

CURRICULUM VITAE

OF

Prof. (Dr.) K. Sreekumar

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PERSONAL DETAILS

FULL NAME : Dr. K. SREEKUMAR
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: Professor
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DATE OF BIRTH : 02-06-1962
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Abubacker Road,
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EDUCATIONAL QUALIFICATION

	Degree	Year	Subject	University/Institution	% of marks
1	B.Sc	1982	Chemistry	University of Kerala	79
2	M.Sc	1984	Chemistry	University of Kerala	69
3	PhD	1989	Polymer Chemistry	M.G. University	

SERVICE HISTORY

1. Lecturer in Chemistry Kerala University, Trivandrum	1989-1989
2. Reader in Chemistry Kerala University, Trivandrum	1989-1999
3. Reader in Chemistry Department of Applied Chemistry, CUSAT, Kochi	1999-2006
4. Professor Department of Applied Chemistry, CUSAT, Kochi	2006 onwards

ADMINISTRATION

- Head, Department of Applied Chemistry 2010-2013 (Rotation)
- Head, Department of Applied Chemistry 2020 March onwards (Rotation)
- Chairman, Board of Studies in Chemistry, CUSAT
- Member of Senate, CUSAT
- Member, of Academic Council, member of Faculty of Science, CUSAT
- Coordinator of Center for Integrated Studies, CUSAT

Ph.D. THESIS SUPERVISED: 39

Sl. No	Name Of The Research Student	Topic Of Thesis	Year
1	Aiswarya Kumari K.	Synthetic and Mechanistic Studies Using Carbonyl Derivatives of Polymeric Oximes	1993
2	Anil Kumar M.O.	Structural and Mechanistic Studies of Macromolecular Metal Chelates	1993
3	K. Geetha Kumari	Polymer Supported Chromates as Solid Phase Organic Reagents	1995

4	Sheela M. S.	Polymer Supported T- Butyl Hydroperoxides Synthetic and Mechanistic Studies	1995
5	Shiney Abraham	Synthetic Studies Using Polymer Supported Oxidising Reagents	1995
6	Sophiamma P. N.	Synthesis and Application of Functional Polymers In Organic Synthesis	1996
7	Sumi Mitra S.	Synthetic Studies Using Polymer Bound Quaternary Ammonium Polyhalides	1996
8	K. A. Maniram		1998
9	K. Sivadasan Chettiar	Studies on Polymer Supported Thiosemicarbazone Transition Metal Chelates	2000
10	Biju Philip	Studies on Photorestructuring of Synthetic Polymers	2001
11	Vipin A.	Studies on Polymer Supported Transition Metal Catalysts	2001
12	N. Ajai Kumar	Studies on Polymer Metal Complexes	2004
13	N. F. Francis	Studies on Free Radical Polymerization	2005
14	Varughese Mathew	Studies on Macromolecular Metal Chelates	2005
15	Daly Davis	Nonlinear Optical Properties of Polymers Containing Azomesogens and Chiral Molecules: Theoretical and Experimental Evaluations	2005
16	K. Sudheesh Kumar	Photorestructuring of Polyurethanes Containing Photolabile Groups	2006
17	V. Santhakumari	Studies on the Synthesis of Polyamines Using Polymer Supported Solid Phase Strategy	2007
18	Rajesh Krishnan	Catalysis By Polymer Supported Dendrimers, Their Metal Complexes and Nanoparticle Conjugates	2008
19	Kishore V. C.	Development of Photo-Refractive Polymers: Evaluation of Photoconducting and Electro-Optic Properties	2008
20	Dhanya R.	Development of Photo-Refractive Polymers: Synthesis and Charecterization of Polymers With	2008

		Donor - Acceptor Groups	
21	Suresh S.	Organic Reactions Catalyzed by Modified Clays	2008
22	Beena Mary John	Fabrication and Characterization of Dye Sensitized Polymer Films for Holographic Applications	2008
23	M.V.N Kannan	Organic Synthesis Mediated by Heterogeneous Catalyst	2011
24	Nimmy K. P.	Studies on Methylene Blue Sensitized Poly(Vinyl Alcohol): Effect of Molecular Weight of the Polymer and Cross-Linking Agents on Its Holographic Properties	2011
25	Mahesh Kumar M. V.	Design And Synthesis of Conjugated Polymers for Photovoltaic and Chemosensor Applications	2012
26	Anoop N. A.	Energetic Polymers	2013
27	Mangala K.		
28	Elizabeth C. V.		
29	Usha Mani M.		
30	Pramitha		
31	Sona Naranyanan	Design and Synthesis Of Donor-Acceptor Low Band Gap Copolymers for Photoconductive and Non-Linear Optical Applications	2015
32	Jiby K Gopinath	Theoretical Design and Synthesis Of Donor-Acceptor Conjugated Polymers for Photovoltaic and NLO Applications	2015
33	Smitha George	Development of Dendrigrft Polymers as Catalyst In Organic Synthesis	2015
34	Sinija P. S.	Organic Reactions Catalyzed by Functionalized Mesoporous Silica	2016
35	Sherly Mole P. B.	Pamam Dendrimers with Modified Polyolcore as Homogeneous Catalysts in Organic Synthesis	2017
36	Anjali C.P.	Theoretical Design And Synthesis of Low Band Gap Conjugated Copolymers for Photovoltaic	2017

		and Nonlinear Optical Applications	
37	Sowmya Xavier	Design and Synthesis of Conjugated Polymers for Photovoltaic and Third Order Nonlinear Optical Applications	2018
38	Jisha J Pillai	Development of Donor-Acceptor Low Band Gap Polymers for Photoconducting and Non-linear Optical Applications: Theoretical Design and Synthesis	2019
39	Anjaly Jacob K.	'Periphery modified heterogeneous hyperbranched polyether as catalyst and support for organic synthesis'	2020

Postdoctoral fellows

1. Joseph M. J.
2. Daly Davis
3. Jaimy Baby
4. Sona Narayanan
5. Geethu R.

Ph. D. thesis under progress : 08

M. Phil. thesis supervised : 17

SPONSORED RESEARCH PROJECTS:

1. Heterogeneous Catalysts Based on Transition Metal Complexes of Polymer Supported Dendrimers (Defence Research and Development Organisation, Govt. of India -2006-2009)
2. Nanostructured Polymeric Ink for Printable Chemosensor (Kerala State Council for Science, Technology and Environment-2007-2010)
3. Design and Synthesis of Low Band Gap Conjugated Polymers and the Fabrication of Inverted Polymer Solar Cells (Technology Systems Development Programme-2010-2014)

4. Catalysis by polymer supported dendrimers, their metal complexes / and nano particle Conjugates (Kerala State Council for Science, Technology and Environment-2018-2021)
5. Energetic Propellant Binders based on Polyphosphazenes (ISRO Respond Project-2017-2020)

AREAS OF RESEARCH:

- Polymers as aids in organic synthesis-Polymeric reagents and catalysts Heterogenisation of homogeneous catalysts, Polymer supported dendritic nanoparticles as catalysts. Modified clay supported transition metal complexes as heterogeneous catalysts.
- Deep eutectic solvents and low melting mixtures as catalyst/reaction media for organic synthesis.
- Solid phase organic synthesis- Combinatorial approach → Photochemistry of synthetic polymers-solution phase and solid state photochemistry and photophysics of synthetic polymers-fluorescence life time and conformational studies.
- Polymers for holographic applications- Synthetic polymers with dyes doped in the matrix and polymers with pendant dye groups for permanent recording holograms data storage and signal processing
- Polymers for optical lithography-photosensitive polymers which show differential solubility properties upon irradiation with light- for use as photoresists, polymers in micro stereo lithography and MEMS
- Polymers for optoelectronics and photonics-Conducting polymers, light emitting polymers, polymer nano composites, amplified fluorescence quenching as a method of signal transduction in sensors. Nanostructured functional polymers as chemosensors.
- Polymers containing donor-acceptor and chiral units for second harmonic generationsupramolecular chirality and helical polymers, polymeric NLO materials. → Computational studies on quantum electro dynamical phenomena in connection with NLO properties of polymers-DFT and Ab initio calculations.
- Development of high energy density materials- synthesis, characterization and ab initio computational studies. Thermoplastic and thermoplastic elastomeric materials as high energy binders. Modified polyphosphazenes as energetic binders.

PEER REVIEWER FOR JOURNALS

- Chemistry Select
- Catalysis letters
- Applied Polymer Science
- Langmuir
- Matrics Inorganic chemistry

Research Publications (National and International) : 154 (list attached)

Detail of patents/ Technology transferred: 01 (list attached)

Book Chapter : 03 (list attached)

Research Papers in Conferences/ Seminars: 81 (list attached)

➤ **RESEARCH PUBLICATIONS**

▪ **Detail of patents/ Technology transferred**

Technology to prepare polymer films for holographic application was transferred to M/s. Light Logics Holography and Optics Pvt. Ltd., Thiruvananthapuram on March 2008.

▪ **Books Chapter**

1. **K. Sreekumar** and G. Rajesh Krishnan, Supported and Reusable Organocatalysts- “New and Future Developments in Catalysis Hybrid Materials, Composites, and Organocatalysts”. *Elsevier*, 2013
2. **K. Sreekumar** and G. Rajesh Krishnan, Recent Trends in Polymer Supported Catalysts -“Focus On Catalysis Research, New Developments”, *Nova Publishers*, New York, 2012
3. **K. Sreekumar** and G. Rajesh Krishnan , Applications of Dendrimers in Catalysis- “Focus On Catalysis Research, New Developments” *Nova Publishers*, New York, 2012

▪ **Research publications**

1. Heterogeneous palladium (II)-complexed dendronized polymer: A rare palladium catalyst for the one-pot synthesis of 2-arylbenzoxazoles, Smitha George , Krishnapillai Sreekumar.(2020), . <https://doi.org/10.1002/aoc.6083>
2. Experimental Investigation on the Correlation between the Physicochemical Properties and Catalytic Activity of Six DESS in the Kabachnik-Fields Reaction, M. Shaibuna, and K. Sreekumar, *ChemistrySelect* (2020), 5, 13454
3. , Development of homogeneous polyamine organocatalyst for the synthesis of 2-aryl-substituted benzimidazole and benzoxazole derivatives, K. Hiba, M. Shaibuna, P. B. Sherly mole, A. M. Shebitha, V. T. Letcy, G. Avudaiappan, K. Sreekumar J. *Heterocycl. Chem. I* (2020), 1-8.
4. A new type IV DES: a competent green catalyst and solvent for the synthesis of α , β -unsaturated diketones and dicyano compounds by Knoevenagel condensation reaction, M. Shaibuna, K. Hiba, Letcy V. Theresa and K. Sreekumar, *New J. Chem.*, 44, 14723.
5. Convenient Synthesis of Dihydropyridine and Dihydropyrimidinethione Derivatives Using a Porphyrin Cored G1 PAMAM Dendrimer as a Homogeneous Catalyst. Avudaiappan, G. Unnikrishnan, V. Sreekumar, K., *ChemistrySelect*, (2020), 5, 506
6. Polyamine Dendritic Polymer–Copper Complex: A Reusable Catalyst for Additive-Free Amination of Aryl Bromides, and Iodides, Avudaiappan, G. Palmurukan, M. R. Unnikrishnan, V. Sreekumar, K., *New Journal of Chemistry*, (2020), 44, 1477
7. Green Synthesis of Pyrazolopyranopyrimidinone and Pyranopyrazole Derivatives Using Porphyrin-initiated Amine-functionalized PolyBCMO Dendritic Polymer as Sonocatalyst, Avudaiappan, G. Unnimaya T, J. Asha, P. Unnikrishnan, V. Sreekumar, K., *Journal of Heterocyclic Chemistry*, (2020), 5, 197
8. , Enantioselective Aza-Diels Alder reaction catalyzed by clay supported Schiff base complex V. Kannan, K. Sreekumar, *J Heterocyclic Chem.* (2020), 1–8.
9. Parackal Baby Sherlymole, Alexander Ronaldo Anuf, Gopalakrishnan Anjali Krishna, and Krishnapillai Sreekumar, Dendrimer with Interior Cavity as Catalytic Pockets for Substrate Molecules: Synthesis of Bisimidazoles and Molecular Docking Study, *ChemistrySelect*, 2020, 5, 5055 –5065.
10. A.M. Shebitha, S.S. Sreejith, P.B. Sherly Mole, Nithya Mohan, G. Avudaiappan, K. Hiba, K.S. Priya, K. Sreekumar, Facile synthesis, X-ray diffraction studies, photophysical properties and DFT-D based conformational analysis of octa and dodecacyanomethoxycalix[4]resorcinarenes, *Journal of Molecular Structure* 1214 (2020) 128215.

11. A novel dendritic polymer based turn- off fluorescence sensor for the selective detection of cyanide ion in aqueous medium, Avudaiappan G, Anjaly Jacob K, Letcy V. Theresa, Shebitha A.M, Hiba K, Priya K. Sheno, Unnikrishnan V, Sreekumar K, *Reactive and Functional Polymers*, (2019), 137, 71-78, <https://doi.org/10.1016/j.reactfunctpolym.2019.01.018>
12. Theoretical design, synthesis and studies on the solvatochromic behaviour of low band gap phenylenevinylene based copolymers, Sowmya Xavier, Sona Narayanan, C. P. Anjali, K. Sreekumar, *European Polymer Journal*, (2019), 113, 365-376, <https://doi.org/10.1016/j.eurpolymj.2019.01.071>
13. Heterogeneous HighLoading Hyperbranched Polyglycidol with Peripheral NHC–Pd Complex: Synthesis and Application as Catalyst in Suzuki Coupling Reaction, Anjali, J. K., and K. Sreekumar, *Catalysis Letters*, (2019), 1952-1964, <https://doi.org/10.1007/s10562-019-02784-w>.
14. Study of polycarbosilane supported copper (II) as a heterogeneous catalyst, K. Mangala, K. Sreekumar, *Polymer Bulletin*, (2019), 77,153-163, <https://doi.org/10.1007/s00289-019-02741-y>.
15. Synthesis of heterogeneous catalyst and study of its catalytic activity towards Henry reaction and Asymmetric Aldol reaction, *Materials Today: Proceedings*, (2019), 9, 46-53, <https://doi.org/10.1016/j.matpr.2019.02.035>
16. Porphyrin Cored Amine Functionalized Dendritic Polymer: An Efficient Reusable Catalyst for Quinoline Synthesis, G. Avudaiappan V. Unnikrishnan Jisha J. Pillai Prof. K. Sreekumar, *ChemistrySelect*, (2019), 4, 5897-5902, <https://doi.org/10.1002/slct.201901012>
17. Glucose:urea:NH₄Cl low melting mixture for the synthesis of symmetric azines, Letcy V. Theresa, M. Shaibuna, K. Sreekumar, *Synthetic Communications*, (2019), 49, 3148-3160, <https://doi.org/10.1080/00397911.2019.1657151>.
18. Green Synthesis of Pyrazolopyranopyrimidinone and Pyranopyrazole Derivatives Using Porphyrin Initiated Amine Functionalized PolyBCMO Dendritic Polymer as Sonocatalyst, Avudaiappan G., Unnimaya. T. J., Asha P., Unnikrishnan V., Sreekumar K, *Journal of Heterocyclic Chemistry*, 57, 197-209, <https://doi.org/10.1002/jhet.3765>
19. AmphiphilicDendrimer as Reverse Micelle: Synthesis, Characterisation and Application as Homogenous Oganocatalyst, P.B.Sherly mole, Smitha George, A.M.

Shebitha, V. Kannan, Suseela Mathew, K.K. Asha, K. Sreekumar, *Tetrahedron*, 75(46), p.130676, <https://doi.org/10.1016/j.tet.2019.130676>.

20. A novel dendritic polymer based turn-off fluorescence sensor for the selective detection of cyanide ion in aqueous medium. Avudaiappan G., Anjaly Jacob K., Letcy V. Theresa, Shebitha A.M., Hiba K., Priya K. Shenoi, Unnikrishnan V., Sreekumar K, *Reactive and Functional Polymer*(2019),137,71, doi.org/10.1016/j.reactfunctpolym.2019.01.018
21. Theoretical design, synthesis and studies on the solvatochromic behaviour of low band gap phenylenevinylene based copolymers. Sowmya Xavier, Sona Narayanan, C. P. Anjali, K. Sreekumar, *European Polymer Journal* (2019),113,365, doi.org/10.1016/j.eurpolymj.2019.01.071.
22. Study of polycarbosilane supported copper (II) as a heterogeneous catalyst, K. Mangala, K. Sreekumar, *Polymer Bulletin*,(2019), doi.org/10.1007/s00289-019-02741-y
23. Synthesis of heterogeneous catalyst and study of its catalytic activity towards Henry reaction and Asymmetric Aldol reaction. G. Smitha, K. Sreekumar, G. Elsymol, P.S. Sudhishna, *Materials Today*,(2019), /doi.org/10.1016/j.matpr.2019.02.035.
24. Porphyrin Cored Amine Functionalized Dendritic Polymer: An Efficient Reusable Catalyst for Quinoline Synthesis, G. Avudaiappan V. Unnikrishnan Jisha J. Pillai Prof. K. Sreekumar, *Chemistry Select*,(2019),4,5897, doi.org/10.1002/slct.201901012.
25. A New Green and Efficient Bronsted: Lewis Acidic DES for Pyrrole Synthesis, M. Shaibuna, Letcy V. Theresa, K. Sreekumar , *Catalysis Letters*, (2018), 8, 148, DOI: [10.1007/s10562-018-2414-4](https://doi.org/10.1007/s10562-018-2414-4)
26. Low band gap donor-accepter phenothiazine copolymer with triazine segment: design, synthesis and application for optical limiting devices, Sona Narayanan, Anshad Abbas, Anjali C.P, Sowmya Xavier, Rani Joseph, C. Sudha Kartha, K. Sreekumar , *Journal of Luminescence*, (2018) , 198, 449
27. Synthesis and experimental investigations on the photoconductivity of p-aminoazobenzene based non conjugated polybenzoxazine system, Jisha J Pillai, Anshad Abbas, Sona narayanan, K. Sreekumar, C. Sudha Kartha, Rani Joseph, *Polymer*,(2018) , 137, 330.

28. Study on the photoconductive properties of charge carriers in donor - acceptor copolymer P(EDOT -FL) and P(EDOT -FL): PCBM blend, Anshad Abbas, Jisha J Pillai, Sona Narayanan, K. Sreekumar, Rani Joseph, C. Sudha Kartha, **(2017)**, 233, 52.
29. Dendritic Amine on Mesoporous Silica: First Organo Base Catalyst for Paal Knorr Reaction under Solvent Free Condition, A green approach, K. A. Jisha, K. Sreekumar, **(2017)**, 147, 96.
30. Chiral dendrigraft polymer for asymmetric synthesis of isoquinclidines, G. Smitha, K. Sreekumar, *RSC Advances*, **(2016)**, 88, 85643-85658. <https://doi.org/10.1039/C6RA15548K>
31. Highly functionalized heterogeneous dendrigraft catalysts with peripheral copper moieties for the facile synthesis of 2-substituted benzimidazoles and 2,2-disubstituted benzimidazoles, G. Smitha, K. Sreekumar, *RSC Advances*, **(2016)**, 6, 18141-18155. <https://doi.org/10.1039/C5RA28046J>.
32. Dendritic Amine on Mesoporous Silica: First Organo Base Catalyst for Paal Knorr Reaction under Solvent Free Condition, A green approach, K. A. Jisha, K. Sreekumar *Catalytical Letters*, **(2017)**, 147, 964-975. <https://doi.org/10.1007/s10562-017-1975-y>.
33. Palladium (II) supported on polycarbosilane: application as reusable catalyst for Heck reaction, Mangala K, Sinija PS, Sreekumar K., *Journal of Molecular Catalysis A: Chemical.*, **(2015)**, 407, 87
34. Facile synthesis of pyranopyrazoles and 3, 4- dihydropyrimidin-2 (1 H)- ones by a Ti-grafted polyamidoamine dendritic silica hybrid catalyst via a dual activation route, Sinija PS, Sreekumar K., *RSC advances*, **(2015)**, 5 101776.
35. Third-order nonlinear optical properties of 3, 4- ethylenedioxythiophene copolymers with chalcogenadiazole acceptors, N. Sona, P.R. Sreejesh, M. Sebastian, Poulouse AC, K. Sreekumar, C. Sudha Kartha, Rani Joseph, *New Journal of Chemistry*, **(2015)**, 39, 2795
36. Synthesis and third order nonlinear optical properties of low band gap 3,4-ethylene dioxythiophene – quinoxaline copolymers, N. Sona, P.R. Sreejesh, M. Sebastian, M.V. Mahesh Kumar, K. Sreekumar, C. Sudha Kartha, Rani Joseph, *European Polymer Journal*, **(2015)**, 64, 157
37. Theoretical and Experimental Investigations on the Photoconductivity and Nonlinear Optical properties of DonorAcceptor π Conjugated Copolymer, Poly(2,5-(3,4- ethylene

- dioxythiophene)- alt-2,7-(9,9- dioctylfluorene)) , N. Sona, P.R. Sreejesh, M. Sebastian, M.V. Mahesh Kumar, K. Sreekumar, C. Sudha Kartha, Rani Joseph, *RSC Advances*, **(2015)**, 5, 8657
38. Dendrimer functionalized polysilane: an efficient and recyclable organocatalyst. K. Mangala, K. Sreekumar, *Journal of Applied Polymer science*, **(2015)**, 132 DOI: 10.1002/app.41593.
39. Synthesis of on resin poly(propyleneimine) dentrimer and its use as organocatalyst. *Tetrahedron Letters*, **(2014)**, 55, 2352.
40. Aminated poly(vinyl chloride): An efficient green catalyst for Knoevenagel condensation reactions. G. Rajesh Krishnan, K. SreeNiveditha & K. Sreekumar, *Indian Journal of Chemistry*, **(2013)**, 52B, 428.
41. Clay supported titanium catalyst for the solvent free synthesis of tetra substituted imidazoles and benzimidazoles. V. Kannan, K. Sreekumar, *Journal of Molecular Catalysis A: Chemical*, **(2013)**, 376, 34.
42. Synthesis and application of polycarbosilane supported manganese ions as catalyst in mannich reaction. K. Mangala, K. Sreekumar, *Journal of Applied Polymer Science*, **(2013)**, 127, 1, 717.
43. Polycarbosilane-supported titanium (IV) catalyst for Knoevenagel condensation reaction. K. Mangala, K. Sreekumar, *Applied Organometallic Chemistry*, **(2013)**, 27,2, 73.
44. Synthesis of β -amino alcohols catalyzed by poly(vinyl chloride)-supported Schiffs base metal complexes. G. Rajesh Krishnan, K. Sapna Kajal, K. Sreekumar, *Monatshefte fuer Chemie/Chemical Monthly*,**(2012)**,143,637.
45. Effect of Concentration of dye on the Storage Life of Plane Wave Gratings on Photopolymer Film. K. P. Nimmi, V. Pramitha, K. Sreekumar, C. Sudha Kartha, Rani joseph, *Journal of Applied Polymer Science*,**(2012)**,125,1238.

46. Theoretical and experimental studies of chiral polyurethanes. C.V. Elizabeth, K. Sreekumar, *Journal of Polymer Research*, **(2012)**, 19, 1.
47. Acetalation of Pentaerithritol Catalyzed by an Al-Pillared Saponite. V. Kannan , K. Sreekumar , A . Gil, M. A. Vicente, *Catalysis Letters*, **(2011)**, 141(8), 1118.
48. Investigation on the panchromaticity of silverdoped poly(vinyl alcohol)/acrylamide photopolymer. V.Pramitha, Rani Joseph, K. Sreekumar, C.Sudha. Kartha, *Applied Optics*, **(2011)**, 50, 2886.
49. Hyperpolarizability studies of some nonconjugated twin donor-acceptor molecules, C.V. Elizabeth, K. Sreekumar, *Bulletin of Materials Science* , **(2011)**,34, 893.
50. Optical and thermal properties of diethyl-(2R, 3R) (+)-tartrate based chiral polyurethanes with main chain amidochromophores. C.V. Elizabeth, K. Sreekumar, *Journal of Applied Polymer Science*, **(2011)**, 119, 111.
51. Study on the performance of eosin-doped poly (vinyl alcohol)/acrylamide photopolymer films for holographic recording using 488-nm wavelength. C S Rajesh, S. S Sreeroop, V Pramitha ,Rani Joseph ,K Sreekumar ,C Sudha Kartha, *Optical Engineering*, **(2011)**, 50 ,5802.
52. Synthesis characterization of catalytically active polystyrene supported poly (amidoamine) dendrimer-palladium nanoparticle conjugates. G. Rajesh Krishnan and K. Sreekumar, *Soft Materials*, **(2010)**, 8 , 114.
53. Isosorbide based chiral polyurethanes: optical and thermal Studies. C.V. Elizabeth, K. Sreekumar, *J. Mater. Sci.*, **(2010)**, 45, 1912.
54. Recording multiple holographic gratings in silverdoped photopolymer using peristrophic multiplexing. V. Pramitha, Rani Joseph,K. Sreekumar ,C. Sudha Kartha ,*Pramana*, **(2010)** ,75, 1241.

55. Peristrophic multiplexing studies in silver doped photopolymer film. V. Pramitha, Rani Joseph, K. Sreekumar, C. Sudha Kartha, *Journal of Modern Optics*, (2010),57(10), 908.
56. Silver-doped photopolymer media for holographic recording. V. Pramitha, K. P.Nimmi, N. V. Subramanyan, Rani Joseph, K. Sreekumar and C. Sudha Kartha, *Appl. Opt.*, (2009), 48, 2255.
57. Photophysical and Electrochemical Investigations on Photoconducting Poly(6 - tertbutyl-3,4-dihydro-2H-1,3-benzoxazine), R. Dhanya ,V. C. Kishore, K. Sreekumar,C. Sudha Kartha, Rani Joseph, *Macromolecular Symposia*,(2009),277,112.
58. Effect of Chromium doping on the diffraction efficiency of methylene blue sensitized PVA /acrylamide films. Beena Mary John, Rani Joseph, K. Sreekumar, C. Sudha Kartha, *J. Mater. Sci. Mater Electron*, (2009),20,216.
59. Synthesis and properties of polyurethanes of hexamethylene diisocyanate with multifunctional chromophores in the main chain. K Sudheesh Kumar, K. Sreekumar, *Int. J. of Polymeric Materials*,(2009),58,160.
60. Polystyrene supported poly (amidoamine) dendrimer- Mn complexes; synthesis, characterization and catalysis. G. Rajesh Krishnan, K. Sreekumar *Applied Catalysis A: General*, (2009),353,80.
61. Three component Mannich reaction and benzodiazepine synthesis catalyzed by a tetranitrile-silver complex. G. Rajesh Krishnan, K. Sreekumar , R. Sreerexha, *Letters in Organic Chemistry*,(2009),6,17.
62. Organocatalysis by poly (amidoamine) dendrimers; Knoevenagel and Mannich reactions catalyzed in water. G. Rajesh Krishnan, Jinimol Thomas, K. Sreekumar, *ARKIVOC, ex*,(2009),106,2009.

63. First Example of Organocatalysis by Polystyrene-Supported PAMAM Dendrimers: Highly Efficient and Reusable Catalyst for Knoevenagel Condensations. G. Rajesh Krishnan, K Sreekumar, *European Journal of Organic Chemistry*, **(2008)**,4763,2008.
64. Ground state and excited state dipole moments of alkyl substituted p-Nitroaniline derivatives. R. Dhanya, V. C. Kishore, Rani Joseph, C. Sudha Kartha, K. Sreekumar, *Spectrochimica Acta Part A: Molecular and Biomolecular Spectroscopy*, **(2008)**,71,1355.
65. Spectral distribution of photocurrent in poly (6-tert-butyl-3-methyl-3, 4-dihydro-2H-1, 3-benzoxazine). R. Dhanya , V. C. Kishore, K. Sreekumar, Rani Joseph , C. Sudha Kartha, *Synthetic Metals*, **(2008)**,158,676.
66. Effect of chromium doping on the diffraction efficiency of methylene blue sensitized PVA/acrylamide films. Beena Mary John, Rani Joseph, K. Sreekumar, C. Sudha Kartha, *Journal of Materials Science, Materials in Electronics*, **(2008)**,20,216.
67. Ring opening of epoxides catalyzed by poly (amidoamine) dendrimers supported on cross linked polystyrene. G. Rajesh Krishnan, K. Sreekumar, *Polymer* ,**(2008)**,49,5233.
68. The dipole moments and first-order hyperpolarizability of N,N-bis(4-bromobutyl)-4-nitrobenzenamine. V C Kishore, R Dhanya, K Sreekumar, Rani Joseph, C Sudha Kartha, *Spectrochimica Acta Part A Molecular and Biomolecular Spectroscopy*, **(2007)**,70,1227.
69. Photoconductivity in molecularly doped poly(methylmethacrylate) sandwich cells. V C Kishore, R Dhanya, K Sreekumar, Rani Joseph, C Sudha Kartha, *Journal of Applied Physics*, **(2007)**,105,063102.
70. Enhancement of diffraction efficiency and storage life of poly(vinyl chloride)-based optical recording medium with incorporation of an electron donor. Beena Mary John, M Ushamani, K Sreekumar, Rani Joseph, C Sudha Kartha, *Applied Optics*, **(2007)**,46,346.

71. Copper Doped Methylene Blue Sensitized Poly(vinyl alcohol)-Acrylamide Films for Stable Diffraction Efficiency. Beena Mary John, Rani Joseph, K. Sreekumar, C. Sudha Kartha, *Japanese Journal of Applied Physics*, **(2006)**, 45, 8686.
72. Oxidation and Epoxidation Reactions Using Polystyrene Supported t-butyl hydroperoxides. M. S. Sheela, K. Sreekumar, *Indian J. Chem. B*, **(2006)**, 45B, 943.
73. Synthesis and characterization of poly BAMO suitable for binder application. M. V. Mahesh Kumar, M. J. Joseph, K. Sreekumar, H.G. Ang, *Chinese Journal of Energetic Materials*, **(2006)**, 14, 411.
74. A reusable recording medium based on MBPVA and vinyl acetate. B. M. John, M. Ushamani, R. Joseph, K. Sreekumar, C. Sudha. Kartha, *Journal of Modern Optics*, **(2006)**, 53, 343.
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