

Name : Dr. Radha Perumal Ramasamy  
 Designation and Affiliation : Assistant Professor  
 Department of Applied Science and Technology  
 Anna University, ACT Campus, Chennai 600025  
 Date of birth : 22 / Jan / 1976  
 Permanent Contact Address : B4 – SSN Colelge of Engineering, OMR road,  
 Kalavakkam, Zip - 603110



**Academic Qualification** :

Si No	Degree	College Name	Area of Specialization	Year of passing	Marks obtained
1	Ph.D	Department of Materials Science and Engineering Stony Brook University, Stony Brook, New York – U.S.A.	Materials science (polymers at Engineered surfaces)	Aug 2006	
2	MSc	Indian Institute of Technology (IIT), Madras	Physics	2000	First class
3	BSc	SaintJosheph's College, Bharathidasan University, Tamil Nadu, India	Physics	1997	First class with distinction

## Employment and Academic positions

<b>Si No</b>	<b>position</b>	<b>Institute name</b>	<b>Nature of duty</b>	<b>Period</b>
1	Visiting Scholar	Department of Materials Science and Engineering Stony Brook University, Stony Brook, New York – U.S.A.	Conducting research in the field of nanocomposites	June 14 2017 – July 11 2017
2	Visiting Scholar as Raman Postdoctoral fellow	Department of Materials Science and Engineering Stony Brook University, Stony Brook, New York – U.S.A.	Conducting research in the field of fire retardant materials	Nov 2013 – Nov 2014
3	Assistant Professor of Physics	Anna University, Chennai – 600 025 Tamil Nadu, India	Teaching and Research	Dec 2009 – present
4	Project Officer	DST unit on Nanoscience, Department of Chemistry and Sophisticated Analytical Instrument Facility Indian Institute of Technology Madras, Chennai - 600 036, India	Researched on Nano tubes, nanoparticleas and nano clusters	7-5-2009 to 6 – 8 - 2009

5	Postdoctoral researcher	Department of Materials Science The Pennsylvania State University Pennsylvania – U.S.A.	Researched on solid polymer electrolytes for Lithium Ion Batteries	(September 2007 – October 2008)
6	Postdoctoral Research associate	Department of Electrical and Computer Engineering Duke University, North Carolina – U.S.A	Researched on DNA nano structures	September 2006 – August 2007
7	Teaching Assistant	Department of Materials Science and Engineering Stony Brook University, Stony Brook, New York – U.S.A.	Taught graduate and undergraduate courses in materials science and Engineering.	(August 2000 - August 2005)

**Area of Research:** soft matter, crystal growth and nanoscience

**Research Projects:**

Si No	Funding Agencies	Title of the Project	Amount (Rs)	Status
1	Inter University Accelerator Centre	Investigation of effect of ions on magnetism in graphene nanocomposites – status - PI	Nil	ongoing

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

2	DBT (2018 – 2020)	In the network project titled “DBT – TANUVAS Canine Research centre and Networks” I am a CO-PI for the project titled “Mass Sterilization of Dogs using Single Intravasal Injection of Functional polymers”	<p>Amount provided for “Mass Sterilization of Dogs using Single Intravasal Injection of Functional Polymers” to me is Rs. 8.9 lakh (Rupees eight lakh and ninety thousand)</p> <p><u>Note:</u> Total cost for network project titled “DBT – TANUVAS Canine Research centre and Networks” is Rs 96035300/- (Rupees Nine crores Sixty Lakhs Thirty Five Thousand Three Hundred Only)</p>	Completed
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3	Inter University Accelerator Centre	Investigation of effect of ion beams upon lithium – polymer – nanoparticles Systems	Nil	completed
4	UGC-DAE Consortium for Scientific Research- National Facility for Neutron Beam Research (NFNBR), BARC	Investigation of Graphene-polymers-nanoparticles system using Neutron and Dielectric spectroscopy	Rs. 1204513 (Twelve lakhs Four thousand Five hundred and Thirteen Only)	ongoing
5	UGC-DAE Consortium for Scientific Research- National Facility for Neutron Beam Research (NFNBR), BARC (2012-16)	Investigation of the effects of nanoparticles in polymers using Neutrons and Dielectric spectroscopy	Rs 844551 (Rupees eight lakh forty four thousand five hundred and fifty one)	completed
6	Raman Post-Doctoral Fellowship tenable in the U.S.A for the year 2013	Investigation of dynamics of polymers in Fire retardant polymer nanocomposites	Rs 2282476 (Rupees Twenty Two Lakh Eighty Two Thousand Four Hundred and Seventy Six)	completed
7	BRNS (DAE) 2011 – 2014	Understanding Dynamics of Motion and Conductivity of Biomaterials Containing Quantum Clusters in Membranes”- Sanction No 2011/37C/21/BRNS	Rs 1911440 (Rupees Nineteen Lakh Eleven Thousand Four	Completed

			Hundred and Forty Only)
8		<b>Total</b>	<b>7132980</b> (Rupees Seventy One Lakh Thirty Two Thousand Nine Hundred and Eighty Only)

**Ph.D** : 2 completed, 1 ongoing

**MSc** : 2 thesis completed

### **Research publications:**

<b>Category</b>	<b>Conferences</b>	<b>Journals</b>
National	7	5
International	1	32

### **Books:**

International publications : 1 - chapter

“Role of Water in Dielectric Properties of Starch Membranes” – **Perumal Ramasamy**-chapter 26, Natural Polymers, Biopolymers, Biomaterials, and Their Composites, Blends, and IPNs - Volume 2 of the Recent Advances in Materials Sciences book series (2012) – Apple Academic Press.

### **Patent:**

### **Consultancy Assignments:**

Nil

<b>Funding Agencies</b>		<b>Number of Projects</b>	<b>Amount (Rs in Lakhs)</b>
<b>Nil</b>	Nil	Nil	Nil

### **Administrative Experience:**

- Faculty advisor for Master of Technology and Master of Science students at Anna University, Chennai, INDIA (2010-2013).
- Faculty advisor for Bachelor of students at Anna University, Chennai, INDIA (2015-2016).
- Laboratory in charge for Master of Science and Bachelor of Engineering students at

Anna University, Chennai, INDIA (2010 -2013).

### **Awards/Recognitions:**

- **Young scientist** award from The Academy of Sciences, Chennai for 2014.
- Young crystal Grower Award from Indian Association of Crystal Growth for the year 2015.
- Fellow of Tamil Nadu Academy of Sciences, India - selected on Oct 10 2015.
- **Raman Post Doctoral Fellowship tenable in the U.S.A for the year 2013 under India-US 21st Century knowledge Initiative.**
- **Editorial board member for Journal of Chemical and Biological Interfaces.**
- Life member for Neutron Scattering Society of India
- Life member of Indian Association for Crystal growth.
- National Synchrotron Light Source User at Brook Haven National Laboratory, USA from 2001 – 2008
- Member of the American Physical Society and the Materials Research Society of U.S.A (2003-2008).
- **List of invited talks**
  - 1) “Chitosan silver fractals” – **invited talk** - SECOND INTERNATIONAL CONFERENCE ON RECENT TRENDS IN APPLIED SCIENCE AND TECHNOLOGY ICRTAST-2018)– PERIYAR UNIVERSITY, Salem, TAMIL NADU during 23-25 Aug 2018.
  - 2) “Forming chitosan meta composites using carbon nanotubes” – **invited talk**- T2S7: Materials for building energy efficiency – 12th International Conference on Ceramic Materials and Components for Energy Storage and Environmental Applications – CMCEE12 by the American Ceramic Society in Singapore from 22 – 27 July 2018.
  - 3) “Micro Structural analysis of Polypropylene Graphene Nanocomposites” – **invited talk** – T2S6: Ceramics in conventional energy and Biomedical, Oil and Gas Exploration - 12th International Conference on Ceramic Materials and Components for Energy Storage and Environmental Applications - CMCEE 12 by the American Ceramic Society in Singapore from 22 – 27 July 2018.

- 4) “Formation of Nanostructures in Chitosan Lithium Films” - **Plenary Speaker** of International Conference on Momentous role of Nanomaterials in Renewable Energy devices (IC MNRE-2018) - at Alagappa University – Karaikudi during 2 March 2018.
- 5) “Formation of Nanostructures in Chitosan - Silver Nanocomposites” – **invited talk** – National Conference on Processing and Fabrication of Advanced Materials – SSN College of Engineering, Kalavakkam, Tamilnadu – 1 March 2018.
- 6) “Chitosan-maghemite-LiClO<sub>4</sub> – a new green solid polymer electrolyte” – **invited talk** – National Conference on Recent Trends in Physics of Materials (**NCRTPM-2018**)- Organized by PG and Research Department of Physics Pachaiyappa’s College, Chennai 600 030 during 9 – 10<sup>th</sup> February 2018.
- 7) “ Growth and Effect of Maghemite nanoparticles upon dielectric behavior of Chitosan matrix” – **invited talk** - 22<sup>nd</sup> National Seminar on Crystal Growth and Applications held at Department of Physics, Sacred Heart College, Tirupattur, Vellore Dt. Tamil Nadu during 29-31 January 2018.
- 8) Forming negative dielectric constant polymeric nanocomposites using graphene" – **invited talk** - 11<sup>th</sup> International Conference on Ceramic Materials and Components for Energy Storage and Environmental Applications - CMCEE 11 by the American Ceramic Society in Vancouver- Canada.
- 9) “Crystallization phenomenon in chitosan gold self collapsing gels" – invited talk - International Conference on Crystal Growth and Biomolecular Crystallography (ICCGBC-2014) 28-29 Nov **2014** at SASTRA University, Thanjavur- India.
- 10) Invited talk delivered in department of Biology, University of Evora, Evora, Portugal. (11 January **2011**)
- 11) Invited talk delivered in Conference on Crystal Growth in Tamil – Department of Physics, Anna University, Chennai India, 18 – 19 October, **2010**.



12) Invited talk delivered at Second International Conference on Natural Polymers (ICNP), Kottayam, Kerala, India 24-26, September 2010.

• **Conferences conducted**

- 1) Workshop on Preparation, Characterization of Crystalline Materials and their Applications (WPCCMA – 2012).
- 2) Conference on Crystal Growth in Tamil – Co-convenor, Department of Physics, Anna University, Chennai India, 18 – 19 October, 2010.
- 3) **Session chair** in 11<sup>th</sup> International Conference on Ceramic Materials and Components for Energy Storage and Environmental Applications - CMCEE 11 by the American Ceramic Society in Vancouver- Canada from 14 - 19 of June 2015.
- 4) **Session chair** in T2S6: Ceramics in conventional energy and Biomedical, Oil and Gas Exploration - 12th International Conference on Ceramic Materials and Components for Energy Storage and Environmental Applications - CMCEE 12 by the American Ceramic Society in Singapore from 22 – 27 July 2018.

• **Outreach**

I have made online presentation to high school students participating in summer programs at Stony Brook University – NY, USA in July 2020.

**TECHNICAL RESEARCH PUBLICATIONS**

**INTERNATIONAL JOURNALS**

- 1) “Toward a Least-Effort Principle in Critical Elements Pricing Sustainability”  
**Radha Perumal Ramasamy** and Alan Hurd - MRS Energy & Sustainability

- 2) "Curving of Tellurium Nanowires with gold in the presence of bovine serum albumin" – **Radha Perumal Ramasamy** –SN Appl. Sci. 2, 1905 (2020).  
<https://doi.org/10.1007/s42452-020-03676-0>
  
- 3) "Polyethylene: graphene—a magnetic tunable metacomposite." **Radha Perumal Ramasamy**, Vinod K. Aswal, Miriam H. Rafailovich and Gary Halada - JOURNAL OF MATERIALS SCIENCE: MATERIALS IN ELECTRONICS - Article DOI:  
<https://doi.org/10.1007/s10854-020-04380-w>
  
- 4) "Broadband dielectric spectroscopy and small-angle neutron scattering investigations of polyurethane-graphene foams" - **Radha Perumal Ramasamy**, Swathi Somanathan, Miriam Rafailovich and Vinod K. Aswal - J Mater Sci: Mater Electron 31, 15843–15851 (2020). <https://doi.org/10.1007/s10854-020-04146-4>.
  
- 5) "Room Temperature Dielectric Characteristics of Chitosan-Graphene Films Embedded in Cellulose Fabric" – **Radha Perumal Ramasamy**, Swathi Somanathan, Vinod Kumar Aswal and Miriam Rafailovich. MRS Advances © 2018 Materials Research Society DOI: 10.1557/adv.2018.71.
  
- 6) "Chitosan-maghemite-LiClO<sub>4</sub> - a new green conducting superpara magnetic nanocomposite" - Annamalai Saravanan and **Radha Perumal Ramasamy** – Journal of polymer research. - J Polym Res (2016) 23:174 - DOI: 10.1007/s10965-016-1072-8.
  
- 7) "Investigation of Polymer Dynamics in Chitosan-Maghemite Nanocomposites - a Potential Green Superparamagnetic Material" – Annamalai Saravanan and **Radha Perumal Ramasamy**– J Polym Res (2016) 23:104 - DOI 10.1007/s10965-016-0998-1.
  
- 8) "Small Angle Neutron Scattering and Spectroscopic Investigations of Ag Fractal Formation in Chitosan-Ag Nanocomposite Facilitated by Hydrazine Hydrate" - Suraiya Begum, Vinod Kumar Aswal and **Radha Perumal Ramasamy**- J. Phys. Chem. C, DOI: 10.1021/acs.jpcc.5b09747.

- 9) "A novel soluble hydrogel cell culture bioreactor made using proteins" – **Radha Perumal Ramasamy**, Chris Gordon and Peter Brink - *Advanced Porous Materials*, Vol. 3, 1–6, 2015.
- 10) "The thermo-mechanical response of PP nanocomposites at high graphene loading" - Kai Yang, Maya Endoh, Rebecca Trojanowski, **Radha P. Ramasamy**, Molly M. Gentleman, Thomas A. Butcher and Miriam H. Rafailovich - *Nanocomposite* 2015, 00, 1-12.
- 11) "Poly propylene - graphene – a nanocomposite that can be converted into meta-materials at desired frequencies" – **Radha Perumal Ramasamy**, Kai Yang and Miriam Rafilovich – *RSC Adv.*, 2014, 4, 44888–44895.
- 12) "Water sensitive group can reveal role of water in spherulite formation in Amylose" – **Radha Perumal Ramasamy**– accepted in *Journal of Chemical and Biological Interfaces– J. Chem. Biol. Interfaces* 2, 1-5 (2014).
- 13) "Studies on formation of star shaped nanostructures in chitosan films induced by lithium salts" - S. N. Suraiya Begum, Vinod K. Aswal, and **Radha Perumal Ramasamy** – *Ionics*, Vol 21, 1363-1380, (2015).
- 14) "Modifications in Mechanical and Electrical Characteristics of Self Collapsing Gels of Chitosan-Gold due to incorporation of Carbon Nanotubes" – **Radha Perumal Ramasamy** – *J. Chem. Biol. Interfaces* Vol. 1, 1–8, 2014.
- 15) "Formation of Highly Fluorescent sponge Obtained Using Gold and Proteins" - **Radha Perumal Ramasamy**– *J. Chem. Biol. Interfaces* Vol. 1, 1–7, 2014
- 16) "Increase in nanoparticles concentration can result in a shift of dielectric behavior of nanocomposite towards that of the host polymer matrix" – Annamalai Saravanan and **Radha Perumal Ramasamy**– *J. Chem. Biol. Interfaces* 2, 17-23 (2014)
- 17) "Formation of gold nanoparticles upon chitosan leading to formation and collapse of gels"– **Radha Perumal Ramasamy** and Shihabudheen M. Maliyekkal - *New Journal of Chemistry* Vol. 38, 63—69 (2014).
- 18) "Chitosan–Gold–Lithium Nanocomposites as Solid Polymer Electrolyte" - S. N. Suraiya Begum, Ramanathaswamy Pandian, Vinod K. Aswal, and **Radha Perumal**

- Ramasamy**- Journal of Nanoscience and Nanotechnology Vol. 14, 1–13 (2014).
- 19) “Formation and Collapse of Fluorescent Gels by Gold Nanoparticles” – **Radha Perumal Ramasamy** and Shihabudheen M. Maliyekkal - Advanced Science, Engineering and Medicine Vol. 5, pp. 1–9, **2013**.
  - 20) “Formation of Graphene Flowers Using Proteins and Gold” – **Radha Perumal Ramasamy**, Thangaraju Murugan Sankaranarayanan and Sundara Ramaprabhu– GRAPHENE Vol. 1, 1–4, **2013**.
  - 21) “Role of Water in Dielectric Properties of Starch Membranes” – **Perumal Ramasamy**-chapter 26, Natural Polymers, Biopolymers, Biomaterials, and Their Composites, Blends, and IPNs - Volume 2 of the Recent Advances in Materials Sciences book series (**2012**) – Apple Academic Press.
  - 22) “Growth improvement of AgGaSe<sub>2</sub> single crystal using the vertical Bridgman technique with steady ampoule rotation and its characterization” - G. Anandha Babu, R. Subramaniyan, N. Karunakaran, **R. Perumal Ramasamy**, P. Ramasamy, S. Ganesamoorthy, P. K. Gupta - Journal of Crystal Growth 338 (**2012**) 42–46.
  - 23) “A dielectric relaxation study of starch - water and starch - glycerol films” – **Perumal Ramasamy**– Ionics (**2012**) 18:413–423.
  - 24) “Characterization of <010> directed ammonium malate single crystals grown by Sankaranarayanan – Ramasamy method” - G. Senthil Murugan, **R. Perumal Ramasamy**, P. Ramasamy\*, G. Bhagavannarayana – Journal of Crystal Growth – 2011, 328 (1), 58-61.
  - 25) “Size Tuning of Au Nanoparticles Formed by Electron Beam Irradiation of Au<sub>25</sub> Quantum Clusters Anchored Within and Outside of Dipeptide Nanotubes” – **Perumal Ramasamy**, Samit Guha, Edakkattuparambil Sidharth Shibu, Theruvakkattil S. Sreeprasad, Soumabha Bag, Arindam Banerjee and Thalappil Pradeep - Journal of Materials Chemistry, **2009**, 19, 8456 – 8462.
  - 26) “Synthesis, crystal growth and characterization of a highly efficient organic nonlinear Optical Donor-Acceptor single crystal: 2-Amino-5-nitropyridinium-Toluenesulfonate” – G. Anandbabu, **R. Perumal Ramasamy**, P. Ramasamy, V. Krishnakumar – Crystal Growth & Design, **2009**, Vol 9, No 7, 3333-3337.

- 27) "Studies on crystal growth. Crystal structure, Optical, Spectral and Thermal Properties of An Organic crystal : Benzophenonehydrazone" - G. Anandbabu, **R. Perumal Ramasamy**, P. Ramasamy and S. Natarajan - Journal of Crystal Growth, **2009**, 311, 3461-3465.
- 28) "Synthesis, crystal growth and characterization of an efficient nonlinear optical D-  $\pi$ - A type single crystal: 2-Amino pyridinium 4-nitrophenolate 4-nitrophenol" - G. Anandbabu, **R. Perumal Ramasamy** and P. Ramasamy –Materials Chemistry and Physics, **2009**, 117, 326 – 330.
- 29) "Protein Fingerprinting Using Flat-Surface Electrophoresis" – **Perumal Ramasamy**, M. Raafat El-Maghrabi, Gary Halada and Miriam Rafailovich – Mater. Res. Soc. Symp. Proc. Vol. 1061, 1061-MM09-23, **2008** Materials Research Society.
- 30) "Electrostatic field calculations for electrophoresis using surfaces" -**Perumal Ramasamy**, M. Raafat El-Maghrabi and Gary Halada – Mater. Res. Soc. Symp. Proc. Vol. 1061, **1061-MM09-25**, **2008** Materials Research Society.
- 31) "Examination of Interactions of Oppositely Charged Proteins in Gels" – **Perumal Ramasamy**, M. Raafat El-Maghrabi, Lisa M. Miller, Gary Halada and Miriam Rafailovich. - published in Langmuir **2007**, Volume 23, Issue 4, pages 2021 - 2029.
- 32) "An approximate and simple method to trisecting and acute angle" – **Radha Perumal Ramasamy**, Mathematical Spectrum, Volume 22, **1989/90**, Number 2, Page 48-49.
- 33) "Jednoduchametodatriseckce a nanoseckceuhlu (A simple method to trisect and nanosect and angle)" – **Radha Perumal Ramasamy** Rozhledy, 69, **1990/1991**, pages 65 – 67.

## NATIONAL JOURNALS

•

- 1) "DNA Nano Structures Observed using Dynamic Light Scattering TEM and AFM in Liquid Techniques" – **Radha Perumal Ramasamy** - Journal of Chennai Academy of Sciences 2, 15-25 (2020).

- 2) "Dielectric analysis of effect of BSA- gold quantum clusters in chitosan films" – **Radha Perumal Ramasamy**, and Vinod K. Aswal – AIP Conference Proceedings **2115**, 030046 (2019); <https://doi.org/10.1063/1.5112885>
- 3) "Formation of Protein Induced Micro-pores in Chitosan Membranes" - S. N. Suraiya Begum, V.K Aswal and **Radha Perumal Ramasamy** AIP Conference Proceedings 1832, 050167 (2017); doi: 10.1063/1.4980400.
- 4) "Formation of Tellurium-Gold Necklaces" – **Radha Perumal Ramasamy**- AIP Conference Proceedings 1832, 050104 (2017); doi: 10.1063/1.4980337
- 5) "Effect of maghemitenanocrystals upon crystallization of LiClO<sub>4</sub> in chitosan films" – Annamalai Saravanan and **Radha Perumal Ramasamy** - **F09**, page 248 - Twentieth National Seminar on Crystal Growth and Applications - Bhabha Atomic Research Centre, Anushaktinagar, Mumbai - 400 094. January 19 – 21, 2016.
- 6) "Forming Nano and Micro crystals of Metals Using Self Collapsing Gels" - A new and Novel Technique – **Radha Perumal Ramasamy**- YCGA 2, page 320 - 20<sup>th</sup> National Seminar on Crystal Growth and Applications - Bhabha Atomic Research Centre, Anushaktinagar, Mumbai - 400 094. January 19 – 21, 2016.
- 7) "Structural Modification in the Formation of Starch – Silver Nanocomposites" – Suraiya Begum, Vinod Kumar Aswal and **Radha Perumal Ramasamy** - AIP Conf. Proc. 1731, 050147-1–050147-3; doi: 10.1063/1.4947801.

## INTERNATIONAL CONFERENCES

- 1) "Understanding formation of chitosan-gold gels using Small Angle Neutron Scattering" – **Oral Presentation** - 2019 MRS Fall Meeting, December 1-6, 2019 at the Hynes Convention Center and adjacent Sheraton Boston Hotel in Boston, MA - USA.
- 2) "Using graphene for fire retardant materials" – invited talk - 3rd International

Conference on Recent Trends in Applied Science and Technology (ICRTAST-2019) in Tamil Language, 19-21 September 2019, SSN Research Centre, SSN Institutions, Kalavakkam-603110, Chennai, Tamil Nadu, INDIA

- 3) “Chitosan silver fractals” – **invited talk** - SECOND INTERNATIONAL CONFERENCE ON RECENT TRENDS IN APPLIED SCIENCE AND TECHNOLOGY ICRTAST-2018)– PERIYAR UNIVERSITY, Salem, TAMIL NADU during 23-25 Aug 2018.
- 4) “Forming chitosan meta composites using carbon nanotubes” – **invited talk**- T2S7: Materials for building energy efficiency – 12th International Conference on Ceramic Materials and Components for Energy Storage and Environmental Applications – CMCEE12 by the American Ceramic Society in Singapore from 22 – 27 July 2018.
- 5) “Micro Structural analysis of Polypropylene GrapheneNanocomposites” – **invited talk** – T2S6: Ceramics in conventional energy and Biomedical, Oil and Gas Exploration - 12th International Conference on Ceramic Materials and Components for Energy Storage and Environmental Applications - CMCEE 12 by the American Ceramic Society in Singapore from 22 – 27 July 2018.
- 6) “GEOLOGIC ENTROPY FOR MATERIALS AVAILABILITY FOR NOVEL TECHNOLOGIES” - Hurd, Alan J. and Ramasamy, R. Perumal - 15th International Symposium on Novel and Nano Materials, 2018-07-01/2018-07-06 (Lisbon, Portugal)
- 7) “Formation of Nanostructures in Chitosan Lithium Films” - **Plenary Speaker** of International Conference on Momentous role of Nanomaterials in Renewable Energy devices (IC MNRE-2018) - at Alagappa University – Karaikudi during 2 March 2018.
- 8) “Light Scattering and FTIR studies of BSA – Poly –L –Lysine complexes in D2O” – **Radha Perumal Ramasamy**, SwathiSomanathan and Vinod Kumar Aswal – poster presentation – AB:20 – International workshop on Recent Materials for Health Care and Industrial Application (IWRN – 2018) held at Anna University from Jan 22-23, 2018.
- 9) “Conductivity studies on cellulose graphene chitosan nanocomposites” – Swathi

Somanathan, **Radha Perumal Ramasamy**, and Vinod Kumar Aswal – poster presentation– AB:22 – International workshop on Recent Materials for Health Care and Industrial Application (IWRN – 2018) held at Anna University from Jan 22-23, 2018.

- 10) “Room Temperature Dielectric Characteristics of Chitosan-Graphene Films Embedded in Cellulose Fabric” – Poster (NM02.11.07) – **Radha Perumal Ramasamy**, Swathi Somanathan, Vinod Kumar Aswal, Miriam Rafailovich. Materials Research Society – Boston, USA. Nov 30, 2017.
- 11) "Effect on Host during Crystallization - A Potential New Branch in Crystal Growth Science" – **Radha Perumal Ramasamy**- Tu1-G08- 4 - Talk - International Conference in Crystal Growth and Epitaxy (ICCGE-18) held in Nagoya, Japan from 7 to 12 August 2016 at the Nagoya Congress Center, Nagoya, Japan.
- 12) "Investigation of Interaction of One Dimensional Tellurium Nanowires with BSA templated Gold Quantum Clusters" – **Radha Perumal Ramasamy**- Tu1-G02-4 - Talk - International Conference in Crystal Growth and Epitaxy (ICCGE-18) held in Nagoya, Japan from 7 to 12 August 2016 at the Nagoya Congress Center, Nagoya, Japan.
- 13) "Investigation of Effect of Formation of Gold Nanoparticles in Chitosan Membranes" - R.RadhaPerumal and S.N. Suraiya Begum - MoP-G03-26 - poster presentation – International Conference in Crystal Growth and Epitaxy (ICCGE-18) held in Nagoya, Japan from 7 to 12 August 2016 at the Nagoya Congress Center, Nagoya, Japan.
- 14) "Dielectric relaxation studies of porous TiO<sub>2</sub> ceramic" – **Radha Perumal Ramasamy**- POSTER - 11<sup>th</sup>International Conference on Ceramic Materials and Components for Energy Storage and Environmental Applications - CMCEE 11 by the American Ceramic Society in Vancouver- Canada CONTROL ID: 2219522 .
- 15) "Forming negative dielectric constant polymeric nanocomposites using graphene" – **Radha Perumal Ramasamy**- invited talk - 11<sup>th</sup>International Conference on Ceramic Materials and Components for Energy Storage and Environmental Applications - CMCEE 11 by the American Ceramic Society in Vancouver- Canada- CONTROL ID: 2220334.



- 16) “Crystallization phenomenon in chitosan gold self collapsing gels” – **Radha Perumal Ramasamy- invited talk** - International Conference on Crystal Growth and Biomolecular Crystallography (ICCGBC-2014) 28-29 Nov **2014** at SASTRA University, Thanjavur- India.
- 17) “Gold Nanocrystals enhances Conductivity in Chitosan films containing Lithium salts” – [poster P-71] S.N. Suraiya Begum and **Radha Perumal Ramasamy**”- International Conference on Crystal Growth and Biomolecular Crystallography (ICCGBC-2014) 28-29Nov **2014** at SASTRA University, Thanjavur- India.
- 18) “Iron Oxide Nanocrystals Modifies Electrical Characteristics of Chitosan Membranes” – [poster - P72] - A. Saravanan and **Radha Perumal Ramasamy**-International Conference on Crystal Growth and Biomolecular Crystallography (ICCGBC-2014) on 28-29 Nov **2014** at SASTRA University, Thanjavur- Poster Presentation- entitle.
- 19) “Structural Modifications Observed Using FT-IR Spectroscopy in Protein-Directed Synthesis of Highly Fluorescent Gold Nanoclusters” – **Invited talk** – Second International Conference on Natural Polymers (ICNP),Kottayam,Kerala,India24-26,September**2010**.
- 20) “Insitu FTIR measurements of Amylose Crystallization from aqueous solutions” –[talk EC2] – The 16<sup>th</sup>International Conference on Crystal Growth, Beijing – China 8 -13 August **2010**.
- 21) “A dielectric relaxation study of starch - water and starch - glycerol films” [poster PA224] – The 16<sup>th</sup>International Conference on Crystal Growth, Beijing China 8 – 13 August 2010.
- 22) “Interactions of proteins in gels, solution and on surfaces” [talk] – **Perumal Ramasamy** Polymer physics seminar at Department of Materials science in Pennsylvania State University, USA. Dec **2007**.
- 23) “Protein Fingerprinting Using Flat-Surface Electrophoresis” [poster - MM9.23] – **Perumal Ramasamy**, M. Raafat El-Maghrabi, Gary Halada and Miriam Rafailovich – Materials Research Society, Boston, USA **2007**.

- 24) “A light scattering study of interactions of oppositely charged proteins in solution” [poster MM9.24] – **Perumal Ramasamy**, M. Raafat El-Maghrabi, Gary Halada and Miriam Rafailovich –Materials Research Society, Boston, USA **2007**.
- 25) “Electrostatic field calculations for electrophoresis using surfaces” [poster - MM9.25] **Perumal Ramasamy**, M. Raafat El-Maghrabi, Gary Halada – Materials Research Society, Boston, USA **2007**.
- 26) “Examination of the Interface Formed from Protein Interactions in Gels” [poster]- **Perumal Ramasamy**, Lisa M. Miller, M. Raafat El-Maghrabi, Miriam Rafailovich [Log #MAR06-2005-005160] American Physical Society, Baltimore, USA **2006**.
- 27) “Electrophoresis of Proteins Using Surfaces” [Talk] – **Perumal Ramasamy**, Miriam Rafailovich , Jonathan Sokolov, Peter Brink, Lisa Miller National Synchrotron Light Source Users Meeting at Brook Haven National Lab, USA **2005**.
- 28) “Electrophoresis of Proteins near Surfaces” [Poster] – **Perumal Ramasamy**, Miriam Rafailovich, Jonathan Sokolov, Peter Brink, Lisa Miller National Synchrotron Light Source Users Meeting at Brook Haven National Lab, **2005**.
- 29) “Surface Electrophoresis Cell using ITO conducting walls” [Poster- Z8.013]- **Perumal Ramasamy**, Vladimir Samuilov, Jonathan Sokolov, Miriam Rafailovich – American Physical Society Montreal, Canada **2004**,.
- 30) “Electrophoresis of Proteins Using Flat Surfaces” [Talk – Y 6.2] –**Perumal Ramasamy**, Miriam Rafailovich, Jonathan Sokolov, Lisa Miller, Peter Brink. Materials Research Society **2004**, Boston.
- 31) “The Electrophoretic Mobility of Proteins near Surfaces” [Talk – R1.073] – **Perumal Ramasamy**, Avtar Singh, Jonathan Sokolov, Miriam Rafailovich. American Physical Society **2004**, Montreal.
- 32) “The Electrophoretic Mobility of Proteins near Surfaces” [Poster] – **Perumal Ramasamy**, Miriam Rafailovich Materials Research Society **2004**, Boston.

- 33) “Measurement of electro osmotic flow (EOF) in a DNA surface electrophoresis cell”  
[Poster presentation – C1.078] – **Perumal Ramasamy**, Eli Hoory, Vladimir Samuilov, Jonathan Sokolov, Miriam Rafailovich American Physical Society, Texas **2003**.
- 34) “X-ray topography analysis of micropipe dislocations in 6H and 4C Silicon Carbide crystals”[poster presentation] – **Perumal Ramasamy** and Prof. Michael Dudley National Synchrotron Light Source users meeting at Brook Haven National Lab, August **2001**.

### NATIONAL CONFERENCES

- 1) “Effect of assembly of graphene upon dielectric properties of Polypropylene graphene nanocomposites - Radha Perumal Ramasamy” – **invited talk** - 23rd National Seminar on Crystal Growth and Applications (NSCGA-2019) 28–30th January 2019 Department of Physics, Bharathiar University Coimbatore, Tamil Nadu -641 046.
- 2) “Effect of Bentonite on morphological and dielectric properties of Chitosan films”- K. Lavanya, T. Sivakumar and Radha Perumal Ramasamy- poster presentation - 23rd National Seminar on Crystal Growth and Applications (NSCGA-2019) 28–30th January 2019 Department of Physics, Bharathiar University Coimbatore, Tamil Nadu -641 046.
- 3) “Synthesis of Zn doped TiO<sub>2</sub> Nanoparticles and their structural characterization” – A. Kosihala, P. Sridevi and Radha Perumal Ramasamy - poster presentation - 23rd National Seminar on Crystal Growth and Applications (NSCGA-2019) 28–30th January 2019 Department of Physics, Bharathiar University Coimbatore, Tamil Nadu -641 046.
- 4) “Dielectric Measurements of Chitosan- LiClO<sub>4</sub> films - Swathi Somanathan, Vinod K. Aswal and Radha Perumal Ramasamy” – **best poster award** - 23rd National Seminar on Crystal Growth and Applications (NSCGA-2019) 28–30th January 2019 Department of Physics, Bharathiar University Coimbatore, Tamil Nadu -641 046
- 5) “Dielectric analysis of effect of BSA- gold quantum clusters in chitosan films” - Radha Perumal Ramasamy and Vinod K. Aswal – poster b0032 - The 63<sup>rd</sup> DAE Solid

State Physics Symposium (DAE SSPS 2018) held at Guru Jambheshwar University of Science and Technology, Hisar, Haryana during 18-22 2018.

- 6) "Formation of Nanostructures in Chitosan - Silver Nanocomposites" – **invited talk** – National Conference on Processing and Fabrication of Advanced Materials – SSN College of Engineering, Kalavakkam, Tamilnadu – 1 March 2018.
- 7) "Chitosan-maghemite-LiClO<sub>4</sub> – a new green solid polymer electrolyte" – **invited talk** – National Conference on Recent Trends in Physics of Materials (**NCRTPM-2018**)- Organized by PG and Research Department of Physics Pachaiyappa's College, Chennai 600 030 during 9 – 10<sup>th</sup> February 2018.
- 8) "Growth and Effect of Maghemite nanoparticles upon dielectric behavior of Chitosan matrix" – **invited talk** - 22<sup>nd</sup> National Seminar on Crystal Growth and Applications held at Department of Physics, Sacred Heart College, Tirupattur, Vellore Dt. Tamil Nadu during 29-31 January 2018.
- 9) "Room Temperature Dielectric Characteristics of Chitosan-Graphene Films Embedded in Cellulose Fabric" – Poster (NM02.11.07) – **Radha Perumal Ramasamy**, Swathi Somanathan, Vinod Kumar Aswal, Miriam Rafailovich. Materials Research Society – Boston, USA. Nov 30, 2017.
- 10) "Formation of Protein Induced Micro-pores in Chitosan Membranes" - S. N. Suraiya Begum, V.K Aswal and **Radha Perumal Ramasamy**- POSTER–The 61<sup>st</sup> DAE Solid State Physics Symposium (**DAE SSPS 2016**) held at KIIT University, Bhubaneswar-751024, Odisha, India during December 26-30, 2016.
- 11) "Formation of Tellurium-Gold Necklaces" Radha Perumal Ramasamy - POSTER – The 61<sup>st</sup> DAE Solid State Physics Symposium (**DAE SSPS 2016**) held at KIIT University, Bhubaneswar-751024, Odisha, India during December 26-30, 2016.
- 12) "Modifications in electrical characteristics of chitosan membrane due to formation of silver nanocrystals" Suraiya Begum S.N and **Radha Perumal Ramasamy** - F06, page 242 - 20<sup>th</sup> National Seminar on Crystal Growth and Applications - Bhabha Atomic Research Centre, Anushaktinagar, Mumbai - 400 094. January 19 – 21, 2016.

- 13) "Effect of maghemitenanocrystals upon crystallization of LiClO<sub>4</sub> in chitosan films" - Annamalai Saravanan and **Radha Perumal Ramasamy** - F09, page 248 – Talk - 20<sup>th</sup> National Seminar on Crystal Growth and Applications - Bhabha Atomic Research Centre, Anushaktinagar, Mumbai - 400 094. January 19 – 21, 2016.
- 14) Forming Nano and Micro crystals of Metals Using Self Collapsing Gels - A new and Novel Technique – **Radha Perumal Ramasamy** - Talk - YCGA 2, page 320 - 20<sup>th</sup> National Seminar on Crystal Growth and Applications - Bhabha Atomic Research Centre, Anushaktinagar, Mumbai - 400 094. January 19 – 21, 2016.
- 15) "Structural Modification in the Formation of Starch – Silver Nanocomposites" - Suraiya Begum, Vinod Kumar Aswal and **Radha Perumal Ramasamy** – POSTER – presentation in 60th DAE SSPS **2015** - Amity University UP, Noida, Uttar Pradesh, INDIA, December 21-25.
- 16) “Temperature Dependant Analysis of Dielectric Relaxations and Conductivity Behavior of Chitosan – Gold – Lithium Nanocomposites” – S.N. Suraiya Begum and **Radha Perumal Ramasamy**- Nano India 2015 on 29-30 Jan 2015 at SASTRA University, Thanjavur- Poster Presentation- entitle.
- 17) "Investigation of dielectric characteristics of Chitosan-maghemite-LiClO<sub>4</sub> nanocomposites" - A. Saravanan and Radha Perumal Ramasamy - Nano India 2015 on 29-30 Jan 2015 at SASTRA University, Thanjavur- Poster Presentation.
- 18) “Conformational changes due to Lithium in chitosan films” – [poster presentation] S.N. Suraiya Begum , Vinod K. Aswal and **Radha Perumal Ramasamy**– CONFERENCE ON NEUTRON SCATTERING, IISER PUNE - 10<sup>th</sup> -12<sup>th</sup> FEBRUARY 2014.
- 19) “Synthesis and Characterization of Chitosan – Gold Nanocomposites” – [poster presentation] S.N. Suraiya Begum and **Radha Perumal Ramasamy**-24<sup>th</sup> Annual General Meeting Materials Research Society of India (MRSI), Indira Gandhi Centre for Atomic Research, Department of Atomic Energy, Kalpakkam, Tamil Nadu, India (February 11-13, **2013**).

- 20) “Electrical and Magnetic studies of superparamagnetic chitosan- maghemite nanocomposites” – [poster presentation]A.Saravanan and **Radha Perumal Ramasamy**– 24th Annual General Meeting Materials Research Society of India (MRSI), Indira Gandhi Centre for Atomic Research, Department of Atomic Energy, Kalpakkam, Tamil Nadu, India (February 11- 13, **2013**).
- 21) “Spectroscopic Analysis of Crystallization of Amylose and It’s Interaction with Water during Formation of Spherulites” – Invited talk delivered in National Conference in Crystal growth and nanoscience (NCCG) sponsored by University Grants Commission of India at Aringar Anna College, Aralvoymoli, Tamil Nadu, India (28 – 29 January **2011**).
- 22) “Size Tuning of Au Nanoparticles Formed by Electron Beam Irradiation of Au<sub>25</sub> Quantum Clusters Anchored Within and Outside of Dipeptide Nanotubes” – **Invited talk** – Conference on Crystal Growth in Tamil – Department of Physics, Anna University, India 18 – 19 October,**2010**.
- 23) “An approximate and simple method to trisecting and acute angle” – **Talk**- Radha Perumal Ramasamy, - monthly meetings of the Tamil Nadu Academy of Sciences – Department of Nuclear Physics – University of Madras – Chennai – **1988**.

### **PATENTS**

Country : Nil  
 Title :  
 App. No. : Nil  
 Status :

### **BOOKS**

1. Title : 1 – chapter . Title : “Role of Water in Dielectric Properties of Starch Membranes” – **Perumal Ramasamy**- chapter 26, Natural Polymers, Biopolymers, Biomaterials, and Their Composites, Blends, and IPNs - Volume 2 of the Recent Advances in Materials Sciences book series  
 Publisher : – Apple Academic Press

Year : 2012  
Authors : Volume editors: Sabu Thomas, Neethu Ninan, Sneha Mohan  
and Elizabeth francis