



Dr. KUMARASAMY MURUGESAN

Professor & Head

Department of Environmental Science

Periyar University, Periyar Palkalai Nagar, Salem- 636011

Email: murugesan@periyaruniversity.ac.in; kmurugesan@gmail.com

Contact: 9789934228

EDUCATION

1998-2003	Ph.D.	Environmental Microbiology (Botany), University of Madras
1996-1997	M.Phil.	Molecular Plant Pathology (Botany), University of Madras
1993-1995	M.Sc.	Botany, University of Madras
1990-1993	B.Sc.	Botany, University of Madras

PROFESSIONAL HISTORY

Year	Position	Institution
2014 - present	Professor	Department of Environmental Science, Periyar University
2012 - 2014	Research Associate	Applied Research Center for Perl River Delta Environment (ARCPE), Hong Kong Baptist University, Hong Kong
2011 - 2012	Research Associate Professor	School of Environmental Science and Engineering, POSTECH, South Korea
2007 - 2011	Research Assistant Professor	School of Environmental Science and Engineering, POSTECH, South Korea
2003 - 2007	Postdoctoral Researcher	School of Environmental Science and Engineering, POSTECH, South Korea
2002	Senior Research Fellow	Centre for Advanced Studies in Botany, University of Madras

DOCTORAL THESIS

Studies on production, purification and characterization and crystallization of laccase from a white rot fungus *Pleurotussajor-caju* and its application in bioremediation of textile dye effluent and dye contaminated soils.

RESEARCH INTERESTS

- Nano-Bio composite catalysts for environmental applications
- Green synthesis and applications of biopolymers
- Lignocellulolytic enzymes production and applications
- Wastewater treatment and sludge dewatering
- Organic waste recycling and management
- Microbial Biofloculants

RESEARCH PUBLICATIONS

Publication type	No	Citation Report	
Peer Reviewed Journal Publications	42	Total citations	989
Conference Proceedings/Abstracts	32	h-index	19
Book Chapter	1	i10-index	22
Patent	1	Total Impact Factor	123.847

<http://scholar.google.co.in/citations?user=MvAgK2oAAAAJ&hl=en>

https://www.researchgate.net/profile/Kumarasamy_Murugesan/contributions?ev=prf_act

COUNTRIES VISITED FOR RESEARCH/SCIENTIFIC MEETINGS

South Korea	Japan	Malaysia
USA	Singapore	Taiwan

RESEARCH COLLABORATORS

Prof. Yoon-Seok Chang	School of Environmental Science and Engineering, POSTECH, Pohang, South Korea
Prof. Jonathan Wong	Applied Research Centre for Pearl River Delta Environment, Hong Kong Baptist University, Hong Kong
Prof. Abdull Rahim bin MohdYusoff	Institute of Environment and Water Resource Management, University Teknologi Malaysia
Prof. PeriasamyAnbu	Department of Bioengineering, Inha University, South Korea
Dr. In-Hyun Nam	Korea Institute of Geoscience and Mineral Resources (KIGAM), KIGAM, Daejeon, South Korea

SELECTED PUBLICATIONS

S. No.	Year	Details of the Publications
1	2015	Wong, J.W.C. Zhou, J., Kurade, M.B., Murugesan, K. , Influence of ferrous ions on extracellular polymeric substances content and sludge dewaterability during bioleaching. <i>Bioresource Technology</i> ,179: 78-83.– Impact Factor 5.039
2	2014	Ravindran, B., Wong, J.W.C., Selvam, A., Murugesan, K. , Mohanapriya, D., Sekaran, G. Influence of fermented tannery solid waste on morphological, biochemical characteristics and yield of tomato. <i>Environmental Science and Pollution Research</i> (online). Impact Factor - 2.757 http://link.springer.com/article/10.1007/s11356-014-3629-6#page-1
3	2014	Murugesan, K. , Ravindran, B., Selvam, A., Kurade, M.B., Yu, S.-M., Wong, J.W.C. Enhanced dewaterability of anaerobically digested sewage sludge using Acidithiobacillus ferrooxidans culture as sludge conditioner. <i>Bioresource Technology</i> , 169: 374-379.Impact Factor 5.039
4	2014	Murugesan, K. , Selvam, A., Yu, S.-M., Wong, J.W.C. Flocculation and dewaterability of chemically enhanced primary treatment sludge by bioaugmentation with filamentous fungi. <i>Bioresource Technology</i> , 168: 198-203.Impact Factor 5.039
5	2014	Thao, L.T., Murugesan, K. , Kim, E.J., Chang, Y.S. Effects of inorganic nanoparticles on viability and catabolic activities of Agrobacterium sp. PH-08 during biodegradation of dibenzofuran. <i>Biodegradation</i> ,116(3), 542–553.Impact Factor 2.492
6	2014	Thao, L.T., Murugesan, K. , Jeon, J.R., Chang, Y.S. Degradation of dibenzofuran via multiple dioxygenation by a newly isolated Agrobacterium sp. PH-08. <i>Journal of Applied Microbiology</i> ,116(3), 542–553. Impact Factor 2.386
7	2013	Jeon, J.R., Murugesan, K. , Nam, I.H., Chang, Y.S. Coupling microbial catabolic actions with abiotic redox processes: A new recipe for persistent organic pollutant (POP) removal: Review Article. <i>Biotechnology Advances</i> , 31: 246-256.Impact Factor 8.905
8	2012	Kim, Y.M., Murugesan, K. , Chang, Y.Y., Jeon, J.R., Kim, E.J., Chang, Y.S. Degradation of polybrominated diphenyl ethers by a sequential treatment with nanoscale zero valent iron and aerobic biodegradation. <i>Journal of Chemical Technology and Biotechnology</i> ,87: 216-224.Impact Factor 2.494
9	2012	Bokare, V., Murugesan, K., Kim, J.H., Kim, E.J., Chang, Y.S. 2012. Integrated hybrid treatment for the remediation of 2,3,7,8-tetrachlorodibenzo- <i>p</i> -dioxin. <i>Science of the Total Environment</i> , 435-436: 563-566.Impact Factor 3.163
10	2012	Jeon, J.R., Baldrian, P., Murugesan, K. , Chang, Y.S. Mini-Review:Laccase-catalysed oxidations of naturally occurring phenols: from <i>in vivo</i> biosynthetic pathways to green synthetic applications. <i>Microbial Biotechnology</i> , 5: 318–332.Impact Factor 2.214
11	2012	Nam, I.H., Kim, Y.M., Murugesan, K. , Chang, Y.S. A catabolic activity of <i>Sphingomonas wittichii</i> RW1 in the biotransformation of Carbazole. <i>Water, Air, & Soil Pollution</i> , 223: 943-949.Impact Factor 1.685
12	2011	Murugesan, K. , Bokare, V., Jeon, J.R., Kim, E.J., Kim, J.H., Chang, Y.S. Effect of Fe-Pd bimetallic nanoparticles on <i>Sphingomonas</i> sp. PH-07 and a nano-bio hybrid process for triclosan degradation. <i>Bioresource Technology</i> ,102: 6019-6025.
13	2011	Kim, Y.M., Murugesan, K. , Schmidt, S., Bokare, V., Jeon, J.R., Kim, E.J., Chang, Y.S. Triclosan susceptibility and co-metabolism – a comparison for three aerobic pollutant-degrading bacteria. <i>Bioresource Technology</i> , 102: 2206-2212.Impact Factor 5.039

14	2010	Bokare, V., Murugesan, K. , Kim, Y.M., Jeon, J.R., Kim, E.J., Chang, Y.S. Degradation of triclosan by an integrated nano-bio redox process. Bioresource Technology , 101: 6354-6360. Impact Factor 5.039
15	2010	Kim, E.J., Jeon, J.R., Kim, Y.M., Murugesan, K. , Chang, Y.S. Mineralization and transformation of monofluorophenols by <i>Pseudonocardia benzenivorans</i> . Applied Microbiology and Biotechnology , 87: 1569-1577 Springer; Germany ISSN: 0175-7598. Impact Factor 3.811
16	2010	Murugesan, K. , Chang, Y.Y., Kim, Y.M., Jeon, J.R., Kim, E.J., Chang, Y.S. Enhanced transformation of triclosan by laccase in the presence of redox mediators. Water Research , 44: 298-308. Impact Factor 5.323
17	2010	Jeon, J.R., Kim, E.J., Murugesan, K. , Park, H.K., Kim, Y.M., Kwon, J.K., Kim, W.G., Lee, J.Y., Chang, Y.S. Laccase-catalysed polymeric dye synthesis from plant-derived phenols for potential application in hair dyeing: Enzymatic colourations driven by homo- or hetero-polymer synthesis. Microbial Biotechnology , 3: 324-335. Impact Factor 3.214
18	2009	Jeon, J.R., Kim, Y.M., Kim, E.J., Murugesan, K. , Kim, J.W., Chang, Y.S. Use of grape seed and its natural polyphenol extracts as natural organic coagulant for removal of cationic dyes. Chemosphere . 77: (8), 1090-1098. Impact Factor 3.499
19	2009	Murugesan, K. , Kim, Y.M., Jeon, J.R., Chang, Y.S. Effect of heavy metals on decolorization of reactive dyes by laccase from <i>Ganoderma lucidum</i> . Journal of Hazardous Materials , 168: 523-529. Impact Factor 4.331
20	2009	Murugesan, K. , Yang, I.H., Kim, Y.M., Jeon, J.R., Chang, Y.S. Enhanced transformation of malachite green by laccase from <i>Ganoderma lucidum</i> in the presence of natural phenolic compounds Applied Microbiology and Biotechnology , 82: 341-350. Impact Factor 3.811
21	2008	Kim, Y.M., Jeon, J.R., Murugesan, K. , Kim, E.J., Chang, Y.S. Biodegradation of 1,4-dioxane and transformation of related cyclic compounds by pure bacterial culture, <i>Mycobacterium</i> sp. PH-06. Biodegradation , 20: 511-519; Impact Factor 2.492
22	2008	Jeon, J.R., Murugesan, K. , Kim, Y.M., Kim, E.J., Chang, Y.S. Synergistic effect of laccase mediators on removal of pentachlorophenol. Applied Microbiology and Biotechnology , 81: 783-790. Impact Factor 3.811
23	2008	Nam, I.H., Kim, Y.M., Murugesan, K. , Jeon, J.R., Chang, Y.Y. Chang, Y.S. Bioremediation of PCDD/Fs-contaminated municipal solid waste incinerator fly ash by a potent microbial biocatalyst. Journal of Hazardous Materials , 157: 114-121 Impact Factor 4.331
24	2007	Murugesan, K. , Nam, I.H., Kim, Y.M., Chang, Y.S. Decolourization of reactive dyes by a thermostable laccase produced by <i>Ganoderma lucidum</i> in solid state culture. Enzyme and Microbial Technology , 40: 1662-1672 Impact Factor 2.966
25	2007	Murugesan, K. , Dhamija, A., Nam, I.H., Kim, Y.M., Chang, Y.S. Decolourization of reactive black 5 by laccase: Optimization by response surface methodology. Dyes and Pigments . 75: 176-184. Impact Factor 3.468
26	2007	Kim, Y.M., Nam, I.H., Murugesan, K. , Schmidt, S., Crowley, D.E., Chang, Y.S. Biodegradation of diphenyl ether and transformation of selected brominated congeners by <i>Sphingomonas</i> sp. PH-07. Applied Microbiology and Biotechnology , 77: 187-194. Impact Factor 3.811
27	2006	Murugesan, K. , Arulmani, M., Nam, I.H., Kim, Y.M., Chang, Y.S., Kalaichelvan, P.T. Purification and characterization of laccase produced by a white rot fungus <i>Pleurotussajor-caju</i> under submerged culture condition and its potential in decolourization of azo dyes. Applied Microbiology and Biotechnology , 72: 939-946. Impact Factor 3.811

28	2005	Nam I.H., Hong, H.B., Kim, Y.M., Kim, B.Y., Murugesan, K. , Chang, Y.S. Biological removal of polychlorinated dibenzo- <i>p</i> -dioxins in incinerator fly ash by <i>Sphingomonas wittichii</i> RW1. Water Research , 39: 4651-4660. Impact Factor 5.323
29	2004	Hong, H.B., Nam, I.H., Murugesan, K. , Kim, Y.M., Chang, Y.S. Biodegradation of dibenzo- <i>p</i> -dioxin, dibenzofuran, chlorodibenzo- <i>p</i> -dioxins by <i>Pseudomonas veronii</i> PH-03. Biodegradation , 15: 303-313. Impact Factor 2.492

BOOK CHAPTER

S.No	Year of Publication	Details of author(s), title of the book chapter, name of the book & publisher
01	2007	Murugesan, K. , Chang, Y.S. Recent Advancements in Microbial Biodegradation of Dioxins In: Leading-Edge Environmental Biodegradation Research , Editors: Lyman E. Pawley. Nova Science Publishers, NY, USA. pp. 131-166.

PATENTS

S.No	Year of Award	Title of Patent, Patent number and Country
01	2010	Chang, Y.S., Jeon J.R., Murugesan, K. , Kim, J.H. Process for recalcitrant cationic dyeing wastewaters treatment using grape seed extract and plant-derived polyphenols. Patent No: 10-2010-0027350, 2010-03-26; South Korea

INVITED LECTURE

01. Microbial Degradation of Dioxins. Delivered at Periyar University, Tamil Nadu, India.
<http://www.hindu.com/2008/10/29/stories/2008102954180500.htm>