Dr. S. Kumaran

Associate Professor, Department of Biotechnology & Dean Research (i/c),
Periyar Maniammai Institute of Science & Technology (Deemed to be University),
Thanjavur – 613 403, India: Mobile: +91-9944960860
Emails: deanresearch@pmu.edu/kumarans@pmu.edu/kumaranshanmugam70@gmail.com

EDUCATIONAL QUALIFICATIONS

05/04: **PhD, Analytical Chemistry**, Charles University, Prague, Czech Republic
09/01: **PhD, Environmental Science (Environmental microbiology)**
Anna University, Chennai, India
05/94: **MSc, Environmental Science**, Bharathidasan University, India
05/91: **BSc, Chemistry**, Bharathidasan University, India

Patent filed and published: Sequential Processing Hexagonal Reactor for Bio-degradable Hospital Waste, Ref: No. No.201941023830 A
Journal Link: http://www.ipindia.nic.in/journal-patents.htm
Journal No.: **25/2019** (download Part - 1 and refer page no. 77)

Design (Patent) Filed and Published: Design Registration No.: 307134
Title: Reactor for Bio-degradable Hospital Waste
Journal Detail: Journal No. 01-2020 Part-6 Pg. No. 1728 Dt. 03-01-2020
Link for the Journal: http://ipindia.nic.in/writereaddata/Portal/IPOJournal/1_4828_1/Part-6_Designs.pdf

SCHOLAR CITATIONS

Sep/2020: **515 citations** as on 27th Sep 2020 with h-index of 12 & i10 index 15
https://scholar.google.co.in/citations?user=050Oe20AAAAJ&hl=en&authuser=1

https://orcid.org/0000-0001-6704-0371

https://www.mendeley.com/profiles/kumaran-shanmugam/

JOURNAL COVER PAGE

2013: Our scientific research diagram has appeared in the front cover of Journal of Molecular Diagnostics, Volume 15, Issue 1, January–February 2013, Pages 17–26. This journal is co-published by the Association for Molecular Pathology (AMP) and the American Society for Investigative Pathology (ASIP).

http://www.sciencedirect.com/science/article/pii/S1525157812002711

Publications

44 Lung function of primary cooks using LPG or biomass and the effect of particulate matter on airway epithelial barrier integrity, Abhilash Kizhakke Puliyakote; Nervana Metwali; Matthew Jeronimo; Ian M Thornell; Robert B Manges; Monalisa Bilas; Mohamed Ali Kamal Batcha; Mangaleswari Seeniappan Kumaravel; Kumar Durairaj; Kesavan Karuppusamy; Kathiresan Geetha; A Sirajunnisa; Kumaran Shanmugam; Peter S Thorne; Thomas M Peters; Eric A Hoffman; Alejandro P Comellas.. Environmental Research Volume 189, 109888, 2020.

43 Amperometric determination of Myo-inositol using a glassy carbon electrode modified with nanostructured copper sulphide, Rajendran Rajaram, Muniyandi Kiruba, Chinnathambi Suresh, Jayaraman Mathiyarasu, Shanmugam Kumaran and Ramanathan Kumaresan, *Microchimica Acta* volume 187, Article number: 334, 2020.

42 Magnetically recyclable $CoFe_2O_4$/ZnO nanocatalysts for the efficient catalytic degradation of Acid Blue 113 under ambient conditions, S. Krishna, P. Sathishkumar, N. Pugazhenthiran, Kiros Guesh, R. V. Mangalaraja, S. Kumaran, M. A. Gracia-Pinilla and S. Anandan, *RSC Adv.*, 10, 16473-16480, 2020.

41 Heterogeneous sonocatalytic activation of peroxomonosulphate in the presence of $CoFe_2O_4$/TiO_2 nanocatalysts for the degradation of Acid Blue 113 in an aqueous environment, S.Krishna, P.Sathishkumar, N.Pugazhenthiran KirosGuesh, R.V. Mangalaraja, S. Kumaran, M.A.Gracia-Pinilla, S.Anandan**,** Journal of Environmental Chemical Engineering, Volume 8, Issue 5, 104024, 2020.

38 Synthesis and Characterization of Naringenin-Loaded Chitosan-Dextran Sulfate Nanocarrier. Muralidharan, S., Shanmugam, K. J Pharm Innov (2020).

39 Long-term-durable anti-icing superhydrophobic composite coatings, S. Rajiv, S. Kumaran, M. Sathish, Volume136, Issue7, J. App. Poly. Sci. February 15, 2019.

38 Maskless patterned growth of ZnO nanorod arrays using tip based electrolithography, Kathalingam Adaikalam, Professor Hyun-Chang Park, Professor Dhanasekaran Vikraman, K Karuppasamy, Professor Hyun-Seok Kim, Kumaran Shanmugam, Mater. Sci. Semicond. Process. 77, 24-30, April 2018.

37 Fabrication of robust superhydrophobic coatings using PTFE-MWCNT nanocomposite: Subramanian Rajiv, Shanmugam Kumaran, Marappan Sathish. Supercritical fluid processing. Surf. Interface Anal. 2018;1–7. https://doi.org/10.1002/sia.6392.

36 Fabrication of arrayed metal oxide structures by electrochemical local oxidation using metallic tip with electric field and humidity, A. Kathalingam, Kumaran Shanmugam, Hyun-Chang Park, Hyun-Seok Kim, J. Mater. Process. Tech. 252, 304-312, 2018.

35 Investigation of Phytochemical Profile and other Safety Parameters for A Hepatoprotective Proprietary Polyherbal Formulation (Liverem) by Using Advanced Instrumentation, Jayachandra Kuncha, P.Thirugnanasambantham, Kumaran Shanmugam, N.Narayanan, Int. J. Pharm. Sci. Rev. Res., 47(1), 2017; 100-105 (online).

34 Patterning of *Vibrio spp*. on oxide dots of silicon for the development of biosensor**,** P. Sankar Ganesh, K. Sathyaraj, N. Chandrakala, K. Rajendran, S. Kumaran, Ind. J. Geo- Mar. Sci. 2015 (online).

33 Raman Fingerprints in Detection of Breast Cancer, Geen, Kathiresan Geetha, Durairaj Kumar, Sreenath Subrahmanyam**,** Kumaran Shanmugam – SOJ Biosensors, Biomarkers & Diagnostics, 2016 (online).

32 Green synthesis of ceftriaxone conjugated *Mukia maderaspatana* mediated silver nanoparticles and its biological applications, M. Harshiny, M. Matheswaran, G. Arthanareeswaran, S. Kumaran, S.Rajasree, Eco-toxicol. Environ. Safety. Online ahead of print. doi: 10.1016/j.ecoenv.2015.04.041.

31 A perspective on bioactive compounds from *Solanum trilobatum:* A Review. Purushothaman Balakrishnan, Thameem Ansari Musafar Gani, Sreenath Subrahmanyam, S. Kumaran, J. Chem. Pharma. Res. 7(8): 507-512, 2015.

30 Genomic wide DNA methylation analysis in blood of local population: A survey in Southern India, N.B. Basheer, H. Muthukumar, M.N. Lincy, S. Kumaran, J. Chem. Pharma. Res. 7 (7), 967— 971 2015.

29 Microbicidal tissue paper using green synthesized silver nanoparticles, S.C.G.K. Daniel, J. Abirami, S. Kumaran , K. Nehru, M. Sivakumar, Curr. Nanosci. 11 (1), 64-68, 2015.

28 Optimization of additives for recycling evaluated answer scripts – Microscopic view with Raman fingerprints, J. Kalimuthu, S. Rajiv, A. P. Aruna, S. Kumaran, J. Chem. Pharma. Res. 6, 12, 178 — 185 2014**.**

27 *Ipomea carnea* based silver nanoparticle synthesis for antibacterial activity against selected human pathogens. S.C.G.Kiruba Daniel, N. B. Basheer, M. Harshiny, K. Nehru, M. Sivakumar and S. Kumaran, J. Exp. Nanosci. 9, 197 — 209, 2014.

26 Conventional and recent nanotechniques for DNA Methylation Profiling. N. B. Basheer, S. Rajasree, A. Laxmi, M. Harshiny, R. Kaliaperumal, S. Kumaran, J. Mol. Diag. 15, 17 — 26, 2013.

25 Topographic imaging of *Mycobacterium smegmatis* cells surface treated with Ethambutol and Rifampicin, P. Sankar Ganesh, K. Kanivalan, K. Rajendran, S. Kumaran, Int. J. Pharm. Bio. Sci. 4, 255 — 262, 2013.

24 FD-CALC: Atomic force microscopy intermolecular force calculator, M. Vijayasarathy, K.Rajendran, S. Kumaran, Quant. Matt. 2, 238 — 240, 2013.

23 Quantitative estimation of Lupeol and Stigmasterol in *Costus igneus* by high performance thin layer chromatography. K. Manjula, K. Pazhanichamy, S. Kumaran, T. Eevera, K. Rajendran, J. Liq. Chrom. & Rela.Technol**.** 36, 192-212, 2013.

22 Intermolecular force measurement between monoamine oxidase B and *Pseudarthria viscida* (L.) using atomic force spectroscopy, S. B. Manoharan, V. Marimuthu, P. Kalailingam, N. B. Basheer, A. Perumal, R. Kaliaperumal, S. Kumaran, J. Exp. Nanosci, 8, 596, 2013.

21 *In vitro* Evaluation of calcium Oxalate Monohydrate crystals influenced by *Costus igneus* aqueous extract, K. Manjula, K. Rajendran, T. Eevera, S. Kumaran, Scandinavian J. Urol. Nephr. 46, 290 — 297, 2012.

20 Effect of *Costus igneus* stem extract on calcium oxalate urolithiasis in albino rats, K. Manjula K. Rajendran, T. Eevera, S. Kumaran, Urol. Res. (Urolithiasis) 40, 499 — 510, 2012.

19 Growth Characterization of calcium oxalate monohydrate crystals influenced by *Costus igneus* aqueous stem extract, K. Manjula, K. Pazhanichamy, S. Kumaran, T. Eevera, C. Dale Keefe, K. Rajendran. Int. J. Phar. & Pharmceu. 4, 261 — 270, 2012.

18 Device for fabrication of oxide dots on silicon using anodic oxidation technique with Copper wire, K. Sathiyaraj, K. Kanivalan, P. Venkatesan, K. Rajendran, S. Kumaran, Microsys. Technol. 17, 1459 — 1462, 2011.

17 Fabrication of porous silicon nanoparticles to attach clorogyline for drug delivery, M. Pradeepa, P. Venkatesan, E. Menaka, K. Rajendran, and S. Kumaran, in Proceedings of the International Conference of Bioscience, Biochemistry and Bioinformatics (IPCBEE '11), IACSIT Press, Singapore, 2011.

16 Efficacy of Methanolic Extract of *Costus igneus* Rhizome on Hypoglycemic, Hypolipidimic Activity in Streptozotocin (STZ) Diabetic Rats and HPTLC Analysis of Its Active Constituents, P. Kalailingam, E. Tamilmani, R. Kaliaperumal, S. Kumaran, in Proceedings of the International Conference of Bioscience, Biochemistry and Bioinformatics, (IPCBEE '11), IACSIT Press, Singapore, 2011.

15 A review on techniques to fabricate silicon oxide arrays to develop biochip. K. Sathiyaraj, M. Harshiny, N. B. Basheer, K. Rajendran, S. Kumaran, Superlat. Microstru. 49, 581 — 590, 2011.

14 Positive Patterning of Ferritin, and Fibronectin Molecules on Silicon by Atomic Force Microscopy Anodic Oxidation, S. Kumaran, T. Yoshinobu, W. Moon, H. Iwasaki, J. Nanosci. Nanotech. 11, 3808 — 3813, 2011.

13 The Efficacy of *Costus igneus* rhizome on Carbohydrate metabolic, hepatoproductive and antioxidative enzyme in streptozotocin (STZ) induced diabetic rats. P. Kalailingam, A. D. Sekara, J. S. Clement Samuela, P. Gandhirajana, Y. Govindaraju, S. Kumaran, E. Tamilmani, J. Health. Sci. 57, 37 — 46, 2011.

12 Micropatterning of Si Surface with Protein Molecules by the AFM Anodic Oxidation Method, J. Suzuki, T. Yoshinobu, W. Moon, S. Kumaran, H. Iwasaki, Electrochemistry (Japan) 74, 131 — 134, 2006.

11 Voltammetric determination of Phenylglyoxylic Acid in Urine using Graphite Composite Electrode, T. Navratil, Z. Senholdova, S. Kumaran, J. Barek, Electroanal. 18, 201 — 206, 2006.

10 Polarographic and voltammetric determination of trace amounts of 1, 3-dinitronaphthalene. S. Kumaran, J. Barek, J. Zima, Chem. Anal. (Warsaw), 49, 765 — 776, 2004.

9 Polarographic and voltammetric determination of submicromolar concentrations of genotoxic 1,5–dinitronaphthalene, S. Kumaran, J. Barek, J. Zima, Czechoslovak Chem. Comm. 69, 2021 — 2035, 2004.

8 2,4-Toluene Diamines – Their Carcinogenicity, Biodegradation, and Analytical Techniques and an Approach towards Development of Biosensors -A General Review. S. Kumaran, S. Subrahmanyam, T. V. Subramanian, N. Kodandapani, and S. F. D'Souza, Anal. Sci. 17, 1369 — 1374, 2001.

7 Amperometric Biochemical Characterization of Isolated Fungal Strains, S. Subrahmanyam, S. V. Tarakad, N. Kodandapani, J. N. Amersham, B. Ranganathan, S. Kumaran, and D. Jayakumar, Electroanal. 13, 1454 — 1458, 2001.

6 Development of a sensor for acetic acid based on *Fusarium solani*, S. Subrahmanyam, N. Kodandapani, S. Kumaran, K. Moovarkumuthalvan, D. Jeyakumar, and T.V. Subramanian, Electroanal. 13, 1275 — 1278, 2001.

5 Cyclic Voltammetric measurements of growth of *Apergillus terreus*, S. Subrahmanyam, N. Kodandapani, S. Kumaran, K. Moovarkumuthalvan, D. Jeyakumar, and T.V. Subramanian, Anal. Sci. 17, 481 — 484, 2001.

4 Development of electrochemical microbial biosensor for ethanol based on *Aspergillus niger.* S. Subrahmanyam, S. Kumaran, V. Murali Madhav, M.Murugesan, T.V.Subramanian, D. Jeyakumar, Electroanal. 13, 944 — 948, 2001.

3 Voltammetric Studies of *Aspergillus niger* – Assessment of their growth using electro active extra cellular production of metabolite, S. Subrahmanyam, S. Kumaran, T.V. Subramanian, V. Murali Madhav, M. Murugesan, D. Jeyakumar, Electroanal. 13, 1051 — 1053, 2001.

2 Assessment of growth of *Fusarium solani* by Cyclic Voltammetry and their bioanalytical Applications, S. Subrahmanyam, S. Kumaran, V.M. Madhav, M. Murugesan, T.V. Subramanian, D. Jeyakumar, Analyst, 125, 2166 — 2168, 2000.

1 Rapid biochemical characterization of polyurethane degrading fungi using amperometric Biosensor technique, S. Subrahmanyam, S. Kumaran, T.V. Subramanian, M. Murugesan, V. M. Madhav and D.Jeyakumar, Bull. Electrochem. 15, 452 — 457, 1999.

RESEARCH ADVISOR FOR Ph.D., THESES

2020: "Comprehensive approach to study the anti-colon cancer activity of the isolated bioactive components from *Ocium basilicum L*. Dr. B. Purushothaman,thesis, Periyar Maniammai Institute of Science & Technology (Deemed to be University), India (Awarded)

2019: "Investigation of Carbon-Polymer Nanocomposite Superhyrophobic Coatings" Dr. S. Rajiv, thesis, Periyar Maniammai Institute of Science & Technology (Deemed to be University), India (Awarded)

2016: "Elucidation of Methylation pattern of DNA in human samples for early detection of cancer", thesis, Dr. B. Nazeema Banu, Periyar Maniammai Univ. (Deemed to be University) India (Awarded).

CONSULTANCY SERVICE

2010— 2011: Generated US Dollar 3500/- through my group expert services for AFM analysis of various research samples (biosensors, cancer biology, early detection of diseases and expertise in advanced measurement tools.) across Tamil Nadu, India.

Chapter in Books in press – Springer group of publication

1 Nanomaterials: Synthesis and Its Applications for Sustainable Development" in Biogenic Nano-Particles and their Use in Agro-ecosystems, Nitin Kumar,Abarna Balamurugan, Purushothaman Balakrishnan, Kanchan Vishwakarma, Kumaran Shanmugam, pp 99-132, online ISBN 978-981-15-2985-6, Springer, 2020. https://link.springer.com/chapter/10.100

MEDALS/ BADGES RECEVIED

2019: Innovation Ambassadors – Three Badges from IIIC-MHRD and AICTE, Govt. of India
2009: Endeavour Medal, Ministry of Education, Australia Government
2008: Gold Medal Special Performance Award**,** Periyar Maniammai University, India.

2018 to till date: Recognition/Responsibility: President of Institution Innovation Council in PMIST supported by IIC-MHRD, AICTE, Govt. of India.

WORK HISTORY

03/07 till date: **Associate Professor (2007 joined as Lecturer), Biotechnology, Periyar Maniammai University, India:** I teach Biotechnology and Nanotechnology to Bachelor and Master Degree students of Engineering and Technology in addition to M.Phil and Research Scholars. Provide mentorship for advanced PhD researchers. Teaching includes subjects such as Environmental Science & Engineering, Nanobiotechnology, Environmental Biotechnology, Biochemistry, Downstream Processing, Organic Chemistry, Protein Chemistry, Nano-manipulation & Assembly, Instrumental Methods of Analysis and Human Ethics.

01/18 till date: **Dean Research (in-charge):** I am monitoring research progress of the deemed to be University, Ph.D. research scholars progress, motivating faculty to submit research proposals to various agencies and inviting experts from various fields.

11/16 till 18th July17: Chief Executive Officer-in-charge, Technology Business Incubator (Section-25 company) – Incubating companies, help them to be successful entrepreneurs, awareness programme on entrepreneurship among the youths, testing facilities for biotechnology companies and for materials.

09/16 till date: **Board of Management Member** (Senate) for Periyar Maniammai University.

07/09 — 10/09: **Endeavour Executive Fellow (Australian Government), Flinders University, Australia:** I worked on fabrication of optical biosensors using porous silicon and oxide dots were fabricated on porous silicon.

09/04 — 09/06: **Postdoctoral Researcher, ISIR (SANKEN), Osaka University, Japan:** I worked on fabrication of biochip using atomic force microscopic technique by anodic oxidation. I have specialized in oxide dot fabrication on silicon, self-assembled monolayers and patterned ferritin and fibronectin molecules.

06/04 — 06/04: **Researcher, J. Heyrovsky Institute of Physical Chemistry, Czech Academy of Science, Prague: Czech Republic:** I carried out research on determination of phenylglyoxylic acid in human urine using cathodic differential pulse stripping voltammetry.

06/94 — 06/95: **Chemist, Enkem Engineers Private Limited, India:** I worked on optimization of coagulation for waste water treatment plants in a confectionary industry-(**company doesn't have proof of my work history**).

SCHOLARSHIPS AND AWARDS

04/05: Postdoctoral scholarship, *Estancias de jovenes doctors* from Ministry of Education, Spain – (Preferred to accept another research assignment which was offered to me at the same time).

09/04 — 09/06: Postdoctoral Research Award, Osaka University, Japan supported by 21st Century of Excellence and Kobe Cluster Creation, Japan.

02/00 — 05/04: Research Scholarship, Czech Ministry of Youth and Sports Scholarship, Prague, Czech Republic.

09/96 — 09/99: Senior Research Fellowship, Council of Scientific and Industrial Research (CSIR), Government of India, New Delhi.

12/93 — 05/94: MSc research project award, Bishop Heber College, Tiruchirapalli, India.

RESEARCH GRANTS/WORKSHOP/SEMINAR GRANTS/AWARD GRANTS/FELLOWSHIP GRANTS/AS RESEARCHER/CO-INVESTIGATOR/ PRINCIPAL INVESTIGATOR

Title:	Wound healing ointment from fish collagen incorporated with *aloe vera*
Role:	Student's research project supervisor
Grant:	10,000/- (Five thousand in rupees)
Funding agency:	Tamil Nadu Council for Science and Technology
Period:	(01/12/2016 — 30/04/2017)
Project website:	**http://www.tanscst.nic.in/pdf/spsr17P1.pdf**

Title:	Correlation of Pulmonary Structural and Functional Alterations in a population exposed to Indoor Cooking with Solid Biofuel: A Pilot Study
Role:	Basic Scientist-Member & Secretary for carrying human research subject-Institutional Ethical Committee Meeting in India
Grant:	University of Iowa will give grant toPMU to cover the cost of CT scan of 30 subjects and analysis of blood and air.
Funding agency:	University of Iowa
Period:	(21/08/2015 — 21/08/2016)
Project website:	http://www.i-clic.org/projects.html

Title:	M.Tech Nanotechnology course in Periyar Maniammai University, India
Role:	One of the co-investigators
Grant:	10 million INR (~ 150,000 US $)
Funding agency:	Department of Science and Technology, Government of India, New Delhi.
Period:	(22/10/2010 —31/03/2016)
Project Number:	DS T project #SR/NM/P G-05/2008

Title:	Endeavour Executive Award
Role:	Endeavour Executive Researcher
Grant:	Australian Dollar 20,000 (US $ 14,000)
Funding agency:	Department of Education, Employment and Workplace Relations, Australian Government
Period:	(7/July/2009 — 30/Oct/2009)
Project Number:	1365_2009
Project website:	https://internationaleducation.gov.au/Endeavour%20program/Scholarships-and-Fellowships/alumni/Documents/07-14%20Recipients.pdf

Title:	Patterning of biomolecules on silicon using AFM anodic oxidation technique
Role:	Co-Researcher
Funding agency:	Kobe Cluster Creation Project and the 21st Century Centre of Excellence (COE)
Grant:	13,287,000 ¥ (US $ 10,000)
Period:	2004-2006
Website - Reference:	http://www.sanken.osaka-u.ac.jp/jp/operation/pdf/nenji16.pdf (2004-report) http://www.sanken.osaka-u.ac.jp/jp/operation/pdf/nenji17.pdf (2005-report) http://www.sanken.osaka-u.ac.jp/jp/operation/pdf/nenji18.pdf (2006-report)

Title:	Polarographic and voltammetric determination of genotoxic and ecotoxic nitro and azo compounds
Role:	Co-Researcher
Funding agency:	Czech Republic, Europe
Grant:	240,000 CZK (US $ 9,000)
Period:	2001-2003
Project Number:	253/2001/B-CH/PřF
Website - Reference:	http://www1.cuni.cz/cuni/ruk/gauk/zz2003/253_01-e.htm

Title: 100 nm patterning of biomolecules on silicon for the next generation chip
Role: Principal Investigator
Grant: 7 Million INR (~ 100, 000 US $)
Funding agency: Department of Biotechnology, Government of India, New Delhi.
Period: (1/4/2008 — 31/3/2011)
Project Number: BT/PR10018/NNT/28/95/2007

Title: Elucidation of Methylation pattern of DNA in human samples for early detection of cancer using nanomolecular techniques
Role: Supervisor
Funding agency: CSIR, Government of India, New Delhi, India
Grant: 0.35 Million INR (US $ 3,000)
Period: 1.04.2009 -31.03.2013 (Three years – there was break available in the funding)
Project Number: 09/960(002)/2K9-EMR-I

Title: Micro Patterning Of Methylcytosine Antibody And DNA For Nanomechanical Recognition Of Methylation Pattern
Role: Supervisor
Funding agency: CSIR, Government of India, New Delhi, India
Grant: 0.5 Million INR (US $ 6,000)
Period: 27.10.2014 to 29.10.2015
Project Number: 09/960 (002)/2014.EMR-I

Title: National Staff Development Program (Workshop)-2010
Role: Principal Coordinator
Funding Agency: All India Council for Technical Education (AICTE), New Delhi, India
Grant: 0.7 Million INR (US $ 70,000)
Period: (3/5/10 — 14/5/10)
Project Number: 1-78/RID/SDP (92) 2008-09

Title: Genomera-08 - National Conference on Nanobiotechnology
Role: Conference Secretary
Funding agency: Department of Science and Technology, Government of India
Grant: 50 ,000 INR (1000 US $)
Period: (24/7/08 — 25/7/08)
Project Number: 100/1FD/566/2008-2009

EXPERT CONTRIBUTOR/ REVIEWER IN JOURNALS

2016 — till date: International Journal of Environment and Pollution
2016 — till date: Research and Reports in Medicinal Chemistry
2016 — till date: Breast Cancer: Targets and Therapy
2016 — till date: Research and Reports in Biodiversity Studies
2016 — till date: Research and Reports in Biochemistry
2016 — till date: Reports in Electrochemistry
2016 — till date: Clinical Interventions in Aging
2016 — till date: Drug Design, Development and Therapy
2016— till date: Journal of Blood Medicine
2016— till date: Journal of Medical Internet Research
2015 — till date: Cancer Management and Research
2015 — till date: International Journal of Nanomedicine

STATE GOVERNMENT ETHICAL COMMITTEE FOR CARRYING OUT RESEARCH WITH CANCER TISSUES

06/12: State Government Medical Ethical Committee clearance to collect the tumor tissues and blood samples from patients for Cancer Research – My PhD student, Ms. B. N. Banu has obtained.

CONTRIBUTION IN A CHAPTER OF A BOOK

2015: Vegetables and Human Health: Editor: Professor R. K. Rana, Haryana Agricultural University, India. Chapter 33: Herbal Remedy for Urinary Stones: K**.** Manjula, K. Pazhanichami, K. Rajendran, S. Kumaran and T. Eevera, Publisher: Scientific Publishers, India. ISBN: 978-81-7233-901-2 (page 454- 468).

INTERNATIONAL CO-ORDINAOR

2013: Logistic Support to visit by Dr. Parris N. Glendening, Former Governor of Maryland (1995-2003) & President, Smart Growth America's Leadership Institute, USA

2013: Dr. Michael Ohadi, Professor, Professor & Co-Founder, Center for Environmental Energy Engineering (CEEE), University of Washington, USA – Support rendered for his immigration paperwork to sort out his visa clearance. Indian Embassy, Washington D. C. & Department of home affairs, New Delhi, Government of India.

2011: Logistic and local support: Dr. Josef Novotny, Faculty, Charles Univ. and his students Ms. Jana Kubelkova, Ms. Dana Kralova and Ms. Magalena Vankova, Czech Republic.

2011-2013 Logistic support: Dr. Allen J Britten, Professor, Department of Chemistry, Cape Breton University – Logistics – for several visits.

2012 Logistic support: Dr. Saito Chihiro and students Faculty of International Welfare Development, Nihon Fukushi University, Japan.

2013 Logistic support: Mr. Liao Wei-Hsiang and Mr. Hong, Yong-Jia (M.Tech students) from Lunghwa University of Science and Technology, Taiwan. International office helped them to get Indian Visa by organizing supporting letter.

WIPO certificate: PCT101E19 Introduction to Patent Cooperation Treaty
Training Material: IP Panorama ™ - completed

CONFERENCE PRESENTATIONS

18 Kitchen Particulate Analysis, and Lung Function of Primary Cooks Using Wood or LPG Fuel in Tamil Nadu, India, E Stapleton, AS Kizhakke Puliyakote, K Shanmugam, K Karrupusamy, S Yusuff, K Geetha, K Durairaj, N Metwali, M Jeronimo, M Brauer, PS Thorne, TM Peters, EA Hoffman, AP Comellas, 47. HEALTH, EFFECTS OF AIR POLLUTION-ORGANIC DUST/BIOMASS, A1798-A1798, 2020, American Thoracic Society.

17 Quantitative CT Imaging Metrics Correlated to Kitchen Particulate Matter, Endotoxin, Metal, and Bioaerosol Content in Cooks Using Wood and LPG Fuel in Tamil Nadu, India, AS Kizhakke Puliyakote, E Stapleton, K Shanmugam, K Karuppusamy, S Yusuff, GB Kathiresan, D Kumar, N Metwali, M Jeronimo, M Brauer, PS Thorne, TM Peters, C Lee, M Bilas, AP Comellas, EA Hoffman. A47. HEALTH EFFECTS OF AIR POLLUTION-ORGANIC DUST/BIOMASS, A1800-A1800, 2020, American Thoracic Society.

16 Quantitative CT Imaging Metrics Correlated to Kitchen Particulate Matter, Endotoxin, Metal, and Bioaerosol Content in Cooks Using Wood and LPG Fuel in Tamil Nadu, India, AS Puliyakote, E Stapleton, K Shanmugam, K Karuppusamy, S Yusuff, GB Kathiresan, D Kumar, N Metwali, M Jeronimo, M Brauer, PS Thorne, TM Peters, C Lee, M Bilas, AP Comellas, EA Hoffman, AMERICAN JOURNAL OF RESPIRATORY AND CRITICAL CARE MEDICINE, Vol. 201, 2020, American Thoracic Society.

15 Long-Term Durable Anti-icing superhydrophobic coatings using supercritical fluid process, Mukhila. S, Rajiv. S., S. Kumaran in ICRAME, International Conference in Mechanical Engineering held on 1st and 2nd Sep 2017 (Oral).

14 Positive patterning of ferritin, and fibronectin molecules on silicon by atomic force microscopy anodic oxidation. S. Kumaran, T. Yoshinobu, W. Moon, H. Iwasaki. Two-Day Workshop on Nanotechnology: Innovations For Tomorrow's World Environment, Osaka Univ. Japan. Aug 6th — 7th 2008 (Oral).

13 Positive patterning of ferritin and fibronectin molecules on silicon, S. Kumaran, T. Yoshinobu, H. Iwasaki, Montpellier, France. June 3rd — 6th 2006 (Poster).

12 Positive Patterning of ferritin and fibronectin molecules on Silicon, S. Kumaran, T. Yoshinobu, H. Iwasaki, COE symposium, Westrin Hotel, Awaji Island, Japan. Mar 3rd — 4th 2006 (Oral).

11 Positive patterning of ferritin and fibronectin molecules on Silicon, S. Kumaran, T. Yoshinobu, H. Iwasaki, Handai Nanoscience and Nanotechnology International Symposium, Osaka Univ. Japan. Jan 30th — Feb 1st 2006 (Poster).

10 Positive Patterning of Ferritin Molecules on Silicon. S. Kumaran, T. Yoshinobu, H. Iwasaki, Cancun 2005, Scanning Probe Microscopy, Sensors and Nanostructures, Omni Cancun Hotel & Vilas, Mexico. June 5th — 8th 2005 (Poster).

9 Voltammetric determination of one of styrene metabolites-Phenylglyoxylic acid-in Urine Using Graphite Electrode, T. Navratil, Z. Senholdova, S. Kumaran, J. Barek, H. Surovoca, XXV Moderni Electrochemicke metody, Jetrichovice, Czech Republic. May 24th — 26th 2005 (Oral).

8 Positive Patterning of Ferritin Molecules on Silicon. S. Kumaran, T. Yoshinobu, H. Iwasaki, Kansai Cluster Symposium, Senri Life Science Foundation, Senrichuo, Osaka, Japan. May 17th 2005 (Poster).

7 Positive Patterning of Ferritin Molecules on Silicon, S. Kumaran, S. Iida, T. Yoshinobu, H. Iwasaki-COE symposium, ISIR-Bio Nano group presentation, Hotel, Awaji Island, Japan. Mar 21st — 22nd 2005 (Oral).

6 Positive Patterning of Ferritin Molecules on Silicon, S. Kumaran, S. Iida, T. Yoshinobu, H. Iwasaki -Third 21st Century "COE Towards Creating New Industries Based on Inter-Nanoscience "International Symposium" Oku-Biwako Makino Prince Hotel, Takagihama, Makino, Takashima, Shiga, Japan. Mar 9th — 10th 2005 (Poster).

5 Polarographic and Voltammetric determination of 1,8-Dinitronaphthalene. S. Kumaran, J. Barek, J. Zima, XXIV Moderní Elektrochmrické metody, Jetřichovice, Czech Republic. May 19th 22nd 2003 (Oral).

4 Determination of trace amounts of chemical carcinogens using modern electroanalytical methods. J. Barek, S. Kumaran, K. Pecková, J. Zima, 3rd International Conference on Instrumental Methods of Analysis, (Modern Trends and Applications), Athens, Greece. Sept 23rd — 27th 2003 (Oral).

3 Polarographic and Voltammetric determination of 1,3-Dinitronaphthalene. S. Kumaran, J. Barek, J. Zima, XXIII Moderní Elektrochmrické metody, Jetřichovice, Czech Republic. May 19th — 22nd 2003 (Oral).

2 Polarographic and Voltammetric determination of 1,5-dinitronaphthalene. Kumaran S, J. Barek, J. Zima, XXII Moderní Elektrochmeické metody, Cikháj, Czech Republic. May 21st — 23rd 2002 (Oral).

1 Bioanalytical applications of Voltammetric Response of Fungi, isolated from Polyurethane Waste Scraps. S. Subrahmanyam, S. Kumaran, T. V. Subramanian, M. Murugesan, V. Murali Madhav, D. Jeyakumar, Fourth Workshop on Biosensors and Biological techniques in Environmental Analysis, Mao, Menorca, Spain. Dec 1st — 3rd 1999 (Oral).

INVITATION TO SERVE AS JOURNAL REVIEWER

39 A study on pectinases from *Aspergillus tamarii* : toward greener approach for cotton bioscouring and phytopigments processing, Submitted to Biocatalysis and Agricultural Biotechnology(Manuscript BAB_2018_255), 2018, Contact Person: Suk Hoo Yoon, Editor.

38 "Metformin – a Panacea Drug," Submitted to Journal of Natural Remedies (Manuscript # 17938 Review), 2017, contact Person: Dr. Ansari S. H. Editor.

37 **"**A study on pectinases from *Aspergillus tamarii*: toward greener approach for cotton bioscouring and phytopigments processing" (Manuscript 17-0106) 2017, Contact Person: Jung-Mi Kim, Editor Mycobiology

36 "Modeling 3D-spatiotemporal dynamics of hierarchical cell division" (Manuscript # JOMS1503084303) submitted to Journal of Modeling and Simulation, 2017, Contact Person: Editorial Manager, Journal of Modeling and Simulation, Knowledge Publishing Group.

35 "Methods for the Evaluation of Waste Treatment Process" (Manuscript # 3567865), Submitted to Journal of Engineering, 2017, Contact Person: Editor, Salma Nagi.

34 **"** Formulation and in-invtro evaluation of floating matrix tablets of cefditioren pivoxil: effect of effervescent agent on properties**"**(Manuscript # 19682-89639-1) submitted to Asian Journal of Pharmaceutical and Clinical Research" 2017, Contact Person: Editor, AJPCR.

33 "Nanoparticulate Drug Delivery Approach is an Emerging Alternative Therapeutics for Intracellular Bacterial Pathogens" (Manuscript # BSP-PNT-2016-HT7-8), submitted to Pharmaceutical Nanotechnology Special Issue, 2017, Contact Person: Dr. Saravanan Muthupandian, Guest editor of PNT.

32 "Nano-medicine as a newly emerging approach to combat Human Immunodeficiency Virus (HIV): (Manuscript # BSP-PNT-2016-HT7-7), submitted to Pharmaceutical Nanotechnology Special Issue, 2017, Contact Person: Dr. Saravanan Muthupandian, Guest editor of PNT.

31 "Seaweed Mediated Biosynthesis of Silver Nanoparticles and Its *In Vitro* Cytotoxicity Effect On Breast Cancer Cell Line" (Manuscript # NNA-Amutha Santhanam-126), submitted to Nanoscience & Nanotechnology-Asia, 2016, Contact Person: Saba Ahmad.

30 **"**Adsorption of Naphthol Green B on unburned carbon: 2- and 3- parameter linear and non-linear equilibrium modeling" (Manuscript # CJCHE_2016_233), submitted to Chinese Journal of Chemical Engineering, 2016, Contact Person: Dr. Geoff Stevens.

29 "Towards Developing a Climatology of Fire Emissions in Central Asia" (Manuscript # 39940), submitted to Air, Soil and Water Research, 2016, Contact Person: Dr Claire Walker-Lloyd.

28 "Evaluation of correlation between saliva and serum ferritin level in patients with iron deficiency anemia and comparison group" (Manuscript # IRJMMS-2016-016) International Research Journal of Medicine and Medical Sciences, 2016, Contact Person: Dr. Attapon Cheepsattayakorn.

27 "Recent advances in electrochemical detection of important sulfhydryl-containing compounds. A review" (Manuscript # MCCM-D-16-00116) Monatshefte fur Chemie - Chemical Monthly, 2016, Contact Person: Dr. Tomas Navratil.

26 "Effects of Green Synthesized Silver Nanoparticles on Lung Cancer cells in vitro and Grown as Xenograft Tumors in vivo" (Manuscript # 103695), submitted to International Journal of Nanomedicine, 2016, Contact Person: Timothy D Hill.

25 "Cinacalcet Hydrochloride: a new dose schedule in the Management of Secondary Hyperparathyroidism in Chronic Kidney Disease Patients (Manuscript # 150156), submitted to Asian Journal of Pharmacy Research" 2015. Contact Person: Mr. Akash Dhokne *(not acknowledged my service)*

24 "DNA data in procedure in European Fundamental Rights context", (Manuscript # Ref. No. BSP-DNAG-2014-39) submitted to Recent Advances in DNA & Gene Sequences", 2014. Contact Person: M. Alam.

23 "Evaluating the clinical feasibility: the direct bisulfite genomic sequencing for examination of methylated status of E3 ubiquitin ligase RNF180 DNA promoter to predict the survival of gastric cancer" (Manuscript # 14-824-RR) submitted to Cancer Biomarkers, 2015, Contact Person: Jeyel Tecson.

22 "Ultrasound Image Enhancement using Structure-based Filtering," (Manuscript # 758439), submitted to Computational and Mathematical Methods in Medicine, 2014, Contact Person: Dr. D. Kumar.

21 "Microwave Dielectric Characterization of Polar Protic liquids using Time Domain Reflectometry" (Manuscript # 4798_R) submitted to International Journal Pharma & Biological Sciences, 2014, Contact Person: Managing Editor.

20 "Strategies for cloning and higher expression of *Aspergillus flavus* urate oxidase gene in *E.Coli* (Manuscript # 4857)submitted to International Journal Pharma & Biological Science, 2014, Contact Person: Sankari.

19 "Use of Behavioral Responses of Zebrafish (Daniorerio) in Identifying Sublethal Exposure to Deltamethrin" (Manuscript Number: IRJPEH-14-008) submitted to International Research Journal of Public and Environmental Health, 2014, Contact Person: Professor Ramesh C. Gupta.

18 "Silver solid amalgam electrode as a tool for monitoring of electrochemical reduction of hydroxocobalamin" (Manuscript # elan.201200365) submitted to Electroanalysis, 2013, Contact Person: Prof. Dr. J. M. Pingarrón.

17 "Bactericidal and instecticidal activity of silver nanoparticles synthesized using brown seaweed S*aragussum muticum*". (Manuscript # not assigned-review due date was 2013-03-01), Submitted to Current Science, 2013, Contact Person: Professor S. Krishnaswamy and Chandrika Ramesh.

16 "Self-assembled sensor based on boron-doped diamond and its application in voltammetric analysis of pyridine herbicide" (Manuscript # GEAC-2013-0357) submitted to International Journal of Environmental Analytical Chemistry, 2013, Contact Person: Joan Albaiges.

15 *in vivo* Imaging-based Mathematical Modeling Techniques that Enhance the Understanding of Oncogene Addiction in Relation to Tumor Growth" (Manuscript # 802512) submitted to Computational and Mathematical Methods" 2013, Contact Person: Heba Motawea.

INVITATION TO SERVE AS REVIEWER IN INTERNATIONAL CONFERENCE PROCEEDINGS

14 Manuscript # BEB3248, entitled "A simple real-time PCR assay for selection of Chinese *Panax ginseng* cultivar Damaya from local ginseng populations", ICBEB-2016, China, Linda Li.

13 Manuscript # BEB 3176, entitled "Enhanced pectinase production by ultraviolet (UV) irradiation and diethyl sulfate (DES) mutagenesis of an *Fusarium oxysporum* isolate", ICBEB-2016, China, Linda Li.

12 Manuscript # ICBE 1876, entitled "Improved 2,3-butanediol production from cotton stalk hydrolysate by *Klebsiella pneumonia*", ICBEB-2014, China, Contact Person: Linda Li.

11 Manuscript # ICBE1981, entitled" Methylene blue-containing nanoliposomes biological distribution and release after dual frequency sonication" ICBEB-2014, China. Contact Person: Linda Li.

10 Manuscript # ICBE1405, entitled "Screening for Minimal hepatic encephalopathy in hospital by the assessment of the abnormal daily behavior" ICBEB-2014, China. Contact Person: Linda Li.

9 Manuscript # ICBE2113, entitled "The quality control of an inspecting – sorting automatic machine for pharmaceutical vials" ICBEB-2014, China. Contact Person: Linda Li.

8 Manuscript # ICBE2548, entitled "Optimization and corroboration of the regulatory pathway of p 423 protein in the pathogenesis of gastric carcinoma", ICBEB-2014, China. Contact Person: Linda Li.

7 Manuscript # ICBE1966, entitled Evaluation of 2-[18F]-fluoro-2-deoxy-D-glucose positron emission tomography/computed tomography in rat model on hepatocellular carcinoma with liver cirrhosis', ICBEB-2014, China. Contact Person: Linda Li.

6 Manuscript # ICBE 1962, entitled " Pyrene Degrading *Achromobacter Denitrificans* ASU-035: Growth Rate, Enzymes Activity and Cell Surface Properties", ICBEB-2014, China. Contact Person: Linda Li.

INVITATION TO SERVE AS REVIEWER IN RESEARCH PROPOSALS

5 **"**Highly selective metal oxide nanocatalysts for oxidative coupling of methane" (File Number: GoE7817N) For my advice regarding an application for a Lead Agency project with Slovenia by Kevin Van Geem, submitted to the Research Foundation - Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO), Contact Person: Administrator, Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO, Belgium.

4 Proposal submitted to Netherlands Organization for Scientific Research (NOW) –Chemical Sciences - Chemistry in Relation to Physics and Material Sciences 2013 CW Application-ECHO.13.FM.01- form titled on "Nanogap devices with methyl binding domain proteins for the specific, electrical detection of hypermethylated DNA" December 2013.

3 Indo-Australian Biotechnology Fund (ABF) 6th Round research proposal on "Structural Characterization of regulatory proteins in developing biomass" (Proposal ID: DBT/Indo-Aus/06/--/2011 Submitted to Department of Biotechnology, Government of India, New Delhi 2012. Grant in AU$ 144,000 - (US # 100,000 US $)

2 Project evaluation of Mr. Mukesh Kumar's proposal on "Medical diagnostic chip"- Contact Person: Mr. M. Sivakumar, Project Co-ordinator (Tepp), National Institute of Technology, Trichirapalli, India 2011.

1 Tepp project evaluation on "Ms. B. Edhaya Naveen's proposal on "Novel Pharmaceutical Leads from Seaweeds and its associated Fungi, Contact Person: Mr. M. Prassanna, Project Officer, Trec Step, NIIT campus, Trichirapalli, India 2011.

EXPERT *VIVA-VOCE* EXAMINER FOR Ph.D., THESES

2 "Nano-catalyzed fermentation Process for biohydrogen production from Lignocellulosic wastes " Anbalagan, K. submitted to Anna Univ. 2017.

1 "Photosynthesis of Transition metal nanoparticles and their application of biodecolourization of dyes" Balaburghan MG, submitted to Anna Univ. 2016.

ACADEMIC CONTRIBUTION ACKNOWLEDGED IN PEER REVIEWED RESEARCH ARTICLES

7 "A multi-dimensional analysis of the impacts of the Mahatma Gandhi National Rural Employment Guarantee Scheme: a tale from Tamil Nadu". J. Novotny, J. Kubelkova, V. Joseph, Singapore Journal of Tropical Geography, 34, 3, forthcoming (e-proof SJTG 12037), 2013.

6 "Alternative to jobless growth? All-India a context and a case of participatory development from rural Tamil Nadu", J. Novotny, N. Ramachandran. Geografie, 115, 3, 2010.

5 "A Study on Sports and Recreational Activities of Periyar PURA Village Children and their Impact on Character", Journal of Chemical and Pharmaceutical Research (online), 2015.

4 "Efficacy of natural diosgenin on cardiovascular risk, insulin secretion, and beta cells in streptozotocin (STZ)-induced diabetic rats" Phytomedicine: Int. J. Phytother. Phytopharmacol. (online), 2015.

3 "Immobilization and characterization of carbonic anhydrase purified from *E. coli* MO1 and its influence on CO_2 sequestration", M. Oviya, S. S. Giri, V. Sukumaran, World J. Microbiol. Biotechnol. – Online. DOI 10.1007/s11274-013-1343-z, 2013.

4 "Biosynthesis of Ag Nanoparticles Using *Amaranthus tristis* Extract for the Fabrication of Nanoparticle Embedded PVA Membrane", K. Nehru, M. Sivakumar, J. Anitha, R. Krithikadevi, G. Raam Dheep, Curr. Nanosci. 8: 5, 703 — 708, 2011.

2 "Isolation, characterization and quantification of diosgenin from *Costus igneus*", K. Pazhanichamy, K. Bhuvaneswari, B. Kunthavai, T. Eevera , K. Rajendran. J. Planar Chromatogr. 25, 6, 566 — 570, 2011.

1 "Morphological, anatomical and proximate analysis of Leaf, Root, Rhizome of *Costus igneus*", T. Eevera, K. Pazhanichamy, S. Pavithra, S. Rubini, B. Lavanya, I. Ramya, J. Pharm. Res., 3, 4,747—752, 2010.

ACADEMIC CONTRIBUTION ACKNOWLEDGED IN CONFERENCE PUBLICATIONS

2 "Optimization of microwave assisted alkali pretreatment and enzymatic hydrolysis of Banana pseudostem for bioethanol production", 2nd International Conference on Environmental Science and Technology, (Singapore), S. Chittibabu, K. Rajendran, M. Santhanmuthu, M.K. Saseetharan. V 62 —V71, 2011.

1 "Optimization of alkali pretreatment and enzymatic hydrolysis of Banana pseudostem for ethanol production by RSM", S. Chittibabu, M. K. Saseetharan, K. Rajendran, M. Santhanamuthu, Advances in Engineering, Science and Management (ICAESM), 2012, IEEE Conference Proceeding 90 — 94, 2012.

COMPLETED CONDITION OF BOND TO UNDERTAKE CZECH GOVERNMENT SCHOLARSHIP

11/2007: Ministry of Human Resource Development (MHRD), Department of Secondary and Higher Education, New Delhi, India (file number No. F 5-4/1999 ES.3) has confirmed the fulfillment of the commitment to Indian Government.

SOCIETAL CONTRIBUTIONS

2017 — July "Intensive Training Programme for Tribal Students on Basic Science and Mathametics" One of the faculty members to handle a session on "Microscopic view of plants, animals & algae" sponsored by DST, Govt. of India

2007 — till date: One of the faculty members (Team) in involved on behalf of Periyar Maniammai University helping 65 villagers in Periyar PURA (Providing Urban Amenities to Rural Villages) around PMU.

2000 — 2004: Helping Czech students who have studied Tamil (language) in Charles University.

1998 — 1991: National Social Service, cleaning the walls of Thanjavur Big Temple.

1992 — 1994: World Vision Projects in Rural Villages.

LIST OF STUDENT'S RESEARCH ACHIEVEMENT AT INTERNATIONAL LEVEL

3 Ms. B. N. Banu (Ph.D scholar, 2011) received Commonwealth Scholarship (Canada)

2 Ms. Jana Kubelkova, Ms. Dana Kralova and Ms. Magalena Vankova (PhD scholars, 2011). Charles University, Czech Republic (a part of their research program carried our research in India).

1 Ms. M. Harshiney (M.Tech Nanotechnology, (2013) received Commonwealth Scholarship (Canada).

RESEARCH GUIDEANCE - SELECTED FORMER AND CURRENT RESEARCH STUDENTS

10 Ms. B. N. Banu, (PhD scholar, 2013) obtained SRF & RA (Council of Scientific and Industrial Research).

9 Dr. K. Manjula (PhD scholar, 2012) [one of the research advisors].

8 Dr. M. Sarathy (PhD scholar, 2012) [one of the research advisors].

7 Dr. P. Gopu (PhD scholar, 2011) [one of the advisors].

6 Dr. K. Pazhanichamy (PhD scholar, 2011) [one of the advisors].

5 Ms. G. K.G. Iyer (B.Tech Biotechnology, 2012) completed UGC Summer Internship at ICT Mumbai.

4 Ms. K. Nadig (B.Tech Biotechnology, 2012) has completed Summer Training programme at CLRI.

3 Five Junior Research Fellows (Research Scholars during 2008-2011), Ms. B. N. Banu, Mr. K. G. Ramachandramurthy, Ms. R. Aarthi, Ms. S. Bharathi, Ms. M. Harshiney, Dr. K. Manjula worked under my supervision.

2 Mr. K. Sathiyaraj, Mr. P. Venkatesan and Mr. K. Kanivalavan (M.Tech Nanotechnology, 2010) received internship to work with me.

1 Mr. K. G. Ramachandramurthy (PhD Scholar, 2010) obtained CSIR-Senior Research Fellowship, New Delhi, India.

RESEARCH ADVISOR FOR M.Phil. THESES

2015: "Studies on celluolytic activity of fungi and bacteria isolated from the soil of paper recycling plant at Periyar Maniammai University" M.Phil Thesis submitted by Ms. T. Saranya (Reg. No. 114011552018) Periyar Maniammai Univ. India.

2015: "Evaluation of antimicrobial activity of green synthesised metallic nanoparticles" M.Phil Thesis submitted by Ms. T. Arivukkarasi (Reg. No. 114011552017) Periyar Maniammai Univ. India.

2010: "Isolation, characterization and evaluation of Bacterial Bio control agents in *Bacillus Spp* against soil born pathogen of different crops" M. Phil thesis, Mr. V. Velavan, Periyar Maniammai Univ. India.

2010: "Screening of anticancer activity of traditional medicinal plant *Vinca rosea* by analytical methods" M. Phil. thesis, Mr. S. Karthik, Periyar Maniammai Univ. India.

2008: "Microbial Contamination (*Vibrio Sp*) on a aquatic habitation in aquaculture practices at Orathanadu" M. Phil thesis, Mr. J. Saravanan, Periyar Maniammai Univ. India.

2009: "Influence of dye industry effluent in the biochemistry of cyanobacterium" M. Phil. thesis, Ms. S. Bhuvaneswari, Periyar Maniammai Univ. India.

2008: "Waste reduction, nutrient recovery and chemical analysis of few solid sludge waste materials composting" M. Phil. thesis, Ms. K. Sasikala, Periyar Maniammai Univ. India.

2008: "Heavy metal concentration in few medicinal plants" M. Phil. thesis, Mr. S. Anandan, Periyar Maniammai Univ. India.

RESEARCH ADVISOR FOR M.TECH THESES

2015: "Lab scale design and performance study of filter media-a potential application in irrigation runoff", for a project report (phase-II) M. Tech Environmental Engineering submitted by Mr. R. Ilamaran (Register Number: 212012678003) Periyar Maniammai Univ. India.

2015: "Graphene modified membrane for separating environmental pollutants" for a project report (phase-II), M. Tech Environmental Engineering submitted by Mr. A. Ganeshkumar (Register Number: 212012678002) Periyar Maniammai Univ. India.

2014: "Graphene Modified Membrane for Separating Environmental Pollutants" for a project report (phase-I), Mr. A. Ganeshkumar (Register Number 212012678002) - the pre-final year research thesis submitted for Master of Technology in Environmental Engineering, Periyar Maniammai University, India.

2014: "Lab Scale Design and Performance study of filter Media – A Potential Application in Irrigation Runoff" for a project report (phase-I), Mr. R. Ilamaran (Register Number 212012678003) - the pre-final year research thesis submitted for Master of Technology in Environmental Engineering, Periyar Maniammai University, India.

2014: "MnO_2 Nanowires by electro spinning as pseudocapacitor electrode with high rate capability", N. Menaga, M.Tech thesis submitted to Periyar Maniammai Univ. India.

2011: "Genome Wide DNA methylation analysis in relation to age, smoking, drinking, dietary habits as epigenetic marker using conventional and nanotechniques." M. Tech. thesis "Ms. R. M. N. Lincy , Anna Univ. of Technology-Tirunelveli, India.

RESEARCH ADVISOR FOR B.TECH THESES

2015: "Separation of sulforaphane from *Brassica oleracea* var. *italica* for cancer**"** B.Tech final year thesis submitted by Ms. R**.** Ramapriya (Register Number: 111011101089), Periyar Maniammai Univ. India.

2013: "Computational study on proton transfer in biological systems using 7- Hydroxyquinoline as a model by Density Functional Theory & An environmental approach towards the synthesis of gold nanoparticles from *Murraya koenigii* leaves" B.Tech. thesis, Ms. K. G. Iyer, Periyar Maniammai Univ. India.

2013: "Identification of antibiotic resistance genes in metagenomes" B.Tech. thesis, Ms. K. Nadig, Periyar Maniammai Univ. India.

2012: "Silver nanoparticles surface coating on recycled paper and its antimicrobial properties", B.Tech thesis, Mr. J. Muthuvel, Ms. B. Deepika and Mr. N. K. Dangi, Periyar Maniammai Univ. India.

2011: "Enhanced Seed Germination using Multiwall Carbon Nanotubes"B.Tech thesis, Ms. K. Jebapriya, Ms. R. Keerthana, Ms. N. Saranya, Ms. J. P. Surya, Anna Univ. Chennai, (Anna University of Technology Tiruchirappalli), India.

2011: Study of antagonistic activity of the soil fungi and antifungal activity of *Rhinacanthus nasutus* against *Colletotrichum falcatum*, B. Tech Thesis, Ms. J. Gayathiridevi, Ms. P. Gayathiridevi, Ms. A. J. Mary, (Anna University of Technology Tiruchirappalli), India.

2009: "Porous silicon nanoparticles mediated drug delivery of Cloroglyine and fabrication of prostate cancer biosensor" B. Tech. thesis, Ms. M. Pradeepa, Ms. E. Menaka, Anna Univ. India.

2008: "Nanolevel imaging and patterning of biomolecules", B.Tech thesis, Ms. S. Rajasree, Ms. P. Ganambigai, Ms. G. Uma Maheswari, Ms. G. Maheswari, Anna Univ. India.

National level workshops

02/13: Indo-American Education Summit & Expo organized by Confederation of Indian Industry, Hyderabad, India.

03/15 One day workshop on Outcome Based Education (OBE) and Bloom Taxonomy of Educational Objectives held at Periyar Maniammai University, India by Dr. S. Baskar, Professor, Thiagarajar College of engineering, Tamil Nadu, India.

10/13 14th Indo-US Flow Cytometry Workshop organized by Central Research Facility & Human Genetics, Sri Ramachandra Medical University, Chennai, India.

11/11: The 2nd India – Korea joint workshop on "Chemistry and Nanomaterials in Nanotechnology conclave", Fisherman's Cove, Chennai, Organized by Confederation of Indian Industry and Indian Institute of Technology- Madras, India.

09/11: " Post Graduate Teaching Programme" Review Meeting – organized by Nano Mission Council, Centre for Nanotechnology & Advanced Biomaterials (CoNTAB) SASTRA University, Thanjavur, India.

05/11: India International Education Forum, Pragti Maidan, New Delhi, India.

04/10: 3rd INUP Training workshop on "Nanofabrication Technologies" Organized by Centre for Continuing Education, IISc, Bangalore, Selected on the basis of All India National competition.

09/08: Attended workshop on "Modern Aspects in Electrochemical Science and Technology" Sponsored by Department of Science & Technology, New Delhi and conducted by Central Electrochemical Research Institute, Karaikudi, and Indian Institute of Science, Bangalore. Selected on the basis of All India National competition.

2006: Attended AFM Training program –Close contact mode (Pacific Nanotechnology, USA) conducted by TOYO Corporation, at Professor Iwasaki's Laboratory, ISIR, and Osaka University, Japan.

2006: Attended AFM Training program in liquid samples, at Prof. Iwasaki's Laboratory, ISIR, Osaka University, Japan (Experts from VEECO).

2004: AFM Training program –Close contact mode (Pacific Nanotechnology, USA), conducted by TOYO Corporation, Osaka, Japan.