... ***Chemical Communications*** 55 (51), 7323-7326, **2019**

22. Green Synthesized Silver Nanoparticles: Toxicity AgainstPoeciliareticulata Fishes and Ceriodaphniacornuta Crustaceans, R Ishwarya, B Vaseeharan, S Shanthi, S Ramesh, P Manogari, K Dhanalakshmi, S Vijayakumar, G Benelli, **Journal of Cluster Science** 1 (28), 519-527, **2017**

23. 'Plasmodium falciparum-infected erythrocyte knob density is linked to the PfEMP1 variant expressed, Ramesh Subramani, Katharina Quadt, Anine Jeppesen, Casper Hempel, Jens Emil Petersen, Tue Hassenkam, Lars Hviid, and Lea Barfod**. MBio**,6 (5), e01456-15, **2015**

24. Immersed boundary model of human periosteum-derived cells under microscopic flow in a perfusion bioreactor, Y. Guyot, B. Smeets, T. Odenthal, R. Subramani, F. Luyten, H. Ramon, L. Geris, I. Papantoniou –. **PLoS Comput Biol** 12(9): e1005108. **2016**

25. Building layer-by-layer 3D supramolecular nanostructures at the terephthalic acid/stearic acid interface' Li Y, Liu L, Subramani R, Pan Y, Liu B, Yang Y, Wang C, Mamdouh W, Besenbacher F, Dong M., ***Chem. Commun***, **2011**, 47, 9155-9157,

26. Two-dimensional network stability of nucleobases and amino acids on graphite under ambient conditions: Adenine, L-serine and L-tyrosine, Bald I, Weigelt S, Ma X, Xie P, Subramani R, Dong M, Wang C, Mamdouh W, Wang J, Besenbacher F, ***Physical Chemistry Chemical Physics*, vol. 12 (2010)**, pp. 3616-3621,

27. Single-molecule chemical reactions on DNA origami, Voigt N V, Tørring T, Rotaru A, Jacobsen M F, Ravnsbæk J B, Subramani R, Mamdouh W, Kjems J, Mokhir A, Besenbacher F, Gothelf K V, ***Nature Nanotechnology***, vol. 5 (**2010**), pp. 200-203.

28. A Novel Secondary DNA Binding Site in Human Topoisomerase I Unravelled by using a 2D DNA Origami Platform', Subramani R, Juul S, Rotaru A,Andersen F F, Gothelf K V, Mamdouh W, Besenbacher F, Dong M, Knudsen B R, ***ACS Nano*, 2010**, *4* (10), pp 5969–5977,

29. Self-assembly of a nanoscale DNA box with a controllable lid', Andersen E S, Dong M, Nielsen M M, Jahn K, Subramani R, Mamdouh W, Golas M.M, Sander B, Stark H, Oliveira C L P, Pedersen J S, Birkedal V, Besenbacher F, Gothelf K V, Kjems J**, *Nature*, vol. 459 (2009**) no. 7243, pp. 73-76.

30. Two Distinct Fluorescent Quantum Clusters of Gold Starting from Metallic Nanoparticles by pH-Dependent Ligand Etching. M. A. Habeeb Muhammed, S. Ramesh, S. S. Sinha, S. K. Pal and T. Pradeep, ***Nano Res*, 1 (2008**) pp.333-340,

Other Publications: International/National

[1]. Isolation and description of plant growth promoting rhizobacteria (pgpr) from banana rhizosphere soil and its impact on plant growth promotion (vigna radiata) Dhivya. K *, Gajalakshmi. K, Ramesh Subramani 2019 JETIR June 2019, Volume 6, Issue 6 374-37

Patent

S.No	Name of the Faculty	Title of the Invention	Application No.	Date of Filing	Publication Date
1.	Sharmila C, Ramesh S, Thilagavathy P	Polymer composition for packing food materials and process thereof, Application number	201941054252	(Filed)	13.03.2020
2.	Sivanandhini, Charumathi P, Ramesh S	Almond gum/alginate edible coating to increase the shelf life of post-harvest Solanum Lycopersicum,	202141054829	(Filed)	10.12.2021

3.	Sivanandhini, Ramesh S	Almond gum/chitosan nanocomposite-based formulation to improve the shelf-life of the blueberries,	202241001168	(Filed)	11.02.2022

Acted as a Resource Person

- Invited talk on "Computational methods in Durg design and food chemistry" – Adhiyaman Arts and Science college for Women, Krishnagiri, Salem, June 27th, 2020
- Invited lecture at Srimathadavar College, Trichy –"Current Trends in Nanochemistry "one day conference, August 28th 2019.
- Invited talk at Two-day national level student's symposium IMPULSE-2K19 - 'Hybrid materials', Department of Chemistry of SASTRA Deemed University, Feb 14th & 15th 2019.
- National level students symposium, HORIZON-2018 under the theme "Electrochemical Sensors", 28th& 29thof August 2018(Invited talk).
- International Conference 3M-NANO 2015, Measurement on the Nanoscale on 5th-9th October 2015 in Changchun, China (Invited talk).
- International Conference 3M-NANO 2015, Measurement on the Nanoscale on 5th-9th October 2015 in Changchun, China (Invited talk).

Reviewer in journal

- BIOMATERIALS ADVANCES
- FOOD CHEMISTRY: X
- FOOD HYDROCOLLOIDS
- FOOD PACKAGING AND SHELF LIFE
- FOOD RESEARCH INTERNATIONAL
- FUTURE FOODS JOURNAL OF AGRICULTURE AND FOOD RESEARCH
- JOURNAL OF PHOTOCHEMISTRY AND PHOTOBIOLOGY A: CHEMISTRY
- PROGRESS IN MATERIALS SCIENCE
- TRENDS IN FOOD SCIENCE & TECHNOLOGY

Paper Presentations in Conference

International

- Invited speaker at various national and international conferences.

National

Presentations in Seminar

- Agilent Advanced Separation and Detection seminar on September 6th2018 at Coimbatore.
- Nano scale characterization of malaria infected red blood cells – Copenhagen University, Denmark, 2014(oral presentation).

- BRM day, 10th May- 2012, Utrecht - 'Structural diversity and mechanical properties of amyloid fibrils by Atomic Force Microscopy'- (oral presentation).

Participation in Conference

[1] Spatiotemporal analyses of cellular tractions characterize the effect of substrate stiffness and adhesion molecule at subcellular scale
Diego Vargas Arango, Alicia Izquierdo-Alvarez, Alvaro Jorge Peñas, **Ramesh Subramani**, Hans Van Oosterwyck 8th World Congress of Biomechanics, Date: 2018/07/08-2018/07/12, Location: Dublin, Ireland.

[2] An industrially scalable small molecule gelator with applications in tissue engineering and regenerative medicine
Annual Conference of the European Society for Biomaterials, Date: 2017/09/04-2017/09/08, Location: Athens

[3] Tractions, morphology and motility dynamics in endothelial cells on compliant substrates
Mechanical Forces in Physiology and Disease Date: 2016/11/04-2016/11/05, Location: Madrid.

[4] Supramolecular nanopatterns of self-assembled peptide nucleic acids at the liquid/solid interface
R Subramani, X Ma, R, WL Mamdouh, F Besenbacher
ABSTRACTS OF PAPERS OF THE AMERICAN CHEMICAL SOCIETY 237, 510-510, 2009

[5] Research on supramolecular structures formed by hydrogen-bonded amino acid and nucleic acid bases
Xiaojing Ma, Eryun Zhang, **Ramesh Subramani**, Wad L Mamdouh, Flemming Besenbacher -Abstracts of papers of the American Chemical Society 237, 500-500, 2009

ParticipationinWorkshop

- National workshop on "Research integrity awareness" by UGC at University of Hyderabad, 5th August 2019.

Conference/Seminar/Workshop Organized

- The Art of Defining Research Problem/Questions and Awareness on Intellectual Properties Rights, one day workshop at PSGRKCW as a convener, Oct 24th 2019

- "Scholarly Publication, Citation, Impact Factor, Plagiarism and Reference Management Tools for Research" one day workshop at PSGRKCW as a convener, Feb 11th 2019

Grants

S.NO.	Project title	Name of the agency	Amount (in Lakhs)	Status
1	Development of novel mechanical characterization method for bio-polymeric nanomaterials using newly	Department of Science & technology (DST) International Bilateral Project (Indo – Russia) Project No:	35.02	Completed

	fabricated micro and nano-mechanical tools	INT/RUS/RFEA/367		
2	Development of novel polymer based edible coating for food preservation	SERB- Startup Research Grant (Project no:SRG/2020/001179)	20.19	Completed
3	Food labeling	GRG – PSGR Krishnammal College for Women (Seed Money from the institution)	0.60	Completed
4	Functional foods	GRG – PSGR Krishnammal College for Women (Seed Money from the institution)	3.00	Completed
5	Synthesis and characterization of novel polymer surfaces for tissue cultural applications	IDO –KU Leuven	-	Completed KU Leuven Belgium
6	Nano scale structural characterization of malaria infected red blood cells	Danish research grant	-	Completed Copenhagen university
7	Nano structural and mechanical characterization of supramolecular proteins	FWO-Unilever, Dutch Polymer Institute	-	Completed Twente University

Awards/Honors

Awards/Honors	Agency/Institute	Year of Award
Awarded	Bharathiar University, Coimbatore, Best Research Project award, at National science day for obtaining research project during 2019-2020 from SERB and DST.	2019-2020

Indexing and Citations

Overall Citation: 2700.H- Index = 12,