INDIAN JOURNAL OF NATURAL SCIENCES (IJONS)

BIMONTHLY INTERNATIONAL JOURNAL

Editor-in-Chief Dr.S.Vijikumar

Published by

TAMILNADU SCIENTIFIC RESEARCH ORGANISATION

39,MURA BHAVAN,KOODAL NAGAR,RAJAGOPALAPURAM POST, PUDUKKOTTAI, TAMIL NADU, INDIA.

ijonstnsro@gmail.com,editorijons@gmail.com-www.tnsroindia.org.in

Editor-in-Chief, Editorial Board and Publisher take no responsibility for inaccurate, misleading data, opinion and statements appeared in the articles and advertisements published in this journal. It is the sole responsibility of the contributors and advertisers. No part of this journal can be reproduced without the written permission of the Editor-in-Chief who also holds the copyright © of the "Indian Journal of Natural Sciences (IJONS)".

Indian Journal of Natural Sciences (IJONS)

Editorial Committee Members (ECM)

Editor-in-Chief	Dr.S.Vijikumar Director TamilNadu Scientific Research Organisation Pudukkottai-622003, Tamil Nadu. India.
	Editorial Committee
Honorable Chief Advisor	Prof. Dr. V. Ramaiyan Marine Biologist Research Advisor Sri Venkateswara College of Arts & Science. Peravoorani, Thanjavur. Tamil Nadu. India.
Honorable Chief Advisor	Prof.Dr.A.Ganapathi Hon'ble Vice Chancellor, Bharathiyar University, Tiruchirappalli. Tamil Nadu. India.
Honorable Chief Advisor	Prof.Mahdi Vatan Parast Chancellor & Professor, Islamic Azad University, Quchan Branch,Quchan-Khorasan Razavi- Iran.
Honorable Chief Advisor	Prof.Dr.Hamid Saremi Vice- Chancellor, Islamic Azad University, Quchan branch, Quchan-Iran.
Honorable Chief Advisor	Dr. Sr.D.Victoriya Amalorpava Mary, FBS Principal, Bon Secours College for Women, Vilar bypass road, Thanjavur - 613 006. Tamilnadu, South India.
Honorable Member	Dr. N. Jayabalan Professor & Head, Dept. of plant Science, School of life Sciences Bharathidasan University, Tiruchirappalli. Tamil Nadu. India.
Honorable Member	Dr. T.S. Saravanan Professor of Biotechnology cum Research Co-ordinator Dr.M.G.R Educational and Research Institute University Periyar E.V.R High Road, Maduravoyal, Chennai-600095.
Honorable Member	Dr.S.P.Subramaniyan Asst.Controller of Patents and Designs (Govt.of India) Patent Office,IPR Building,GST Road,Guindy,Chennai 600032
Honorable Member	Er. Abdul Samad. M. Kamdod Assistant Professor, Department of Civil Engineering Bharat Institute of Science & Technology for Women Mangalpally, Renga Reddy Dist. Andhra Pradesh, India
Honorable Member	Dr. Hina kousar Assistant Professor, Department of Environmental Sciences, Kuvempu University, Shankaraghatta, Shivamogga – 577 451, Karnataka ,India

Honorable Member	Mr.B.Rajesh Manager (Tech. Services Env.) Grass Roots Research & Creation India (P) Ltd Noida – 201301,Uttar Pradesh,India
Honorable Member	Mr. K.Ramanathan Head, Department of Bioinformatics, Thanthai Hans Roever College Perambalur, TamilNadu, India.
Honorable Member	Dr. K.Gurunathan Prof & Head, Department of Nano science & Technology, Alagappa University, Karaikudi, TamilNadu, India.
Honorable Member	Dr. Rajashekhar O, Patil Assistant Professor, Department of Environmental Management Sant Gadge Maharaj College of Commerce & Economics, Mumbai 400004, India
Honorable Member	Dr.M.Ravichandran Prof.& Head Department of Environmental Management Bharathidasan University, Tiruchirappalli. Tamil Nadu. India.
Honorable Member	Dr.M.Krishnan Prof.& Head, Department of Environmental Biotechnology Bharathidasan University, Tiruchirappalli. Tamil Nadu. India
Honorable Member	Dr.K.Kumarasamy Prof.& Head,Department of Geography Bharathidasan University, Tiruchirappalli. Tamil Nadu. India
Honorable Member	Dr.A.Sathya, Assistant professor – III, School of Civil Engineering, SASTRA University, Thanjavur – 613401, TamilNadu, India.
Honorable Member	Dr.G.G.Hammad Ahmad Shadab Senior Assistant Professor, Department of Zoology Aligarh Muslim University, Aligarh-202002, Uttar Pradesh
Honorable Member	Dr.H.Syed Jahangir Assistant Professor, P.G. and Research Department of Botany Jamal Mohamed College(Autonomous) Trichirappalli-620020, TamilNadu, India.
Honorable Member	Mrs.A.Indumathi Asst.Professor,Department of Biotechnology, Bon Secours College for Women,Vilar bypass road, Thanjavur Tamilnadu, South India
Honorable Member	Dr. P. Santhanam Assistant Professor, Department of Marine Science, School of Marine Sciences, Bharathidasan University, Tiruchirappalli. Tamil Nadu. India
Honorable Member	Dr.B.Parimala Devi Additional Director, Veeramani Mohana Centre for Quality Life Engineering Research, Periyar Maniyammai University, Vallam,Thanjavur ,Tamil Nadu. India.

Honorable Member	Dr. M. Lekeshmanaswamy Associate professor PG and Research Department of Zoology Kongunadu Arts and Science College G.N. mills (PO), Coimbatore-641 029, TamilNadu, India.
Honorable Member	Dr.P.Udayakumar Principal, Jayanthi College of Education, Jayanthi Gardens Arulpurm, Tirupur(Dist.)-641605, TamilNadu, India
Honorable Member	Dr.Syed Mohamed Asst. Prof. Dept. of Zoology, Jamal Mohamed College Tiruchirappalli, TamilNadu, India
Honorable Member	Dr. Komalavalli Narayanaswamy Associate Professor, PG and Research Department of Botany H.H. The Rajah's College (Autonomous) Pudukkottai – 622 001, Tamil Nadu, India.
Honorable Member	Mis.S.Muthu Bharathi Asst.Professor,Department of Chemistry, Bon Secours College for Women,Vilar bypass road, Thanjavur Tamilnadu, South India
Honorable Member	Mrs.Sujatha Ilangovan Assistant Professor, Department of Biochemistry Holy Cross College, Tiruchirapalli-620002. TamilNadu, India.
Honorable Member	Dr.C.Kathirvelan Assistant Professor, Department of Animal Nutrition Veterinary College and Research Institute (TANUVAS) Namakkal -637002. TamilNadu, India.
Honorable Member	Professor.G.Ganesan Professor, Department of Mathematics Adikavi Nannaya University,Rajahmundry-533105 Andhra Pradesh, India.
Honorable Member	Mis D.Kalpana Asst.Professor,Department of Chemistry, Bon Secours College for Women,Vilar bypass road, Thanjavur TamilNadu, South India
Honorable Member	Dr.C.Balusami Assistant Professor, Department of Livestock Production and Management College of Veterinary and Animal Sciences Pookode-673576.Kerala, India.
Honorable Member	Dr.P.Kavitha Assistant Professor, Department of Zoology and Biotechnology AVVM Sri Pushpam College (Autonomous) Poondi,Thanjavur, TamilNadu, India.

Honorable Member	Dr.Vasudevan Ayyappan Department of Biology, Delaware State University, Dover, Delaware - 19901
Honorable Member	Mrs.A.Amargeetha Asst.Professor,Department of Chemistry, Bon Secours College for Women,Vilar bypass road, Thanjavur TamilNadu, South India
Honorable Member	Mrs.N.Rajarajeswari Asst.Professor,Department of Physics, Bon Secours College for Women,Vilar bypass road, Thanjavur TamilNadu, South India
Honorable Member	Dr.V. Rajendran Dean i/c Vanavarayar Institute of Agriculture Manakkadavu – 642 103. Pollachi Taluk, TamilNadu,India.
Honorable Member	Dr.C.Thamaraiselvi Assistant Professor, Dept. of Biotechnology Mother Teresa Women's University Kodaikanal-624101,TamilNadu,India.
Honorable Member	Dr. K.Madhava Chetty Plant Taxonomist, Assistant Professor, Department of Botany, SVUCS, S.V. University, Tirupati-517 502, Andhra Pradesh, India.
Honorable Member	Dr.S.Ramesh Kumar Assistant Professor, Department of Horticulture, Vanavarayar Institute of Agriculture, Manakkadavu-642103,Pollachi,TamilNadu,India.
Honorable Member	Dr. S. Balasubramanian Assistant Professor Department of Mathematics, Government Arts College (A), Karur – 639 005, Tamilnadu, India.
Honorable Member	Dr.G. Rubalakshmi D/o V.P. Govindaraj, #3/41, Nanbargal Nagar,Muthukalipatty, Rasipuram TK, Namakkal DT-637401.Tamilnadu,India.
Honorable Member	Mr.Sridhar Ramachandran Assistant Professor, Department of Biological Science, Gojan College of Teacher Education, Chennai-600 052, TamilNadu, India
Honorable Member	Dr. H. Krishna Ram #11, 1st Main, Opp. to SBM, Gnanaganganagar,Bangalore- 560 056, Karnataka, India.
Honorable Member	Dr.S.Senthil Murugan Assistant Professor, Department of Animal Nutrition, College of Veterinary and Animal Sciences, Pookode, Wayanad, Kerala, India.

Honorable Member	R.Muthukrishnan Assistant Professor Department of Soil Science and Agricultural Chemistry Vanavarayar Institute of Agricultural Manakkadavu, Pollachi-642- 103, TamilNadu, India
Honorable Member	K.Ashokkumar Senior Research Fellow Dept of Agricultural Microbiology, Tamil Nadu Agricultural University, Coimbutore-3, TamilNadu, India
Honorable Member	Dr.Subbiah poopathi Scientist-F/Deputy-Director Vector control Research Centre, Medical complex, Indira Nagar,Pondicherry-605006,India
Honorable Member	Dr. Sivalingam Elayabalan Assistant professor 3/33,Eachampatti village Attur(Tk),Salem(Dt)-636107, TamilNadu, India
Honorable Member	Dr. Horne Iona Averal Associate professor of Head Holy cross college (Autonomous), Trichy. TamilNadu, India
Honorable Member	Dr.G.Singaravelu Professor & Head Department of Education Bharathiar University Coimbatore-46 TamilNadu, India
Honorable Member	Dr.Ga.Bakavathiappan Associate Professor in Zoology SBK College, Aruppukottai - 626 101, TamilNadu, India.
Honorable Member	Dr.P.Govindaraj Head & Associate Professor in Chemistry Department of Chemistry SBK College, Aruppukottai - 626 101, TamilNadu, India
Honorable Member	Dr.M.Gopikannan Senior Research Fellow, 15-B3 Paramathi Main Road, S.P.Pudhur, Namakkal(Dt)-637 001, TamilNadu, India
Honorable Member	Dr.K.Samiayyan Dean Agricultural College and Research Institute, TNAU, Eachangkottai, Thanjavur-614902, T.N,India.
Honorable Member	Dr.M.Vasanthy Assistant professor Periyar Illam,(upstairs), No,4,Vayalur Road, Kumaran Nagar, Ramalinga nagar south Extension, Trichy-620017, Tamil Nadu, India
Honorable Member	Dr.N.Vijayakumar Assistant Professor Dept.of Biochemistry & Biotechnology Annamalai University, Annamalainagar-608 002, Tamilnadu, India.

Honorable Member	Dr. S. Umamaheswari Assistant Professor Department of Environmental Biotechnology School of Environmental Sciences Bharathidasan University Tiruchirappalli – 620 024, Tamil Nadu
Honorable Member	Dr. Jai Shanker Pillai H.P. H.D. Ponna swamy Pillai # 644, Ganesh Temple Street Hunsur taluk, Mysore district – 571105, Karnataka, India
Honorable Member	Mr. Nesarajan. J Assitant Professor, Department of Zoology, Bishop Heber College, Trichy-17, Tamil Nadu. India
Honorable Member	Dr. John Abraham Assistant Professor, Department of L.P.M. College of Veterinary and Animal Sciences Pookode, Wayanad. 673576, Kerala.
Honorable Member	Dr. S. Jayachandran Professor & Head, Dept. of Oral Medicine and Radiology, Tamil Nadu Govt. Dental College and Hospital, Chennai -600003, Tamil Nadu, India.
Honorable Member	Dr.V.M. Srinivasan Assistant Professor (Plant Pathology) Department of Crop Protection Thanthai Roever Institute of Agriculture and Rural Development, Valikandapuram Post, Perambalur - 621115., Tamil Nadu.
Honorable Member	Dr.Ranjith.D Assistant Professor, Department of Veterinary Pharmacology and Toxicology, College of Veterinary and Animal Sciences, Pookode, Wayanad – 673576. Kerala,India
Honorable Member	Daniel Jebaraj,M. C/o Joshuah No.14A, Thendral Nagar New Thillai Nagar, Vadavalli, Coimbatore-641041,TamilNadu,India
Honorable Member	Dr.Sindhu. K Veterinary Officer Department of AH and VS Karnataka, India.
Honorable Member	Dr.Rajesh R Young Scientist, Department of Agricultural Microbiology, Tamil Nadu Agricultural University, Coimbatore 641 003, Tamil Nadu, India.

Honorable Member	Dr.Jaivel N Post Doctoral Fellow, Department of Agricultural Microbiology, Tamil Nadu Agricultural University, Coimbatore - 641 003, TamilNadu, India.
Honorable Member	Dr.R.Prabhu Research Associate, NADP Cell,CARDS, TamilNadu Agricultural University, Coimbatore - 641 003,Tamil Nadu, India.
Honorable Member	Dr.M.Uma Gowri Research Associate, NADP Cell,CARDS, TamilNadu Agricultural University, Coimbatore - 641 003,Tamil Nadu, India.
Honorable Member	S.Jegan Karuppiah Assistant Professor, Department of Rural Development Science, Arul Anandar College, Karmathur - 625 514, Madurai. Tamilnadu, India

Indian Journal of Natural Sciences (IJONS)

 Volume V(7)
 October 2016

 CODEN: IJONS (38) (2016)
 Issue 38

 ISSN: 0976 - 0997

S. No.	CONTENTS	Page No.
	Editorial	
1	Nutritive Elemental Status in Mulberry (<i>Morus</i> sp.) Foliage under Jassids (<i>Empoasca flavescenes</i> F.) Infestation Mahadeva. A	11537-11544
2	Decolorisation of Reactive Red-11 by <i>Klebsiella</i> CMGS-3 Madhuri R. Basutkar , Channappa T. Shivannavar , and Subhaschandra M. Gadded	11545-11554
3	Ultrasound Waves Employment in the Medical Diagnostic for Kidneys Faik H. Anter and Roaa M. Hussian	11555-11561
4	Earthworms Supplemented Poultry Feed As An Alternate To Vaccines Dr.Sujatha Ilangovan and A.Shamasath Begam	11562-11565
5	The Effect of Etching Current Density on Silicon Nanostructures Properties Fabricated by Electrochemical Etching Process AsmietRamizy, Isam M. Ibrahim and Mays A. Hommadi	11566-11572
6	Study of Beta Particles (β) Effect on Hardness, Thermal conductivity and Dielectric strength for Epoxy Resin Reinforced with (Fe) Particles Abd-Al sattarKhlilMaroof, FouadNajah Ali and Jassim M.Najeem	11573-11583
7	The Levels of Some Trace Elements and Correlations between them in Non-Insulin Dependent Diabetes Mellitus Mohammed A. Hami, Musher I. Salih and Aveen A. Ibrahim	11584-11589
8	Techno-Economic Evaluation of Solar Tunnel Dryer S.R. Kalbande, V. P. Khambalkar and Sneha Deshmukh	11590-11597
9	Energy Conservation in Pulse Processing Industry: A Case Study S. R. Kalbande, V. P. Khambalkar and Sneha Deshmukh	11598-11603
10	Preparation and Characterization Cadmium Nanonickel Ferrite at Different Sintering Temperature by Sol Gel Method Farah T.M.Noori, Malik Jabbar, A.Kadhim and Iqbal S.Naji	11604-11614
11	Comparative Study on Sensory Quality of Yoghurt Incorporated with Flaxseed oil and Flaxseed oil Emulsion Sivakumar, BV Balasubramanyam , K Jayaraj Rao ,P Heartwin Amala Dhas and B Surendra Nath	11615-11620
12	Gas Sensing of ZnO:SnO2 Thin Films Prepared by Spray Pyrolysis Technique Noor Talib , Mahdi Hasan Suhail and Suaadkhafory	11621-11631
13	Electrical Properties of PVA:PEG/MnCl ₂ Thin Film Composites Abeer Mohammed, Mohammed Ghazi and Mahdi Hasan suhail	11632-11639
14	Monitoring of Iron Concentration in Ground Water of Lucknow City, Uttar Pradesh Aisha siddiqui, Zulfiquar Ali and S.Malhotra	11640-11647

15	Aerosol Optical Properties Estimation Over Iraq and Surrounding Regions using best GIS Spatial Interpolation Method Saadiyah H. Halos, Mounim H. Al-Jiboori and Osama T. Al-Taai	11648-11654
16	Synthesis, Characterization and Biological Studies of Transition Metal Complexes with Coumarin Derivatives S. Radha, K. K Mothilal and A. Thamarai chelvan	11655-11666
17	Analysis of Seismic Torsional Pounding Effect in Adjacent Buildings Evaluating by Indian Standard Codes Kheti Huseni, Panaskar Sourabh Vilasrao, Tashi Dorji Tamang and Abdul Rahim. A	11667-11677
18	Does Literature help EFL Learners to Improve Language? S.Vijaylakshmi and Parveen Bala	11678-11684
19	Extraction Quantity Estimation of Gallic Acid in Fruits of Indian Medicinal Plants Amla Haritaki And Vibitaki Arvind Varchaswi, K Ramakanth Reddy, M Ravi Kumar Reddy, A Anuradha, K Gnananath and MachaVijay	11685-11690
20	Transition Period and its Successful Management in Dairy Cows (Review Article) P. Ravi Kanth Reddy, Jakkula Raju, A. Nagarjuna Redy, P. Pandu Ranga Reddy and Iqbal Hyder	11691-11699
21	Recent trends in supplementation of Exogenous Fibrolytic Enzymes in Ruminant Nutrition – A Review (Review Article) P. Ravi Kanth Reddy, J. Raju, A. Nagarjuna Reddy, A. Ramadevi and P.Pandu Ranga Reddy	11700-11708

Editorial.....

2016 International Year of Global Understanding (IYGU)



"Building bridges between global thinking and local action"

The International Council for Science (ICSU), the International Social Science Council (ISSC) and International Council for Philosophy and Human Sciences (CIPSH) jointly announced that 2016 is the International Year of Global Understanding (IYGU).

The aim of IYGU is to promote better understanding of how the local impacts the global in order to foster smart policies to tackle critical global challenges such as climate change, food security and migration. How to translate scientific insight into more sustainable lifestyles will be the main focus of activities – research projects, educational programmes and information campaigns – for 2016. The project seeks to go beyond a narrow focus on environmental protection and climate policy and explore quality of life issues and the sustainable, long-term use of local resources.

Sustainable development is a global challenge, but solving it requires transforming the local – the way each of us lives, consumes, and works. While global negotiations on climate attack the sustainability crisis from above, the IYGU complements them beautifully with coordinated solutions from below - by getting individuals to understand and change their everyday habits. This twin approach elevates our chance of success against this crisis, the gravest humanity has ever seen," said former ICSU President and Nobel Laureate Yuan-Tseh Lee.

It is hoped that this focus on tangible, local action will generate ideas for research programmes and school curricula, as well as highlight best practice examples. Wherever possible, activities will be communicated in several languages. Using this bottom-up approach, the IYGU hopes to support and extend the work of initiatives such as Future Earth, the UN's Post-2015 Development Agenda, and the UN Decade of Education for Sustainable Development. The involvement of the ISSC, ICSU and CIPSH in IYGU underwrites broad collaboration across the natural and social sciences and the humanities, from across disciplinary boundaries and from all around the world.

Vijikumar .S Editor in Chief Indian Journal of Natural Sciences INDIA.