Assoc. Prof. Suresh Valiyaveettil

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Employment history:

Current	Assoc. Professor	Department of Chemistry, National University of Singapore	
April 2013	Joint appointment	Solar Energy Research Institute (SERI) Singapore	
Aug.13/ June 14	Visiting Scholar	Dept. Mat. Sc. Eng.; Beckmann Institute, UIUC, USA	
2009 - 2012	Assistant Head	Department of Chemistry, National University of Singapore	
Jul.10 - Jun.11	Acting Deputy Head	Department of Chemistry, National University of Singapore	
Oct. 2012	Erudite Professor	Sch. of Chemistry, MG University, Kottayam, Kerala, India	
June 2011	Visiting scientist	Department of Chemical and Biological Engineering, UBC, Canada	
Dec. 2010	Guest Researcher	National Institute for Materials Science (NIMS), Tsukuba, Japan.	
July 2010	Visiting professor	Department of Kazakh British University, Almaty, Khazakhistan	
July 2008	Visiting Professor	Tokyo Institute of Technology, Tokyo, Japan	
June 2007	Visiting Professor	Department of Chemistry, University of Houston, Houston, USA	
2006 - to date	Resident Advisor	Prince George's Park Residences, NUS, Singapore	
		Graduate residence, UTown (from July 2011)	
2006- to date	Visiting Professor	Dept. of Chemistry, IIT Madras, Chennai, India	
2007 - to date	Adjunct Professor	K. S. Rangasamy College of Technology, Tamil Nadu, India	
2006 - to date	Adjunct Fellow	Institute of Materials Research and Engineering, Singapore	
2004 - to date	NGS Fellow	National University of Singapore Graduate School for Integrative	
		Sciences and Engineering (NGS), http://www.ngs.nus.edu.sg/	
2002 - 2010	NUSNNI Member	National University of Singapore, Nanoscience and Engineering	
	NUSNNI – Focus Group	Initiative, <u>www.nusnni.nus.edu.sg</u>	
	Chair		
2004 - 2006	Research Champion	National University of Singapore – University of British Columbia	
		Applied Science Research Center,	
		http://www.researchcentre.apsc.ubc.ca/	
2001 - 2006	SMA Fellow	MEBCS, Singapore-MIT Alliance (SMA), National University of	
	Course Coordinator	Singapore, <u>www.sma.nus.edu.sg</u>	
Dec. 2004	Visiting Professor	Department of Inorganic and Physical Chemistry, Indian Institute of	
		Science (IISc), Bangalore, India	
June 2004	Visiting Scientist	Nanoscience Center, University of Copenhagen, Denmark	
2002	Visiting Professor	Marine Science Institute, University of California Santa Barbra	
		(UCSB), CA, USA	
2000	Visiting Scientist	NIMS/AIST, Tsukuba, Japan	
1998 – 1999	Lecturer	Department of Chemistry, National University of Singapore.	
1997 –1998	Visiting Scientist/	Department of Materials Science and Engineering, Cornell	
	Research Associate	University, USA	
1995-1997	Project Leader	Max-Planck Institute for Polymer Research, Mainz, Germany	
1993 -1994	Post doctoral fellow	Max-Planck Institute for Polymer Research, Mainz, Germany	
1992	Post doctoral fellow	Department of Organic chemistry, University of Twente, The	
		Netherlands	

Education:

2011	MBA, Business School, National University of Singapore
1992	Ph.D. (Supramolecualr chemistry), University of Victoria, Victoria, B. C., Canada.

- 1987 M Tech. (Analytical chemistry and instrumentation), Indian Institute of Technology Delhi, New Delhi, India.
- 1985 M Sc. Chemistry (Organic, Physical and Inorganic), Calicut University, Kerala, India
- 1983 **B Sc.** Chemistry, Calicut University, Kerala, India.

A short summary of activities of my group

Research

My group at the National University of Singapore is interested in developing functional materials for various applications. Ongoing projects involve

- i) Synthesis of conjugated oligomers and polymers
- ii) Functionalization of natural polymers (e.g. cellulose)
- iii) Developing new adsorbent materials (e.g. polymers, nanocarbon, metal oxides, biomembranes) for water purification.
- iv) Synthesis and characterization of novel nanomaterials
- v) Safety and toxicity of metallic nanoparticles
- vi) Investigation of biomimetic synthesis of hard tissues (e.g. eggshells, seashells)
- vii) Materials for solar cells

My group has published more than 166 papers in various refereed international journals with a total citation of 4550 (Average citations per paper: 22.12, h-index: 40). In addition, about 29 students completed their PhD, 15 students graduated with MSc degrees and more than 100 students finished their final year projects from my group in NUS. One of my key strength is providing quality research experience and training to young talented students.

Teaching

After joining NUS in 1998, I taught courses at different levels starting from 2nd year to postgraduate level. Subjects include organic, polymer, supramolecular and nanochemistry. Many tools (e.g. slides, videos, internet resources) and an intranet based integrated virtual learning environment (IVLE) were used for teaching and communicating with students. Class sizes ranged from 250 to 15 students, based on the level of the course. The student feedback is usually above 4 in the 5 point scale, throughout my stay in NUS.

<u>Service</u>

I am involved in various committees in the department, faculty and university level (research, faculty search, safety, space, graduate studies etc.) in NUS. I also serve as a member in research proposal evaluation committee of NUS and national funding agencies such as Ministry of Education, National Research Foundation and Agency for Science, Technology and Research (ASTAR/SERC-PSF). I was an assistant head in the chemistry department for past six years (2006 – 2012) in charge of research portfolio. I have been reviewing papers for various journals in areas of polymers and materials.

Resident Advisor

Our university provides housing services to more than 12,000 to both local and foreign students on campus residences and halls. All campus residences are managed by live in Resident Advisors (staff) and Resident Assistants (student representatives), who offer pastoral care, academic mentorship, organize cultural, sports and academic activities for the residents. I have been serving as a live-in resident advisor for the past 6 years. On an average, there are four activities in a semester and feedback from the participating residents are sought to improve the events as well. In addition, I have helped many students who were under stress due to personal or academic reasons. It has been a learning experience for me to deal with such students, who needed help to get through the difficult time on campus.

Research

Areas of research

Organic and polymer Synthesis Biopolymers and their applications Biomineralization & Biomaterials Nanomaterials Nanosafety and nanomedicine Adsorbents for water purification

Research Awards/honors (recent)

- 1. Erudite Professorship (Oct. 2012) at School of Chemistry, Mahatma Gandhi University, Kerala from Kerala Government, India.
- Singapore Science and Engineering Fair (SSEF) 2012. Silver: VS003 Potential Applications of Tomato and Apple Peels as Biosorbents for the Removal of Water Pollutants, Dillon Chew and Yu Quan Poh, mentored by A/P Valiyaveettil, Suresh (Chemistry)
- 3. Singapore Science and Engineering Fair (SSEF) 2011. GOLD: Project CH57 mentored by A/P Valiyaveettil, Suresh (Chemistry)
- 4. Outstanding Scientist Award 2008, Faculty of Science, National University of Singapore.
- 5. One of the PhD students, Gayathri Subramanyam won the SNIC GOLD MEDAL for Best Thesis Award 2008.
- 6. JSPS award for exchange visit to Tokyo Institute of Technology, July 2008
- 7. UK-Singapore Partnership Grant, 2006.
- 8. One of my PhD student, G. Subramanyam, won Best Oral Presentation Award at MRS meeting in San Francisco, 2007 and one SNIC's Gold Medal for best thesis (2008)
- 9. Best poster award for my student Rajamani Lakshminarayanan for his poster on "Comparative Study of Structure -Function Relationship of Eggshell Proteins" at the Second International Conference on Structural Biology and Functional Genomics held in Singapore, 2002.
- 10. Crisp Award: Best project award was won jointly by my undergraduate students Loh Xian Jun and me in the UROPs program for the project entitled "Analysis of Biomaterials: Investigation of the Calcification in Avian Eggshells, 2004. (<u>http://www.science.nus.edu.sg/undergraduate/urops/crisp/crisp04/</u>). The award was given to the best project among all projects (>100) in Faculty of Science.
- 11. My science research program (STP) student, Zhong Youjia from Raffles Junior College won prizes for her project entitled "Isolation, Characterization of Beta-Chitin from Squid Pens and Calcium Carbonate Crystallization on the Chitin Scaffold" at
 - (i) Taiwan International Science Fair, Taiwan, 2005 http://www.ntsec.gov.tw/file/main/winners%200f%202005%20TISF.pdf)
 - (ii) Second Prize (US\$ 1500) at Intel International Science and Engineering Fair, May 13, 2005, Phoenix, Arizona USA (<u>http://www.sciserv.org/isef/results/grnd2005.asp</u> or <u>http://www.sciserv.org/isef/</u>). More than 1,400 students from over 40 countries competed at the 56th Intel International Science and Engineering Fair.
 - (iii) Gold Medal at Singapore Science and Engineering Fair (SSEF-2005), Singapore (<u>http://www.science.edu.sg/ssc/</u>)
- 12. My postdoctoral fellow, Paravil Kumaran Ajikumar won the American Peptide Society Travel Awards in 2004.
- 13. Invited as a Visiting Scientist (2004) at the Department of Inorganic and Physical Chemistry at the Indian Institute of Science, Bangalore, India.
- 14. Invited as a visiting scientist (2004) at the Nanoscience Center at the University of Copenhagen.
- 15. Invited as a Visiting Professor (2002) at the Marine Science Institute at the University of Santa Barbara, California, USA.
- 16. ASEM-DUO Denmark Fellowship to visit University of Copenhagen.
- 17. Young Scholar Award from American Chemical Society, Pacifichem 2000, A few ~ 24 were given for a conference with an attendance of more than 5,000 participant. I am the only recipient from Singapore.
- 18. JSPS Fellowship for a lecture series in Japan Universities (2000)
- 19. NATO Fellowship for a lecture and research visit to universities in USA (1995 1996)

- 20. Max-Planck Society Honorarium, Mainz, Germany (1995 1997)
- 21. Max-Planck Society Fellowship, Mainz, Germany (1993 -1994)
- 22. The Dr. E and Mrs. M. Von Rudloff Award, Univ. of Victoria, Canada (1990 1991)
- 23. Fellowship to attend the First International Summer School of Supramolecular Chemistry, Strasbourg, France (1990)
- 24. University of Victoria Teaching award for lab instructors (1989 1991)

Training of students

PhD Students Completed

- 1. Soo Choi Pheng 2. Molamma Prabakaran (cosupervisor)
- 3. Akhila Jayaraman
- 4. Fan Ailong
- 5. Balasubrahmanian
- Venketaramanan 6. Rajamani
- Lakshminarayanan
- 7. Liao Shaowen
- 8. Chinnapan Baskar9. Jiao Hua (cosupervisor)
- 10. Subbiah Jagadesan
- 11. Renu ravindranathan
- 12. Nurmawati Bte Muhammad Hanafiah
- 13. Gayathri Subramanyam
- 14. Li Hairong
- 15. Zhuang Haiyu
- 16. Fathima Shahitha Jahir Hussain
- 17. Balaji Ganapathy
- 18. Satyananda Barik
- 19. Ankur Duraih
- 20. Asha Rani P. V. Nair
- 21. Sajini Vadukumpully
- 22. Jhinuk Gupta
- 23. Pradipta Sankar Mati
- 24. Narahari Mahanta
- 25. Teo Yiwei
- 26. Ashok Keerthi
- 27. Wang Chunyan
- 28. Ramakrishna Mallampati

Research Publications from my group (see list at the end)

Number of refereed publications:	168
Number conference proceedings (e.g. polymer preprints)	34
Number of conference presentations:	315
H-Index	34
Total Citations	4716
[Full list of publications and conferences presentations are g	given at the end]

MSc Completed

- 1. Low Bee Jin, Michelle
- 2. Wong Ling Guan
- 3. Ong Boon Tee
- Shu Wenmiao 4.
- Saifudin Bin 5. Mohammad Abubaker
- 6. Liu Rong
- Feng Zheng 7.
- Ye Huanwen 8.
- Zu Ning 9.
- 10. Robert Cecil
- 11. Eyo Ye Hua
- 12. Kelly Nandar
- 13. Bindu Pradeep
- 14. Sirimulu Deepa
- 15. Teo Zihao
- 16. Sangeetha
- Amirthalingam 17. Ong Pin Jin
- 18. Li Xuanjun
- 19. Jee Wan Yi Stephanie

Current Students

- 1. Daisy Setvono
- Sved Abdulrahim Sved Nizar; 2.
- Roshan Fredrick Dsouza
- 4. Sriramulu Deepa
- Choong Ping Sen 5.
- 6. Samarth Bhargava

Postdocs

- 7. Kalidhasan Sethu
- 8. D Brahatheeswaran
- 9. Vanga Devendar Goud
- 10. Lekha Padmanabhan Potty Kalava
- 11. Ramkrishna Mallampati

12. Wang Chunyan

Research Assistants

Evelyn Paul

3.

Funding:

Research Grants

(I) International Grant

- 1. UK-Singapore Partnership Program, S\$ 5000, 2006
- 2. ASEM DUO Fellowship to visit and explore collaboration with Prof. Thomas Bjornholm's group at University of Copenhagen, Denmark, ASEM DUO Fellowship program, Republic of Korea, £ 18,000, 2003 2005.

(II) External agencies in Singapore

- 1. Diagnosis of lung cancer from exhaled breath with silicon biophotonic device, BMRC SERC Diagnostics Joint Grant Call, 2012, S\$ 326,00, Feb. 2012 Jan 2014.
- 2. Development of Methods for Detection and Removal of Nanomaterials from Water Using Multifunctional Polymers, S\$ S\$ 3,395,095.00, EWT/PUB/NUS Singapore, 2011 2014., PI
- 3. Graphene related materials and devices, Competitive Research Proposal (CRP), National Research foundation, 8.5m, Co-PI, 2008 2013, Collaborator
- 4. Multifunctional Nanostructured Nanoparticle-conjugated Polymer Assemblies Prepared via Layer-by-Layer and Surface Initiated Polymerization (SIP) Approaches in Ultrathin Films, S\$ 560,840, SERC-NSF program, Principal Investigator.
- 5. Novel cyclic Dinucleotide 2nd Messenger Signalling Pathways and Their Roles in Biofilm Formation & Virulance of Pseudomonas aeruginosa, S\$ 333,200, BMRC (06/1/21/16/432), 04/06 03/08, Collaborator
- 6. Mechanism –based combination telomerase inhibition in human tumor cells; implication for cancer cell therapy, S\$ 623,024, AcRF (R-185-000-153-112), 06/07 05/10, Collaborator
- 7. Molecular and Materials Engineering Approaches to Organic and Polymer Electronic Devices, S\$ 2,303,967, SERC –ASTAR, Principal Investigator.
- 8. Biomimetic synthesis of bio(nano)materials using proteins extracted from the skeletal tissues of asteroid as model system, \$\$ 869,840, 2004 2007 (SERC ASTAR); Principal Investigator.
- 9. Investigation of the interaction between surface modified nanoparticles and various cell lines in *in vitro* environment, S\$ 20,000, 2005 2005 (Office of Life Science, NUS); Principal Investigator.
- 10. Synthesis and characterization of novel compounds for molecular electronic devices, S\$ 50,000, 2004 2005 (ASTAR SERC, completed); Principal Investigator.
- 11. Reaction engineering with polymeric MEMs technology, S\$ 1,562,790, R-143-000-176-305 SERC/022/107/0005, 2002 2006 (SERC ASTAR); Co-principal Investigator
- 12. Polymeric MEMs, S\$ 866,000, 1999 2002 (SERC ASTAR, completed); Collaborator
- 13. Pharmachem, ~S\$ 2.3 million, 2000 2003 (ASTAR through CPEC, completed); collaborator
- 14. Temasek Professorship Program, ~ S\$ 1.9 million, 2001 2003 (ASTAR, completed); Collaborator.

(III) Internal sources

- 1. Application of bionanofibers from renewable resources for removal of nanopollutants and toxic chemicals in water, \$117,000 + 60,000, FRC-MOE, FRC SPORE, 2011 2013., PI
- 2. Catalytic degradation of natural polymers into useful small molecules, S\$50,000, FoS-NUS, 2011 2012
- 3. NUS-JSPS New Scientific Exchange Programme, Travel support.
- 4. New electroactive glass-forming organic materials for (opto)electronic applications, S\$15,000, NUS (Singapore) KUT (Lithuania) EERSS DSTA, 2008., PI
- 5. Nature-Like Self-Regenerating Polymer Coatings for the Protection of Space Devices, S\$15,000, NUS (Singapore) ICS (Khazakhistan), EERss DSTA, 2008, PI
- 6. Ehretianone an antitoxin from Ehreta buxifolli: Synthesis, Characterization and Drug development, Intra Faculty Collaborative Research (IFCR) grant, NUS-ARF, S\$ 133,000, 2005 2008, Collaborator
- 7. Synthesis and characterization of novel conjugated structures through metathesis reaction, International collaboration fund, 2006, S\$5,770 Faculty of Sciences, Singapore.
- 8. Investigation of the interaction between surfaces modified nanoparticles and various cell lines in invitro environment, \$\$20,000, 2005, Office of Life Sciences, NUS, Singapore.

- 9. Synthesis, characterization and self-assembly of biopolymer-conducting polymer conjugates, NUS-UBC collaboration funds, S\$ 157,750, R-143-000-223-112, 2004 2006 (NUS AcRF), Principal Investigator.
- 10. Purification, characterization, and *invitro* mineralization studies of proteins extracted from crayfish shell, S\$ 115,000, R-143-000-228-112, 2004 2006 (NUS AcRF), Principal Investigator.
- 11. Synthesis of bio(nano)materials using interface engineering, MSEI-Initiative, S\$ 100,000, R-143-000-194-112, 2003 2005 (NUS AcRF), Principal Investigator.
- 12. Functional nanostructured supramolecular architectures and hydrogels from amphiphilic compounds, S\$ 112,500, RP-143-000-152-112, 2001 2003 (NUS ARF, completed); Principal Investigator.
- 13. Synthesis and characterization of C60 incorporated functional block copolymers, S\$ 97,600, RP-143-000-076-112, 1999 – 2003, (NUS - AcRF, completed); Principal Investigator.
- 14. Synthesis and fine-tuning the properties of conjugated polymers, S\$ 102,050, RP- 143-000-071-112, 1999- 2002, (NUS AcRF, completed); Principal Investigator.
- 15. Self-assembly directed synthesis of supramolecular materials: A building block approach, S\$ 165,280, R-143-000-057-112, 1998 2001 (NUS AcRF, competed); Principal Investigator.

Invited presentations (1998 – 2013)

International invitations

- 1. Developing nanomaterials for health and environmental applications, 1st IBN international symposium: Nanosystems for biomedical applications, Singapore, January, 10-11, 2013.
- 2. Electron rich hybrid materials for solar cell applications, India-Singapore joint workshop on advanced materials and energy, Kolkata, India, April, 21-24, 2013.
- 3. Biomass Derived Materials and Their Applications, 3rd Molecular Materials Meeting (M3) @ Singapore, 14 16 Jan. 2013, Matrix Building, BIOPOLIS One-North, Singapore.
- 4. Developing Nanomaterials for Health and Environmental Applications, 1st IBN International Symposium on Nanosystems for Biomedical Applications, 10 11 Jan. 2013, Biopolis, Singapore.
- 5. Impact of Material Engineering in Environmental Applications, 2nd International conference on Optoelectronic Materials and Thin films for Advanced Technology (OMTAT 2013). 3 5 Jan. 2013, Kochi, India
- 6. Nanosafety and methods for removal of nanomaterial's from the environment, International symposium on frontiers in chemical sciences, Vidyasagar University, Midnapur, West Bengal, India, March, 21, 2012.
- 7. Design and synthesis of conjugated polymers and hybrid materials, 26th Dec. 2012, Department of Chemistry, University of Massachusetts, Amherst, MA, USA.
- 8. Functional Nanomaterials for Environmental Applications, 3rd MRS China-India-Singapore Trilateral Workshop, IIT Bombay, Nov. 2012
- 9. Functional hybrid materials-synthesis, characterization and applications, The 5th MRS-S conference on advanced materials, Singapore, March, 20-22, 2012.
- Plenary Lecture: Functionalization and Use of Biopolymers for Environmental Applications; 3rd International conference on Natural Polymers, Biopolymers, Biomaterials, their composites, Blends, IPNs, Polyelectrolyte and Gels (ICNP – 2012), 26 – 28 October 2012, MG University, Kotayam, Kerala, India.
- 11. Functional Materials for Environmental Applications, Conference on "Complex Chemical Systems", Dec 3 5, 2012, Indian Institute of Science Education and Research (ISER) Bhopal, India.
- 12. Biomimetic Nanofibers for Environmental Applications, The 6th International Symposium on Macro- and Supramolecular Architectures and Materials (MAM-12): Nano Systems and Applications, 21-25 November 2012, Coimbatore, India.
- 13. Health and environmental impacts of nanomaterials and nanotechnology, Kathmandu Symposia on Advanced Materials (Kasam) 2012, Nepal, India, May, 09-12, 2012 Tutorial: Recent Trends in Materials Science.
- 14. Functional Materials for Water Purification, Kathmandu Symposia on Advanced Materials 2012 (K SAM 2012), May 9-12, 2012, Kathmandu, Nepal
- 15. Nanosafety and Methods for Removal of Nanomateirals from Environment, Dept. of Chemistry, Vidyasagar University, Kolkata, India, 2012.
- 16. Design and synthesis of interesting polymers and hybrid materials, Dept of Chemistry, University of Illionois, Champaign, Urbana, Illinois, August 2012.

- 17. Design and synthesis of conjugated polymers and hybrid materials, 14th International Union of Pure and Applied Chemistry Conference on Polymers and Organic Chemistry (POC 2012), Doha, Qatar, 6-9 Jan 2012.
- 18. Environmental impact of nanotechnology, Molecular materials meeting (M3): International conference on "big ideas in molecular materials", Singapore, January, 10-11, 2011.
- 19. Understanding the interactions of nanomaterial's with biological systems, NUS-Imperial College, symposium on energy, Singapore, September, 5-6, 2011.
- 20. Molecular engineering for functional materials-Synthesis and applications, International Conference on Vistas in Chemistry (ICVC) 2011, Kalpakkam, India, October, 11-13, 2011.
- 21. Molecular engineering of materials-synthesis and applications, International conference on advances in applied chemical sciences and innovative materials, IIT Delhi, New Delhi, India, August, 10-12, 2011.
- 22. Health and environmental impact of nanomaterials, 3rd international conference on frontiers of Nanoscience and technology, Cochin Nano- 2011, Cochin, India, August, 14-17, 2011.
- 23. Multidimensional polymeric architectures and their properties Baltic polymer symposium, Palanga, Lithuania, September 8-11, 2010.
- 24. AFM based nanolithography on polymer films, Baltic polymer symposium, Palanga, Lithuania, September, 8-11, 2010.
- 25. Health impacts of nanomaterials, 4th MRS-S Conference on advanced materials, IMRE, Singapore, March 17-19, 2010.
- 26. Conjugated polymer-nanomaterial hybrids: synthesis, structure and property investigation, International chemical congress of Pacific Basin societies (Pacifichem 2010), Hawaii, USA, December15-20, 2010.
- 27. Synthesis and solid state assembly of novel fused planar aromatics compounds, International chemical congress of Pacific Basin societies (Pacifichem 2010), Hawaii, USA, December15-20, 2010.
- Impact of Nanotechnology in Society and Environment Good, Bad and Ugly, International Symposium on the Social Acceptance of Nanomaterials – International Session, 20th Academic Symposium non Advanced Materials Research Breakthroughs to Ecoinnnovation II, MRS Japan 2010, Yokohama Media & Communiation Center, Tokyo, Japan, 20 – 21 Dec. 2010.
- 29. Nanopatterning of Conjugated Polymer Using Electrochemical Nanolithography, Suresh Valiyaveettil, NUS, Singapore, INTERNATIONAL SYMPOSIUM on NANOTECHNOLOGY-Present and Future Trends"- INSYN 2010, August 25th and 26th, 2010,VIT University, Tamil Nadu, India.
- 30. Biomimetic Approaches to Synthesis of Biomaterials, Suresh Valiyaveettil, 5th SBE International Conference on Bioengineering and Nanotechnology (ICBN 2010), 1- 4 August 2010, Biopolis, Singapore.
- 31. Learning from Biosynthesis of Calcium Carbonate to Make Interesting Functional Composites, Suresh Valiyaveettil, BCUBE, 18 January 2010, Dresden, Germany.
- 32. Impact of nanotechnology in society and environment Good-bad and ugly, 11th Frontier Science Symposium, 13-18 November 2010, Nanjing, China.
- 33. Strategies for Developing Multifunctional Nanomaterials, Suresh Valiyaveettil, The 10th Frontier Science Symposium, National Central University, 17~20 November 2009, Taiwan., Session Chair.
- 34. Potential Health Impact of Nanomaterials, Second International Conference on Frontiers in Nanoscience and Technology, Cochin Nano 2009, Jan, 2009, Chochin, India. Member of International Advisory Board.
- 35. Health Impact of Nanomaterials, Suresh Valiyaveettil, Nanotech India 2009 14th 16th August 2009 (http://www.nanotechindia.in/).
- 36. Role of polymers in the preparation of nanoarchitectures: Nanospheres, rings, honey-comb through molecular engineering, QAFCO-TAMUQ chemistry conference to be held on January 9th 2008, Doha, Qatar (invited)
- H. Li and S. Valiyaveettil, Water soluble multifunctional cross-conjugated poly(p-phenylens): Design, synthesis and characterization, Abstr. 1090, Symp. MS1, 91st Canadian Chemistry Conference and Exhibition (CSC2008), May 24 29, Edmonton, AB, Canada.
- 38. Unraveling the Biosynthesis of Eggshells: What do we know so far? Suresh Valiyaveettil, Inorganic and Physical chemistry department, Indian Institute of Science, Bangalore India, 2008.
- Nanomaterials Characterization, Educational Training Program on Nanoscience & Technology supported by World Bank at National Institute of Technology, Tiruchirapally, Tamil Nadu, India, 24 – 29, February, 2008 India.
- 40. Design, synthesis and characterization of multifunctional nanostructured materials, 2008, International Conference on advanced materials, Feb. 2008.

- 41. M. H. Nurmawati, P. K. Ajikumar, <u>S. Valiyaveettil</u>, Self-assembly assisted synthesis of functional materials, The 8th joint Frontier Science Symposium of NUS, Nanjing U., and National Taiwan U is going to be held in Nanjing, 26-29 October, 2007, Nanjing University, Nanjing, China.
- 42. Multifunctional Supramolecular Materials through self-assembly approach, DST (India) JSPS Japan Asia Academic Seminar on Molecular and Supramolecular Materials with Designed Functions, 24 28 Feb. 2007, Pune, India.
- 43. M. H. Nurmawati, P. K. Ajikumar, <u>S. Valiyaveettil</u> Self-assembly of nanomaterials inside a polymer lattice, 10th International Conference on Advanced Materials (IUMRS-ICAM), Bangalore, India, 8-13 October 2007. http://www.icam2007.com/
- 44. Role of Polymers in the Preparation of Nanoarchitectures: Nanoparticles, nanopatterns through molecular engineering, International Conference on Nanomaterials and its Applications (ICNA 2007), 4 6 Feb. 2007, Dept. of Chemistry, Thiruchirappalli (Trichy), India.
- 45. Synthesis, self-assembly and photophysical properties of amphiphilic conjugated polymers, Photoradchem 2007 (An International Conference on Frontiers of Radiation and Photochemistry), 8-11 Feb. **2007**, Hotel Windsor Castle Kottayam, Kerala, India (http://photoradchem.org/prc2007/).
- Multifunctional materials using self-assembly and molecular engineering approaches (Plenary PL10), MatCon 2007 (International Conference on Materials for the Millenium), Cochin University of Science and Technology, Kerala, India (<u>http://chem.cusat.ac.in/matcon-2007/?MatCon_2007</u>)
- 47. Molecular Engineering approaches for multifunctional smart materials, 2007 Reach Symposium, 7 10 March 2007, Hotel Timber Trail Heights, Parwanoo (HP), India.
- 48. Role of polymers in the preparation of nanoarchitectures: Nanoparticles and nanopatterns through moelcualr engineering, Feb. 2007, IIT Madras, India.
- 49. Transferring know-how from Nature's biomaterials synthesis machinery to materials research, MRS-S Conference on Advanced Materials, 18-20 January **2006** IMRE, Singapore.
- 50. Design, synthesis and properties of multiconjugated oligomers and polymers, International Symposium on Advances in Organic Chemistry (INSOC 2006), Jan. 9 12, 2006, Mahatma Gandhi University, Kottayam, Kerala, India, www.insoc2006.org.
- 51. Symposium on Biomineralization and Bio-Inspired Chemistry, Pacifichem 2005, Hawaii, USA, www.pacifichem.org
- 52. Symposium on Organic Solid State Chemistry: Structure, Synthesis and Reactivity, Pacifichem 2005, Hawaii, USA, <u>www.pacifichem.org</u>.
- Self-assembly of Conducting Polymers and Applications, Singapore MIT workshop, Institute of Soldier Nanotechnology, MIT, Boston, 18th May, 2005.
- 54. Synthesis and Characterization of Functional Nanostructured Materials Using Self -assembly and Molecular Engineering, International Conference on Nanomaterials (Nano-2005), July 13-15, **2005**, Also see highlight at <u>Pharmabiz.com</u>
- 55. Conducting Polymers: A Versatile Tool for the Fabrication of Thin Films and Devices, Optical Probes 2005, January **2005**, Bangalore, India.
- 56. Synthesis and Characterization of Nanostructured Materials and Electrochemical Nanopatterning of Monomer/Polymer Films, December 2004, Department of Inorganic and Physical Chemistry, Indian Institute of Science, Bangalore, India.
- 57. Self-assembling Systems: A Peek into the Molecular Mechanism of Biomaterial Synthesis, June **2004**, Niels Bohr Institute, University of Copenhagen, Denmark.
- 58. Self-assembly Assisted Formation of 1D, 2D and 3D Supramolecular Architectures in the Crystal Lattice, The 16th International Conference on the Chemistry of the Organic Solids State (ICCOSS XVI), **2003**, The New South Wales, Sydney, Australia.
- 59. Synthesis and Characterization of Polymers with Millipede-like Architecture, Sympoium on New Developments in Polymer Synthesis (Organizers: K. Ulrich and K. L. Wooley), POLYMILLENIAL, **2000**, American Chemical Society, Hawaii, USA.
- 60. Self-assembly of Aromatic Acids: How to Control the Dimensions of the Supramolecular Structures in the Crystal Lattice, Symposium on Chemistry of the Organic Solid State: Synthesis, Structure and Reactivity, Pacifichem, **2000**, Hawaii, USA.
- 61. Self-assembly of Molecular and Macromolecular Building blocks, Tsukuba University, Tsukuba, Japan, 14 June **2000**, Host: Prof. Tatsuya Nabeshima, Dr. Kenji Kobayashi.

- 62. Biomineralization: Unlocking the Mystery of Biological Hard Tissue Formation, Nara Institute of Science and Technology, National Institute of Materials and Chemical Research, Tsukuba, Japan, 15 June **2000.** Host: Prof. Toshimi Shimizu.
- 63. Self-assembly of Aromatic Acids, Shinsyu University, Ueda, Japan, 19 June 2000, Host: Prof. Kenji Hanabusa.
- 64. Polymers with Unusual Structures and Morphology, Nagoya University Nagoya, Japan (sponsored by Polymer Society of Japan), 21 June **2000**, Host: Prof. Keigo Aoi
- 65. Self-assembly of Aromatic Acids, Kyoto University, Kyoto, Japan. 22 June **2000**, Host: Prof. S. Kitagawa, Dr. Mitsuru Kondo
- 66. Biomineralization: Unlocking the Mystery of Biological Hard Tissue Formation, Nara Institute of Science and Technology, Nara, Japan, 23 June **2000**. Host: Prof. Katsuhiko Ariga
- 67. Multiphase Self-assembly: A Unique Way to Understand the Intermolecular Interactions, Gordon Research Conference on Organic Structures and Properties, invited lecture, Fukuoka, Japan, 6 11 Sept. **1998**

Bilateral meetings

- 68. Nanotoxicity and methods for removal of nanomateirals from environment, Trilateral Conference on Advances in Nanomaterials" organized by MRS India at IIT Bombay during 19 to 21 November 2012
- 69. Design and Synthesis of Functional Materials, Asian Network for Natural and Unnatural Materials II, Nanyang Technological University (NTU), 3 5 October 2012, Singapore.
- 70. Functional Materials for Personal Care Synthesis and Characterization, Workshop on Engineered Materials for Consumer Care Applications, IMRE, March 2011.
- 71. Understanding the interactions of nanomaterials with biological systems, NUS-Imperial College Symposium on Energy, NUS, 5-6 Sept. 2011.
- 72. Functional Materials for personal care synthesis and charactersiation, Workshop on Engineered Materials for Consumer Care Applications, IMRE, March 2011, Singapore
- 73. Nanomaterials: Synthesis, Application and Environmental Impacts, Singapore Japan Workshop on Advances in Nanomaterials; Applications in Electronics, Energy and Health, IMRE Auditorium, Singapore, April 2010.
- 74. Applications of Nanomateirals in MedTech Industry, MTSC Standards eXchange Seminar, TUV SUD PSB, Nov. 2010, Singapore.
- 75. Nanomaterials The Good, Bad and Ugly, Singapore-India Collaborative and Cooperative Chemistry Symposium 5, 20-22 February 2009, Department of Chemistry, University of Hyderabad, India
- 76. Environmental impact of nanotechnology, Suresh Valiyaveettil, Molecular Materials Meeting (M3) @ Singapore Singapore-Australia Collaborative and Cooperative Chemistry Symposium, 15-17 December 2008, University of Queensland, Australia, Singapore-Australia
- 77. HSA-NUSCHEM Workshop 2007, Exploring synergies and Potential for Collaboration, 10 May 2007, Health Science Authority of Singapore (http://www.chemistry.nus.edu.sg/events/ images/HSA-A3-Poster-Final.jpg).
- 78. Micro- and Nanopatterning of Functional Materials, Scanning Probe Microscopy 2007 Symposium (SingSPM 2007) Institute of Materials Research and Engineering, May 2007, Singapore.
- Nanostructured materials using self-assembly and molecular engineering approaches, Singapore Australia Collaborative and Cooperative Chemistry Symposium, 22-23 November 2006, Faculty of Science, National University of Singapore.
- 80. Singapore-India Collaborative and Cooperative Chemistry Symposium 4, 20-21 February 2006, Faculty of Science, National University of Singapore.
- 81. Development of new strategies in synthesis of multifunctional materials, NUS-University of Warwick Joint Symposium, 16 August 2006, National University of Singapore (<u>http://www.chemistry.nus.edu.sg/events/nuswarwick/index.html</u>).
- Functional molecular and nanoarchitectures synthesis and fabrication, 6th Frontier Science Symposium (jointly organized by Nanjing University, National Central University, National Taiwan University, National University of Singapore), 7 11, Nov. 2005, Faculty of Science, national University of Singapore (http://www.chemistry.nus.edu.sg/events/_files/6thFrontier.pdf);
- 83. Design and Characterization of Nanostructured Materials from Triphenylene Incorporated Molecules, 2nd IMRE-Chemistry Joint Symposium, November 25, **2004**, IMRE Auditorium, Institute of Materials Research and Engineering (IMRE), Singapore (http://www.chemistry.nus.edu.sg/events/past/chem-imre2.html)

- Understanding the Molecular Mechanism of the Biomimetic Synthesis of Complex Materials: Use of Natural Scaffolds with a Top - down Approach, Singapore - UCSB Workshop on Nanoscience and Nanotechnology, April 2004, Santa Barbara, CA, USA.
- 85. Japan Singapore Symposium on Nanoscience and Nanotechnology, Nov. 2004, Science Auditorium LT31, NUS, Singapore. Chair.
- 86. Synthesis of Novel Materials: Lessons Learned from Nature, 2nd Singapore-China Collaborative and Cooperative Chemistry Symposium, April 7-9, **2004**, Soochow University, Soochow, China.
- Self-assembling Systems: A peek into the Molecular Mechanism of Complex Structure Formation, Singapore India Collaborative and Cooperative Chemistry Symposium II, Nov. 7 – 8, 2003, Indian Institute of Technology Bombay, India.
- Self-assembly Assisted Material Synthesis: A Molecular Engineering Perspective, 1st Singapore-India Collaborative and Cooperative Chemistry Symposium (S=In-C=C=C=S), Dec. 2 – 3, 2002, Science Auditorium (LT 31) (Blk S16 Level 3) Faculty of Science, NUS, Singapore.
- Multifunctional Polymers for Nano- and Microsensor Applications, NUS JSPS Joint Symposium on Analytical Sciences, Feb. 2002, Singapore Nanostructured Materials: Use of Self-assembly and Molecular Engineering Approaches, Singapore-The Netherlands Scientific Collaborations in Catalysis Research- Exploring the possibilities, Dec. 2002, University of Eindhoven, The Netherlands.
- 90. Multifunctional Polymers for Nano- and Microsensor Applications, NUS JSPS joint symposium on Analytical Sciences: Challenges of the New Century, Feb 28 March 1, 2002, National University of Singapore, Singapore.

Organization of conferences

International meetings

- ICMAT 2013, Symposium R: Ecological and Health Impact of Nanomaterials and Nanotechnology, June June 2013
- 2. Asian Network for Natural and Unnatural Materials (ANNUM2), 2 5 October 2012, NTU, Singapore (http://www.spms.ntu.edu.sg/cbc/Events/2012/ANNUM2.html)
- 3. 12th Frontier Science Symposium, 14-16th November, 2011, Faculty of Science, NUS, Singapore.
- 4. Workshop by Baden Wuttemberg International and NUS Department of Chemistry, 26 Sept. 2011, Faculty of Science, NUS, Singapore.
- 5. Pacifichem 2010, Dec. 2010, Hawaii, USA, Co-Chair of symposium on Hybrid Polymer Materials
- 6. ICMAT 2009, July 2009, Suntec Convention Centre, Singapore, Member of the Scientific Committee, Chair of the symposium on Carbon Rich Materials and Applications.
- Potential health impacts of nanomaterials, Second International Conference on Frontiers in Nanoscience and Nanotechnology, COCHIN NANO 2009, Jan. 3 – 6, 2009, Cochin, India, Member of the international Advisory Board.
- 4. Organizing committee, Asia nanotech camp, October, 3-15, 2010. Asia Nano Forum (AFM), Singapore.
- 5. Functional Materials, Nov. 2008, Indian Institute of Technology, Madras, India, Member of the Organizing Committee
- 6. Asianano 2008, Nov. 2008Singapore, Member of the Executive Committee, Chair of symposium B on Functional Nanoassembly: Nanoparticles, Quantum Dots, Nanoarchitectures and Self-Assembled Architectures.
- 7. AsCA 20007 Taipei, The 8th Conference of the Asian Crystallographic Association, Chair of session MS-10: Science of Organic Materials.
- ICMAT 2007 (International Conference for Materials and Advanced Technologies), 1-6 July 2007, SunTec International Convention & Exhibition Center, Singapore. Co-Chair of Symposium R: Polymer and Molecular Electronics: Chemistry, Physics & Materials Science (<u>http://mrs.org.sg/conference/icmat2007/symposia/sym-r/</u>).
- 9. American Chemical Society (ACS) 234th National Meeting & Exposition, 19-23 August 2007, Boston, USA, Co-Chair of the symposium on "Conjugated Polymer Materials and Hybrids: Synthesis, Macromolecular Assemblies, and Nanostructures".
- 10. Pacifichem Hawaii 2005, Co-chair of the symposium on "Supramolecular Thin Films and Devices" (http://www.pacifichem.org/c_symposia/c_symp_143.htm)

- 11. Singapore Chemical Conference SICC4, December 2005, Co-chair of the Symposium on Organic and Polymer Materials (<u>http://www.sicc4.com.sg/organise/spcom.htm</u>)
- 12. First Symposium on Polymer and Molecular Electronics and Devices, Singapore, 9-12 January 2005, Member of the organizing committee (<u>http://www.a-star.edu.sg/astar/attach/event/0f237b91700S/Invitation.pdf</u>)
- 13. ICMAT-2005, Symposium on Science and Technology of Hybrid Materials, Member of local organizing committee
- 14. 6th Asia Pacific Chitin and Chitosan Symposium Singapore, May 2004, Member of the organizing committee
- 15. Singapore International Chemical Conference II: Frontiers in Chemical Design and Synthesis, Singapore, 18-20 December 2001, Organizing committee member.
- 16. International Conference on Materials for Advanced Technologies (ICMAT 2003), Symposium D: New Materials by Crystal Engineering Design, July 2003, Co-chair.
- 17. International Conference on Fundamental Sciences: Biological and Chemical Sciences, Singapore, May 2001, Organizing committee member

Bilateral meetings

- 18. First Japan Singapore Symposium on Nanoscience and Nanotechnology @ Science Auditorium, LT31, NUS, November 2004, Singapore Chair, Japan Chair S. Kitagawa, Kyoto University.
- 19. Singapore-India Collaborative and Cooperative Chemistry Symposium (S=In=C=C=C=S) held in Singapore, 2002, Co-chair (<u>www.chemistrry.nus.edu.sg</u>, look under event).

Local

- 1. Chemistry Industry Forum, National University of Singapore, 24 February 2010.
- 2. BMRC sponsored Workshop on Nanotoxicity and Nanomedicine, National University of Singapore, 19th Feb 2010
- OLS-NUSNNI Workshop on Nanobiotechnology and Nanomedicine, Center for Life Sciences, NUS, Sept. 2006, Chair.
- 4. First IMRE-Chemistry Symposium, Singapore, September 2002, Co-chair
- 5. First symposium on Departments of Chemistry-Physics, NUS, Singapore 2004. Co-chair

Teaching (details are available in the full write up)

Department of Chemistry

List of courses offered in the department.

CM 2264: Polymer Chemistry (Applied Chem. Program) CM4226: Current Topics in Organic Chemistry (Chemistry Major) CM 4264: Specialty Polymers (Appl. Chem. Program) CM 3251: Nanochemistry (Chemistry Major and Nanoscience Minor students) CM 3221: Organic Synthesis and Spectroscopy (Chemistry Major) CM 2264: Polymer Chemistry (Applied Chem. Program) CM 5223: Topics in Supramolecular Chemistry (Graduate students) SPS: Independent Study Module (Science Students)

Singapore-MIT Alliance (SMA)

SMA 5421: Nanostructured catalysts in organic synthesis (Singapore - MIT Alliance program)

Laboratory courses

CM2132 Physical Chemistry (up to 40 students) CM2142: Analytical Chemistry (up to 40 students) CM3291: Synthesis and Characterization of Organic Compounds (up to 80 students) CM3292: Synthesis and characterization of Inorganic Compounds (up to 80 students)

Service (details will be available in the full write up)

For Department of Chemistry

- 1. Level Coordinator for 3rd year undergraduate program (deals with all student issues, course, examination, final marks related maters, etc.)
- 2. Current or Former Member of the following departmental committees
 - (i) Faculty search committee
 - (ii) Graduate student admission committee
 - (iii) Space Committee
 - (iv) Safety Committee
 - (v) Enterprise committee
 - (vi) Chair of the Research & Industry Placement Enterprise (RIPE)
 - (vii) Research Committee
 - (viii) Department Coordinator for the UROPS program

For the Faculty of Science

- 1. Member of the research grant review committee (Tier 1)
- 2. Member of the Curriculum Committee for the nanoscience minor
- 2. Member of the Crisis Management Committee
- 3. Mentoring undergraduate students

For University

- 1. Member of Competitive Research Program Proposal evaluation Committee 2007
- 2. Member of URC panel for Academic Research Funding 2007
- 3. Member of
 - 35 PhD thesis committees
 - 25 MSc thesis committee
- 4. Fellow of Singapore MIT Alliance (Course Coordinator, taught a module, helped in the admission process and member of the road shows and acted as)
- 5. Member of NUS-Integrated Graduate School in Science and Engineering
- 6. Focus group Chair in NUS-Nanoscience and Nanotechnology Initiative
- 7. Member of Materials Science and Engineering Initiative
- 8. Research Champion of the NUS-UBC Applied Science Research Center

For Community

- (i) Member of grant review committee for ASTAR (PSF SERC), Singapore.
- (ii) I am a member of Materials Research Society (MRS-Bostoan USA, MRS-Singapore), Singapore National Institute of Chemistry
- (ii) I have been reviewing research papers for various journals, including Journal of the American Chemical Society, Macromolecule, Biomacromolecule, Chemistry of Materials, Langmuir, Organic Letters, Crystal Growth and Design, Angewvante Chemie, Advanced Materials, Small, Advanced Functional Materials, Chemical Communications, Journal of Polymer Physics, Journal of Applied Polymer Science, Polymer International etc.
- (iii) Organized international symposia in Singapore (e.g. ICMAT, SICC series) and abroad (e.g. Pacifichem)

PUBLICATIONS

Journal Articles – International Refereed

- 1. Setyono D., Valiyaveettil S., Functionalized paper-A readily accessible adsorbent for removal of dissolved heavy metal salts and nanoparticles from water, Journal of Hazardous Materials, 2016, 30, 120-128.
- Wang C.; Ito Y., Pradeep B., Valiyaveettil S., Shape Sensitivity on Toxicity of Gold Nanoplates in Breast Cancer Cells, Journal of Nanoscience and Nanotechnology, 2015, 15, 9520-9530.
- 3. Sen C. P.; Shrestha R. G., Shrestha L. K. Ariga K., Valiyaveettil S., Low-Band-Gap BODIPY Conjugated Copolymers for Sensing Volatile Organic Compounds, Chemistry A European Journal, 2015, 21, 17344-17354.
- 4. Goud V. D., Dsouza R., Valiyaveettil S., Synthesis of amphiphilic block copolyamines via click reaction, European Polymer Journal, 2015, 71, 114-125.
- 5. Mallampati R., Tan K. S., Valiyaveettil S., Utilization of corn fibers and luffa peels for extraction of pollutants from water, International Biodeterioration and Biodegradation, 2015, 103, 8 15.
- Kandiah K., Venkatachalam R., Wang C. Y., Valiyaveettil S., Ganesan K., In vitro and preliminary in vivo toxicity screening of high-surface-area TiO2-chondroitin-4-sulfate nanocomposites for bone regeneration application, Colloids and Surfaces B – Biointerfaces, 2015, 128, 347-356.
- 7. Sen C. P., Valiyaveettil S., Synthesis and structure-property investigation of multi-arm oligothiophenes, RSC Advances, 2015, 5, 105435-105445.
- 8. Setyono D., Valiyaveettil S., Use of porous cellulose microcapsules for water treatment, RSC Advances, 2015, 5, 83286-83294.
- 9. Goud V. D., DSouza R., Valiyaveettil S., Solution processable polyamines via click chemistry for water purification, RSC Advances, 2015, 5, 47647-47658.
- Dsouza R., Valiyaveettil S., Aminoparticles synthesis, characterisation and application in water purification, RSC Advances, 2015, 5, 32862-32871.Mallampati, R., Valiyaveettil, S. Co-precipitation with calcium carbonate - a fast and nontoxic method for removal of nanopollutants from water? RSC Advances, 2015, 5, 11023-11028.
- 11. Barik, S.; Valiyaveettil, S. Synthesis and Self-Assembly of Polyhydroxylated and Electropolymerizable Block Copolymers, Journal of Polymer Science Part A Polymer Chemistry, 2014, 52, 2217-2227.
- 12. Qureshi, Z. S.; DSouza, R.; Mallampati, R.; Valiyaveettil, S. Synthesis of Amine-Functionalized Block Copolymers for Nanopollutant Removal from Water, Journal of applied Polymer Science 2014, 131, 40943.
- 13. Mallampati, R.; Valiyaveettil, S.; Eggshell Membrane-Supported Recyclable Catalytic Noble Metal Nanoparticles for Organic Reactions, ACS SUSTAINABLE CHEMISTRY & ENGINEERING, 2014, 2, 855-859.
- Dhandayuthapani, B.; Mallampati, R.; Sriramulu, D., Dsouza, R. F.; Valiyaveettil, S.; PVA/Gluten Hybrid Nanofibers for Removal of Nanoparticles from Water, ACS SUSTAINABLE CHEMISTRY & ENGINEERING, 2014, 2, 1014-1021.
- 15. Kavitha, K., Chunyan, W., Navaneethan, D., Rajendran, V., Valiyaveettil, S. Vinoth, A., In vitro gene expression and preliminary in vivo studies of temperature-dependent titania-graphene nanocomposites for bone replacement applications, RSC Advances, 2014, 4, 43951-43961.

- Setyono, D., Valiyaveettil, S. Multi-metal oxide incorporated microcapsules for efficient As(III) and As(V) removal from water, RSC Advances, 2014, 4, 53365-53373.
- 17. Prabhu, M., Suriyaprabha, R., Rajendran, V., Kulandaivelu, P., Valiyaveettil, S. In vivo cytotoxicity of MgO-doped nanobioactive glass particles and their anticorrosive coating on Ti-6Al-4V and SS304 implants for high load-bearing applications, RSC Advances 2014, 4, 43630-43640.
- 18. Vanga, D. G., Santra, M., Keerthi, A., Valiyaveettil, S., Synthesis and photophysical properties of pyrene-based green fluorescent dyes: butterfly-shaped architectures, Org. & Biomol. Chem., 2014, 12, 7914-7918
- 19. Keerthi, A.; Sriramulu, D.; Liu, Y.; Timothy, C. T. Y.; Wang, Q.; Architectural influence of carbazole push-pull-pull dyes on dye sensitized solar cells, DYES AND PIGMENTS, 2013, 99, 787-797.
- Mallampati, R; Valiyaveettil, S, Apple Peels-A Versatile Biomass for Water Purification?; ACS APPLIED MATERIALS & INTERFACES, 2013, 5, 4443-4449.
- Mahanta, N.; Teow, Y.; Valiyaveettil, S.; Viscoelastic hydrogels from poly(vinyl alcohol)-Fe(III) complex, Biomat. Sci., 2013, 1, 519-527.
- 22. Wang C. Y., Valiyaveettil S. Correlation of biocapping agents with cytotoxic effects of silver nanoparticles on human tumor cells, RSC ADVANCES, 2013, 14329-14338.
- Mamidala, V., Nalla, V., Maiti, P. S., Valiyaveettil, S., Ji, W., Charge transfer assisted nonlinear optical and photoconductive properties of CdS-AgInS2 nanocrystals grown in semiconducting polymers, JOURNAL OF APPLIED PHYSICS, 2013, 113, Article Number: 123107 DOI: 10.1063/1.4798383 Published: MAR 28 2013
- 24. Mallampati, R., Valiyaveettil, S., Biomimetic metal oxides for the extraction of nanoparticles from water, NANOSCALE, 2013, 5, 3395-3399.
- 25. Mahanta, N., Valiyaveettil, S., Functionalized poly(vinyl alcohol) based nanofibers for the removal of arsenic from water, RSC ADVANCES, 2013, 3, 2776-2783.
- Thangavelu K., Pan C. Q., Karlberg T., Balaji G., Uttamchandani M., Valiyaveettil S., Schüler H., Low B. C., Sivaraman J., Structural basis for the allosteric inhibitory mechanism of human kidney-type glutaminase (KGA) and its regulation by Raf-Mek-Erk signaling in cancer cell metabolism, PNAS, 2012, 109 (20) 7705-7710.
- 27. Keerthi A., Liu Y., Wang Q., Valiyaveettil S., Synthesis of Perylene Dyes with Multiple Triphenylamine Substituents, Chemistry-Eur. J., 2012, 18, 11669-11676.
- Mallampati R., Valiyaveettil S., Application of Tomato Peel as an Efficient Adsorbent for Water Purification Alternative Biotechnology?, RSC Adv., 2012, 2 (26), 9914 – 9920.
- 29. Mahanta N., Teow Y., Valiyaveettil, S. Fabrication and Characterization of Hybrid Nanofibers from Poly(Vinyl Alcohol), Milk Protein and Metal Carbonates, J. Nanosci and Nanotech., 2012, 12, 6156-616.
- 30. Keerthi A.; Valiyaveettil S. Regioisomers of Perylenediimide: Synthesis, Photophysical, and Electrochemical Properties, J. Phys. Chem. B, 2012, 116, 4603-4614.
- Aitchison, T. J.; Ginic-Markovic, M.; Clarke, S.; Valiyaveettil, S.; Polystyrene-block-poly(methyl methacrylate): Initiation Issues with Block Copolymer Formation Using ARGET ATRP, Macromol. Chem. Phys. 2012, 213, 79 – 86.
- 32. Mallampati, R., Valiyaveettil, S. Simple and Efficient Biomimetic Synthesis of Mn3O4 Hierarchical Structures and Their Application in Water Treatment, J. Nanosci. Nanotech. 2012, 12, 618 622.

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- Mahanta N., Leong W. Y., Valiyaveettil S., Isolation and Characterization of Cellulose-Based Nanofibers for Nanoparticle Extraction from Aqueous Environment, J. Mater. Chem., 2012, 22 (5), 1985 – 1993.
- 35. Vadukumpully S., Basheer C., Jeng C. S., Valiyaveettil S. Carbon nanofibers extracted from soot as a sorbent for the determination of aromatic amines from wastewater effluent samples, J. Chrom. A. 2011, 1218, 3581 3587.
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- Aitchison, T. J., Ginic-Markoyic, M., Saunders, M., Fredericks, P., Valiyaveettil, S., Matisons, J. G., Simon, G. P. Polymer Brushes on Multiwalled Carbon Nanotubes by Activators Regenerated by Electron Transfer for Atom Transfer Radical Polymerization, J. Poly. Sci. A – Polym. Chem., 2011, 49, 4283-4291.
- 38. Asharani, P. V., Yi, L. W., Gong, Z. Y., Valiyaveettil, S. Comparison of the toxicity of silver, gold and platinum nanoparticles in developing zebrafish embryos, Nanotoxicology, 2011, 5, 43-54.
- Basheer C., Balaji G., Chua S. H., Valiyaveettil S., Lee H. K., Novel on-site sample preparation approach with a portable agitator using functional polymer-coated multi-fibers for the microextraction of organophosphorus pesticides in seawater, J. Chrom. A., 2011, 1218, 654-661.
- 40. Balaji G., Kale T. S., Keerthi A., Della Pelle A. M., Thayumanavan S., Valiyaveettil S., Low Band Gap Thiophene-Perylene Diimide Systems with Tunable Charge Transport Properties, Org. Lett., 2011, 13, 18 – 21.
- 41. Teow Y., Asharani P. V., Hande M. P., Valiyaveettil S., Health impact and safety of engineered nanomaterials, Chem. Commun. 2011, 47, 7025-7038.
- 42. Vadukumpully S., Paul J., Mahanta N., Valiyaveettil S., Flexible conductive graphene/poly(vinyl chloride) composite thin films with high mechanical strength and thermal stability, Carbon, 2011, 49, 198 205.
- 43. Vadukumpully S., Gupta J., Zhang Y. P., Xu G. Q., Valiyaveettil S., Functionalization of surfactant wrapped graphene nanosheets with alkylazides for enhanced dispersability, NANOSCALE, 2011, 3, 303-308.
- 44. Teow Y., Valiyaveettil S., Active targeting of cancer cells using folic acid-conjugated platinum nanoparticles, Nanoscale, 2010, 2, 2607-2613.
- 45. Fathima S. J. H., Paul J., Valiyaveettil S., Surface-Structured Gold-Nanotube Mats: Fabrication, Characterization, and Application in Surface-Enhanced Raman Scattering, SMALL, 2010, 6, 2443-2447.
- 46. Gupta J., Vadukumpully S., Valiyaveettil S., Synthesis and property studies of linear and kinked poly(pyreneethynylene)s, POLYMER, 2010, 51, 5078-5086.
- 47. Ito, Yoshikazu, Miyazaki, Akira, Valiyaveettil, Suresh, Enoki, Toshiaki, Magnetic Properties of Fe-Pd Alloy Nanoparticles, JOURNAL OF PHYSICAL CHEMISTRY C., 2010, 114, 11699-11702.
- 48. Balaji G., Ganapathy; S. Valiyaveettil; Synthesis and Properties of Symmetric and Unsymmetric Dibenzothienopyrroles, Org. Lett., 2009, 11, 3358-61.

- 49. Sivalmurugan V, K Kazlauskas, S Jursenas, A Gruodis, J Simokaitiene, J. V. Grazulevicius, S Valiyaveettil; Synthesis and Photophysical Properties of Glass-Forming Bay-Substituted Perylenediimide Derivatives, J. Phys. Chem. B., 2010, 114, 1782-1789.
- 50. AshaRani P. V., Ng Xinyi, Manoor Prakash Hande and Suresh Valiyaveettil.DNA damage and p53 mediated growth arrest in human cells treated with platinum nanoparticles. Nanomedicine, 2010, 5(1). 51-64.
- 51. P. V. AshaRani, Swaminathan Sethu., S.P. Zhong, C.T. Lim, M. Prakash Hande and Suresh Valiyaveettil. Effects of silver, gold and platinum nanoparticles on normal human erythrocytes. Adv. Funct. Mater.2010, 20(8), 1233-42.
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- 54. S. Vadukumpully, J. Paul, S. Valiyaveettil, Cationic surfactant mediated exfoliation of graphite into graphene flakes Carbon, 2009, 47, 3288-3294.
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- 56. G. Balaji, W. L. Shim, M. Parameswaran, S. Valiyaveettil, Thiadiazole Fused Indolo[2,3-a]carbazole Based Oligomers and Polymer, Org. Lett. 2009, 11, 4450-4453
- 57. H. Li, S. Valiyaveettil, Synthesis and characterization of cross-conjugated cruciforms with varied functional groups, Tet. Lett., 2009, 50, 5311 5314.
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- 60. M. H. Nurmawati; P. K. Ajikumar, R. Ravindranath; C. H. Sow, S. Valiyaveettil, Amphiphilic Poly(p-phenylene)-Driven Multiscale Assembly of Fullerenes to Nanowhiskers, ACS Nano, 2008, 2(7), 1429–1436.
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- 63. S. Barik, S. Valiyaveettil, Synthesis and self-assembly of copolymers with pendant electroactive units, Macromolecules, 2008, 41, 6376 6386.
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- 69. P. V Asharani, N. G. B. Serina, M. H. Nurmawati, Y. Lianwu, Z. Gong, S. Valiyaveettil, Impact of Multi Walled Carbon Nanotubes (MWCNTs) on Aquatic species, *Journal of Nanoscience and Nanotechnology*, 2008, 8, 1-7.
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