

## CV OF DR. T. SIVAKUMAR

### **Dr. T. SIVAKUMAR**

**Professor,**

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**Residential Address:**

**14/47 Holy Mother flats**

**Officer's colony, Porur, Chennai - 600116**

- 29 years of **Teaching and Research Experience** at Anna University and 2 years as Research Fellow at **FIPPAT**.
- Published more than 100 **research papers** in various journals. Authored 2 **book chapters**, Filed a **Patent**
- Presented the research findings in several national and international conferences.
- **Recipient of Young Scientist award** from Indian Council of Chemists.
- **Recipient of Dupont award** by Indian Thermal Analytical Society.
- **Recipient of UNESCO fellowship** to conduct research at **Tokyo Institute of Technology, Japan** during Oct 2000 to Sep 2001.
- **Recipient of Brainpool award** by **Government of South Korea**.
- **Recipient of Active Researcher Award-2012** by **CTDT, Anna University, Chennai**.
- Biography has been included in **Marqui's Who is Who book**.
- Handling theory and practical classes for UG and PG programmes of the Department since 1989.
- Consultancy and testing services for more than Rs. 10 Lakhs have been done to various institutions and industries.
- Completed several research projects funded by UGC, DST, DRDO, CPRI, MOEF, DARL and generated about **Rupees 2.85 crores + US\$ 37000** to Anna University.

## CURRICULUM VITAE

### I. Personal Data

Name : T. SIVAKUMAR  
Date of Birth & Age : 02-05-1965, 53 Years

### II. Academic Qualification

Year	Name of the Academic degree	Name of the University	Place, Country	Subject	Grade
1982 -85	B.Sc	University Of Madras	Chennai, India	Chemistry	First Class
1985-87	M.Sc	University Of Madras	Chennai, India	Analytical Chemistry	First Class

### III. Doctorate degree

Year	Name of the academic degree	Name of the University	Place, Country	Subject
1991 -96	Ph.D	Anna University	Chennai, India	Chemistry ( Catalysis)

### IV. Post-Doctoral Research:

Carried out research as UNESCO Post-Doctoral Fellow at Tokyo Institute of Technology, Tokyo, Japan from October 2000 to September 2001. I was the only one selected from INDIA out of the 14 selected worldwide.








### IV. Professional Background: Total Experience : 31 years ( 29 years at AU+2 years at FIPPAT)

Period	Position	Nature of Duty	Name and Place
19.10.87 to 1.10.89	Research Fellow/ Scientist	Research	FIPPAT (Fredrick Inst. Of Plant Protection and toxicology), India
4.10.89 to 24.4.2002	Instruments In charge	Technical, teaching and Research	Dept. of Chemical Engineering, Anna University, Chennai, India
24.4.2002 to 01.08.2006	Lecturer	Teaching and Research	Dept. of Chemical Engineering, Anna University, Chennai, India
01.08.06 to 25.06.12	Sr. Asst. Professor	Teaching and Research	Dept. of Chemical Engineering, Anna University, Chennai, India
25.06.12 to 24.06.2015	Associate Professor	Teaching and Research	Dept. of Applied Science & Technology, Anna University, Chennai, India
25.06.2015 to till date	Professor	Teaching and Research	Dept. of Applied Science & Technology, Anna University, Chennai, India







## **Areas of Research:**

- ❖ *Heterogeneous catalysis*
- ❖ *Biofuels*
- ❖ *Visible light driven catalysts*
- ❖ *Photocatalysts for detoxification processes*
- ❖ *Photocatalytic membranes*
- ❖ *Contact membrane reactor*
- ❖ *Carbon Nano materials*
- ❖ *Photocatalytic water splitting*
- ❖ *Graphene research*

## **MEMBERSHIP**

-  Life Member in Indian Institute of Chemical Engineers
-  Member in Indian Thermal Analytical Society
-  Life Member in Indian Society of Analytical Scientists
-  Member in Indian Council of Chemists
-  Member in Indian Science Congress
-  Member in Catalysis society of India
-  Member in Indian Institute of Chemical Engineers.

## **AWARDS RECEIVED**

-  **DUPONT AWARD** was given by Indian Thermal analytical Society (ITAS) during THERMANS International conference held at DMSRDE, Kanpur, during 20 –21<sup>st</sup> Dec 1995.
-  **YOUNG SCIENTIST AWARD** for the year 1998 was given by Indian Council of chemists during 17<sup>th</sup> conference of Indian Council of Chemists held at University of Madras during 26 –28<sup>th</sup> Nov 1998.
-  **UNESCO AWARD:** One among the 14 persons selected worldwide to undergo Advanced Research in Chemistry and Chemical Engg., at Tokyo Institute of Technology, Japan during Oct 2000 to Sep 2001.
-  **Biography** has been included in both **Marqui's Who's Who in the world and Marqui's Who's Who in Science and engineering.**
-  Selected as **BRAINPOOL FELLOW** by South Korean Government to carry out research at Korean Research Institute of Technology, Daejon for the period of one year 2009 and 2010
-  **ACTIVE RESEARCHER AWARD 2012** - Centre for Technology Development and Transfer (CTDT), Anna University, Chennai

## **TRAVEL OR STUDY ABROAD**

Country Visited	Period of Visit	Purpose of Visit
JAPAN	October 2000 to September 2001	<i>One among the 14 candidates selected worldwide to carry out advance research in the area of Chemistry and Chemical Engg in one of the Premier institutes of Japan (Tokyo Institute of Technology, Japan)</i>

## PROJECT DETAILS

S.No	Title of the Project	Funding Agency	Amount (In Lakhs)	Status
1	Intercalated Nano sized noble metal catalyst for selective hydrogenation of Furfural to Furfuryl alcohol for Defense and Space research Application	DRDO	24.94	Completed (2007)
2	Noble metal capped semiconductor nanoparticles in the photocatalytic treatment of textile waste water.	MOEF	10.71	Completed (2007 – 10)
3	Biofuel production by catalytic cracking of jatropha oils over intelligent catalysts	DARL	9.996	Completed (2008 – 10)
4	Identification of the best organic reductants for the synthesis of noble metal nano particle catalysis for the generation of hydrogen fuel by splitting of water	DRDO SSER	4.34	Completed (2009 – 10)
5	Novel route for the production of liquid hydrocarbons fuels from non-edible oils by using composite catalysts	DRDO Project	27.212	Completed (2010 – 13)
6	Development of heterogeneous catalysts for the valorization of glycerol, a biodiesel by-product, into fuels, fuel additives and commodity chemicals	DRDO - LSRB	44.28	Completed (2014 – 16)
7	Hydrogen fuel generation by splitting of water using nano-sized metal doped layered titanates for fuel cell applications	CPRI	30.390	Completed (2015 – 17)
8	<b>Development of fluorine doped graphene based titania photocatalytic membranes for water treatment applications</b>	<b>DST -TDP</b>	<b>64.2948</b>	<b>Ongoing (2017-2020)</b>

**Total: Rs 216.1628/-Lakhs**

### As Co PI

1	Increasing the yield of Cyclohexanone – an Industrially important raw Material by catalytic conversion using Perovskite and Perovskite related oxides	UGC	3.51	Completed
2	Regio Selective alkylation and acylation Reactions of some aromatic compounds using Mesoporous aluminosilicate supported heteropolyacids	DST	9.61	Completed
3	Synthesis of value added products for Defence Research applications via eco-friendly catalytic oxidative process.	DRDO	14.97	Completed
4	Recovery of hydrogen and elemental sulfur from hydrogen sulphide by indirect hydrolysis (Petroleum Inst.Abudhabi)	UAE	US \$ 37000	Ongoing
5	Functionalized Polymer /Ceramic Matrix Hybrid Composite (P/C- MHC) Membranes for Environmental Applications	DST- Indo-Korea	41.07	Ongoing (2018-2021)

**Total: Rs 69.16/-Lakhs + US \$ 37,000**

### Consultancy Projects

S. N	Title	Agency	Period	Amount
1	Reduction of SOx emissions using catalysts/sorbents in cement, coal and carbon black combustion unit	ABSTC	2015 – 16	2,37,244/-

**PH.D STUDENTS:**

GUIDED : 15  
GUIDING : 6

S.No.	Title of the Thesis	Name of the Scholar	Year of Completion
1	Selective Hydrogenation of $\alpha,\beta$ unsaturated aldehydes over nano sized noble metal intercalated clay catalysts.	D. Manikandan	2008
2	Noble metal intercalated / Impregnated clay catalysts for selective hydrogenation of $\alpha, \beta$ unsaturated aldehydes	D. Divakar	2008
3	Synthesis, Characterisation and catalytic activities of nano sized Fe loaded Al-MCM-41 catalysts	M. Esther Leena Preethi	2008
4	Synthesis, characterization of TPA impregnated mesoporous materials and their catalytic activity towards some industrially important reactions	S. Revathi	2008
5	Noble metal (Ag,Au,Pt) deposited Titania for the photocatalytic degradation of textile dyes	A. Valentine Rupa	2009
6	Synthesis And Characterization Of Transition Metal Oxide Functionalized Mesoporous Carbon With Tunable Pore Size For Energy Storage	K. Shanmugha Prasad	2013
7	Enhanced Photocatalytic Activities Of Metal Doped Titania Catalysts In The Degradation Of Some Textile Reactive Azo Dyes	R. Vaidhyanathan	2013
8	Biofuel production from non-edible vegetable oil through catalytic cracking technology using microporous, mesoporous and composite catalysts.	G. Ramya	2014
9	Photo degradation of textile and leather dyes using semiconductor oxide catalysts.	J. Amala Infant Joice	2015
10	Valorization of different biomasses by metal impregnated mesoporous catalysts	R. Ramakrishnan	Thesis submitted 2018

11	Synthesis, characterization and catalytic degradation activity of visible active composite photocatalysts	K. Thamaraiselvi	Thesis submitted 2018
12	Non metals doped photocatalysts supported over graphene: synthesis, characterization and catalytic activity	A. Brindha	Thesis submitted 2018
13	Fabrication of hybride metal-metal oxide nanostructured catalysts for electrochemical application	P. Sahaya murphin kumar	Thesis submitted 2018
14	Catalytic cracking of non-edible vegetable oils to biofuel over nanosized microporous and composite catalysts	R.Sudhakar	Synopsis submitted 2018
15	Catalytic conversion of glycerol into value-added chemicals using heterogeneous solid catalysts	D. Arulselvan	Synopsis Submitted 2018

#### LIST OF CURRENT RESEARCH SCHOLARS

S.No.	Name	Full time/ Part time	Research topic
1	K. Kathiravan	Full time	Synthesis & Characterization of Transition Metal Oxides nano Photocatalysts for Splitting of Water.
2	K. Sakthivel	Full time	Development of Heterogeneous catalyst to convert Lignocellulose to clean fuels.
3	E. Elangovan	Full Time	Nano particle synthesis, characterization and its application in drug delivery.
4	Thanigaivel.V	Full Time	Removal of Organic Pollutants by using Photocatalytic Membranes.
5	Madhumitha.J	Full Time	Detoxification of Organic Pollutants Using Composite photocatalysts
6	Maruthathurai. K	Full Time	Photocatalytic Degradation of Dyes, Agro Chemicals, Pharmaceutical waste and Health care products using Titania based Catalysts

## INSTRUMENTS FACILITIES DEVELOPED

S.No.	Generic Name of Equipment	Model & Make
1	UV – Vis spectrophotometer (2) ( Rs. 4 Lakhs)	AU 1071 & Elico
2	BET Surface area analyzer	Micromeritics Pulse Chemisorb (2701) & Micromeritics pulse desorb.
3	H.P Hydrogenation reactor	Technomic Autoclaves
4	Multi-lamp Photocatalytic Reactor ( Rs.1 .5 Lakhs)	HEBER
5	Gas chromatograph: GC - 9A – 3 units.	Shimadzu, Japan
6	GC - 17A – 1 unit (Rs.13Lakhs)	Shimadzu, Japan
7	UV – DRS spectrophotometer (Rs.9.99Lakhs)	Jasco(V650) UV-Vis/DRS, Japan (2011)
8	Microprocessor based fixed bed reactor assembly (Rs.15Lakhs)	Amar (2013)
9	Multi-lamp Photocatalytic Water Splitting Reactor (Rs.4.5Lakhs)	Lelesil Innovative Systems (2015)
10	Membrane Casting and Testing Equipment ( Rs. 7 Lakhs)	Tech Inc(2018)
11	TOC analyzer ( Rs. 10 Lakhs)	Shimadzu, Japan ( 2018)
12	Contact angle Analyzer ( Rs. 2 Lakhs)	Tech Inc ( 2018)

## PATENTS FILED

Patent Details	Patent status <b>Published/Filed</b>	Patent Number	Date of Filing
Mixed Matrix polymeric membrane catalytic reactor for carbohydrate valorization and separation thereof	FILED	Application No: 201841027725 A	27/07/2018



## LIST OF PUBLICATIONS

**Total no. of Publications -103**

1. Paskalis Sahaya Murphin Kumar, Vinoth Kumar Ponnusamy, Deepthi Koolath Ramakrishnan, Gopalakrishnan kumar, Arivalagan Pugazhendhi, Hideki Abe, **Sivakumar Thiripuranthagan**, Umapada pal and Siva Kumar Krishnan (2018) “Controlled synthesis of Pt nanoparticle supported TiO<sub>2</sub> nanorods as efficient and stable electrocatalyst for oxygen reduction reaction” Journal of Material Chemistry A, DOI: 10.1039/x0xx00000x (**Impact Factor = 9.931**)
2. M. Esther Leena Preethi, A. Umasankari, C.H.Rekha, M. Palanichamy, **T. Sivakumar**, A. Pandurangan (2018), “Selective Oxidation of Cyclohexane to KA Oil Over Ce-Alpo-18 Molecular Sieves” International Journal of Engineering & Technology, 7 (4.5) (2018) 352-354
3. V. Sivasankar, E. Senthilkumar, R. Vivekananth, R. A. Kalaivani and T.Sivakumar, ( 2018) “Electrochemically exfoliated Graphene for Nanosensor Applications” Journal of Nanoscience and nanotechnology ( Accepted)
4. Sudhakar R, **Sivakumar T**,(2018) “Synthesis of nanosized ZSM-5/AlKIT-6 composite catalysts for biofuel production from non-edible Jatropha Curcas oil” Journal of Nanoscience and nanotechnology (Accepted)
5. Amala Infant Joice J, Aishwarya S, **Sivakumar T**,(2018) “Nano structured Ni and Ru impregnated TiO<sub>2</sub> photocatalysts: Synthesis, characterization and photocatalytic degradation of neonicotinoid insecticides, Journal of Nanoscience and nanotechnology (Accepted)
6. E. Elangovan, **T. Sivakumar**, A. Brindha, K. Thamaraiselvi, K. Sakthivel, K. Kathiravan and S. Aishwarya,(2018) “ Visible active N-Doped TiO<sub>2</sub>/WS<sub>2</sub> heterojunction nano rods: synthesis, characterization and photocatalytic activity. Journal of Nanoscience and nanotechnology (Accepted)

7. Sakthivel Kumaravel, **Sivakumar Thiripuranthagan**, Ramakrishnan Radhakrishnan, Elangovan Erusappan , Arulselvan Devarajan<sup>a</sup>, Mani Durai and Arivanandhan Mukannan, (2018) "Liquid phase esterification of levulinic acid into ethyl levulinate over sulphobenzylated nanoporous SBA-15 catalyst" Journal of Nanoscience and nanotechnology (Accepted)
  
8. Ramya R, Santhana Krishnan P, Neelaveni M, Gurulakshmi M, **Sivakumar T**, Shanthi K,(2018) "Enhanced visible light activity of Pr-TiO<sub>2</sub> nanocatalyst in the degradation of dyes: Effect of Pr doping and TiO<sub>2</sub> morphology" Journal of Nanoscience and NanoTechnology (Accepted)
  
9. Paskalis Sahaya Murphin Kumar, **Thiripuranthagan Sivakumar**, Takeshi Fujita, Ramasamy Jayavel and Hideki Abe, (2017) Synthesis of Metastable Au-Fe Alloy Using Ordered Nanoporous Silica as a Hard Template, METALS 8(1), 17 ( **Impact factor 1.984**)
  
10. Thamaraiselvi, S, **Sivakumar, T**, Sahaya Murphin Kumar, P & Sakthivel, K 2018, 'Synthesis, characterization and photodegradation activity of graphitic C<sub>3</sub>N<sub>4</sub>-SrTiO<sub>3</sub> nanocomposites', Journal of Photochemistry and Photobiology A:Chemistry, (DOI No: 10.1016/j.jphotochem.2018.01.027). Volume 356, 1 April 2018, Pages 425–439 (**Impact factor-2.625**)
  
11. Brindha, A, **Sivakumar. T**, Thamaraiselvi, K, Sakthivel, K & Elangovan, E,(2018) 'Facile synthesis, characterization and outstanding photocatalytic activities of NiWO<sub>4</sub>/nitrogen doped reduced graphene oxide nanocomposites', Journal of NanoScience and Nano technology, Accepted. (Annexure I, **Impact Factor: 1.556**)
  
12. Brindha, A, **Sivakumar, T**, Sudhakar, R, Elangovan, E & Kathiravan, K, (2018) 'BiVO<sub>4</sub> /N-rGO nano composites as highly efficient visible active photocatalyst for the degradation of dyes and antibiotics in eco system', EES-S-17-01788, Journal of Ecotoxicology and Environmental Safety, 151, 118–126, (**Impact Factor: 3.743**)
  
13. Brindha, A, **T.Sivakumar, T**, Priyanka, Suresh & Pavitra, S,(2017) 'Novel band gap engineered Bi<sub>5</sub>Nb<sub>3</sub>O<sub>15</sub> / N-rGO composite catalyst for photo degradation of reactive dyes',

14. Thamaraiselvi, K, **Sivakumar, T**, Brindha, A & Elangovan, E 2017, 'Photocatalytic degradation of reactive dyes and optimization studies over titania nanoparticles and metal perovskites', Journal of Nanoscience and Nanotechnology, (Accepted) (Impact factor-1.483)
15. Paskalis Sahaya Murphin Kumar, Sivakumar Thiripuranthagan, Tsubasa Imai, Gopalakrishnan Kumar, Arivalagan Pugazhendhi, Sriram Kumar Vijayan, Rodrigo Esparza, Hideki Abe, and Siva Kumar Krishnan (2017), "Pt nanoparticles supported on Mesoporous CeO<sub>2</sub>Nanostructures obtained through green approach for Efficient Catalytic Performance towards Ethanol Electrooxidation" ACS Sustainable Chem. Eng., 5 (12), 11290-11299 ( **Impact factor 5.951**)
16. Arulselvan Devarajan, **Sivakumar Thiripuranthagan**, Ramakrishnan Radhakrishnan and Sakthivel Kumaravel, (2018) "Solvent free transesterification of glycerol into glycerol carbonate over nano structured CaAl hydrotalcite catalyst" Journal of Nanoscience and Nanotechnology. 18, 4588–4599
17. Radhika N, Steplin Paul Selvin S, Amala Infant Joice J, **Sivakumar T**, Princy Merlin, Sharmila Lydia, (2018) "Fluorescent Biomolecules capped ZnSe Quantum Dots and their photocatalytic Activities" Journal of Nanoscience and Nanotechnology. 18(7),4634-4642
18. R.Ramakrishnan, **T. Sivakumar**, D. Arulselvan, K. Sakthivel, E. Elangovan, K. Kathiravan, (2017) "Oxidative esterification of furfural by Au Nanoparticles supported CMK-3 mesoporous catalysts" Applied Catalysis A, General vol. 545 pp. 33–43 ( **Impact factor 4.354**)
19. Thamaraiselvi Kanagaraj, **Thiripuranthagan Sivakumar**, Sahaya Murphin Kumar Paskalis, Hideki ABE, (2017) "Visible light photocatalytic activities of template free porous graphitic carbon nitride - BiOBr composite catalysts towards the mineralization of reactive dyes" Applied Surface Science . vol. 426 pp. 1030–1045 ( **Impact factor 3.387**)

20. Vaithiyanathan. R, Kathiravan.K, and **Sivakumar.T**, (2018) “Photocatalytic Degradation of Textile Reactive Dyes - A Comparative Study Using Nano Silver Decorated Titania-Silica Composite Photocatalysts” Journal of Nanoscience and Nanotechnology. 18(4),2921-2930
21. Amala Infant Joice Joseph and **Sivakumar Thiripuranthagan**, (2018) “Non-metal doped titania photocatalysts for the degradation of neonicotinoid insecticides under visible irradiation” Journal of Nanoscience and Nanotechnology. 18 (5), 3158–3164
22. Brindha Appavu and **Sivakumar Thiripuranthagan**, (2017) “Visible active N, S co-doped  $\text{TiO}_2$  / graphene photocatalysts for the degradation of hazardous dyes” Journal of Photochemistry and Photobiology A: Chemistry. Vol 340, pp. 146-156.( **Impact factor 2.625**)
23. Thamarai Selvi and **T. Sivakumar**, (2017) “Photocatalytic reduction of carbon dioxide by UV light using bare and copperoxide impregnated nano titania catalysts” Journal of Nano Science and Nanotechnology, Journal of Nanoscience and Nanotechnology, Volume 17, Number 1, pp. 313-322(10)
24. Thamaraiselvi Kanagaraj and **Sivakumar Thiripuranthagan**, (2017) “Photocatalytic activities of novel  $\text{SrTiO}_3$  –  $\text{BiOBr}$  heterojunction catalysts towards the degradation of reactive dyes” Applied Catalysis B: Environmental Volume 207, Pages 218–232 ( **Impact factor 9.446**)
25. Ramakrishnan. R, Kathiravan. K, Sakthivel. K and **Sivakumar. T**, (2016) “Oxidative esterification of furfural over  $\text{Au-Pd/HAP-T}$  and  $\text{Au-Ag/HAP-T}$  bimetallic catalysts supported on mesoporous hydroxyapatite nanorods” RSC Advances, Volume 6, pp. 45907-45922.
26. Brindha Appavu, Kathiravan Kannan, **Sivakumar Thiripuranthagan**, (2016) “Enhanced visible light photocatalytic activities of template free mesoporous nitrogen doped reduced graphene oxide/titania composite catalysts” Journal of Industrial and Engineering Chemistry, Volume 36, pp. 184–193.

27. R. Vaidhyanathan, K. Kathiravan, Amala Infant Joice, Thamarai selvi, and **T. Sivakumar**, (2016) "Photocatalytic degradation of acid orange dye using silver impregnated  $\text{TiO}_2/\text{SiO}_2$  composite catalysts" Journal of Nano Science and Nanotechnology, Volume 16, Number 9, pp. 9980-9986(7).
28. **T. Sivakumar**, Danny Raj, K. Kathiravan, (2015) "Photocatalytic degradation of Congo Red on Silica supported Ag impregnated  $\text{TiO}_2$ ", Journal of Nano Science and Nanotechnology, Vol. 15, pp. 4727-4733.
29. Amala Infant Joice Joseph and **Sivakumar Thiripuranthagan** (2015), "Metal doped titanate photo catalysts for the mineralization of congo red under visible irradiation" RSC Adv., Vol. 5, pp. 9792-9805.
30. G.Ramya, **T.Sivakumar**, Mohommad Arif and Zakwan Ahmed, (2015) "Catalytic cracking using  $\text{H}\beta$  catalyst for the production of green fuel: optimization studies" Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, Vol. 37, pp.758–765
31. G.Ramya, **T. Sivakumar**, Mohammad Arif and Zakwan Ahmed. (2015) "Application of Microporous Catalysts in the Production of Biofuels from Non edible vegetable oils and used Restaurant Oil" Energy Sources, Part A: Recovery, Utilization, and Environmental Effects, Vol. 37, pp. 878–885
32. G.Ramya, R.Sudhakar, K.Kathiravan, **T.Sivakumar**, (2014), "Studies on Properties of Biofuel Produced by Cracking of Jatropha Oil Using AlMCM-41/HZSM-5 Composite Catalysts" Advanced Porous Materials, Volume 2, Number 2, pp. 113-123(11).
33. G.Ramya, R.Sudhakar and **T.Sivakumar**, (2013), "Synthesis, Characterization and Cracking Activities of Microporous, Mesoporous and Composite Catalysts for Biofuel Production" Advanced Porous Materials, Volume 1, Number 4, December 2013, pp. 385-396(12)

34. R.Ramakrishnan, P.Wilson, **T.Sivakumar** and I. Jemina (2013) “A comparative study of hydroxyapatites synthesized using various fuels through aqueous and alcohol mediated combustion routes”, *Ceramic International*, 39(2013)3519-3532.
  
35. Kumaresa P.S. Prasad Dattatray S. Dhawale , Stalin Joseph , Chokkalingam Anand , Mohammad A. Wahab , Ajayan Mano , .I. Sathish , Veerappan V. Balasubramanian , **T. Sivakumar** Ajayan Vinu (2013)” Post-synthetic functionalization of mesoporous carbon electrodes with copper oxide nanoparticles for supercapacitor applications” *Microporous and Mesoporous materials* 172,77-86
  
36. Joseph Amala Infant Joice, **Thiripuranthagan Sivakumar**, Radhakrishnan Ramakrishnan, Ganesan Ramya, Kumaresa Pillai Shanmuga Prasad, Devarajan Arul Selvan (2012) “Visible active metal decorated titania catalysts for the photocatalytic degradation of Amidoblack-10B”*Chemical Engg journal*, 210, 385–397
  
37. G. Ramya, R. Sudhakar, J. Amala Infant Joice, R. Ramakrishnan and **T. Sivakumar**, (2012) “Liquid hydrocarbon fuels from Jatropha oil through catalytic cracking technology using Al-MCM-41/ZSM-5 composite catalysts”, *Applied Catalysis A, General* 433–434 (2012) 170–178.
  
38. J. Amala Infant Joice, G. Ramya, R. Vaithiyanathan, R. Ramakrishnan and **T. Sivakumar** (2012) “Effect of Doping of Transition Metals Over Titania Based Nanocatalysts on the Degradation of Harmful Insecticides” *Asian journal of chemistry*,24(12), 5766-5770
  
39. G.Ramya, R.Vaithiyanathan, J.Amala Infant Joice, R.Sudhakar and **T.Sivakumar** (2012) “Application of core-shell modeled composite catalysts for biofuel production of nonedible vegetable oils” *Asian journal of chemistry*, 24(12), 5683-5686.
  
40. R. Vaidhyathan, G. Ramya, J. Amala Infant Joice and **T. Sivakumar**, (2012) “Enhanced Photocatalytic Activity of TiO<sub>2</sub>/SiO<sub>2</sub> Composite Catalysts for the Degradation of Reactive Orange 16 Under UV and Sunlight Irradiations” *Asian journal of Chemistry*, 24(12), 5673-5676

41. D. Manikandan, R. V. Mangalaraja, S. Anandakumar and **T. Sivakumar**, (2012) "Synthesis of metal intercalated clay catalysts for selective hydrogenation reactions" *Catalysis in Industries*, 1, 11-24
42. R. Ramakrishnan, S. Kalaivani, J. Amala Infant Joice and **T. Sivakumar**, (2012) Photocatalytic activity of multielement doped TiO<sub>2</sub> in the degradation of congo red, *Appl. Surf. Sci.* 2515-2521.
43. K.S. Prasad, D. S. Dhawale, **T.Sivakumar**, S.S. Aldeyab, Javaid SM Zaidi, K. Ariga, A. Vinu, (2011) "Fabrication and textural characterization of CuO nanoparticles encapsulated nanoporous carbon electrodes for supercapacitors", *Science and Technology of Advanced Materials*, 12, 044602(9pp).
44. G.Ramya and **T. Sivakumar** (2011) "Catalytic cracking using nano porous AlMCM-41 for the production of green fuel" *Transactions of Indian Ceramic Society* 70 (3) 149-152 (2011).
45. J.Amala Infant Joice, S.Kalaivani, S.Divya, E.Rajesh Kannan and **T.Sivakumar**, (2011) "Synthesis, Characterization and Catalytic activity of titania based Nanocatalysts for the degradation" *Trans. Ind. Ceram. Soc.*, 70 (3) 109-114 (2011).
46. R.Vaithiyanathan and **T.Sivakumar**, (2011) "Studies on photocatalytic activity of the synthesised TiO<sub>2</sub> and Ag/TiO<sub>2</sub> photocatalysts under UV and sunlight irradiations", *Water Science and Technology*. 63 (3), 377 -384.
47. A. Valentine Rupa, R. Vaithiyanathan and **Sivakumar Thiripuranthagan**, (2011) "Noble metal modified titania catalysts in the degradation of Reactive Black 5 – A Kinetic approach " (2011), *Water Science and Technology* 64(5)1040-1045.
48. G. Ramya and **T. Sivakumar** (2010) "Fixed bed catalytic cracking of non-edible oils using zeolites for the production of biofuel" *Bulletin of Catalysis Society*, 9, 102 -111.
49. J. Amala Infant Joice and **T. Sivakumar** (2010), "Metal ions impregnated titania for the photocatalytic degradation of amido black 10B and acetamiprid" *Bulletin of Catalysis Society*, 9, 122 -137.

50. Muthuraj Esther Leena Preethi, **Thiripuranthagan Sivakumar**, Muthiahpillai Palanichamy. (2010) "Room temperature efficacious synthesis of diphenylmethane over Fe/Al-MCM-41 catalysts" *Catalysis Communications* 11,876-879.
51. Dhanagopal Manikandan, Duraiswami Divakar, Valentine Rupa, Ramalinga Viswanathan Mangalaraja and **Thiripurantagan Sivakumar** (2010),"Nanosized noble metals intercalated clay catalysts for industrial catalytic applications: Selective hydrogenation" *Chinese Journal of Catalysis* 31 (9), 1200-1208.
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## LIST OF CONFERENCE PAPERS (WITHOUT PROCEEDINGS)

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