National Institute of Technology, Tiruchirappalli:
Performa for CV of Faculty/ Staff Members

Curriculum Vitae

Dr M. Matheswaran is an Assistant Professor in chemical Engineering department at National Institute of Technology, Trichy. His research interests include Wastewater treatment, Electrochemical engineering, Nanoparticle synthesis, Design and development of hybrid system for pollution control, Microbial fuel cell. He received his Ph.D degree in 2008 from Sunchon National University, South Korea and his bachelor and master degree from Annamalai University in the Chemical Engineering. He has been active in the field of design and development various system for treatment industrial wastewater. He has been involved in organizing the conference and workshop dealing pollution control, water treatment including the international conference on Green technologies for environmental pollution prevention and pollution control. He has published 46 research articles in peer reviewed international journals and book chapters. He has been received Hiyoshi Young Leaf Award by Hiyoshi Corporation, Japan and Hiyoshi India Ecological Services Pvt. Ltd.

1. Name — M. MATHESWARAN
2. Designation: — ASSISTANT PROFESSOR
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   Tiruchirappalli – 620 015,
   Tamil Nadu, INDIA
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   Telephone : Extn (Optional):
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5. Email (Primary): matheswaran@nitt.edu — Email (Secondary) :math_chem95@rediffmail.com
6. Field(s) of Specialization: — Electrochemical Engineering
7. Employment Profile

Job Title	Employer	From	To
Assistant professor	National Institute of Technology, Tiruchirappalli	Nov 2008	Till date
Lecturer	Dr. Navalar Nedunchezhiyan College of Engineering, Tholudur	Nov 2002	Nov 2004
National Service Scheme Programme Officer	Dr. Navalar Nedunchezhiyan College of Engineering, Tholudur	Nov 2003	Nov 2004

8. Academic Qualifications (From Highest Degree to High School):

Examination	Board / University	Year	Division/ Grade	Subjects
Ph.D	Sunchon National University, South Korea	2008		Chemical Engineering
M.E	Annamalai University	2001	first class with Distinction	Chemical Engineering
Diploma	Annamalai University	2000		Industrial Safety
B.E	Annamalai University	1999	first class	Chemical Engineering

9. Academic/Administrative Responsibilities within the University

Position	Faculty/Department/Centre/Institution	From	To
Class committee chairman	Department	2014	2015
Faculty advisor for Alchem'15	Department	2014	2015

10. Academic/Administrative Responsibilities outside the University

Position	Institution	From	To

11. Awards, Associateships etc.

Year of Award	Name of the Award	Awarding Organization
2012	Hiyoshi Young Leaf Award	Hiyoshi Corporation, Japan and Hiyoshi India Ecological Services Pvt. Ltd.

12. Fellowships

Year of Award	Name of the Fellowship	Awarding Organization	From (Month/Year)	To (Month/Year)

13. Details of Academic Work

(i) Curriculum Development

Introduced tow subject in Undergraduate

1. Electrochemical reaction engineering

2. Electrochemical engineering

(ii) Courses taught at Postgraduate and Undergraduate levels

Postgraduate

1. Batteries and Fuel Cells

Undergraduate

1. Engineering Mechanics
2. Applied Mathematics in Chemical Engg.
3. Chemical reaction engineering – I
4. Advances in Heat Transfer
5. Introduction to Mechanical Engineering
6. Mechanical & Civil Engineering Laboratory
7. Chemical Reaction Engineering Laboratory

(iii)Projects guided at Postgraduate level

1. M.Tech Projects Guided : 12

(iv) Other contribution(s)

14. Details of Major R&D Projects

Title of Project	Funding Agency	Duration		Status
		From	To	Ongoing/ Completed
Novel Energy Production from Distillery Effluent Treatment by Bio-electrochemical Method	Department of Biotechnology	2013	2016	Ongoing
Direct conversion of CO_2 to hydrocarbon fuel using novel nano photocatalyst	Department of Science & Technology	2013	2016	Ongoing

15. Number of PhDs guided

Name of the PhD Scholar	Title of PhD Thesis	Role(Supervisor/ Co-Supervisor)	Year of Award
P. Asaithambi	Electrochemical advanced oxidation processes for the treatment of distillery industrial effluent	Supervisor	2014
N. Samsudeen	Studies on bioelectricity production from distillery wastewater using microbial fuel cell	Co-Supervisor	2016

16. Participation in Workshops/ Symposia/ Conferences/ Colloquia /Seminars/ Schools etc. (mentioning the role)

Date (s)	Title of Activity	Level of Event (International/ National/ Local)	Role (Participant/ Speaker/ Chairperson, Paper presenter, Any other)	Event Organized by	Venue

8-9th Oct 2015	workshop on Electrochemical Technologies in Hydrogen Production and Utilization for Electrical Energy	National	Participant	TEQIP	IIT Delhi
Jul 1st to 5th, 2013	Short Term Course on "Biotechniques for Pollution Control and Resource Recovery	National	Participant	TEQIP	IIT Guwahati
Dec 11th to 24th, 2012	Workshop on Thermodynamics	National	Participant	ISTE	NITT, Trichy

17. Workshops/ Symposia/ Conferences/ Colloquia/Seminars Organized (as Chairman/ Organizing Secretary/ Convenor / Co-Convenor)

Title of Activity	Level of Event (International/ National/ Local)	Date (s)	Role	Venue
workshop on Nanomaterials for Energy & Environment	National	June 13-18th, 2016	Coordinators	NITT Tiruchirappalli
International conference on Green Technologies for Environmental Pollution Control and Prevention	International	27th to 29th Oct 2014	Convener	NITT Tiruchirappalli
Short term course on integrated separation process for Environmental and biotechnology applications	National	19th and 20th Jul 2013	Coordinators	NITT Tiruchirappalli
Two day Short term course on Corrosion Control and Surface Engineering	National	18th and 19th Oct 2012	Coordinators	NITT Tiruchirappalli
Three - One Day Colloquium with a focus on: Current R&D and Industrial Scenario	National	10th to 12th Dec 2012	Co-Convener	NITT Tiruchirappalli

18. Invited Talks delivered

Topic	Date	Inviting Organization
Bioelectricity generation during wastewater treatment using Microbial fuel cell	10th Sep 2016	Department of Chemical Engineering at SVCE, Chennai

Bioelectricity production using Microbial fuel cell	4th September, 2015	in Department of Biotechnology at St. Joseph's College of Engineering, Chennai
Advanced oxidation processes for the removal of organic contaminants in water and waste water	5th Oct 2013	Kongu Engineering College, Perundurai
Soncation assisted Electrochemical Process for the Treatment of Industrial Effluent	23rd Mar 2013	NITT Tiruchirappalli
Advance Electrochemical Oxidation for the Treatment of Industrial Effluent	1st Dec 2012	NITT Tiruchirappalli
Development of sustainable wastewater treatment processes	31st Aug 2011	NITT Tiruchirappalli
Electrochemical Technologies for Wastewater Treatment	25th Feb 2011	Josphe College of Engineering, Chennai
Effluent treatment	Apr 8, 2009	The Institution of Engineers (India) – Tiruchi local centre

19. Membership of Learned Societies

Type of Membership (Ordinary Member/ Honorary Member / Life Member)	Organization	Membership No. with date
Life Member	Indian Institute of Chemical Engineers	LM 41282
Life Member	Indian Society for Technical Education	LM 38639
Life Member	The Society for Advancement of Electrochemical Science and Technology	LA355
Ordinary Member	International Association of Engineers	M 112733

20. Academic Foreign Visits

Country	Duration of Visit	Programme
South Korea	2005-2008	Research work
Malaysia	13th -15th Dec 2010	Attending International conference
Germany	4 – 7th Oct 2011	Attending International conference
Thailand	22 – 24th Aug 2012	Attending International conference
Dubai	29-30th Oct 2014	Attending International conference

21. Publications

(A) Refereed Research Journals:

Author(s)	Title of Paper	Journal	Volume (No.)	Page numbers	Year	Impact Factor of the Journal (Optional)
M. Harshiny, Ashish Gire, Meena Kumari, ***M. Matheswaran***	Biogenic synthesis of nano-biomaterial for toxic naphthalene photocatalytic degradation optimization and kinetics studies	*International Biodeterioration & Biodegradation*			2016	2.429
M. Harshiny, C. Nivedhini Iswarya, N. Samsudeen, P. Saravanan, M. Matheswaran	Iron oxide nano-material: physicochemical traits and in vitro antibacterial propensity against multidrug resistant bacteria	***Journal of Industrial and Engineering Chemistry***			2016	4.179
N. Samsudeen, T. K. Radhakrishnan, ***M. Matheswaran***	Effect of isolated bacterial strains from distillery wastewater on power generation in microbial fuel cell	*Process Biochemistry*			2016	2.529
N. Samsudeen, Shivanand Chavan, T. K. Radhakrishnan, ***M. Matheswaran***	Performance of microbial fuel cell using chemically synthesized activated carbon coated anode	*Journal of Renewable and Sustainable Energy*	8(4)	044301	2016	0.961
M. Harshiny, ***M. Matheswaran***	Amaranthus spinosus leaf extract mediated FeO nanoparticles: Physicochemical traits, photocatalytic and antioxidant activity	*ACS Sustainable Chemistry & Engineering*	3(12)	3149-3156	2015	5.267
M. Harshiny, C. Nivedhini Iswarya, ***M. Matheswaran***,	Biogenic synthesis of iron nanoparticles using Amaranthus dubius leaf extract as a reducing agent	*Powder Technology*	286	744-749	2015	2.759
N. Samsudeen, T. K. Radhakrishnan, ***M. Matheswaran***,	Bioelectricity production from microbial fuel cell using mixed bacterial culture isolated from distillery wastewater	*Bioresource Technology*	195	242–247	2015	4.917
N. Samsudeen, Amit Sharma, T. K. Radhakrishnan, ***M. Matheswaran***	Performance investigation of multi-chamber microbial fuel cell: An alternative approach for scale up system	*Journal of Renewable and Sustainable Energy*	**7**	043101	2015	0.961
M. Harshiny, ***M. Matheswaran,*** G. Arthanareeswaran,	Enhancement of antibacterial properties of silver	*Ecotoxicology and Environmental Safety*	121	135-141	2015	3.13

S. Kumaran, S. Rajasree	nanoparticles–ceftriaxone conjugate through Mukia maderaspatana leaf extract mediated synthesis					
N. Samsudeen, T. K. Radhakrishnan, ***M. Matheswaran,***	Performance comparison of triple and dual chamber microbial fuel cell using distillery wastewater as a substrate	*Environmental Progress & Sustainable Energy*	34(2)	589-594	2015	1.631
P. Asaithambi, R. Saravanathamizhan, ***M. Matheswaran***, "	Kinetics Studies of Catalytic Ozonation of Distillery Effluent",.	*Desalination and Water Treatment*	54(12)	3470-3476	2015	1.272
P. Asaithambi, R. Saravanathamizhan, ***M. Matheswaran,***	Comparison of treatment and energy efficiency of advanced oxidation processes for the distillery wastewater	*International Journal of Environmental Science and Technology*	12(7)	2013-2220	2015	2.344
Modepalli Susree, P. Asaithambi, R. Saravanathamizhan, ***M. Matheswaran***	Studies on various Mode of electrochemical reactor operation for the treatment of distillery effluent	*Journal of Environmental Chemical Engineering*	1(3)	552-558	2013	
E. Elakkiya, ***M. Matheswaran***	Comparison of Anodic Metabolisms in Bioelectricity Production during Treatment of Dairy Wastewater in Microbial Fuel Cell	*Bioresource Technology*	136	407–412	2013	4.917
Suganya Kanagasabi, Yee Li Kang, ***M. Matheswaran***, Shaliza Ibrahim, Saravanan Pichiah	Intimate coupling of electro and biooxidation of tannery wastewater	*Desalination and Water Treatment*	51	6617-6623	2013	1.272
M.N. Vineetha, ***M. Matheswaran***, K.N. Sheeba	Photocatalytic colour and COD removal in the distillery effluent by solar radiation	*Solar Energy*	91	368-373	2013	3.685
Anusha Somayajula, Azrina Abd Aziz, Pichiah Saravanan, ***M. Matheswaran***	Adsorption of Mercury (II) ion from aqueous solution using Low cost Activated Carbon Prepared from Mango kernel	*Asia-Pacific Journal of Chemical Engineering*	8	1-10	2013	0.728
Prasad Sudamalla, Pichiah Saravanan,	Responses of surface modeling and	*Desalination and Water Treatment*	50	367–375	2012	1.272

M. Matheswaran	optimization of Brilliant Green adsorption by adsorbent prepared from Citrus limetta peel					
P. Asaithambi, Modepalli Susree, R. Saravanathamizhan, ***M. Matheswaran***	Ozone assisted electrocoagulation for the treatment of distillery effluent	*Desalination*	297	1–7	2012	4.412
Azrina Abd Aziz, Chee Kaan Cheng, Shaliza Ibrahim, ***M. Matheswaran***, P. Saravanan	Visible light improved, photocatalytic activity of magnetically separable titania nanocomposite"	*Chemical Engineering Journal*	183	349– 356	2012	5.31
Anusha Somayajula, P. Asaithambi, Modepalli Susree, ***M. Matheswaran***	Sonoelectrochemical Oxidation for Decolourization of Reactive Red 195	*Ultrasonics Sonochemistry*	19	803-811	2012	4.556
P. Asaithambi, Lakshminarayana Garlanka, N. Anantharaman, ***M. Matheswaran***	Influence of experimental parameters in the treatment of distillery effluent by electrochemical oxidation	*Separation Science Technology*	47(3)	470-481	2012	1.083
P. Asaithambi, ***M. Matheswaran***	Electrochemical treatment of simulated sugar industrial effluent: optimization and modeling using a response surface methodology	*Arabian Journal of Chemistry*			2011	3.613
Prasad Sudamalla, Pichiah Saravanan, ***M. Matheswaran***	Optimization of operating parameters using response surface methodology for adsorption of crystal violet by activated carbon prepared from mango kernel	*Sustainable Environment Research*	22(1)	1-7	2012	
M. Matheswaran	Kinetic studies and equilibrium isotherm analyses for the adsorption of methyl orange by coal fly ash from aqueous solution	*Desalination and Water Treatment*	29	241-251	2011	1.272
R. Lakshmi Narayana, *M. Matheswaran*,	Photocatalytic decolourization of basic green dye by	*Desalination*	269	249–253	2011	4.412

Azrina Abd Aziz, Pichiah Saravanan	pure and Fe, Co doped TiO_2 under daylight illumination					
M. Matheswaran, T. Raju	Destruction of methylene blue by mediated electrolysis using two-phase system	*Process Safety and Environmental Protection*	88(5)	350-355	2010	2.078
M. Matheswaran, Tae Ouk Kwon, Jaewoo Kim, Mikel Duke, Stephen Gray, Il Shik Moon	Effects of operating parameters on permeation flux for desalination of sodium chloride solution using air gap membrane distillation	*Desalination and Water Treatment*	13	362–368	2010	1.272
M. Matheswaran, I. S. Moon	Influence parameters in the ozonation of phenol wastewater treatment using bubble column reactor under continuous circulation	*Journal of Industrial and Engineering Chemistry*	15	287-292	2009	4.179
K. Chandrasekara Pillai, ***M. Matheswaran***, S. J. Chung, I. S. Moon	Studies on promising cell performance with H_2SO_4 as the catholyte for electrogeneration of Ag^{2+} from Ag^{+} in HNO_3 Anolyte in mediated electrochemical oxidation process	*Journal of Applied Electrochemistry*	39(1)	23-30	2009	2.223
M. Matheswaran, S. J. Chung, I. S. Moon	Co(III) – mediated oxidative destruction of phenol using divided electrochemical cell	*The Korean Journal of Chemical Engineering*	25(5)	1031-1035	2008	1.408
M. Matheswaran, S. Balaji, S. J. Chung, I. S. Moon	Mediated electrochemical oxidation of phenol in continuous feeding mode using Ag (II) and Ce (IV) mediator ions in nitric acid: A comparative study	*Chemical Engineering Journal*	144(1)	28-34	2008	5.31
S. Balaji, ***M. Matheswaran***, S. J. Chung, V. V. Kokovkin, I. S. Moon	Determination of overall kinetic constants for mediated electrochemical oxidation of Phenol from CO_2 measurement	*Kinetic and catalysis*	49(5)	621-625	2008	0.632
S. Balaji, S. J. Chung, ***M. Matheswaran***, V. V. Kokovkin, I. S.	Destruction of organic pollutants by cerium(IV) MEO process : A study on	*Journal of Hazardous Materials*	150(3)	596-603	2008	4.836

Moon	the influence of process conditions for EDTA mineralization					
M. Matheswaran, S. Balaji, S. J. Chung, I. S. Moon	Silver ion catalyzed cerium(IV) mediated electrochemical oxidation of phenol in nitric acid medium	*Electrochimica Acta*	53(4)	1879-1901	2007	4.803
M. Matheswaran, S. Balaji, S. J. Chung, I. S. Moon	Mineralization of phenol by Ce(IV)-mediated electrochemical oxidation in methanesulphonic acid medium: A preliminary study	*Chemosphere,*	69(2)	325-331	2007	3.698
M. Matheswaran, T. O. Kwon, J. W. Kim**,** I. S. Moon	Factors affecting flux and water separation performance in air gap membrane distillation	*Journal of Industrial and Engineering Chemistry*	13(6)	965-970	2007	4.179
S. Balaji, S. J. Chung, ***M. Matheswaran***, I. S. Moon	Cerium(IV) mediated electrochemical oxidation process for the mineralization of various organic pollutants in batch and continuous organic feeding modes	*The Korean Journal of Chemical Engineering*	24(6)	1009-1016	2007	1.408
V. V. Kokovkin, S. J. Chung, S. Balaji, ***M. Matheswaran***, I. S. Moon	Electrochemical cell current requirements for organic waste destruction in cerium mediated electrochemical oxidation process	*The Korean Journal of Chemical Engineering*	24(5)	749-756	2007	1.408
M. Matheswaran, S. Balaji, S. J. Chung, I. S. Moon	Electro-oxidation kinetics of cerium(III) in nitric acid using divided electrochemical cell for application in the mediated electrochemical oxidation of Phenol	*Bulletin of Korean Chemical Society*	28(8)	1329-1334	2007	0.793
M. Matheswaran, T. Karunanithi	Adsorption of Chrysoidine R by using Fly ash in Batch Process	*Journal of Hazardous Materials*	145(1-2)	154-161	2007	4.836
R. Thiruvenkatachari, T. O. Kwon, J. C. Jun, S. Balaji, ***M. Matheswaran***, I. S. Moon	Application of several advanced oxidation processes for the destruction of terephthalic acid (TPA)	*Journal of Hazardous Materials*	142(1-2)	308-314	2007	4.836
M. Matheswaran,	Silver Mediated	*Journal of Industrial*	13(2)	231-236	2007	4.179

S. Balaji, S. J. Chung, I.S. Moon	Electrochemical Oxidation: Production of Silver(II) in Nitric acid Medium and *in situ* Destruction of Phenol in Semi batch Process	*and Engineering Chemistry*				
M. Matheswaran, S. Balaji, S. J. Chung, I.S. Moon	Studies on cerium oxidation in catalytic ozonation process: A novel approach for organic mineralization	*Catalysis Communications*	8	1497 – 1501	2007	3.389
S.J. Chung, S. Balaji, ***M. Matheswaran***, T. Ramesh, I.S. Moon.	Preliminary studies using hybrid mediated electrochemical oxidation (HMEO) for the removal of persistent organic pollutants (POPs)	*Water Science & Technology*	55(1-2)	261 – 266	2007	1.064
R. Thiruvenkatachari, ***M. Matheswaran***, T. O. Kwon, J. W. Kim, I. S. Moon	Separation of Water and Nitric Acid with Porous Hydrophobic Membrane by Air Gap Membrane Distillation (AGMD)	*Separation Science and Technology*	41(14)	3187 – 3199	2006	1.083

(B) Conferences/Workshops/Symposia Proceedings

Author(s)	Title of Abstract/ Paper	Title of the Proceedings	Page numbers	Conference Theme	Venue	Year
Dr. M. Matheswaran	Performance evaluation of continuous mode operation triple chamber microbial fuel cell for electricity generation during distillery wastewater treatment	-	-	International Conference On Biotechnology and Bioengineering - 2014	BITS Pillani Dubai Campus, Dubai	29-30th of 2014
Dr. M. Matheswaran	Comparison of electricity generation efficiency of MFCs operating with proton exchange membranes	-	-	International conference on Membrane Science & Technology (MST – 2013)	Kuala Lumpur, Malaysia	*27 – 29th Aug 2013*
Dr. M. Matheswaran	Comparison of various electrocoagulation techniques for the	-	-	CHEMCON 2012	NIT, Jalandhar.	27th-30th Dec 2012

	treatment of industrial effluents					
Dr. M. Matheswaran	Degradation of reactive dye by electrochemical method	-	-	National Convention of Electrochemists (NCE-17)	Chennai	14 and 15th Sep 2012
Dr. M. Matheswaran	Bio-Oxidation Mediated treatment of Dairy Industrial wastewater Accompanied by energy generation in an Micro Fuel Cell	-	-	2nd international conference on Advance Oxidation Processes (AOP-2012)	Kottayam, Kerala	5 - 8th OCT 2012
Dr. M. Matheswaran	An integrated electrocoagulation - ultrafiltration system for the reuse of kraft paper mill effluent	-	-	international conference on Membrane Science & Technology (MST – 2012)	*Bangkok, Thailand*	*22 – 24th Aug 2012*
Dr. M. Matheswaran	Integrating membrane process with electrochemical oxidation for the removal of colour and COD in the distillery effluent	-	-	6th IWA Specialist Conference on Membrane Technology, Aachen	Aachen, Germany	4 – 7th Oct 2011
Dr. M. Matheswaran	Optimization of operating parameters for electrochemical oxidation of synthetic sugar industrial effluent	-	-	CHEMCON 2010	Annamalai nagar	27th-29th Dec 2010
Dr. M. Matheswaran	Electrochemical treatment of sugar industrial effluent: optimization and modeling using a response surface methodology	-	-	International Conference on Environment 2010 (ICENV 2010)	Penang, Malaysia	13th - 15th Dec 2010
Dr. M. Matheswaran	Polymer blend ultrafiltration for waste water treatment application	-	-	Second International Conference on Natural Polymers and Biomaterials (ICNP – 2010)	Kottayam, Kerala	24th – 26th Sep 2010
Dr. M. Matheswaran	Evaluation of Aeration Systems for Effluents of Different Organic Load	-	-	International Congress on Bioprocesses in Food Industries organized by ICBF – BRSI	Osmania University, Hyderabad	6-8th Nov 2008

(C) Books & Monographs

Author(s)	Title of Book/Monograph	Name of Publishers	Year of Publication	ISSN/ISBN Number
M. Matheswaran	Mediated Electrochemical Oxidation Process for organic mineralization: Studies on Electo-oxidation of Ce(III), Ag(I) and Co(II) for Phenol Destruction	VDM Verlag Dr. Müller Publisher	2010	978-3639258035