

VIRUDHUNAGAR HINDU NADARS' SENTHIKUMARA NADAR COLLEGE
(AUTONOMOUS)
VIRUDHUNAGAR-626 001
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General Information

Photo :



Name : **Dr. V. MUTHURAJ, M.Sc., M.Phil., Ph.D.,**
Designation : **ASSISTANT PROFESSOR OF CHEMISTRY**
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Mobile : +91 94444 27485 & 9444427485
Experience in Teaching : **15 Years**
Experience in Research : **20 Years**
Education : **M.Sc., M. Phil., Ph.D.,**
Area of specialization : Inorganic and material Chemistry (Photocatalysis)

Courses Attended

No.	Title	Place	Period
1.	UGC., Sponsored Refresher Course in "Chemistry"	Academic Staff College, Bharathiyar University, Coimbatore.	08.05.2012 to 28.05.2012
2.	UGC. Sponsored Orientation Programme in Multidiscipline.	Academic Staff College, Madurai Kamaraj University, Madurai.	05.05.2010 to 01.06.2010.

Project

Title of the project	Name of the funding Agency	Duration	Remarks
Synthesis, characterization and its environmental catalytic activity of cadmium sulfide and cadmium selenide nanoparticles” – a green chemistry approach.	UGC – New Delhi Approved amount Rs. 8,23,000/-	2013-2016	Principal Investigator
Encapsulation of marine terpenoid compounds with palladium and platinum nanoparticules and anti-cancer application	SERB- New Delhi Approved amount Rs : 12, 00,000/-	2014 - 2016	Principal Investigator

Seminars Organized as convenor / co-ordinator : 2

Workshop Organized as convenor / co-ordinator : 1

Seminars, Workshops and Conferences Attended

State level Seminars / Workshops / Conference : 10

National level Seminars / Workshops / Conference : 10

Papers Presented

Paper Presented in National level Seminars / Workshops / Conference: **30**

Paper Presented in International level Seminars / Workshops / Conference: **35**

Research Publications :

Research publications in International Journals : 80

Research publications in National Journals : **7**

Research publications in Edited Books : 3

LIST OF PUBLICATIONS (KEY PUBLICATIONS)

Year 2022

1. Efficient photocatalytic degradation of sulfasalazine and reduction of hexavalent chromium over robust $\text{In}_2\text{S}_3/\text{Nd}_2\text{O}_3$ heterojunction under visible light, M. Murugalakshmi, Karunamoorthy Saravanakumar, Chang Min Park, Velluchamy Muthuraj., **J. Water Process Engineering**, 45 (2022) 102492.
2. Nano Ag@bioactive microspheres from marine sponge *Clathria frondifera*: Fabrication, fortification, characterization, anticancer and antibacterial potential evaluation,

K. Saravanakumar, M. Abinaya, S. Mehnath, V. Shanmuga Priya, M. Jeyaraj, S. Al-Rashed, V. Muthuraj, **Environmental Research** 206 (2022) 112282

<https://doi.org/10.1016/j.envres.2021.112282>.

3. Ultrasonic assisted anchoring of Yb₂O₃ nanorods on In₂S₃ nanoflowers for norfloxacin degradation and Cr(VI) reduction in water: Kinetics and degradation pathway., M. Murugalakshmi, G. Mamba, Sajid Ali Ansari, V. Muthuraj, T.I.T. Nkambule. *Colloids and Surfaces A: Physicochemical and Engineering Aspects* 634 (2022) 127969
4. 2D/2D nitrogen-rich graphitic carbon nitride coupled Bi₂WO₆ S-scheme heterojunction for boosting photodegradation of tetracycline: Influencing factors, intermediates, and insights into the mechanism., K.Saravanakumara, V. Maheskumar, Y.Yea, Y. Yoon, V. Muthuraj, Chang Min Park. *Composites Part B* 234 (2022) 109726
5. Heterogeneous advanced oxidation processes over stoichiometric ABO₃ perovskite nanostructures., G. Mamba, P.J. Mafa, V. Muthuraj, A. Mashayekh-Salehi, S. Royer, T.I.T. Nkambule, S. Rtimi, *Materials Today Nano* 18 (2022) 100184
6. Effect of doping nickel/cobalt ions on the structural and photocatalytic efficiency of magnesium manganese oxide materials for the environmental applications.

A. Banu¹, B. Filip Jones, V. Muthuraj, Kadarkarai Govindan, P. Senthil kumar, M. Sasikumar, M. Thamilselvan, B. Vidhya, S. Rajesh, A. Sakunthala
J Mater Sci: Mater Electron (2022) 33:7134–7153

<https://doi.org/10.1007/s10854-022-07895-6>

Year 2021

7. Simple fabrication and unprecedented visible light response of NiNb₂O₆/RGO heterojunctions for the degradation of emerging pollutants in water,
[B.Filip Jones](#), [G. Mamba](#), [Sajid Ali Ansari](#), [D. Maruthamani](#), [V. Muthuraj](#) and [T. I. Nkambule](#), *New J. Chem*, 2021,45, 22697, <https://doi.org/10.1039/D1NJ04693D>
8. Ultrasound assisted synthesis of silver titanate for the differential pulse voltammetric determination of antibiotic drug metronidazole. V.Vinothkumar, M.Abinaya, Shen-Ming Chen, V. Sethupathi, V.Muthuraj., *Physica E* 134 (2021) 114865

9. Ultrasonic assisted anchoring of Yb_2O_3 nanorods on In_2S_3 nanoflowers for norfloxacin degradation and Cr(VI) reduction in water: Kinetics and degradation pathway,
M. Murugalakshmi, G. Mamba , Sajid Ali Ansari, V. Muthuraj, T.I.T. Nkambule,
Colloids and Surfaces A: 634 (2022) 127969.
<https://doi.org/10.1016/j.colsurfa.2021.127969>.
10. A structural unique 1D- MoO_3 @3D- WO_3 nanohybrid for stable and reusable photocatalytic conversion of hexavalent chromium in aqueous medium
K. Saravanakumar, V. Balakumar, B. Filip Jones, V. Muthuraj.,
Materials Chemistry and Physics 267 (2021) 124688.
<https://doi.org/10.1016/j.matchemphys.2021.124688>
11. Ultrasound assisted synthesis of silver titanate for the differential pulse voltammetric determination of antibiotic drug metronidazole,
V. Vinothkumar, M. Abinaya, S. M.Chen, V. Sethupathi, **V. Muthuraj**,
Physica E 134 (2021) 114865., <https://doi.org/10.1016/j.physe.2021.114865>
12. Insights of pharmacological effects on 2-aminopyrazine / pyrimidine derivative and their palladium complexes: Synthesis and biochemical perspective, S. Bhuvaneshwari M. Umadevi, **V. Muthuraj**, Inorganic Chemistry Communications 134 (2021) 108991.
<https://doi.org/10.1016/j.inoche.2021.108991>
13. Unravelling the visible light-assisted catalytic prowess of an n-n type $\text{In}_2\text{S}_3/\text{CeO}_2$ Z scheme heterojunction towards organic and inorganic water pollution mitigation
M. Murugalakshmi, B. Filip Jones, G. Mamba, D. Maruthamanid, **V. Muthuraj**
New J. Chem., 2021, 45, 4046-4060: [DOI: 10.1039/d0nj04844e](https://doi.org/10.1039/d0nj04844e)
14. Electrochemical recovery of H_2 and nutrients (N, P) from synthetic source separate urine water. Kadarkarai Govindan Sung-Ju Im , **V. Muthuraj** , Am Jang
Chemosphere 269 (2021) 129361. <https://doi.org/10.1016/j.chemosphere.2020.129361>
15. Photocatalytic degradation of levofloxacin by a novel $\text{Sm}_6\text{WO}_{12}/\text{g-C}_3\text{N}_4$ heterojunction: Performance, mechanism and degradation pathways, Laskhmi Prabavathi , Saravanakumar, C. Min Park, **V. Muthuraj**.

Separ. Purifi. Tech., 257 (2021) 117985. <https://doi.org/10.1016/j.seppur.2020.117985>.

Year 2020

16. Polyaniline intercalated with $\text{Ag}_1.2\text{V}_3\text{O}_8$ nanorods based electrochemical sensor.

Saravanakumara, Balakumarc, Kadarkarai Govindand, Am Jangd., Giehyeon Leeb,
Velluchamy Muthuraj.

Journal of Industrial and Engineering Chemistry 91 (2020) 93–101.

17. Bi-functional catalytic performance of silver manganite/polypyrrole nanocomposite for electrocatalytic sensing and photocatalytic degradation.

Abinaya, **Velluchamy Muthuraj**

Colloids and Surfaces A 604 (2020) 125321.

18. Structural, cytotoxicity and molecular docking studies of some quinoline schiff bases and their Pd(II), Mn(II) and Ru(II) complexes. M. Umadevi , **V. Muthuraj** , R. Vanajothi.

Journal of Molecular Structure 1221 (2020) 128778.

19. Construction of novel n-type semiconductor anchor on 2D honey comb like $\text{FeNbO}_4/\text{RGO}$ for visible light drive photocatalytic degradation of Norfloxacin.

Filip Jonesa, Maruthamanib, **Velluchamy Muthuraj.**

Journal of Photochemistry & Photobiology A: Chemistry 400 (2020) 112712.

20. A novel $\text{In}_2\text{S}_3/\text{Gd}_2\text{O}_3$ p-n type visible light-driven heterojunction photocatalyst for dual role of Cr(VI) reduction and oxytetracycline degradation.

M. Murugalakshmi, G. Mamba, **V. Muthuraj.**

Applied Surface Science 527 (2020) 146890

21. Enhanced photoactivity of cerium tungstate-modified graphitic carbon nitride heterojunction photocatalyst for the photodegradation of moxifloxacin.

S. Lakshmi Prabavathi, K. Saravanakumar, T. T. I. Nkambule · **V. Muthuraj**, G. Mamba.

J. Mater. Science: Materials in Electronics. <https://doi.org/10.1007/s10854-020-03692-1>.

22. Reduction of hexavalent chromium and degradation of tetracycline using a novel indium-doped Mn_2O_3 nanorod photocatalyst.

Abinaya, Kadarkarai Govindanb., Kalpanac, Saravanakumara, Laskhmi Prabavathia,
Velluchamy Muthuraj, Am Jang.

Journal of Hazardous Materials 397 (2020) 122885.

23. Iridium nanoparticles anchored WO₃ nanocubes as an efficient photocatalyst for removal of refractory contaminants (crystal violet and methylene blue)

M. Dhanalakshmia, S. Lakshmi Prabavathi, K. Saravanakumar, B. Filip Jones, **V. Muthuraj**

Year 2019

24. Mesoporous Gd₂O₃/NiS₂ microspheres: a novel electrode for energy storage applications.
S. Dhanalakshmi A. Mathi Vathani **V. Muthuraj**, N. Prithivikumar S. Karuthapandian

J. Materials Science: Materials in Electronics (2020) 31:3119–3129 ISSN 0957- 4522,
[DOI 10.1007/s10854-020-02858-1](https://doi.org/10.1007/s10854-020-02858-1)

25. Ultrasonication and hydrothermal assisted synthesis of cloud-like zinc molybdate nanospheres for enhanced detection of flutamide.

R. Rajakumarana, M. Abinayab, Shen-Ming Chena, K. Balamurugana, **V. Muthuraj**

Ultrasonics - Sonochemistry 61 (2020) 104823

[https:// doi.org/10.1016/j.ultsonch.2019.104823](https://doi.org/10.1016/j.ultsonch.2019.104823)

26. Ultrasonic assisted fabrication of silver tungstate encrusted polypyrrole nanocomposite for effective photocatalytic and electrocatalytic applications.

M.Abinaya, Rajakumarana. R., Shen-MingChen, **V.Muthuraj**.

Ultrasonics Sonochemistry Available online 3 December 2019, 104913.

<https://doi.org/10.1016/j.ultsonch.2019.104913>

27. Iridium Doped ZnO Nanocomposites: Synergistic Effect Induced Photocatalytic Degradation of Methylene Blue and Crystal Violet

M.Dhanalakshmi, K.Saravanakumar, S.Lakshmi Prabavathi, **V.Muthuraj**,

Inorganic Chemistry Communications, Available online 21 October 2019, 107601

<https://doi.org/10.1016/j.inoche.2019.107601>

28. State of the art on the photocatalytic applications of graphene based nanostructures: From elimination of hazardous pollutants to disinfection and fuel generation.

- G.Mamba, G.Gangashe, L.Moss, S.Hariganesh, S.Thakurc, S.Vadivel, A.K.Mishra, G.D.Vilakati, **V.Muthuraj**, T.T.I. Nkambule.
Journal of Environmental Chemical Engineering, 2019, 103505,
<https://doi.org/10.1016/j.jece.2019.103505>
29. In Situ Synthesis, Characterization, and Catalytic Performance of Polypyrrole Polymer-Incorporated Ag_2MoO_4 Nanocomposite for Detection and Degradation of Environmental Pollutants and Pharmaceutical Drugs.

M. Abinaya, R. Rajakumaran, Shen-Ming Chen, Raj Karthik, **Velluchamy Muthuraj**.
ACS Appl. Mater. Interfaces 2019, 11, 38321–38335.
DOI: 10.1021/acsami.9b13682
30. Ultrasonication-assisted synthesis of sphere-like strontium cerate nanoparticles (SrCeO_3 NPs) for the selective electrochemical detection of calcium channel antagonists nifedipine. Periyasamy Sundaresana, Raj Karthika, Shen-Ming Chena,, Jeyaraj Vinoth Kumarb,, **Velluchamy Muthuraj**, E.R. Nagarajan

Ultrasonics - Sonochemistry 53 (2019) 44–54
31. Rational construction of novel rose petals-like yttrium molybdate nanosheets: A Janus catalyst for the detection and degradation of cardioselective β -blocker agent acebutolol

T.W Chen, J. Vinoth Kumar, S. M. Chen, B. Mutharani, R. Karthik, E. R. Nagarajan,
V. Muthuraj, Chemical Engineering Journal 359 (2019) 1472-1485
DOI: 10.1016/j.cej.2018.11.029
20. Paddle wheel manganese carboxylate metal organic frame work as a host for hydrophilic molecules

A. Elangovan, M. Umadevi, **V. Muthuraj**
Journal of Molecular Structure 1176 (2019) 591-604
DOI: 10.1016/j.molstruc.2018.09.003
21. Superior visible light driven photocatalytic degradation of fluoroquinolone drug norfloxacin over novel NiWO_4 nanorods anchored on g- C_3N_4 nanosheets

S. Lakshmi Prabavathi, **V. Muthuraj**
Colloids and Surfaces A: Physicochemical and Engineering Aspects 567 (2019) 43-54
DOI: 10.1016/j.colsurfa.2019.01.040

22. Synthesis and Characterization of 1D-MoO₃ Nanorods Using *Abutilon indicum* Extract for the Photoreduction of Hexavalent Chromium

M. Abinaya, K. Saravanakumar, E. Jeyabharathi, **V. Muthuraj**

Journal of Inorganic and Organometallic Polymers and Materials 29 (2019) 101-110

DOI: [10.1007/s10904-018-0970-0](https://doi.org/10.1007/s10904-018-0970-0)

Year 2018

23. One-step sonochemical synthesis of 1D β-stannous tungstate nanorods: An efficient and excellent electrocatalyst for the selective electrochemical detection of antipsychotic drug chlorpromazine

T. Kokulnathan, J. Vinoth Kumar, S. M. Chen, R. Karthik, A. Elangovan, **V. Muthuraj** Ultrasonics Sonochemistry 44 (2018) 231- 239

DOI: [10.1016/j.ultsonch.2018.02.025](https://doi.org/10.1016/j.ultsonch.2018.02.025)

24. 3D Flower-Like Gadolinium Molybdate Catalyst for Efficient Detection and Degradation of Organophosphate Pesticide (Fenitrothion) J. Vinoth Kumar, R. Karthik, Shen-Ming Chen, K. Natarajan, K. Chelladurai, C. C. Yang, **V. Muthuraj**. ACS Applied Materials & Interfaces 10 (2018) 15652-15664.

DOI: [10.1021/acsami.8b00625](https://doi.org/10.1021/acsami.8b00625)

25. Design of Novel 3D Flower-like Neodymium Molybdate; An Efficient and Challenging Catalyst for Sensing and Destroying Pulmonary Toxicity Antibiotic Drug Nitrofurantoin J. Vinoth Kumar, R. Karthik, Shen-Ming Chen, K. H. Chen, S. Sakthinathan,

V. Muthuraj, T.W. Chiu

Chemical Engineering Journal 346 (2018) 11-23. **DOI: [10.1016/j.cej.2018.03.183](https://doi.org/10.1016/j.cej.2018.03.183)**

26. Design of Novel Ytterbium Molybdate Nano-flakes Anchored Carbon Nanofibers: A Challenging Sustainable Catalyst for the Detection and Degradation of Assassination Weapon (Paraoxon-Ethyl)

R. Karthik, J. Vinoth Kumar, S. M. Chen, T. Kokulnathan, H.Y. Yang, **V. Muthuraj**

ACS Sustainable Chemistry & Engineering 6 (2018) 8615-8630

DOI: [10.1021/acssuschemeng.8b00936](https://doi.org/10.1021/acssuschemeng.8b00936)

27. Development of Novel 3D Flower-like Praseodymium Molybdate Decorated Reduced Graphene Oxide: An Efficient and Selective Electrocatalyst for the Detection of Acetylcholinesterase Inhibitor Methyl Parathion

- R. Karthik, J. Vinoth Kumar, Shen-Ming Chen, T. Kokulnathan, T. W. Chen,
S. Sakthinathan, T. W. Chiu, **V. Muthuraj**
Sensors and Actuators B: Chemical 270 (2018) 353-361
DOI: 10.1016/j.snb.2018.05.054
28. Simple Sonochemical synthesis of Novel Grass-like Vanadium Disulphide: A Viable
Non-Enzymatic Electrochemical Sensor for the detection of Hydrogen Peroxide
R. Karthik, J. Vinoth Kumar, S. M. Chen, P. Sundaresan, B. Mutharani, **V. Muthuraj**
Ultrasonics Sonochemistry 48 (2018) 473-481
DOI: 10.1016/j.ultsonch.2018.07.008
29. Fabrication of novel surface plasmon resonance induced visible light driven iridium
decorated SnO₂ nanorods for degradation of organic contaminants
M. Dhanalakshmi, K. Saravanakumar, S. Lakshmi Prabavathi, M. Abinaya, **V.
Muthuraj**. Journal of Alloys and Compounds., 763 (2018) 512-524
DOI: 10.1016/j.jallcom.2018.05.340
30. Photo-degradation of CT-DNA with a series of carbothioamide ruthenium (II) complexes
- Synthesis and structural analysis
V. Muthuraj, M. Umadevi
Journal of Molecular Structure 1157 (2018) 201-209,
DOI: 10.1016/j.molstruc.2017.10.103
31. A novel sulphur decorated 1-D MoO₃ nanorods: Facile synthesis and high performance
for photocatalytic reduction of hexavalent chromium
S. Lakshmi Prabavathi, P. Senthil Kumar, K. Saravanakumar, **V. Muthuraj**,
S. Karuthapandian
Journal of Photochemistry and Photobiology A: Chemistry 356 (2018) 642–651
DOI: 10.1016/j.jphotochem.2018.02.007
32. The design of novel visible light driven Ag/CdO as smart nanocomposite for
photodegradation of different dye contaminants
K. Saravanakumar, **V. Muthuraj**, M. Jeyaraj
Spectro chimica Acta Part A: Molecular and Biomolecular Spectroscopy 188 (2018)
291- 300., **DOI: 10.1016/j.saa.2017.07.022**

33. Highly selective electrochemical detection of antipsychotic drug chlorpromazine in drug and human urine samples based on peas-like strontium molybdate as an electrocatalyst
J. Vinoth Kumar, R. Karthik, Shen-Ming Chen, T. Kokulnathan, S. Sakthinathan,
V. Muthuraj, Te-Wei Chiu, Tse-Wei Chen
Inorganic Chemistry Frontiers 5 (2018) 643-655., [DOI: 10.1039/C7QI00743D](https://doi.org/10.1039/C7QI00743D)

Year -2017

34. Assessment of divergent functional properties of seed-like strontium molybdate for the photocatalysis and electrocatalysis of the postharvest scald inhibitor diphenylamine
R. Karthik, N. Karikalan, S.M. Chen, J. Vinoth Kumar, C. Karuppiah, **V. Muthuraj**
Journal of Catalysis 352 (2017) 606-616 [DOI: 10.1016/j.jcat.2017.06.001](https://doi.org/10.1016/j.jcat.2017.06.001)
35. Construction of Novel Pd/CeO₂/g-C₃N₄ Nanocomposites as Efficient Visible-light Photocatalysts for Hexavalent Chromium Detoxification
K. Saravanakumar, R. Karthik, Shen-Ming Chen, J. Vinoth Kumar, K. Prakash, **V. Muthuraj**, J.
Colloid and Interface Science 504 (2017) 514-526
[DOI: 10.1016/j.jcis.2017.06.003](https://doi.org/10.1016/j.jcis.2017.06.003)
36. A facile graphene oxide based sensor for electrochemical detection of prostate anti-cancer (anti-testosterone) drug flutamide in biological samples
R. Karthik, Mani Govindasamy, Shen-Ming Chen, Tse-Wei Chen, J. Vinothkumar, A. Elangovan, **V. Muthuraj** and Ming-Chin Yu
RSC Advances 7 (2017) 25702-25709 [DOI: 10.1039/C6RA28792A](https://doi.org/10.1039/C6RA28792A)
37. Evaluation of a new electrochemical sensor for selective detection of non-enzymatic hydrogen peroxide based on hierarchical nanostructures of zirconium molybdate
J. Vinoth Kumar, R. Karthik, Shen-Ming Chen, N. Raja, V. Selvam, **V. Muthuraj**
J. Colloid and Interface Science 500 (2017) 44-53 [DOI: 10.1016/j.jcis.2017.03.113](https://doi.org/10.1016/j.jcis.2017.03.113)
38. A Study of Electrocatalytic and Photocatalytic Activity of Cerium Molybdate Nanocubes Decorated Graphene Oxide for the Sensing and Degradation of Antibiotic Drug Chloramphenicol
R. Karthik, J. Vinoth Kumar, S. M. Chen, C. Karuppiah, Y. H. Cheng, **V. Muthuraj**
ACS Applied Materials and Interfaces 9 (2017) 6547-6559
[DOI: 10.1021/acsami.6b14242](https://doi.org/10.1021/acsami.6b14242)

39. Green synthesis of a novel flower-like cerium vanadate microstructure for electrochemical detection of tryptophan food and biological samples
J. Vinoth Kumar, R. Karthik, Shen-Ming Chen, S. Marikkani, A. Elagovan, **V. Muthuraj**
J. Colloid and Interface Science 496 (2017) 78-86 [DOI: 10.1016/j.jcis.2017.02.009](https://doi.org/10.1016/j.jcis.2017.02.009)
40. Molecular characterization, DFT and TD-DFT calculations of morpholinium tetra chloropalladate (II)
M. Umadevi and **V. Muthuraj.**, Journal Molecular Structure., 1138 (2017) 208-214
[DOI: 10.1016/j.molstruc.2017.01.073](https://doi.org/10.1016/j.molstruc.2017.01.073)
41. Light assisted synthesis of hierarchically structured Cu/CdS nanorods with superior photocatalytic activity, stability and photocatalytic mechanism
P.S. Kumar, S. L. Prabavathi, P. Indurani, S. Karuthapandian, **V. Muthuraj**
Separation and Purification Technology 172 (2017) 192–201.
[DOI: 10.1016/j.seppur.2016.08.017](https://doi.org/10.1016/j.seppur.2016.08.017)
42. A highly sensitive and selective electrochemical determination of non-steroidal prostate anti-cancer drug nilutamide based on f-MWCNT
R. Karthik, R. Sasikumar, S.M. Chen, J. Vinoth Kumar, A. Elangovan, **V. Muthuraj**
J. Colloid and Interface Science 487 (2017) 289-296.
[DOI: 10.1016/j.jcis.2016.10.047](https://doi.org/10.1016/j.jcis.2016.10.047)
43. Fabrication of sphere like plasmonic Ag/SnO₂ photocatalyst for the degradation of phenol., K. Saravanakumar, **V. Muthuraj**
Optik - International Journal for Light and Electron Optics 131 (2017) 754-763
[DOI: 10.1016/j.ijleo.2016.11.127](https://doi.org/10.1016/j.ijleo.2016.11.127)

List of Book Edited

1. Carbon Nanomaterials for Agri-food and Environmental Applications: Graphene quantum dot-based nanostructures for water treatment, *Elsevier publications*, (2020) ISBN: 978-0-12-819786-8., Gcina Mamba, Lerato Moss, Gumani Gangashe, Sourbh Thakur, **Velluchamy Muthuraj**, Sethumathavan Vadivel, Gcina D. Vilakati, Thabo T.I. Nkambule.,
2. Recent Advances in Chemical Research (RACR-2017), Penquin Printer, ISBN No. 9789381723609, Editors: Dr. R. Boominathan, **Dr. V. Muthuraj**, Dr. S. Karuthapandian, Dr. V. Selvam, Publisher: Virudhunagar Hindu Nadars' SenthikumaraNadar College (Autonomos), Virudhunagar, Tamilnadu.

Recent Advances in Materials for Energy and Environmental Remediation (RAMEER – 2018),
Penquin Printer, ISBN No.978-93-81723-86-9, Editors: Dr. R. Boominathan, Dr. P. Sami, **Dr. V. Muthuraj**, Dr. S. Karuthapandian, Publisher: Virudhunagar Hindu Nadars' SenthikumaraNadar
College (Autonomos), Virudhunagar, Tamilnadu

Research Experience :

Degree	Awarded	Submitted	Guiding
Ph.D	6	1	2
M.Phil	10	--	1

Invited Lectures Delivered

S. No.	Title	Venue
1	Oil and Fat	Thiagarajar College, Madurai.

Resource Person

Board of Studies Member : Hajee Karutha Rowther Howdia College,
Uthamapalayam.