

Dr.M.Matheswaran Publications

Publication Details	Year of Publication
Influence of Nickel Molybdate Nanocatalyst for Enhancing Biohydrogen Production IN Microbial Electrolysis Cell Utilizing Sugar Industrial Effluent T Jayabalan, M Matheswaran, TK Radhakrishnan, SN Mohamed Bioresource Technology, 124284	2020
Bioelectricity generation using iron (II) molybdate nanocatalyst coated anode during treatment of sugar wastewater in microbial fuel cell SN Mohamed, N Thomas, J Tamilmani, T Boobalan, M Matheswaran, ... Fuel 277, 118119	2020
Unique Nonenzymatic Glucose Sensor Using a Hollow-Shelled Triple Oxide Mn–Cu–Al Nanocomposite NI Chandrasekaran, M Matheswaran ACS omega 5 (37), 23502-23509	2020
Electrochemical activity of 3D hairy hollow sphered Mn-Cu-Al layered hydroxide nanocomposites: A short survey on glucose analyte NI Chandrasekaran, M Matheswaran Asia-Pacific Journal of Chemical Engineering 15 (5), e2525	2020
Simultaneous biohydrogen production with distillery wastewater treatment using modified microbial electrolysis cell N Samsudeen, J Spurgeon, M Matheswaran, J Satyavolu International Journal of Hydrogen Energy 45 (36), 18266-18274	2020
Enhanced biohydrogen production from sugar industry effluent using nickel oxide and cobalt oxide as cathode nanocatalysts in microbial electrolysis cell T Jayabalan, S Naina Mohamed, M Matheswaran, TK Radhakrishnan, ... International Journal of Energy Research	2020
NiCo ₂ O ₄ -graphene nanocomposites in sugar industry wastewater fed microbial electrolysis cell for enhanced biohydrogen production T Jayabalan, M Matheswaran, SN Mohammed Renewable Energy	2020
Enhancing biohydrogen production from sugar industry wastewater using metal oxide/graphene nanocomposite catalysts in microbial electrolysis cell T Jayabalan, M Matheswaran, V Preethi, SN Mohamed International Journal of Hydrogen Energy 45 (13), 7647-7655	2020
Immobilization of xylose reductase enzyme on cysteine-functionalized Murraya	2020

<p>koenigii mediated magnetite nanoparticles H Muthukumar, S Malla, M Matheswaran, SN Gummadi Materials Letters 261, 127125</p>	
<p>Microbial electrolysis cells for converting wastes to biohydrogen SN Mohamed, M Matheswaran, T Jayabalan Biovalorisation of Wastes to Renewable Chemicals and Biofuels, 287-301</p>	2020
<p>3 Core-Shell Nanomaterials for Supercapacitors NI Chandrasekaran, M Matheswaran Morphology Design Paradigms for Supercapacitors, 59-85</p>	2019
<p>Spiny amaranth leaf extract mediated iron oxide nanoparticles: biocidal photocatalytic propensity, stability, dissolubility and reusability M Harshiny, S AiswaryaDevi, M Matheswaran Biocatalysis and Agricultural Biotechnology 21, 101296</p>	2019
<p>Electrospinning of Fe-doped ZnO nanoparticles incorporated polyvinyl alcohol nanofibers for its antibacterial treatment and cytotoxic studies AD Sekar, V Kumar, H Muthukumar, P Gopinath, M Matheswaran European Polymer Journal 118, 27-35</p>	2019
<p>Biohydrogen production from sugar industry effluents using nickel based electrode materials in microbial electrolysis cell T Jayabalan, M Matheswaran, SN Mohammed International Journal of Hydrogen Energy 44 (32), 17381-17388</p>	2019
<p>Enhancing power generation and treatment of dairy waste water in microbial fuel cell using Cu-doped iron oxide nanoparticles decorated anode AD Sekar, T Jayabalan, H Muthukumar, NI Chandrasekaran, ... Energy 172, 173-180</p>	2019
<p>Investigation of photoelectrochemical activity of cobalt tin sulfide synthesized via microwave-assisted and solvothermal process I Raman, NI Chandrasekaran, A Pugazhendhi, M Matheswaran Journal of Alloys and Compounds 778, 496-506</p>	2019
<p>Effect of iron doped Zinc oxide nanoparticles coating in the anode on current generation in microbial electrochemical cells H Muthukumar, SN Mohammed, NI Chandrasekaran, AD Sekar, ... International Journal of Hydrogen Energy 44 (4), 2407-2416</p>	2019
<p>Review on cultivation and thermochemical conversion of microalgae to fuels and chemicals: process evaluation and knowledge gaps T Mathimani, A Baldinelli, K Rajendran, D Prabakar, M Matheswaran, ... Journal of cleaner production 208, 1053-1064</p>	2019

<p>Photocatalytic performance and antibacterial activity of visible light driven silver iodide anchored on Graphitic-C3N4 binary composite</p> <p>P Murugesan, S Narayanan, M Matheswaran</p> <p>Environmental nanotechnology, monitoring & management 10, 253-263</p>	2018
<p>High-performance asymmetric supercapacitor from nanostructured tin nickel sulfide (SnNi2S4) synthesized via microwave-assisted technique</p> <p>NI Chandrasekaran, H Muthukumar, AD Sekar, A Pugazhendhi, ...</p> <p>Journal of Molecular Liquids 266, 649-657</p>	2018
<p>A direct Z-scheme plasmonic AgCl@ g-C3N4 heterojunction photocatalyst with superior visible light CO2 reduction in aqueous medium</p> <p>P Murugesan, S Narayanan, M Manickam, PK Murugesan, R Subbiah</p> <p>Applied Surface Science 450, 516-526</p>	2018
<p>Photocatalytic degradation of naphthalene using calcined FeZnO/PVA nanofibers</p> <p>AD Sekar, H Muthukumar, NI Chandrasekaran, M Matheswaran</p> <p>Chemosphere 205, 610-617</p>	2018
<p>Enhancement of bioelectricity generation from treatment of distillery wastewater using microbial fuel cell</p> <p>S Naina Mohamed, R Thota Karunakaran, M Manickam</p> <p>Environmental Progress & Sustainable Energy 37 (2), 663-668</p>	2018
<p>Strategy for Multifunctional Hollow Shelled Triple Oxide Mn–Cu–Al Nanocomposite Synthesis via Microwave-Assisted Technique</p> <p>NI Chandrasekaran, M Kumari, H Muthukumar, M Matheswaran</p> <p>ACS Sustainable Chemistry & Engineering 6 (1), 1009-1021</p>	2018
<p>Role of nanofibers in bioremediation</p> <p>SA Devi, M Harshiny, M Matheswaran</p> <p>Bioremediation: applications for environmental protection and management, 99-114</p>	2018
<p>Bioremediation of Industrial Wastewater Using Bioelectrochemical Treatment</p> <p>N Samsudeen, M Matheswaran</p> <p>Bioremediation: Applications for Environmental Protection and Management ...</p>	2018
<p>Structural, optical and photocatalytic properties of visible light driven zinc oxide hybridized two-dimensional π-conjugated polymeric g-C3N4 composite</p> <p>P Murugesan, N Girichandran, S Narayanan, M Manickam</p> <p>Optical Materials 75, 431-441</p>	2018
<p>Experimental studies on photocatalytic reduction of CO2 using AgBr decorated g-C3N4 composite in TEA mediated system</p>	2017

P Murugesan, S Narayanan, M Manickam Journal of CO2 Utilization 22, 250-261	
Strategy of metal iron doping and green-mediated ZnO nanoparticles: dissolubility, antibacterial and cytotoxic traits S Aiswarya Devi, M Harshiny, S Udaykumar, P Gopinath, M Matheswaran Toxicology research 6 (6), 854-865	2017
Mesoporous hollow MnCuAl layered triple hydroxides nanocomposite synthesized via microwave assisted technique for symmetrical supercapacitor NI Chandrasekaran, M Manickam International Journal of Hydrogen Energy 42 (42), 26475-26487	2017
Biosynthesized FeO nanoparticles coated carbon anode for improving the performance of microbial fuel cell M Harshiny, N Samsudeen, RJ Kameswara, M Matheswaran International Journal of Hydrogen Energy 42 (42), 26488-26495	2017
Hollow nickel-aluminium-manganese layered triple hydroxide nanospheres with tunable architecture for supercapacitor application NI Chandrasekaran, H Muthukumar, AD Sekar, M Manickam Materials Chemistry and Physics 195, 247-258	2017
Facile biosynthesis of ZnO and iron doped ZnO nano-catalyst: physicochemical traits and multifunctional applications H Muthukumar, S Pichiah, KH Leong, SA Devi, M Manickam Journal of Bionanoscience 11 (2), 114-122	2017
Biogenic synthesis of nano-biomaterial for toxic naphthalene photocatalytic degradation optimization and kinetics studies H Muthukumar, A Gire, M Kumari, M Manickam International Biodeterioration & Biodegradation 119, 587-594	2017
Iron oxide nano-material: physicochemical traits and in vitro antibacterial propensity against multidrug resistant bacteria H Muthukumar, NI Chandrasekaran, SN Mohammed, S Pichiah, ... Journal of Industrial and Engineering Chemistry 45, 121-130	2017
Effect of isolated bacterial strains from distillery wastewater on power generation in microbial fuel cell N Samsudeen, TK Radhakrishnan, M Matheswaran Process Biochemistry 51 (11), 1876-1884	2016
Electrochemical treatment of simulated sugar industrial effluent: optimization and modeling using a response surface methodology P Asaithambi, M Matheswaran	2016

Arabian Journal of Chemistry 9, S981-S987	
Performance of microbial fuel cell using chemically synthesized activated carbon coated anode N Samsudeen, S Chavan, TK Radhakrishnan, M Matheswaran Journal of Renewable and Sustainable Energy 8 (4), 044301	2016
<i>Amaranthus spinosus</i> Leaf Extract Mediated FeO Nanoparticles: Physicochemical Traits, Photocatalytic and Antioxidant Activity H Muthukumar, M Matheswaran ACS Sustainable Chemistry & Engineering 3 (12), 3149-3156	2015
Biogenic synthesis of iron nanoparticles using <i>Amaranthus dubius</i> leaf extract as a reducing agent M Harshiny, CN Iswarya, M Matheswaran Powder technology 286, 744-749	2015
Bioelectricity production from microbial fuel cell using mixed bacterial culture isolated from distillery wastewater N Samsudeen, TK Radhakrishnan, M Matheswaran Bioresource technology 195, 242-247	2015
Enhancement of antibacterial properties of silver nanoparticles–ceftriaxone conjugate through <i>Mukia maderaspatana</i> leaf extract mediated synthesis M Harshiny, M Matheswaran, G Arthanareeswaran, S Kumaran, ... Ecotoxicology and environmental safety 121, 135-141	2015
Performance investigation of multi-chamber microbial fuel cell: An alternative approach for scale up system N Samsudeen, A Sharma, TK Radhakrishnan, M Matheswaran Journal of Renewable and Sustainable Energy 7 (4), 043101	2015
Comparison of treatment and energy efficiency of advanced oxidation processes for the distillery wastewater P Asaithambi, R Saravanathamizhan, M Matheswaran International journal of environmental science and technology 12 (7), 2213-2220	2015
Kinetics studies of catalytic ozonation of distillery effluent P Asaithambi, R Saravanathamizhan, M Matheswaran Desalination and Water Treatment 54 (12), 3470-3476	2015
Performance comparison of triple and dual chamber microbial fuel cell using distillery wastewater as a substrate N Samsudeen, TK Radhakrishnan, M Matheswaran Environmental Progress & Sustainable Energy 34 (2), 589-594	2015

<p>One of the ongoing challenges in the management of CRS is determining the optimal diagnostic method.</p> <p>PH Hwang</p> <p>International forum of allergy & rhinology 5 (1), 1</p>	2015
<p>Intimate coupling of electro and biooxidation of tannery wastewater</p> <p>S Kanagasabi, YL Kang, M Manickam, S Ibrahim, S Pichiah</p> <p>Desalination and Water Treatment 51 (34-36), 6617-6623</p>	2013
<p>Studies on various mode of electrochemical reactor operation for the treatment of distillery effluent</p> <p>M Susree, P Asaithambi, R Saravanathamizhan, M Matheswaran</p> <p>Journal of Environmental Chemical Engineering 1 (3), 552-558</p>	2013
<p>Comparison of anodic metabolisms in bioelectricity production during treatment of dairy wastewater in Microbial Fuel Cell</p> <p>E Elakkiya, M Matheswaran</p> <p>Bioresource technology 136, 407-412</p>	2013
<p>Photocatalytic colour and COD removal in the distillery effluent by solar radiation</p> <p>MN Vineetha, M Matheswaran, KN Sheeba</p> <p>Solar Energy 91, 368-373</p>	2013
<p>Adsorption of mercury (II) ion from aqueous solution using low-cost activated carbon prepared from mango kernel</p> <p>A Somayajula, AA Aziz, P Saravanan, M Matheswaran</p> <p>Asia-Pacific Journal of Chemical Engineering 8 (1), 1-10</p>	2013
<p>Responses of surface modeling and optimization of Brilliant Green adsorption by adsorbent prepared from Citrus limetta peel</p> <p>P Sudamalla, S Pichiah, M Manickam</p> <p>Desalination and Water Treatment 50 (1-3), 367-375</p>	2012
<p>Ozone assisted electrocoagulation for the treatment of distillery effluent</p> <p>P Asaithambi, M Susree, R Saravanathamizhan, M Matheswaran</p> <p>Desalination 297, 1-7</p>	2012
<p>Sonoelectrochemical oxidation for decolorization of Reactive Red 195</p> <p>A Somayajula, P Asaithambi, M Susree, M Matheswaran</p> <p>Ultrasonics sonochemistry 19 (4), 803-811</p>	2012
<p>Visible light improved, photocatalytic activity of magnetically separable titania nanocomposite</p> <p>A Abd Aziz, CK Cheng, S Ibrahim, M Matheswaran, P Saravanan</p> <p>Chemical Engineering Journal 183, 349-356</p>	2012

<p>Influence of experimental parameters in the treatment of distillery effluent by electrochemical oxidation P Asaithambi, L Garlanka, N Anantharaman, M Matheswaran Separation Science and Technology 47 (3), 470-481</p>	2012
<p>Heterogeneous photocatalytic oxidation an effective tool for wastewater treatment—a review CC Kaan, AA Aziz, S Ibrahim, M Matheswaran, P Saravanan Studies on Water Management Issues, 219-236</p>	2012
<p>Optimization of operating parameters using response surface methodology for adsorption of crystal violet by activated carbon prepared from mango kernel P Sudamalla, P Saravanan, M Matheswaran Environ. Res 22 (1), 1-7</p>	2012
<p>Kinetic studies and equilibrium isotherm analyses for the adsorption of Methyl Orange by coal fly ash from aqueous solution M Matheswaran Desalination and Water Treatment 29 (1-3), 241-251</p>	2011
<p>Photocatalytic decolourization of basic green dye by pure and Fe, Co doped TiO₂ under daylight illumination RL Narayana, M Matheswaran, A Abd Aziz, P Saravanan Desalination 269 (1-3), 249-253</p>	2011
<p>Destruction of methylene blue by mediated electrolysis using two-phase system M Matheswaran, T Raju Process Safety and Environmental Protection 88 (5), 350-355</p>	2010
<p>Effects of operating parameters on permeation flux for desalination of sodium chloride solution using air gap membrane distillation M Matheswaran, TO Kwon, J Kim, M Duke, S Gray, IS Moon Desalination and Water Treatment 13 (1-3), 362-368</p>	2010
<p>Influence parameters in the ozonation of phenol wastewater treatment using bubble column reactor under continuous circulation M Matheswaran, IS Moon Journal of Industrial and Engineering Chemistry 15 (3), 287-292</p>	2009
<p>Studies on promising cell performance with H₂SO₄ as the catholyte for electrogeneration of Ag²⁺ from Ag⁺ in HNO₃ anolyte in mediated electrochemical ... KC Pillai, M Matheswaran, SJ Chung, IS Moon Journal of Applied Electrochemistry 39 (1), 23-30</p>	2009
<p>Mediated electrochemical oxidation of phenol in continuous feeding mode using</p>	2008

<p>Ag (II) and Ce (IV) mediator ions in nitric acid: A comparative study M Matheswaran, S Balaji, SJ Chung, IS Moon Chemical Engineering Journal 144 (1), 28-34</p>	
<p>Determination of overall kinetic constants for mediated electrochemical oxidation of phenol from CO₂ measurements S Balaji, M Matheswaran, SJ Chung, VV Kokovkin, IS Moon Kinetics and Catalysis 49 (5), 621-625</p>	2008
<p>Cobalt (III)-mediated oxidative destruction of phenol using divided electrochemical cell M Matheswaran, SJ Chung, IS Moon Korean Journal of Chemical Engineering 25 (5), 1031-1035</p>	2008
<p>Destruction of organic pollutants by cerium (IV) MEO process: A study on the influence of process conditions for EDTA mineralization S Balaji, SJ Chung, M Matheswaran, KV Vasilivich, IS Moon Journal of hazardous materials 150 (3), 596-603</p>	2008
<p>1P-190: Desalination of Sodium Chloride Solution using Membrane Distillation M Matheswaran 한국공업화학회 연구논문 초록집 2008, 150-150</p>	2008
<p>Silver ion catalyzed cerium (IV) mediated electrochemical oxidation of phenol in nitric acid medium M Matheswaran, S Balaji, SJ Chung, IS Moon Electrochimica acta 53 (4), 1897-1901</p>	2007
<p>Cerium (IV)-mediated electrochemical oxidation process for destruction of organic pollutants in a batch and a continuous flow reactor S Balaji, SJ Chung, M Matheswaran, IS Moon Korean Journal of Chemical Engineering 24 (6), 1009-1016</p>	2007
<p>Studies on cerium oxidation in catalytic ozonation process: A novel approach for organic mineralization M Matheswaran, S Balaji, SJ Chung, IS Moon Catalysis Communications 8 (10), 1497-1501</p>	2007
<p>Electrochemical cell current requirements for toxic organic waste destruction in Ce (IV)-mediated electrochemical oxidation process VV Kokovkin, SJ Chung, S Balaji, M Matheswaran, IS Moon Korean Journal of Chemical Engineering 24 (5), 749-756</p>	2007
<p>Mineralization of phenol by Ce (IV)-mediated electrochemical oxidation in methanesulphonic acid medium: A preliminary study M Matheswaran, S Balaji, SJ Chung, IS Moon</p>	2007

Chemosphere 69 (2), 325-331	
<p>Application of several advanced oxidation processes for the destruction of terephthalic acid (TPA)</p> <p>R Thiruvengkatachari, TO Kwon, JC Jun, S Balaji, M Matheswaran, ...</p> <p>Journal of hazardous materials 142 (1-2), 308-314</p>	2007
<p>Investigation of electrochemical cell current requirements for toxic organic waste destruction in Ce (IV)-MEO process</p> <p>VV Kokovkin, SJ Chung, S Balaji, M Matheswaran, IS Moon</p> <p>Korean J. Chem. Eng 25 (5)</p>	2007
<p>Adsorption of Chrysoidine R by using fly ash in batch process</p> <p>TK Manickam Matheswaran</p> <p>Journal of Hazardous Materials 145, 154–161</p>	2007
<p>Disinfection and oxidation-Preliminary studies using hybrid mediated electrochemical oxidation (HMEO) for the removal of persistent organic pollutants (POPs)</p> <p>SJ Chung, S Balaji, M Matheswaran, T Ramesh, IS Moon</p> <p>Water Science and Technology 55 (1), 261</p>	2007
<p>Electro-oxidation kinetics of cerium (III) in nitric acid using divided electrochemical cell for application in the mediated electrochemical oxidation of phenol</p> <p>M Matheswaran, S Balaji, SJ Chung, IS Moon</p> <p>Bulletin of the Korean Chemical Society 28 (8), 1329-1334</p>	2007
<p>Factors affecting flux and water separation performance in air gap membrane distillation</p> <p>M Matheswaran, TO Kwon, JW Kim, IS Moon</p> <p>Journal of Industrial and Engineering Chemistry 13 (6), 965-970</p>	2007
<p>Preliminary studies using hybrid mediated electrochemical oxidation (HMEO) for the removal of persistent organic pollutants (POPs)</p> <p>SJ Chung, S Balaji, M Matheswaran, T Ramesh, IS Moon</p> <p>Water science and technology 55 (1-2), 261-266</p>	2007
<p>Silver-mediated electrochemical oxidation: Production of silver (II) in nitric acid medium and in situ destruction of phenol in semi-batch process</p> <p>M Matheswaran, S Balaji, SJ Chung, IS Moon</p> <p>Journal of Industrial and Engineering Chemistry 13 (2), 231-236</p>	2007