

## CV OF DR. T. SIVAKUMAR

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

**Professor,**

Department of Applied Science and Technology,

A.C. Tech Campus, Anna University, Chennai - 600025,

Phone: +91-44-2235 9193 (Off.), 09444159636 (Mobile)

E-mail: [tssivakumar@yahoo.com](mailto:tssivakumar@yahoo.com)

[sivakumar@annauniv.edu](mailto:sivakumar@annauniv.edu)



**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 CTD, 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 01.08.2006	Instruments In charge/Lecturer	Technical/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 jatropa 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>
9	<b>“Development of RuO<sub>2</sub> -MnO<sub>2</sub> /N-Dopped Graphene Hybrid nano supercapacitors as energy storage devices for electric vehicles</b>	<b>RUSA 2.0</b>		<b>Ongoing (2020-2022)</b>
<b>Total: Rs 216.1628/-Lakhs</b>				
<b>As Co PI</b>				
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)
<b>Total: Rs 69.16/-Lakhs + US \$ 37,000</b>				
<b>Consultancy Projects</b>				
S. N	Title	Agency	Period	Amount

1	Reduction of SO <sub>x</sub> 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. Vaidhyathan	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
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.
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 -115**

1. Elangovan E, **Sivakumar T**, Ramakrishnan R, Mani D, Sakthivel K, Thanigaivel V and Noel Jacob K, 2021, Fabrication of mesoporous TiO<sub>2</sub>/PVDF photocatalytic membranes for efficient photocatalytic degradation of synthetic dyes Journal of Environmental chemical engineering (**Under review**)
2. Sakthivel, K, Mani, D, Arivanandhan, M, Krishnakumar, B \* and **Sivakumar, T \***, 2021, PTA supported mesoporous Al-SBA-15 as an efficient solid acid catalysts for esterification of valeric acid, Journal of Porous Materials (**Under review**)
3. Sakthivel K, **Sivakumar T**, Elangovan E, Mani D and Thanigaivel V, 2021, 'Ru/TiO<sub>2</sub> nanostructured catalysts: synthesis, characterization and catalytic activity towards hydrogenation of ethyl levulinate ', Journal of Nanoscience and nanotechnology (**Under review**)
4. Sakthivel K, **Sivakumar T**, Elangovan E, Mani D and Thanigaivel V, 2021, 'Ru nanoparticles supported Sn-SBA-15 catalysts for selective hydrogenation of biomass-derived levulinic acid to  $\gamma$ -valerolactone', waste and biomass valorization (**Under review**)
5. Maruthathurai, K, **Sivakumar, T**, Aishwarya, S, 2021. Fabrication of 3D/2D Bi<sub>2</sub>MoO<sub>6</sub>/g-C<sub>3</sub>N<sub>4</sub> heterostructure with enhanced photocatalytic behavior in the degradation of harmful organics. Emergent Materials, pp.1-14.
6. Sakthivel K, Sivakumar, T & Elangovan, E, 2021, 'WO<sub>3</sub>/Al-HZSM-5 catalysts for effective catalytic conversion of biomass-derived levulinic acid to angelica lactones', Emergent Materials, pp. 1-12.
7. Sakthivel K, **Sivakumar, T**, Thanigaivel, V, Elangovan, E, Mathivanan, D, Thamaraiselvi, S & Mani D, 2021, 'Fabrication of mesoporous WO<sub>3</sub>-SBA-15 catalysts and enhanced photocatalytic degradation of harmful dye', Optik, Vol 235, pp.166599, ISSN: 0030-4026. (**Impact factor- 2.187**)
8. Thanigaivel V, **Sivakumar T**, Thamaraiselvi S, Elangovan E and Sakthivel K, Maruthathurai K & Aishwarya S, 2020, "Degradation of harmful organics using visible light driven N-TiO<sub>2</sub>/rGO nanocomposite" Journal of Nanoscience and Nanotechnology, 21(5), pp.3081-3091 (**Impact Factor : 1.35**)

9. Elangovan Erusappan, Guan-Ting Pan, Hsiu-Ying Chung, Siewhui Chong, **Sivakumar Thiripuranthagan**, Thomas Chung-Kuang Yang, and Chao-Ming Huang, 2020 "Hierarchical nickel–cobalt oxide and glucose-based carbon electrodes for asymmetric supercapacitor with high energy density." *Journal of the Taiwan Institute of Chemical Engineers*, 112, pp.330-336. (**Impact factor 4.79**)
10. Maruthathurai, K, **Sivakumar, T**, Aishwarya, S, 2020, "Fabrication of sphere like  $\text{Bi}_2\text{MoO}_6/\text{ZnO}$  composite catalyst with strong photocatalytic behavior for the detoxification of harmful organic dyes" *Optical materials*, 109, p.110218. (**Impact Factor: 2.72**)
11. Mani, D, Mathivanan, D, Chang, H, Sakthivel, K, Elangovan, E, Sivakumar, T, Arivanandhan, M and Jayavel, R, 2020, "A facile synthesis of novel  $\epsilon\text{-Fe}_2\text{O}_3$  grafted 2D h-BN nanostructures for enhanced visible active photocatalytic applications" *New Journal of Chemistry*, 44 (28), pp.12289-12298. (**Impact factor :3.288**)
12. Maruthathurai Kasinathan, Sivakumar Thiripuranthagan, and Aishwarya Sivakumar, 2020 "Fabrication of metal-free 2D/2D g- $\text{C}_3\text{N}_4/\text{rGO}$  composite towards the degradation of harmful organics." *Optik*, 165023. (**Impact Factor: 1.91**)
13. Elangovan E, **Sivakumar T**, Mani D, Sakthivel K, and Thanigaivel V. "Photocatalytic performance of visible active boron nitride supported  $\text{ZnFe}_2\text{O}_4$  ( $\text{ZnFe}_2\text{O}_4/\text{BN}$ ) nanocomposites for the removal of aqueous organic pollutants." *New Journal of Chemistry* 44, no. 19 (2020): 7758-7770 (**Impact factor :3.288**)
14. Maruthathurai K, **Sivakumar T**, and Aishwarya, 2020, "A facile fabrication of Br-modified g- $\text{C}_3\text{N}_4/\text{rGO}$  composite catalyst for enhanced visible photocatalytic activity towards the degradation of harmful dyes." *Materials Research Bulletin*, 110870 (**Impact factor: 4.01**)
15. Sakthivel K, **Sivakumar T**, Mani D, Elangovan E, and Thanigaivel V. "Catalytic transfer hydrogenation of biomass-derived levulinic acid to  $\gamma$ -valerolactone over Sn/Al-SBA-15 catalysts." *New Journal of Chemistry* (2020), 44, pg.no:8209-8222 (**Impact factor: 3.288**)
16. Sakthivel K, **Sivakumar T**, Elangovan E, Mani D, Thanigaivel V, and Mathivanan D. "Catalytic conversion of levulinic acid under noncorrosive conditions using Ru/Zr/Al-SBA-15 catalysts." *Microporous and Mesoporous Materials* (2020) 110298, pg.no: 1387-1811, (**Impact factor: 4.582**)
17. Maruthathurai K, **Sivakumar T**, Aishwarya S, Sudhakar R, Thanigaivel V, Sakthivel K, and Elangovan E. "Fabrication of novel  $\text{Bi}_2\text{MoO}_6/\text{N-rGO}$  catalyst for the efficient photocatalytic degradation of harmful dyes." *Materials Research Bulletin* (2020): 110782. (**Impact factor: 4.05**)

18. Brindha Appavu, **Sivakumar Thiripuranthagan**, Thamaraiselvi Sureshkumar, (2019), “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” *J. Materials Science and Engineering: B*. 2020 Feb 1;252:114472, **(Impact Factor : 3.507)**
19. Ramya Ganesan, **Sivakumar Thiripuranthagan** and Shanthi Subba (2019) Synthesis and Characterization of Core-Shell Modeled AIMCM-48/HZSM-5 Composite Catalyst and Studies on Its Catalytic Activity in Cracking of Pongamia Oil into Bio Liquid Products. *BioEnergy Research* (2019) 12:388–399
20. 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”, *J. Mater. Chem. A*, 2018,6, 23435-23444 **(Impact Factor: 9.931)**
21. 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
22. V. Sivasankar, E. Senthilkumar, R. Vivekananth, R. A. Kalaivani and T.Sivakumar, ( 2018) “Electrochemically exfoliated Graphene for Nanosensor Applications” *Journal of Nanoscience and nanotechnology* 19(11), pp.7097-7104.
23. Sudhakar R, **Sivakumar T**,(2018) “Synthesis of nanosized ZSM-5/AIKIT-6 composite catalysts for biofuel production from non-edible *Jatropha Curcas* oil” *Journal of Nanoscience and nanotechnology* 19, 4228–4236 (2019)
24. Amala Infant Joice J, Aishwarya S, **Sivakumar T**,(2019) “Nano structured Ni and Ru impregnated TiO<sub>2</sub> photocatalysts: Synthesis, characterization and photocatalytic degradation

of neonicotinoid insecticides, *Journal of Nanoscience and nanotechnology* Volume 19, Number 5, May 2019, pp. 2575-2589(15)

25. 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* 19(8), pp.4429-4437.
26. 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* 19(11), pp.6965-6977.
27. 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* 19(7), pp.3971-3981.
28. 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**)
29. 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**)
30. 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, Volume 19, Number 5, May 2019, pp. 2664-2670(7) (Annexure I, **Impact Factor: 1.556**)

31. 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**)
32. 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', MSB-S-17-02114, Materials Science and Engineering: B, Under revision. ( **Impact Factor: 2.552**)
33. Thamaraiselvi, K, **Sivakumar, T**, Brindha, A & Elangovan, E 2019, 'Photocatalytic degradation of reactive dyes and optimization studies over titania nanoparticles and metal perovskites', Journal of Nanoscience and Nanotechnology, 19, 2087–2098 (2019) (**Impact factor-1.483**)
34. 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**)
35. 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
36. 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

- 37.** 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**)
- 38.** 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**)
- 39.** Vaithyanathan. 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
- 40.** 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
- 41.** Brindha Appavu and **Sivakumar Thiripuranthagan**, (2017) “Visible active N, S co-doped TiO<sub>2</sub> / graphene photocatalysts for the degradation of hazardous dyes” Journal of Photochemistry and Photobiology A: Chemistry. Vol 340, pp. 146-156. (**Impact factor 2.625**)
- 42.** 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)
- 43.** Thamaraiselvi Kanagaraj and **Sivakumar Thiripuranthagan**, (2017) “Photocatalytic activities of novel SrTiO<sub>3</sub> – BiOBr heterojunction catalysts towards the degradation of reactive dyes” Applied Catalysis B: Environmental Volume 207, Pages 218–232 (**Impact factor 9.446**)

44. Ramakrishnan. R, Kathiravan. K, Sakthivel. K and **Sivakumar. T**, (2016) “Oxidative esterification of furfural over Au–Pd/HAP-T and Au–Ag/HAP-T bimetallic catalysts supported on mesoporous hydroxyapatite nanorods” RSC Advances, Volume 6, pp. 45907-45922.
45. 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.
46. R. Vaidhyathan, K. Kathiravan, Amala Infant Joice, Thamarai selvi, and **T. Sivakumar**, (2016) “Photocatalytic degradation of acid orange dye using silver impregnated TiO<sub>2</sub>/SiO<sub>2</sub> composite catalysts” Journal of Nano Science and Nanotechnology, Volume 16, Number 9, pp. 9980-9986(7).
47. **T. Sivakumar**, Danny Raj, K. Kathiravan, (2015) “Photocatalytic degradation of Congo Red on Silica supported Ag impregnated TiO<sub>2</sub>”, Journal of Nano Science and Nanotechnology, Vol. 15, pp. 4727-4733.
48. 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.
49. G.Ramya, **T.Sivakumar**, Mohommad Arif and Zakwan Ahmed, (2015) “Catalytic cracking using 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
50. 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

51. 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).
52. 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)
53. 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.
54. 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
55. 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
56. 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.
57. 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



58. G.Ramya, R.Vaithiyathan, 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.
59. R. Vaidhyathan, G. Ramya, J. Amala Infant Joice and **T. Sivakumar**, (2012) "Enhanced Photocatalytic Activity of  $\text{TiO}_2/\text{SiO}_2$  Composite Catalysts for the Degradation of Reactive Orange 16 Under UV and Sunlight Irradiations" Asian journal of Chemistry, 24(12), 5673-5676
60. 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
61. R. Ramakrishnan, S. Kalaivani, J. Amala Infant Joice and **T. Sivakumar**, (2012) Photocatalytic activity of multielement doped  $\text{TiO}_2$  in the degradation of congo red, Appl. Surf. Sci. 2515-2521.
62. 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).
63. 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).
64. 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).
65. R.Vaithiyathan and **T.Sivakumar**, (2011) "Studies on photocatalytic activity of the synthesised  $\text{TiO}_2$  and  $\text{Ag}/\text{TiO}_2$  photocatalysts under UV and sunlight irradiations", Water Science and Technology. 63 (3), 377 -384.

66. 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.
67. 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.
68. 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.
69. 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.
70. Dhanagopal Manikandan, Duraiswami Divakar, Valentine Rupa, Ramalinga Viswanathan Mangalaraja and **Thiripuranthagan Sivakumar** (2010),”Nanosized noble metals intercalated clay catalysts for industrial catalytic applications: Selective hydrogenation” *Chinese Journal of Catalysis* 31 (9), 1200-1208.
71. Valentine Rupa D. Divakar, **T. Sivakumar.**, (2009), Titania and Noble Metals Deposited Titania Catalysts in the Photodegradation of Tartazine. *Catal. Lett* 132:259–267.
72. Divakar D., Manikandan D., Kalidoss G., **Sivakumar T.**, (2008), “Hydrogenation of benzaldehyde over Pd intercalated bentonite catalysts: Kinetic studies’ *Catal. Letters*, 125,277-282., ISSN: 1011-372X/SCI.
73. S. Revathi, M. EstherLeena Preethi, S. Siddharth and **T. Sivakumar.** (2008) “Solvent free selective acylation of veratrole over 12-tungstophosphoric acid immobilised mesoporous silicates” *Catalysis Communications*, 9, 2008, 594 -599, ISSN: 1566-7367.
74. M. Esther Leena Preethi, S. Revathy, **T. Sivakumar**, D. Manikandan, D. Divakar, A. Valentine Rupa and M. Palanichamy, (2008), “Phenol Hydroxylation using Fe/Al-MCM-41 catalysts”, *Catalysis Letters*, 120, (1-2), 56-64, ISSN: 1011-372X/SCI.

75. D.Manikandan, D.Divakar, A. Valentine Rupa, **T.Sivakumar**, (2008), Selective hydrogenation of citral over noble metals intercalated montmorillonite catalysts, *Catalysis Letters*, 123,107-114, ISSN: 1011-372X/SCI.
76. D.Divakar, D.Manikandan, **T.Sivakumar**, (2008), Vapour phase selective hydrogenation of citral over Pd-bentonite: Effect of reduction method, *Journal of Chemical Technology and Biotechnology*, 83, 1472-1478 DOI: 10.1002/jctb.
77. M. Esther Leena Preethi, S. Revathi, **T. Sivakumar**, (2008). Green synthesis of benzylated aromatics using Fe/Al-MCM- 41, *E- Journal of Chemistry*. \_vol. 5, no. 3, pp. 467-472, 2008.
78. D.Divakar, D.Manikandan, **T.Sivakumar**, (2008), Tetra silicic mica - a synthetic support for nanoparticle generation and catalytic applications, *Catalysis Communications* 19(4)2433-2436, ISSN: 1566-7367.
79. S. Revathi, M. Esther Leena Preethi, D. Manikandan, T.Sivakumar (2008) Effect of immobilization of 12-tungstophosphoric acid over AISBA-15 and its selective acetylation towards anisole, *Chinese Journal of Catalysis*, 29(12),1202-1210.
80. D.Manikandan, D.Divakar, A.Valentine Rupa, S.Revathi, M.Esther Leena Preethi, **T.Sivakumar**, (2007) Synthesis of Platinum nanoparticles in montmorillonite and their catalytic behaviour, , *Applied Clay Science*, 37, (1-2), , 193-200. ISSN: 0169-1317/SCI.
81. D. Manikandan, D. Divakar , **T. Sivakumar**\_(2007) Utilization of clay minerals for developing Pt nanoparticles and their catalytic activity in selective hydrogenation of cinnamaldehyde, *Catalysis Communications*, 8, , 1781-1786, ISSN: 1566-7367.
82. Duraiswami Divakar, Dhanagopal Manikandan, Valentine Rupa, Esther Leena Preethi, Revathi Chandrasekar, **Thiripuranthagan Sivakumar**, (2007) Palladium nanoparticles intercalated vermiculite for selective hydrogenation of  $\alpha$ ,  $\beta$ -unsaturated aldehydes, *Journal of Chemical Technology and Biotechnology*, 82, (3), 253-258. ISSN **0268-2575**.
83. Valentine Rupa, D.Manikandan, D.Divakar, S.Revathi, M.Esther Leena Preethi, K.Shanthi, **T.Sivakumar**, (2007), Photocatalytic degradation of Tatzazine dye using TiO<sub>2</sub> Catalyst: Salt effect and Kinetic studies, *Indian Journal of chemical technology*, 14, 71-78.

- 84.** A.Valentine Rupa, D.Manikandan, D.Divakar, **T. Sivakumar** (2007) Effect of deposition of Ag on TiO<sub>2</sub> nano particles in the photodegradation of Reactive Yellow –17 Journal of Hazardous Materials, 147, (3), 906-913, ISSN: 0304-3894/SCI.
- 85.** **Thiripuranthagan Sivakumar**, Thangavelu krithiga , Kannan shanthi , Tohru Mori , Jun Kubo and Yutaka Morikawa,(2004):” Noble metals intercalated / supported mica catalyst-synthesis and characterization” J.Mol.Cat.223, 185-194, ISSN: 1381-1169/SCI .
- 86.** R.Maheswari, N.R.Sasirekha, K.Shanthi, **T.Sivakumar** and S.Narayanan, ‘Selective acylation of 2-methoxy naphthalene over PW/HMCM-41’, 13th International Congress on Catalysis 2004, Paris, France, 4 (2004) 2622
- 87.** Maheswari.R, Narayanan. S, Shanthi. K and **Sivakumar. T**, (2003): ' Meso porous molecular sieves: Part 1: Isopropylation of naphthalene over Al-MCM -41' Appl. Catal. A. General 245 (2), 221-230, ISSN: 0926-860X/ SCI.
- 88.** Maheswari. R, Narayanan. S, Shanthi. K and **Sivakumar. T**, (2003):” Beckmann rearrangement of cyclohexanone oxime to E - caprolactam over phosphotungstic acid/Si MCM -41” Appl. Catal. A. General ,248 ,291-301. ISSN: 0926-860X/SCI.
- 89.** **Sivakumar. T**, Mori. T, J. Kubo. J, Morikawa. Y, (2001) ”Selective hydrogenation of 2-methyl bezaldehyde using Palladium particles generated in situ in surfactant exchanged fluorotetrasilicic mica”. Chem. Lett. 860. ISSN 0366- 7022/SCI.
- 90.** **Sivakumar. T** and Shanthi. K. (2001),” Photocatalytic studies on some textile reactive dyes using TiO<sub>2</sub>” Ind. Journal of Env. Protection, Feb, 101-104.
- 91.** K. Shanthi, N.R. Sasi Reka, R. Maheswari and **Sivakumar,T**(2001) 26-P-14-Hydro denitrogenation activity of NiO-MoO<sub>3</sub> catalysts supported on various mesoporous alumino silicates Studies in Surface Science and Catalysis, Volume 135, 2001, Page 303
- 92.** Annadurai, G. **Sivakumar, T.** and Rajesh babu.S (2000): "Photocatalytic decolourisation of congo red over ZnO powder using Box -Behnken design of Experiments" Bio Process and Bio systems Engineering 23(2), 0167-0170, ISSN 1615-7591

- 93. Sivakumar, T.,** Shanthi, K. and Newton Samuel, T. (2000) " Photo catalysed decomposition of anthraquinone sulphonic acid (sodium salt) using ZnO" Bio Process Engineering. 23(6), 579-583, ISSN 1615-7591.
- 94. Sivakumar. T** and Shanthi. K. (2000) "Kinetic studies on the photodecolourisation of textile dyes (reactive) using ZnO catalyst. Indian Journal of Chemical Technology, 7, 121 – 126, ISSN: 0971 – 457 X.
- 95. Annadurai, G., Sivakumar, T.** and Rajesh Babu, S. (2000)" Degradation of phenol by a mixed culture of pseudomonas putito (NICM 2174) and pseudomonas pictorum (NICM 2074) adsorbed on chitosan, "Indian Journal of Environmental Protection." 181-186.
- 96. Sivakumar, T.,** Shanthi. K., Sankar Guru, S.P., Srividhya, B., Kiruthiga, P. S. And Rangunathan, R. (1999): "Kinetics of photodegradation of Remazol supra red using ZnO as photocatalyst" Asian Journal of Microbiology, Biotechnology and Environmental Sciences".1, (3-4), 167 -170.
- 97. Sivakumar, T.,** Shanthi, K. and Sivasankar, B. (1998):"Kinetics of the catalytic dehydrogenation of cyclohexanol to cyclohexanone in the vapour phase on  $Sr_{0.2}La_{1.8}CuO_{3.9}$  "Hungarian Journal of Industrial Chemistry". 26 (2), 97 –100.
- 98. Sivakumar, T.,** Rameshchandran Nayr, T., Shanthi, K. and Sivasankar, B. (1998): "Kinetic modelling for the dehydrogenation of cyclohexanol on  $Sr_x La_{2-x}CuO_{4-y}$  (x =0 & 0.2) catalyst systems."Indian Journal of Chemical Technology".5, 293 –301.
- 99. Sivakumar, T.,** Shanthi, K. and Sivasankar, B. (1998): Perovskites and Perovskite related oxides - The potential catalysts for solving environmental problems" Ind. Journal of Environmental Protection. 18(7), 481–488.
- 100. Sundarakkannan, B., Kesavamoorthy, R., Adelene Nisha, J., Sridharan, V. And Sivakumar, T.** (1998): "Antiferroelectric to Paraelectric Transition in BaFCl, "Physical Review B, 57 (18) 11632 –11638, ISSN 1098-0121.
- 101. Sivakumar, T.** and Sivasankar, B. (1996): "Vapour phase dehydrogenation of cyclohexanol over cuprates of Lanthanides with Perovskites related structure". Hungarian Journal of Industrial Chemistry 24, 199-203.

- 102.** Hariprasad, J.S., **Sivakumar, T.**, Shanthi, K., Kandasamy, P. and Suresh, P.S.( 1998) ” Photo Decolourisation Of Textile Dyes(Reactive) Using ZnO Catalyst” Proceedings of Recent trends in catalysis, pp 236 -41,1998 Ed. by Murugesan.V et al.
- 103.** Newton Samuel, T., **Sivakumar, T.**, Shanthi, K., Vijay immanuel, R., Pradeep, M. and Patrick, S. (1998)” Photocatalysed Decomposition Of Anthraquinone Sulphonic Acid (Sodium Salt) Using ZnO” Proceedings of Recent trends in catalysis, pp 691 -697, 1998, Edited by Murugesan.V et al.
- 104.** Mohanbabu, B., **Sivakumar., T.**, Shanthi, K., Mothivel Balaiyya and Jayaganesh, V. (1998) “.Photo Catalytic Studies On Some Textile Reactive Dyes Using TiO<sub>2</sub>” Proceedings of Recent trends in catalysis, pp 698 -702, Edited by Murugesan.V et al.
- 105.** Subramanian, S. **Sivakumar, T.**, Shanthi, K., Mohan, V., Senthilkumar, C., Thanigaivelu, M. and Sivasankar, B. (1998) “Vapour Phase Conversion Of Various Alcohols Over La<sub>2</sub>CuO<sub>4</sub> - A Comparative Study, Proceedings of Recent trends in catalysis, pp 414 -420, 1998 Edited by Murugesan.V et al.
- 106.** **Sivakumar, T** Shanthi, K. and Sivasankar, B. (1997)" Kinetic modelling for the Dehydrogenation of cyclohexanol over Sr<sub>x</sub>La<sub>2-x</sub>CuO<sub>4-y</sub>." Proceedings of National Symposium on advances in Chemical Reaction Engineering”. Symposium held at Institute of Technology, BHU, Varanasi during March 5 -7, 97.
- 107.** **Sivakumar, T.** and Sivasankar, B. (1996)"Catalytic decomposition of cyclohexene by metal impregnated Zeolite-Y and its acidity characterisation" Proceedings of National Seminar on Catalysts for synthetic fuels and pollution abatement held at Deptt of Chemistry, Anna University, during Jan 96.
- 108.** **Sivakumar, T** and Sivasankar, B. (1996)"The effect of impregnation and exchange of some transition metal ions on the acidic properties of Zeolite-Y". Proceedings of National Conference on Fundamentals of Crystal Growth" Conference held at Crystal Growth Centre, Anna University, during January 1996.
- 109.** **Sivakumar. T.** and Sivasankar, B. ( 1995) "Acidity characterisation ofcopper exchanged zeolites using Differential Scanning Calorimetry", Proceedings of the 10th National

Symposium on Thermal Analysis THERMANS 95 pp 129-131,1995 held at DMSRDE, Kanpur, during December 20-21, 1995 and won **DUPONT'S BEST PAPER AWARD**.

### **Book Chapters authored**

1. D. Manikandan, R. V. Mangalaraja, S. Anandakumar and **T. Sivakumar**, (2012) “Synthesis of metal intercalated clay catalysts for selective hydrogenation reactions” in the book titled “Catalysis in Industries” edited by VALENTIN N PARMON, published by PLEIADES PUBLISHING LTD, PROF.SOYUZNAYA UL. 90, MOSCOW, 117997 RUSSIA 1, 11-24, ISSN-ISBN No 2070- 0504
2. **T. Sivakumar** and A. Valentine Rupa, (2018) “Detoxification of Carcinogenic Dyes by Noble Metal (Ag, Au, Pt) Impregnated Titania” in the book titled Gold Nanoparticles - Reaching New Heights edited by Prof. Mohammad Muzibur Rahman published by INTECH OPEN registered in England and Wales no. 11086078DOI: <http://dx.doi.org/10.5772/intechopen.80467> ISBN 978-1-78984-957-8

## LIST OF CONFERENCE PAPERS

1. Elangovan E, **Sivakumar T**, Thamaraiselvi S, Sakthivel K, Thanigaivel V, (2020) “Comparison of photocatalytic activities of template free porous graphitic  $C_3N_4$  with BiOBr and BiOI composite catalysts in the degradation of dye and antibiotic” International Conference on Advances in Chemistry with Specific Reference to Catalysis, Sensors, Drug Delivery and Energy Materials (ICACSEM-2020) held on January 9<sup>th</sup> & 10<sup>th</sup> at University of Madras, Chennai-25
2. Maruthathurai K, Sudhakar R, **Sivakumar T**, (2020) “Fabrication of visible active  $gC_3N_4/rGO$  composite for the effective photocatalytic degradation of dyes and antibiotics”, International Conference on Advances in Chemistry with Specific Reference to Catalysis, Sensors, Drug Delivery and Energy Materials (ICACSEM-2020) held on January 9<sup>th</sup> & 10<sup>th</sup> at University of Madras, Chennai-25
3. Sakthivel K, **Sivakumar T**, Elangovan E, Mani, Thanigaivel V, (2020) “Efficient formation of angelica lactones in a vapor-phase conversion of levulinic acid over PTA/ZSM-5 catalyst” International Conference on Advances in Chemistry with Specific Reference to Catalysis, Sensors, Drug Delivery and Energy Materials (ICACSEM-2020) held on January 9<sup>th</sup> & 10<sup>th</sup> at University of Madras, Chennai-25
4. Thamaraiselvi S, **Sivakumar T**, Ravichandran K, (2020) “Comparison of photocatalytic mechanisms of  $gC_3N_4-BiOBr$ ,  $gC_3N_4-SrTiO_3$ ,  $SrTiO_3-BiOBr$  heterojunction photocatalysts in the degradation of dyes” International Conference on Advances in Chemistry with Specific Reference to Catalysis, Sensors, Drug Delivery and Energy Materials (ICACSEM-2020) held on January 9<sup>th</sup> & 10<sup>th</sup> at University of Madras, Chennai-25
5. Thanigaivel V, **Sivakumar T**, Sakthivel K, and Elangovan E, “Synthesis of N-TiO<sub>2</sub>/rGO nanocomposite as highly efficient visible active photocatalysts for the degradation of harmful dye and antibiotic” International Conference on Advances in Chemistry with Specific Reference to Catalysis, Sensors, Drug Delivery and Energy Materials (ICACSEM-2020) held on January 9<sup>th</sup> & 10<sup>th</sup> at University of Madras, Chennai-25
6. **Sivakumar Thiripuranthagan**, Ramakrishnan Radhakrishnan, Noel Jacob Kallekal, Elangovan Erusappan, Thanigaivel Vembuli, Mani Durai, (2018), “Solution combustion synthesis of mesoporous titania spheres, immobilization on PVDF polymeric membrane and photocatalytic degradation of organic dyes” Bengaluru - India Nano international event to be held at Bengaluru between Dec 5<sup>th</sup> and 7<sup>th</sup>, 2018



7. **Sivakumar T**, Thanigaivel V, Aswath Kumar, Hemant Kumar Iyer, Amit Chatterji, Ravichandran J, (2018) "Immobilized fluorine doped graphene based photocatalytic membranes for carcinogenic pollutant removal" Bengaluru - India Nano international event to be held at Bengaluru between Dec 5<sup>th</sup> and 7<sup>th</sup>, 2018
8. Paskalis Sahaya Murphin Kumar, **Thiripuranthagan Sivakumar**, PonnusamyVinoth Kumar, "Nanostructured hybrid metal-metal oxide interface for biosensor application" International conference on emerging health policies and smart medical care (EHPSMC) (2018) held on 29 -30 September 2018 at Kaohsiung Medical University, Taiwan ( **Won Outstanding paper award**)
9. E.Elangovan, **T.Sivakumar** , A.Brindha, K.Sakthivel and K. Kathiravan (2017) "N-doped TiO<sub>2</sub>/WS<sub>2</sub> heterojunction catalysts: synthesis, characterization and photocatalytic activity", 3<sup>rd</sup> International conference on global trends in pure and applied chemical science (ICGTCS-2017) held at SRM university NCR campus, Delhi, Ghaziabad, December 8-9
10. K.Sakthivel, **T.Sivakumar** , E.Elangovan, R.Ramakrishnan, K.Kathiravan and D.Arulselvan (2017) "Esterification of levulinic acid in to methyl levulinate over SO<sub>3</sub>H functionalized SBA-15 catalyst", 3<sup>rd</sup> International conference on global trends in pure and applied chemical science (ICGTCS-2017) held at SRM university NCR campus, Delhi, Ghaziabad, December 8-9
11. Arulselvan, D & **Sivakumar T** 2016, 'Studies on KF incorporated mesoporous Mg-Al and Ca-Al hydrotalcite catalysts for the conversion of biomass derived furfural into value-added chemicals', 3<sup>rd</sup> National conference on New Renaissance in Chemical Research (NCNRCR), SRM University, Chennai.
12. K. Sakthivel, R. Ramakrishnan, K. Kathiravan and **T. Sivakumar** (2016) "Catalytic hydrogenation of furfural over bimetallic Pt-Ru/SBA-15 nano catalysts", National Conference on Emerging Trends in Chemical Sciences (NCETCS 2016) held at Jerusalem college of Engineering, Chennai, January 6.
13. R. Ramakrishnan, K. Sakthivel, K. Kathiravan and **T. Sivakumar** (2016) "Vapour phase esterification of levulinic acid over phosphotungstic acid supported SBA-15 catalyst", National Conference on Emerging Trends in Chemical Sciences (NCETCS 2016) held at Jerusalem college of Engineering, Chennai, January 6.
14. Kathiravan. K, Jothi Babu. R, Elangovan. E and **Sivakumar. T** (2016) "Heterogeneous photocatalytic degradation of toxic pollutants using layered Titanates", National Conference on Emerging Trends in Chemical Sciences (NCETCS 2016) held at Jerusalem

college of Engineering, Chennai, January 6.

15. Brindha. A, Elangovan. E and **Sivakumar. T** (2016) “Hydrothermal synthesis and their enhanced electrochemical and Photocatalytic activities”, National Conference on Emerging Trends in Chemical Sciences (NCETCS 2016) held at Jerusalem college of Engineering, Chennai, January 6.
16. K. Thamarai Selvi and **T. Sivakumar** (2016) “Visible light driven photocatalytic degradation of Reactive dyes over Bismuth oxy halides”, National Conference on Emerging Trends in Chemical Sciences (NCETCS 2016) held at Jerusalem college of Engineering, Chennai, January 6.
17. Gopinath . S, **Sivakumar. T** (2015) “Synthesis of Heteropoly Acid Supported on Modified Kit-6 for Biodiesel Production by Esterification of Oleic Acid with Methanol”, International conference on recent trends in Analytical Chemistry (ICORTAC 2015) held at Department of Analytical Chemistry, University of Madras, Chennai, December 28 - 30.
18. K. Thamaraiselvi and **T.Sivakumar** (2015) “Photocatalytic Degradation of Reactive Dyes over Different Perovskites” International conference on recent trends in Analytical Chemistry (ICORTAC 2015) held at Department of Analytical Chemistry, University of Madras, Chennai, December 28 - 30.
19. K. Sakthivel, R. Ramakrishnan, K. Kathiravan and **T.Sivakumar** (2015) “Catalytic Hydrogenation Of Furfural To 2- Methyl tetrahydro furan over Monometallic And Bimetallic Pt-Ru/SBA-16 Nano Catalysts”, International conference on recent trends in Analytical Chemistry (ICORTAC 2015) held at Department of Analytical Chemistry, University of Madras, Chennai, December 28 - 30.
20. Brindha. A and **Sivakumar. T** (2015) “Synthesis Of  $\text{BiVO}_4/\text{N-rGO}$  Composite Catalysts For Visible Light Photocatalytic Applications”, International conference on recent trends in Analytical Chemistry (ICORTAC 2015) held at Department of Analytical Chemistry, University of Madras, Chennai, December 28 - 30.
21. Kathiravan. K, Elangovan. E and **Sivakumar. T** (2015) “Synthesis and characterization of layered perovskite materials and evaluation of their photocatalytic activities”, Third International Workshop on Advanced Functional Nanomaterials (TIWAN 2015) held at Center for Nanoscience and Technology, A.C.Tech., Anna University, Chennai, December 16 - 18.
22. Ramakrishnan. R, Sakthivel. K and **Sivakumar. T** (2015) “Au/Pd and Au-Ag Bimetallic Supported Hydroxyapatite Nanorods for the Oxidative Esterification of Furfural to Methyl-

- 2-Furoate”, Third International Workshop on Advanced Functional Nanomaterials (TIWAN 2015) held at Center for Nanoscience and Technology, A.C.Tech., Anna University, Chennai, December 16 - 18.F
23. K. Sakthivel, R. Ramakrishnan, K. Kathiravan and **T. Sivakumar** (2015) “Single step catalytic hydrogenation of furfural to 2-methyltetrahydrofuran over monometallic and bimetallic Pt-Ru/SBA-16 nano catalysts”, National conference on Safety Environment and Industrial Applied Science and Technology (SEIAST 2015) held at A.C.Tech., Anna University, Chennai, February 4 - 6.
  24. S. Gopinath, K. Thamaraiselvi and **T. Sivakumar** (2015) “Production of biodiesel from jatropha curcas oil using mesoporous sulfated modified kit-6 solid acid catalysts”, National conference on Safety Environment and Industrial Applied Science and Technology (SEIAST 2015) held at A.C.Tech., Anna University, Chennai, February 4 - 6.
  25. P. Sahaya Murphin Kumar, S. Thamaraiselvi and **T. Sivakumar** (2015) “Synthesis of Bio diesel using nanophorous highly acidic catalytic materials”, National conference on Safety Environment and Industrial Applied Science and Technology (SEIAST 2015) held at A.C.Tech., Anna University, Chennai, February 4 - 6.
  26. K. Shanmuga Prasad, P. Sahaya Murphin Kumar, R. Sudhakar, A. Vinu and **T. Sivakumar** (2015) “Post synthesis of copper doped mesoporous silica KIT-6 of varying pore diameters and its characterization”, National conference on Safety Environment and Industrial Applied Science and Technology (SEIAST 2015) held at A.C.Tech., Anna University, Chennai, February 4 - 6.
  27. K. Thamarai selvi and **T. Sivakumar** (2014) “Photocatalytic reduction of carbon-dioxide by rutile TiO<sub>2</sub> and CuO supported TiO<sub>2</sub>”, International Conference on Emerging Environmental and Advanced Oxidation Technologies for Energy, Environment and Sustainability (EEAOTEES-2014) held at Anna University, Chennai, September 29-20.
  28. J. Amala Infant Joice, **T. Sivakumar**, K. Gowthami Balashri and R. Jeyapriya (2014) “Highly efficient metal and non-metal doped titania photocatalysts for the degradation of organic pollutants”, International Conference on Sustainable Energy Technologies (ICSET-2014) held at PSG Tech, Coimbatore, December 11-13.
  29. K. Kathiravan, R. Jothi Babu, J. Ravichandran and **T. Sivakumar** (2014) “Synthesis and Characterization of Metal Doped Layered Titanates and Evaluation of their Photocatalytic Activity towards splitting of water”, International Conference on Sustainable Energy Technologies (ICSET-2014) held at PSG Tech, Coimbatore, December 11-13.

30. K. Thamarai selvi, J. Ravichandran and **T. Sivakumar** (2014) “Photocatalytic reduction of carbon-dioxide using as synthesized TiO<sub>2</sub> and CuO supported TiO<sub>2</sub>”, International Conference on Sustainable Energy Technologies (ICSET-2014) held at PSG Tech, Coimbatore, December 11-13.
31. A. Brindha, J. Ravichandran and **T. Sivakumar** (2014) “One Pot hydrothermal synthesis of sulphur doped Graphene/titania for photocatalytic dye degradation”, International Conference on Sustainable Energy Technologies (ICSET-2014) held at PSG Tech, Coimbatore, December 11-13.
32. R. Ramakrishnan, and **T. Sivakumar** (2014) “Catalytic oxidative esterification of Renewable Furfural to Methyl-2-furoate over Au and Au-Pd supported hydroxyapatite nanorods”, International Conference on Sustainable Energy Technologies (ICSET-2014) held at PSG Tech, Coimbatore, December 11-13.
33. R. Sudhakar, and **T. Sivakumar** (2014) “Production of biofuel from non-edible vegetables oils using Nanosized ZSM-5 enwrapped with KIT-6 composites catalysts”, International Conference on Sustainable Energy Technologies (ICSET-2014) held at PSG Tech, Coimbatore, December 11-13.
34. R. Vaithiyathan and **T. Sivakumar** (2012) “Visible light photocatalytic activity of TiO<sub>2</sub>/SiO<sub>2</sub> composite catalysts on the decolourisation of reactive dye” National seminar on Green Chemistry-2012 held at A.C Tech, Anna University, Chennai, October 4-5.
35. K. Shanmugha Prasad, Ajayan Vinu and **T. Sivakumar** (2012) “Post synthetic functionalisation of mesoporous carbon with copper and copper oxide nanoparticles, its characterization and application in click synthesis of 1,2,3-Triazoles” National seminar on Green Chemistry-2012 held at A.C Tech, Anna University, Chennai, October 4-5.
36. J. Amala Infant Joice, G. Ramya, R. Vaithiyathan and **T. Sivakumar** (2012) “Detoxification of harmful insecticides using titania based nanocatalysts” National seminar on Green Chemistry-2012 held at A.C Tech, Anna University, Chennai, October 4-5.
37. G. Ramya, J. Amala Infant Joice, R. Ramakrishnan, K. Kathiravan, R. Sudhakar, S. Thamarai Selvi and **T. Sivakumar** (2012) “Physico-chemical characterization of almc-41/zsm-5 composite catalyst and the biofuel produced from catalytic cracking of jatropha carcus over composite catalyst” National seminar on Green Chemistry-2012 held at A.C Tech, Anna University, Chennai, October 4-5.
38. R. Ramakrishnan, K. Arun Prasad, Asha Mathew, P. Selvamurugesan and **T. Sivakumar** (2012) “Solvent free oxidation of ethylbenzene over Mn exchanged hydroxyapatite Mn-

- HAP” National seminar on Green Chemistry-2012 held at A.C Tech, Anna University, Chennai, October 4-5.
39. K. Kathiravan and **T. Sivakumar** (2012) “Synthesis and characterization of metal doped layered niobates and evaluation of their photocatalytic activity towards splitting of water” National seminar on Green Chemistry-2012 held at A.C Tech, Anna University, Chennai, October 4-5.
  40. R. Sudhakar, G. Ramya, **T. Sivakumar** (2012) “Catalytic cracking of pongamia pinnata oil using al SBA-15/ZSM-5 composite catalysts” National seminar on Green Chemistry-2012 held at A.C Tech, Anna University, Chennai, October 4-5.
  41. Thamaraiselvi.K. and **T.Sivakumar** (2012) “Catalytic Hydrogenation of Carbon Dioxide” National seminar on Green Chemistry-2012 held at A.C Tech, Anna University, Chennai, October 4-5.
  42. J. Amala Infant Joice and **T. Sivakumar** (2012) “Effect of transition metals over titania based nanocatalysts on the degradation of harmful insecticides”, International conference on Global Trends in Pure and Applied Chemical Sciences” held at Udaipur, Rajasthan, March 3-4.
  43. G. Ramya, R. Sudhakar, R. Renku and **T. Sivakumar** (2012), “Application of Core-Shell Modeled Composite Catalysts for Biofuel production from Nonedible Vegetable Oils”, International conference on Global Trends in Pure and Applied Chemical Sciences” held at Udaipur, Rajasthan, March 3-4.
  44. R. Vaithiyanathan and **T. Sivakumar** (2012), “Optimization studies on the photocatalytic decolourization of textile azo dyes over titania based composite catalysts”International conference on Global Trends in Pure and Applied Chemical Sciences” held at Udaipur, Rajasthan, March 3-4.
  45. K.Satheesh, R.Ramakrishnan and **T. Sivakumar** (2011) “Esterification of glycerol with acetic acid using PTA / MCM- 41”, 15<sup>th</sup> National workshop on the role of new materials in catalysis, IITM, December 11-13.
  46. G.Ramya, R.Renku and **T.Sivakumar** (2011), “Cracking of n-heptane by using meso and composite catalysts”, 15<sup>th</sup> National workshop on the role of new materials in catalysis, IITM, December 11-13.
  47. J.Amala Infant Joice, R.Jeyapriya, K.Gowthami Balashri and **T.Sivakumar**,(2011) “Photogradation of carcinogenic dyes in textiles and leather waste water using metal and

- non metal (silver and reason ) doped nanocatalysts, 15<sup>th</sup> National workshop on the role of new materials in catalysis, IITM, December 11-13.
48. J.Amala Infant Joice and **T.Sivakumar**, Visible photo catalytic activity of potassium titanate in the degradation of thiamethoxam insecticide, Chemical Engineers Conference, Bangalore, December 27-29.
  49. J.Amala Infant Joice, K.Gowthami Balashri, R.Jeyapriya and **T.Sivakumar**, “Enhancement of the photocatalytic activity of metal doped titania in the photodegradation of organic pollutants”, ICRAM, Vellore institute of technology (VIT), Feb 20-22.
  50. Kathiravan.K and **Sivakumar.T**, “Synthesis and Characterization of Metal Doped Layered Niobates and Evaluation of Their Photocatalytic Activity towards Splitting of Water”, The International Conference on Nanoscience and Technology (ICONSAT - 2012) at Hyderabad, India. January 20 - 23
  51. G.Ramya and **T.Sivakumar** (2011) “Catalytic cracking using nano porous AlMCM-41 for the production of green fuel” NanoSec 2011, IISC, Bangalore June 23-24.
  52. 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” NanoSec 2011, IISC, Bangalore June 23-24 and Won BEST paper award.
  53. G.Ramya, **T.Sivakumar**, (2010) ‘Green fuel production from jatropha and castor oil by catalytic cracking over solid acid catalysts’. CHEMCON 2010, Annamalai University, Chidambaram, December 27-29.
  54. J.Amala Infant Joice, **T.Sivakumar**, (2010) “ Photodegradation of acetamiprid by Ni, Ru and Pt doped TiO<sub>2</sub> catalyst”, CHEMCON 2010, Annamalai University, Chidambaram, December 27-29.
  55. G.Ramya, **T.Sivakumar**, (2010) “Fixed bed catalytic cracking of non-edible oils using zeolites for production of biofuels”, (NSC) ,IIT Madras, December 19-22.
  56. S.Kalaivani, **T.Sivakumar**, (2010) “Degradation of carcinogenic dyes in textile and leather waste water using multielement (carbon, nitrogen, boron and fluorine) co-doped semiconductor oxides catalyst”, (NSC), IITM Madras, December 19-22.
  57. J.Amala Infant Joice, **T.Sivakumar**, (2010) “Metal ions impregnated titania and niobates for the photocatalytic degradation of AmidoBlack-10B and some insecticides”, (NSC), IIT Madras, December 19-22.
  58. R.Ramakrishnan and **T. Sivakumar**, (2010) “Gas phase dehydration of glycerol by using water tolerant layered niobates”, (NSC), IIT Madras, December 19-22.

59. K.Kathiravan, M. Danny raj, K. Vaishnavi, V. Vidya and **T.Sivakumar**, (2010) “Development and Characterization of Photocatalytic materials for decolourization of Aqueous Pollutants”, (NSC), IIT Madras, December 19-22.
60. G.Ramya and **T.Sivakumar**, (2010) “Production of organic liquid hydrocarbons from jatropha oil by catalytic cracking”, (NCRTEM-2010), School of Physics, Alagappa University, Karaikudi, March 10-11.
61. G.Ramya and **T.Sivakumar**, (2010) “Biofuel production from jatropha oil through catalytic cracking technology”, Indo-hungarian international workshop, (NCCR) February 16 – 18.
62. G.Ramya and **T.Sivakumar**, “Role of intelligent composite catalyst in cracking of vegetable oils for the production of liquid fuels”, NCCR-Anna University research scholar meet, IIT Madras, February-2008.
63. D.Manikandan, D.Divakar, A.Valentine Rupa, S.Revathi, M.Esther Leena Preethi, **T.Sivakumar\*** “Synthesis And Characterization Of Platinum Intercalated Montmorillonite Catalysts” presented in the National Workshop on catalysis for Energy , pp 114 held at Banaras Hindu University, Varanasi during 23-25<sup>th</sup> Feb 2006 .
64. D.Divakar, D.Manikandan, A.Valentine Rupa, S.Revathi, M.Ester Leena Preethi **T.Sivakumar\*** “Selective Hydrogenation Of  $\alpha$ ,  $\beta$  Unsaturated Aldehydes Using Noble Metal Intercalated / Supported Bentonite Catalysts” presented in the National Workshop on catalysis for Energy ,pp 103, held at Banaras Hindu University, Varanasi during 23-25<sup>th</sup> Feb 2006.
65. A.Valentine Rupa, D.Manikandan, D.Divakar, M.Esther Leena Preethi, S.Revathi, **T.Sivakumar\*** “Utilisation Of Solar Energy In The Degradation Of Textile Dye Effluent Using Ag-Deposited TiO<sub>2</sub> “ presented in the National Workshop on catalysis for Energy, pp 117, held at Banaras Hindu University,Varanasi during 23-25<sup>th</sup> Feb 2006.
66. S.Revathi, M.Esther Leena Preethi, D. Manikandan, D. Divakar, Valentine Rupa, **T.Sivakumar\***. “Effect of Pore Size Mesoporous Material (MCM-41) On Esterification of Maleic Acid with N-Butanol”. Presented in the National Workshop on catalysis for Energy, pp 112, held at Banaras Hindu University,, Varanasi during 23-25<sup>th</sup> Feb 2006.
67. M.Esther Leena Preethi, S.Revathi, D Manikandan,D.Divakar, A. Valentine Rupa, **T.Sivakumar\*** “Friedel Crafts Alkylation By Eco-Friendly Fe, Al Containing MCM-41 Solid Acid Catalyst” presented in the National Workshop on catalysis for Energy , pp 117, held at Banaras Hindu University, Varanasi during 23-25<sup>th</sup> Feb 2006.

68. Study of photocatalytic activity for the degradation of reactive dye using nano Ag-TiO<sub>2</sub> catalyst under UV and Visible light A. Valentine Rupa, D.Manikandan, D.Divakar, S.Revathi, M.Esther Leena Preethi, **T.Sivakumar\*** presented in the International conference in nano science and nano technology (ICNSNT), University of Madras, Chennai,India in August 2006.
69. Synthesis, characterisation and catalytic activity of palladium nano particles generated in the interlamellar space of TSM using adsorption excess isotherm. D.Divakar, D.Manikandan, A. Valentine Rupa, S.Revathi, M.Esther Leena Preethi, **T.Sivakumar\*** presented in the International conference in nano science and nano technology (ICNSNT), University of Madras, Chennai,India in August 2006 – Won the Best Paper Award.
70. Noble metal nano particle intercalated catalysts for selective hydrogenation  $\alpha$ ,  $\beta$  unsaturated aldehydes, D.Manikandan, D.Divakar, A. Valentine Rupa, S.Revathi, M.Esther Leena Preethi, **T.Sivakumar\*** presented in the International conference in nano science and nano technology (ICNSNT), University of Madras, Chennai,India in August 2006.
71. D.Divakar, D.Manikandan, A.Valentine Rupa, **T.Sivakumar\*** “Synthesis and characterization of palladium nano particle generated in the interlamellar space of bentonite using adsorption excess isotherm” presented in the 17<sup>th</sup> National Symposium Sustainable development through catalysis, pp 212, held at CSMCRI, Bhavnagar during 18<sup>th</sup> -20<sup>th</sup> Jan 2005.
72. A.Valentine Rupa, D.Manikandan, D.Divakar, **T.Sivakumar\*** “Photo Catalytic Degradation Of Tetracycline Dye Using TiO<sub>2</sub> Catalyst: Salt Effect And Kinetic Studies” presented in the 17<sup>th</sup> National Symposium Sustainable development through catalysis, pp 180, held at CSMCRI, Bhavnagar during 18<sup>th</sup> -20<sup>th</sup> Jan 2005.
73. M.Esther Leena Preethi, S. Revathy, **T.Sivakumar\*** “Eco-friendly liquid-phase benzylation of benzene over Fe containing al-mcm-41 molecular sieves” presented in the 17<sup>th</sup> National Symposium Sustainable development through catalysis, pp 187, held at CSMCRI, Bhavnagar during 18<sup>th</sup> -20<sup>th</sup> Jan 2005.
74. S. Revathi, M. Esther Leena Preethi and **T.Sivakumar\*** “Acylation of 1, 3- dihydroxybenzene with acetic acid over heteropoly acid loaded metal substituted MCM-41” presented in the 17<sup>th</sup> National Symposium Sustainable development through catalysis, pp 182, held at CSMCRI, Bhavnagar during 18<sup>th</sup> - 20<sup>th</sup> Jan 2005.
75. D.Manikandan, D.Divakar, A.Valentine Rupa, **T.Sivakumar\*** “generation of nano sized pd particles in vermiculite and bentonite clays for catalytic applications” presented in the



- 17<sup>th</sup> National Symposium, Sustainable development through catalysis, pp 247, held at CSMCR , Bhavnagar during 18<sup>th</sup> -20<sup>th</sup> Jan 2005.
76. S.Siddharth, M. Muthu Senthil Kumar, S.Revathi, **T. Sivakumar\*** “An eco-friendly method for treating hazardous waste effluent in process industries” held at National Institute of Technology Trichy, 16<sup>th</sup> Jan-2006.
77. S.Siddharth, M. Muthu Senthil Kumar, S.Revathi, **T. Sivakumar\*** “A Novel method for treating hazardous waste effluent in process industries by using sustainable energy source” held at Indore, 24<sup>th</sup> December 2005.
78. A.Valentine Rupa, D.Manikandan, D.Divakar, M.Esther leena preethi, S.Revathi, **T.Sivakumar\*** “Photocatalytic degradation of reactive red-2 using visible light active s-doped TiO<sub>2</sub>” presented in the National Conference on Frontiers in Environmental Sciences and Engineering in India, pp 122 , Bharathiar University, Coimbatore during 15-17<sup>th</sup> Sep 2005.
79. R.Suresh, K.Lakshminarayanan, A.Valentine Rupa, **T.Sivakumar\*** “UV / Solar photocatalytic degradation of dye using TiO<sub>2</sub>” held at St.Peters college of Engineering, Chennai, October 2005.
80. S.Siddharth, M. Muthu Senthil Kumar, S.Revathi, **T. Sivakumar\*** “An Eco-Friendly Method for Synthesis of Mesoporous MCM-41-SO<sub>3</sub>H Catalyst, Its Characterization and Applications for a Greener Environment” Held at St. Peters college of Engineering, Chennai, October 2005.
81. S. Siddharth, M. Muthu Senthil Kumar, S.Revathi, **T. Sivakumar\*** “A Novel Method for Synthesis of Sulphonic Acid Functionalized MCM-41 and its catalytic application” held at St.Joseph’s college of Engineering, Chennai, 30<sup>th</sup> August 2005.
82. K.Shanthi, **T.Sivakumar** and N. R. Sasirekha, ` Mesoporous molecular sieve (Al-MCM-41) supported Ni-Mo catalysts for hydrodenitrogenation of o- toluidine and cyclohexylamine`.CATSYMP –15 & IPCAT –2 held at NCL, Pune during Jan 23-25,2001.
83. K.Shanthi, **T.Sivakumar**, N. R. Sasirekha and R. Maheswari, “Hydro denitrogenation activity of NiO – MoO<sub>3</sub> catalysts supported on various meso porous alumino silicates”. 13<sup>th</sup> International zeolite conference to be held at Montpellier, France during July 8 –13<sup>th</sup>, 2001.
84. **T. Sivakumar**, K.Shanthi, G.Thiagarajan, S.Seevasubramanian," Effect of substitution of metal ions in the A and B site of La<sub>2</sub>CuO<sub>4</sub> catalyst on the catalytic activity" National

workshop on catalysis ( CAT WORKSHOP 2000) held at IICT Hyderabad, during 7 -8 Jan 2000.

85. K.Shanthi and **T.Sivakumar**, "Comparison of catalytic activities of Nickel - Molybdena catalysts supported over MCM -41 and  $\gamma$ -Al<sub>2</sub>O<sub>3</sub> for hydrodenitrogenation reaction", National workshop on catalysis ( CAT WORKSHOP 2000) held at IICT Hyderabad, during 7 -8<sup>th</sup> Jan 2000.
86. **T.Sivakumar**, P.Tilak Palanisamy, M.Muppitathi, P.Sudhakar, Karthik Saminathan, K.Shanthi, B.Sivasankar and V.Mohan, "Catalytic conversion of various alcohols over Sr<sub>0.2</sub> La<sub>1.8</sub>Cu O<sub>3.955</sub>" 17<sup>th</sup> conference of Indian council of Chemists held at School of Chemical sciences, University of Madras during 26 – 28<sup>th</sup> Nov. 1998.
87. **T.Sivakumar**, J.Hariprasad, P. Kandaswamy, P.S.Suresh and K.Shanthi, "Kinetics of photodecolourisation of some textile reactive dyes using ZnO" 17<sup>th</sup> conference of Indian council of Chemists held at School of Chemical sciences, University of Madras during 26 – 28<sup>th</sup> November 1998.
88. **T. Sivakumar**, T. Newton Samuel, R.Vijay Immanuel, M. Pradeep, S. Patrick and K. Shanthi, "Kinetics of photo degradation of Anthraquinone – 2- sulphonic acid ( Sodium salt) using ZnO", 17<sup>th</sup> conference of Indian council of chemists held at School of chemical Sciences, University of Madras during 26-28<sup>th</sup> Nov 1998.
89. **T.Sivakumar**, K.Shanthi and B.Sivasankar, "DSC and TG studies of metal exchanged / impregnated zeolites for acidity determination" Sixteenth conference of Indian Council of Chemists held at Mangalore University, Mangalagangothri during 6 - 8th November 1997.
90. **T.Sivakumar**, K.Shanthi, D.Shanthana Lakshmi, T.Ramesh Chandran Nayr and B.Sivasankar, " Kinetic modelling for the dehydrogenation of secondary alcohol catalysed by Lanthanum Cuprate" Sixteenth conference of Indian Council of Chemists held at Mangalore University, Mangalagangothri during 6 - 8th November 1997.
91. **T.Sivakumar**, K.Shanthi and B.Sivasankar," Evaluation of Thermodynamic and Kinetic parameters for the Dehydrogenation of cyclohexanol over Sr<sub>0.2</sub>La<sub>1.8</sub>CuO<sub>3.9</sub>.IUPAC International conference on Chemical and Biological

Thermodynamics" held at Gurunanak Dev University, Amritsar during January 5 - 8, 1997.

92. T.Sivakumar and B.Sivasankar," Synthesis, Characterisation and Catalytic activity of metal exchanged Zeolites."15th Conference of Indian Council of Chemists" held at Aurangabad during October 24 -26, 1996.