

LOYOLA INSTITUTE OF FRONTIER ENERGY

I. PAPERS PUBLISHED (INTERNATIONAL JOURNAL)

S.No. Publication Details (Accepted for publication during the period, March 2006 to February 2007 Only)

- 1 M. Selvanayagam and Francis P. Xavier S.J (2006), Disaster preparedness – a holistic approach. National seminar an Recent Development in Disaster management: Indian perspective.
- 2 S. Subash Kumar, K. Antony Jeya Kumar and M. Selvanayagam (2006), The coral needs and its importance in Disaster management. National seminar on recent
3. Antony Jeyakumar, S. Subash Kumar and M. Selvanayagam (2006), Importance of coastal mangroves in National Disaster National seminar on Recent Development in Disaster management: Indian Prospective

II. PAPERS PUBLISHED (NATIONAL JOURNAL)

Sl. No. Publications in National Journals

- 1 Francis P. Xavier S.J, Education for the Marginalized, In Chris to 44 (3) 2006, 202-212
- 2 Francis P. Xavier S.J, Jesuits and Higher Education – A global view, IGNIS XXXV (IV) 2006, 5 –19
- 3 Francis P. Xavier S.J, The inner enables the confer: Towards Quality Education, In Chris to 45(1) 207, 54-73
- 4 M. Selvanayagam, (2006), “Energy crisis, Resources and Environment – A cross cultural Introduction to Bro ethics” Eubios Ethics Institute pp. 78-84.
- 5 M. Selvanayagam, Loganathan K, B. Velmurugan and J.H. Howerlia, Bharat B. Patnaik, (2006), Zinc induced histological changes in brain and live of labes rothita J. Env. Bio. 27(1)
- 6 Velmurugan B. T. Ambrose and M. Selvanayagam.(2006), Genotoxic evaluation of Lambda – cyhalothrine in mystus gulio J. Env. Bir 27(2), 247-250
- 7 Mary Josephine Rami and M. Selvanayagam.(2007) ‘ Bio shied in Disaster management sea hand people. ICMTE pp 185 -187.
- 8 P.J. Thomas, P. Suresh, S. Jananhanan and S. Vincent, 2006. Variability of intron sequences of metallothionein genes. *Bioinfarmatics India*, 3 (2): 17-19.
- 9 S. Athikesavan, S. Vincent T. Ambrose and B. Velmurugan. 2006. Nickel histopathological changes in the different tissues of freshwater fish Hypophthalmichthys molitrix (Valenciennes). J. Environ. BioI., 27(2), 391-395.

- 10 S. Athikesavan, S. Vincent and B. Velmurugan. 2006. Accumulation of nickel in the different tissues of silver carp (*Hypophthalmichthys molitrix*). *Environment & Ecology.*, 24S (1): 143-146.
- 11 S. Athikesavan, S. Vincent, B. Velmurugan and S. Jananhanana. 2006. Impact of nickel and zinc on protein profile of the silver carp, *Hypophthalmichthys molitrix*. *AsianJ. Microbiol. Biotech. Environ. Sci.*, 8(1): 147-149.
- 12 S. Athikesavan, S. Vincent and B. Velmurugan. 2006. Accumulation of zinc in the different tissues of silver carp, *Hypophthalmichthys molitrix*. *Pollution Research*, 25 (1): 47-49.
- 13 S. Athikesavan, S. Vincent and B. Velmurugan.. 2006. Investigation of acute toxicity of zinc sulphate in silver carp (*Hypophthalmichthys molitrix*) *Aquacult*, 7 (2), 323-325.
- 14 S. Athikesavan, S. Vincent and B. Velmurugan. 2006. Investigation of acute toxicity of nickel chloride on (*Hypophthalmichthys molitrix*) *J. Natcon.*, 18(2), 239- 246.
- 15 S. Athikesavan, S. Vincent, and B. Velmurugan. 2006. Investigation of acute toxicity of nickel chloride on (*Hypophthalmichthys molitrix*) *J Natcan.*, (Accepted. Vol. 18(1).
- 16 S. Athikesavan, S. Vincent and B. Velmurugan. Investigation of acute toxicity of zinc sulphate in silver carp (*Hypophthalmichthys molitrix*) *Aquacult*, (Accepted. Vol. 7 (2), 323-325 (2006).
- 17 S. Athikesavan, S. Vincent and B. Velmurugan. 2006. Histopathological effects of zinc sulphate on gill, liver, intestine and kidney tissues of *Hypophthalmichthys molitrix*. 1. *J. Environ. Toxicol.* , (Communicated. MS. No: 537).
- 18 P.Antony Premkumar, Arup Dasgupta, P.Kuppusamy, P.Parameswaran, C.Mallika, K.S.Nagaraja, V.S.Raghunathan, Synthesis and characterization of Ni and Ni/CrN Nano composite coatings by plasma assisted metal-organic CVD *Chern. Vap. Deposition* 12(2006) 39-46
- 19 Suman Pokhrel, K.S. Nagaraja, Vapor pressure measurements of chromium dithiocarbamates, *Materials Letters* 60 (2006) 621-625
- 20 Arup Dasgupta, P. Antony Premkumar, Felix Lawrence, L. Houben, P. Kuppusami M. Luysberg, K.S. Nagaraja , V.S. Raghunathan Microstructure of thick chromium...nitride coating synthesized using plasma assisted MOCVD technique, *Surface & Coatings Technology* 201 (2006) 1401-1408
- 21 JJudith Vijaya, L.John Kennedy, G.Sekaran, and K.S.Nagaraja, Effect of Sr addition on the humidity sensing properties of CoAl₂O₄ composites, *Sensors & Actuator B*, 2006 (In press)
- 22 K.S.Nagaraja, JJudith Vijaya LJohn Kennedy, G.Sekaran Strontium(II) Added MgAl₂O₄ Composites For Ammonia Detection, *Chemistry Materials Science* 2 (2006) 215-222

- 23 P. Antony Premkumar, P. Kuppasami, Arup Dasgupta, C. Mallika, K.S. Nagaraja, and V.S. Raghunathan, Plasma assisted chemical vapour deposition of Cr coatings using chromium (III) acetylacetonate vapour source, *Materials Letters* 61 (2007) "50-53
- 24 S. Pokhrel and K.S. Nagaraja, Refinement, comparison study and EPR measurements on the molecular structure of NN-diethyldithiocarbamate of Zn(II) and Cd(II), *Cryst. Res Technol.* 41 (2006) 1246-1250
- 25 S. Arockiasamy, O.M. Sreedharan, C. Mallika, V.S. Raghunathan and K.S. Nagaraja, Development, characterisation and rapid evaluation of standard enthalpies of vapourisation and fusion of volatile Bis(N-R-salicylaldimine)nickel(II) (n-R = methyl to pentyl) complexes for its MOCVD application, *Chemical Engineering Science*, 62 (2007), 1703- 1711.
- 26 J. Judith Vijaya, L. John Kennedy, G. Sekaran, B. Jeyaraj and K.S. Nagaraja, Methanol sensing behavior of Strontium(II) added MgAl₂O₄ composites through solid-state electrical conductivity measurements, *Sensors & Transducers* 74 (2006) 855-863
- 27 J. Judith Vijaya, L. John Kennedy, G. Sekaran and K.S. Nagaraja, Synthesis, Characterization and humidity sensing properties of Cu-Sr-Al mixed metal oxide composites, *Materials Research Bulletin*, 2007 (*in Press*)
- 28 J. Judith Vijaya, L. John Kennedy, G. Sekaran and K.S. Nagaraja, Synthesis, characterization and humidity sensing properties of Sr(II)-added BaAl₂O₄ composites *Sensors and Actuators B: Chemical*, 2007 (*In Press*)
- 29 J. Selvakumar, Babu Varghese, V.S. Raghunathan and K.S. Nagaraja, N,N'-Bis(2 hydroxyacetobenzyl)-1,3-diaminopropane, *Acta Cryst. E* 2007 (*Accepted*)
- 30 J. Judith Vijaya, L. John Kennedy, G. Sekaran, B. Jeyaraj and K.S. Nagaraja 'Synthesis, Characterization and Acetone Sensing Properties of Novel Strontium(II)-added ZnAl₂O₄ Composites' *Sensors & Transducers Journal*, 76 (2007) 1008-1017.

III. PAPERS PRESENTED (INTERNATIONAL JOURNAL (OR) NATIONAL JOURNAL)

Sl. No. Details of Papers Presented

- 1 Francis P. Xavier, S.J, 'The inner enables the outer', National workshop on student quality circles, St. Theresa's College for women, (September 26 '06)
- 2 Francis P. Xavier, S.J, 'Science with social relevance', Invited paper during the International conference of Jesuits in science and religion, Pune (January 2, 07)
- 3 V. Manickam, E. Prabhu, V. Jayaraman, K. I. Gnanasekaran, T. Gnanasekaran and K. S. Nagaraja, Gas Sensing properties of Fe₂(MoO₄)₃-Fe₂O₃ composite thick film, Proceedings of 11th National Seminar on Physics and Technology of sensors. (NSPTS), Feb. 2006. (Best paper award)

- 4 S. Arockiasamy: O.M. Sreedharan, C. Mallika, V.S. Raghunathan, K.S. Nagaraja, "Development, characterisation and rapid evaluation of standard enthalpies of vapourisation and fusion of volatile Bis(N-R-salicylaldimine)nickel(II) (n-R = methyl to pentyl) complexes for its MOCVD applications" - July 12 & 13, 2006 at DeptChemistry, IIT Madras, Chennai - 600036
- 5 V. Manickam.. R. Sundaram, B. Jeyaraj and K. S. Nagaraj a, Humidity Dependent Electrical Conductivity Studies on CuIn₂S₃ - IH203 by Synthesis of Combustion Method - July 12 & 13,2006 at Dept.Chemistry, IIT Madras, Chennai - 600036
- 6 J. Judith Vijaya, L.J. Kennedy, G. Sekaran and K.S. Nagaraja "Preparation, characterization and benzene vapor sensing properties of strontium(II) in cobalt aluminate composites" - July 12 & 13, 2006 at Dept.Chemistry, IIT Madras, Chennai 600 036
- 7 M.G. Johnson O.M.Sreedharan and K.S.Nagaraja, "Syntheses, Characterisation, Volatility And Vapor Pressure Measurement Of Bis (N-Alkyl Salicylaldiminato) Copper (Ii) Complexes" - July 12 & 13,2006 at Dept.Chemistry, IIT Madras, Chennai - 600036
- 8 L. Regina Mary, O.M.Sreedharan, I.ohn Pragasam, and K.S. Nagaraja, "Transition Metal Chromites As Humidity Sensors" - July 12 & 13, 2006 at DeptChemistry, IIT Madras, Chennai - 600036
- 9 Mary George, N. Balasubramanian, K.S. Nagaraj a, "An Indirect Method For The Determination Of Hydroxylamine Using Methyl Red" - " - July 12 & 13, 2006 at -DeptChemistry, IIT Madras, Chennai - 600 036
- 10 J.Selvakumar~ Francis P. Xavier, Tom Mathews; V.S. Raghunathan and K.S.Nagaraja, "Preparation and Characterization of Yttrium MOCVD Precursors for SOEC/SOEC Applications". " - July 12 & 13,2006 at DeptChemistry, IIT Madras, Chennai - 600 036
- 11 Maria Mathew, J. Selvakumar, Tom Mathews, V.S. Raghunathan and K.S.Nagaraja, "Synthesis And Characterization of Magnesium Coordination Complexes for MOCVD Applications" — July 12 & 13,2006 at Dept. Chemistry, IIT Madras, Chennai - 600036
- 12 T.S.Arul Jeevan, Francis P. Xavier, Tom Mathews, V.S.Raghunathan and K.S.Nagaraja, "Synthesis and Characterization of Metallo-Organic Complexes of Zirconium for MOCVD Applications"- - July 12 & 13,2006 at DeptChemistry, IIT Madras, Chennai600 036
- 13 N.Shanmugapriya G.Ramarnurthy, and K.S.Nagaraja, "Synthesis And Characterization Of Cobalt(II) And Iron(III) Complexes For MOCVD Applications" - -' July 12 & 13, 2006 at DeptChemistry, IIT Madras, Chennai - 600034
- 14 V. Jesantha Rani, S.Arockiasamy and K.S.Nagaraja, Chelats in Cancer therapy - Ethiraj College, February 2007.

- 15 J. Judith Vijaya, L. John Kennedy, G. Sekaran and K.S. Nagaraj a, Metal aluminates as sensors for volatile organic compounds (VOC) – International Conference on Environmental pollution, Department of Chemistry, Anna University, January 2007.

IV. CONFERENCES / SEMINARS / WORKSHOPS ATTENDED (INTERNATIONAL, NATIONAL & REGIONAL)

S.No. Staff Details Details of Seminars / Conferences Attended

- 1 M. Selvanayagam Recent Development in Disaster Management: An Indian perspective 24-25, November 2006. Seeri vidyasagar College, Seeri, West Bengal
- 2 M. Selvanayagam National Consultation for Practicing and potential community radios operations in India. Organized by the ministry of Information and broad casting. Govt. of India in collaboration with the Un, at Indian Institute of mass communication on 6-7, March 2007.
- 3 S. Vincent “Training the Trainer Programme on Municipal Solid Waste Management” at centre for environmental studies Anna university, Chennai- 600 025 held on 2006.
- 4 S. Vincent Chairman for the State Level debate are whether “Genetically Modified Crop is useful for farmers or Industry” held on 13th Jan 2007 at ICSA Centre, Chennai.
- 5 S. Vincent Chairman “Current Trends in Laboratory Techniques for the diagnosis of Human Viral Infections” held on 25th Jan 2007 at LIVE, Loyola College.

V. CONFERENCES / SEMINARS / WORKSHOPS CONDUCTED (INTERNATIONAL / NATIONAL / REGIONAL)

Sl.No.Details of Seminars / Conferences / Workshops Conducted

- 1 Francis P. Xavier S.J, Nature conference on ‘ Environments Biosensors’, organizing secretary Loyola College, Chenani (gen 11-12-07)
- 2 M. Selvanayagam, Brain storming seminar on multidisciplinary research. Loyola College, December 8th & 9th 2006, org. secretary
- 3 M. Selvanayagam, National conference on Environment Biosensors convener Loyola College, Jan 11-12, 2007
- 4 M. Selvanayagam, Workshop and Training for school teacher and students on environmental Education Loyola College, Chennai, Feb 1-3, 2007. org. sec.
- 5 S. Vincent, A three days Orientation Programme on Environmental Studies for School Teachers (19th - 21st July 2006) at Loyola College, Chennai.
- 6 S. Vincent, International conference on Ecology and Culture: Interdisciplinary Approaches on 18, 19 September 2006 at Loyola College in collaboration with OSLE - India.

- 7 S. Vincent, Awareness Campaign for 'a smokeless bhogi' joined with Environment Minister T.P.M. Mohideen Khan held on Jan 2007.
- 8 S. Vincent, Enviro Club of Loyola "Awareness Campaign on Chikungunya" (22nd August 2006) at Loyola College, Chennai.

VII. DETAILS OF STAFF WHO HAVE BEEN RESOURCE PERSONS

Sl. No.	Staff Name	Nature of the Programme with Date	Topic
1	Francis P. Xavier S.J	Bangalore Orientation for junior faculty	All India Seminar for college teaches (May 26-27 2006)
2	Francis P. Xavier S.J	Teaching methodology and Time Management	Members, lady doake College, Madurai (June 10'06)
3	Francis P. Xavier S.J	Eruru (Sep 26'06)	Student Quality circles, St. Theresa's College for women, Towards Quality Education
4	M. Selvanayagam	Workshop cum training for school Teachers and students on Environment Feb 1-3, 2007.	Biodiversity non Conventional Energy source
5	S. Vincent	Women's Christian College, Chennai.	"Recent Trends in Biotechnology"
6	S. Vincent	Shree Chandraprabhu Jain College, Minjur held on 10th October 2006.	"Bio Mathematics"
7	S. Vincent	Loyola Outreach held on 29th August 2006.	'Awareness on Chikungunya'
8	S. Vincent	Delivered Lectures to the students of Advanced Course in Bioinformatics jointly organized by nCT, CDAC and JNTU on 13th and 14th Sep 2006 at nCT, Hyderabad.	
9	K.S. Nagaraja	Delivered principle D. Lakshmi Devi Endowment Lecture, 13 th February 2007	Materials for Millennium
10	K.S. Nagaraja	Talk and Technical Discussion at Material Atomic Research Centre (BARC) complexes for Silicon Carbide	Synthesis and characterization of volatile Silicon coordination Coatings by CVD methods.
11	K.S. Nagaraja	Inaugurated the Science Club activities of St. Peter's Hr. Sec. School, Royapuram, Chennai, 2006.	

VIII. RESEARCH PROJECT (S) (ON GOING PROJECT ONLY)

Sl. No.	Name of the Principal Investigator	Title of the Project	Name of the Funding Agency	Period with Amount
1	M. Selvanayagam	Community Based disaster preparedness for Delicate Community	CORAID	Rs. 1,50,00000/-
2	M. Selvanayagam	Ecological and Biodiversity studies in and around kalpakkam with special reference to IGCAR	IGCAR	Rs. 20,000,00
3	S. Vincent	Project on "GIS Strategy for Storm Water Management in Relevance with Public Health Issues of Chennai Corporation Area"	Loyola College jointly with University of Madras and Chennai Corporation funded, by <i>Ministry of Communication and Information Technology, Government of India</i>	Rs. 22.50 lakhs
4	S. Vincent	Project on "Effect of Heavy Metal Pollutants on the induction of Metallothioneins in selected species of edible fishes"	New Delhi (2007). Rs. 6 lakhs	funded by <i>University Grants Commission,</i>
5	S. Vincent	Project on "Flood Risk Mapping in the Coastal Area of Chennai and Pondicherry"		funded by <i>Universitaet Freiburg, Germany</i> (2007). Rs. 1.50 lakhs.
6	K.S. Nagaraja	BRNS Project "Synthesis and characterization of vapour of volatile chromium and nickel complexes and their fragmentation studies for CVD applications." - Extended		Rs. 3,82,865
7	Dr. K.S. Nagaraja and Rev. Dr. John Pragasam S.J,	UGC major research project "Humidity and gas sensing characteristics of mixed metal oxide composites" - Sanctioned		(Rs. 6,53,100)

Books Written:

1. A Text Book on Environmental Studies.
2. A Text Book on Applied Genetics: Recent Trends and Techniques.

3. A Laboratory Manual on Practical Biotechnology

Ph.D Thesis Submitted:

1. Popuri Pandari Lal Krishna

Title: Evaluation of Various Bulking agents of application of natural zeolite on composting of biosludge generated from bulk pharma industry (October 2006).

2. E.S. Arulraj Emmanuel

Title: A study on sperm cell preservation and motility inducement of buffalo bull semen (*Bubalus bubalis*) November 2006).

3. V. Ramakrishnan

Title: Study of serum metals and DNA damage in patients with coronary artery disease (CAD) (December 2006).