CURRICULUM VITAE

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About

Graduation includes Bachelors in Physics (1986-1989) from SRMK Vidyalaya, Bharathiyar University, Coimbatore,, India and Post Graduate in Physics (19891991) from PSG College of Arts and Science, Bharathiyar University, Coimbatore, India. Later, I started my research carrier in IISc, Bangalore, India and perused my Doctoral research (1993-1999) at Anna University Chennai, India in field of advanced ceramics by sol-gel process. With this strong academic background, I had vast experience in the lectureship over the past 27 years handling different courses for Science, Engineering & Technology.

Area of my research include Nanomaterials synthesis, Thin Films, Bio-Medicals/Materials, Advanced ceramics, Solar Energy materials for energy conversion and storage. More keen on Nanostructured materials for energy conversion and storage devices (solar cells, supercapacitors). Apart from my expertise, I also cover many other important areas such as development of Nanomaterials using different approaches like combustion method, SILAR for Sensor applications. All the outcomes of Research are published in International reputed journals and referred International conferences.

I have supervised **Nine Research Scholar** and more than dozens of Master's and undergraduates research projects. I was also serving as Doctoral committee member for several PhD and Master student from different Universities/Institute in India and also active reviewer in various reputed journals including Elsevier, Springer publishers. In concern with research, I had good collaborations in National as well as International countries like Chile, Taiwan, Malaysia and visited NUS and Nanyang Technological University in Singapore

I'm an active member in various Professional bodies like Indian Laser Association (ILA), Materials Research Society of India (MRSI), etc. Besides my teaching & research career, I'm also associating with Office of Controller of Examination in the capacity of Deputy COE & COE (i/c), administrative committee member (University Nominee-Academic Council and Board of Studies) of Anna University and holding several other administrative positions.

Research Areas

- Nanostructured materials
- Advanced Ceramics
- Thin films
- Energy conversion and Storage Devices

List of Publications (last 6 years)

International Journals (Published)

1. Enhanced Electrocatalytic performance of electrodeposited NiCu alloy as an Efficient Bi-functional electrode by prolonged potentiostatic activation, (2023), Guruswamy Brindha, Mahendran Mathankumar, Jeng-Yu Lin, **Senguttuvan Govindan,** Journal of Energy Storage, **(IF = 9.4)**
2. Jyotirmaya Behera· **Senguttuvan Govindan** and M.S.Ramasamy, (2023), "Nitric oxide promotes cell-matrix adhesion of endothelial progenitor cells under hypoxia condition via ITGA5 CpG promoter demethylation", Biochemical and Biophysical Research Communications, Vol. 644, 12 Feb 2023, Pages 162-170.
3. J Behera, MP Kumar, AI Femela, **G Senguttuvan**, MS Ramasamy, (2022) "miRNA-15/IL-10Rα axis promotes Kabasura Kudineer (Indian traditional Siddha formulation) induced immunomodulation by suppressing oxidative stress" Journal of Ethnopharmacology, 116032, https://doi.org/10.1016/j.jep.2022.116032
4. A Kalaivani, Mohanbabu Bharathi, R. Kannan**, G. Senguttuvan**, V. Sivakumar, D. Nithiyaprokash & Donghui Guo, (2022) "Preparation of Bath Temperature Controlled NiFeP films for MEMS Application" Solid State Communications, https://doi.org/10.1016/j.ssc.2022.114715
5. Immanuel Paulraj, **G. Senguttuvan**, Jih-Hsing Chang, K. Mohanraj, N. Senthil Kumar, (2021), "Effect of Cr doping on Mn_3O_4 Thin Films for High Performance Supercapacitors" Journal of Materials Science: Materials in Electronics, ISSN 0957-4522, 32 (3), 3732-3742
6. A. Kalaivani, B. Mohanbabu , R. Kannan, **G. Senguttuvan**, V. Sivakumar, and Donghui Guo, (2021) "Influence of current density on the physical properties of electroplated NiFeP nano thin films for MEMS applications" J Mater Sci: Mater Electron (2021) 32:13610–13618 https://doi.org/10.1007/s10854-021-05939-x
7. P Immanuel, **G Senguttuvan**, K Mohanraj, (2020), "Enhanced Activity of Chemically Synthesized Nanorod Mn_3O_4 Thin Films for High Performance Supercapacitors", Int. J. Thin. Film. Sci. Tec, Volume 9, Issue 1, Pages 57-67.
8. Nagarajan, P. Sampathkumar, A. Arulraj, **G. Senguttuvan** & K. Kumaraguru, (2020) "Solar assisted reduced graphene oxide as adsorbent for carbon dioxide and its kinetic studies", Physica E: Low-dimensional systems and Nanostructures, vol. 116, id. 113739. http://doi.org/10.1016/j.physe.2019.113739
9. A Sales Amalraj, S Christina Joycee, & **G Senguttuvan** (2019), "Effect of concentration on growth and characterization of chemically deposited ZnO nanostructured thin films", Materials Research Innovations, vol. 23, pp. 397-401. https://doi.org/10.1080/14328917.2018.1498209.
10. M Vanmathi, M Senthil Kumar, M Mohamed Ismail, & **G Senguttuvan** (2019) "Optimization of process parameters for al-doping back ground on CO gas sensing characteristics of magnetron-sputtered TiO2 sensors", Materials Research Express, vol. 6, id. 106423. https://doi.org/10.1088/2053-1591/ab3a02.
11. Chi Yen Huang, Pravinraj Selvaraj, **Govindan Senguttuvan**, & Che Ju Hsu (2019) "Electro-optical and dielectric properties of TiO2 nanoparticles in nematic liquid crystals with high dielectric anisotropy", Journal of Molecular Liquids, vol. 286, pp. 110902. https://doi.org/10.1016/j.molliq.2019.110902.
12. A. Arulraj, B. Subramanian, M. Ramesh & **G Senguttuvan** (2019) "Effect of active sites in pulsed laser deposited bimetallic $NiMoS_2$ thin films for solar energy conversion", Materials Letters, vol. 241, pp. 132-135. https://doi.org/10.1016/j.matlet.2019.01.068.
13. AP Dharani, A Sales Amalraj, S Christina Joycee, V Sivakumar, & **G Senguttuvan** (2019) "Influence of Seed Layer on Surface Morphology of ZnO Thin Films Grown by Silar

Method", International Journal of Nanoscience, (in press) https://doi.org/10.1142/S0219581X19500054.

14. A. Arulraj, **G. Senguttuvan**, S. Veeramani, V. Sivakumar, & B. Subramanian (2019) "Photovoltaic performance of natural metal free photo-sensitizer for TiO2 based dye-sensitized solar cells", Optik, vol. 181, pp. 691-626. https://doi.org/10.1016/j.ijleo.2018.12.104.
15. A. Arulraj, M. Ramesh, B. Subramanian, & **G. Senguttuvan** (2018) "In-situ temperature and thickness control grown 2D-MoS2 via pulsed laser ablation for photovoltaic devices", vol. 174, pp. 286-295. https://doi.org/10.1016/j.solener.2018.08.056.
16. A Arulraj, S Bhuvaneshwari, **G Senguttuvan**, & M Ramesh (2018) "Solution processed inverted organic bulk heterojunction solar cells under ambient air-atmosphere", Journal of Inorganic and Organometallic polymers and materials, vol. 28, pp. 1029-1036. https://doi.org/10.1007/s10904-017-0762-y.
17. A Kalaivani, **G Senguttuvan**, & R Kannan (2018) "Structural, mechanical and magnetic study on galvanostatic electroplated nanocrystalline NiFeP thin films", Materials Research Express, vol. 5, id. 036404. https://doi.org/10.1088/2053-1591/aab37a.
18. M Senthil Kumar, M Vanmathi, **G Senguttuvan**, RV Mangalaraja, & G Sakthivel (2018) "Fly Ash Constituent-Silica and Alumina Role in the Synthesis and Characterization of Cordierite Based Ceramics", Silicon, vol. 11, pp. 2599-2611. https://doi:10.1007/s12633-018-0049-0.

Book Chapter:

1. A. Arulraj, Mehana Usmaniya, V. Sivakumar, **G. Senguttuvan** & M. Khalid (2020) "Chalcogenides Nanocrystals and its Applications" Ch-04, Perspective in Future Development of Nanomaterials, Springer Publishers.
2. A. Arulraj, M. Ramesh, & **G. Senguttuvan**, (2019) "Chalchogenides as counter electrodes", Ch- 07, New generation counter electrode materials for high performance dye-sensitized solar cells, Wiley Publishers.
3. Book in Engineering Physics- Dr. S. M. Moses Kennedy, E. Theboral Sugi, **Dr. G. Senguttuvan**, in S.P.R. Publications, Old No. 21 New No.8, 5th street, Pudur, Ashok Nagar, Chennai- 600083.

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