Curriculum Vitae

CHANDANI TIKIRI KUMARI THAMINIMULLA TILAKARATNE

1. QUALIFICATIONS:

• Doctor of Philosophy (Ph.D.- Chemistry)	1997	University of Peradeniya
• Master of Philosophy (M.Phil. Chemistry)	1991	University of Peradeniya
• Post Graduate Diploma in Chemical Engineering	1999	Tokyo Institute of Technology (TIT), Tokyo, Japan
• Bachelor of Science (Special degree in Chemistry)	1988	University of Peradeniya
• Diploma in Management	1997	Open University of Sri Lanka

2. PROFESSIONAL EXPERIENCE:

• Coordinator /Science Dissemination – National Institute of Fundamental Studies (NIFS), Sri Lanka	1st January 2000 to date
• UNESCO Fellow, Tokyo Institute of Technology (TIT), Tokyo, Japan	1st September 1998 to 31st October 1999
• Senior Lecturer- Post Graduate Institute of Science (PGIS), University of Peradeniya, Sri Lanka	15th July 1997 to 15th July 1998
• Visiting Demonstrator at the Post Graduate Institute of Science (PGIS), University of Peradeniya	1st January 1997 to 14th July 1997

- Trainer of training scientists on skills for Science communication to the genaral public [Trained by National Science Foundation- NSF].

3. CONTRIBUTIONS TOWARDS DISSEMINATION OF SCIENCE

3.1 Dissemination of Science through Publications

I changed my field of research area to Science Education and Science Communication in order to fulfill my present job responsibilities and duties after year 2000. *Photochemistry was my previous research field and I have **eleven research publications in Science citation indexed journals** and **one publication** in a local journal to my credit.*

3.1.1 Research Publications in refereed journals:

1. **C. T. K. Tilakaratne**, T. M. S. S. K. Y. Ekanayake, Achievement level of Science Process Skills of Junior Secondary Students: Based on a Sample of Grade Six and Seven Students from Sri Lanka. *International Journal of Environmental and Science Education, 12(9)* 2089-2108 (2017).
   RG Journal Impact factor; 1.00

2. **Kumari Tilakaratne**; *"Teaching scientific concepts through simple models and social communication techniques"*. ***Science Vision*****,** *Vol. 16 and 17 (61-64) 2011.*

3. **C.T.K. Thaminimulla,** T. Takata, M. Hara, J.N. Kondo, and K. Domen; Effect of Chromium addition for Photocatalytic Overall water splitting on Ni-$K_2La_2Ti_3O_{10}$. ***Journal of Catalysis*****,** *196, 362-365 (2000).*
   Journal Impact factor; 7.354

4. K. Tennakone**, C.T.K. Tilakaratne**, and I.R.M. Kottegoda; Photomineralization of Carbofuran by TiO_2 supported catalyst. ***Water Research*** *Vol 31, No. 8, 1909-1912 (1997).*
   Journal Impact factor; 5.911

5. K. Tennakone, **C.T.K. Thaminimulla,** and I.R.M. Kottegoda; Photocatalytic degradation of organic contaminants in water with TiO_2 supported on polythene films. ***J. Photochemistry & Photobiology A: Chem*** *87 177-179 (1995).*
   Journal Impact factor; 2.6

6. O.A. Ileperuma, **C.T.K.Thaminimulla**, and W.C.B. Kiridena; Photoreduction of N_2 to NH_3 and H_2O to H_2 on metal doped TiO_2 catalysts (M=Ce, V). ***Solar Energy Materials and Solar Cells*** *28 335-343 (1993).*
   Journal Impact factor; 4.732

7. K. Tennakone**, C.T.K. Thaminimulla,** and W.C.B. Kiridena; Nitrogen Photoreduction by Coprecipitated Hydrous Oxides of Samarium(III) and Vanadium(III). ***Langmuir*****,9,** ***723*** *(1993).*
   Journal Impact factor; 3.933

8. K. Tennakone, **C.T.K. Thaminimulla,** S. Senadeera, and A.R. Kumarasinghe; TiO_2 Catalysed oxidative photodegradation of Mercurochrome: An Example of an Organo-Mercury compound. ***J. Photochemistry Photobiology A: Chem 70(2) 193-195*** *(1993).*
   Journal Impact factor; 2.6

9. K. Tennakone, O.A. Ileperuma, **C.T.K. Thaminimulla**, and J.M.S. Bandara; Photo-oxidation of nitrogen to nitrite using a composite ZnO-Fe_2O_3 catalyst, ***J.Photochem. Photobiol. A: Chem.****, 66 375-378 (1992).*
   Journal Impact factor; 2.6

10. K. Tennakone, **C.T.K. Thaminimulla**, and J.M.S. Bandara; Nitrogen photoreduction by vanadium(III)-substituted hydrous ferric oxide, ***J.Photochem. Photobiol A: Chem.****, 68 131-135 (1992).*

Journal Impact factor; 2.6

11. K. Tennakone, O.A. Ileperuma, J.M.S. Bandara, and **C.T.K.Thaminimulla**; Photoreduction of Nitrogen dissolved in water with Hydrous Oxide of Samarium (III) and Europium (III). ***Solar Energy Materials*****,** *22 ,319-325* (1991).
Journal Impact factor; 4.732

12. K. Tennakone, J.M.S. Bandara, **C.T.K. Thaminimulla,** W.D.W. Jayatilake, U.S. Ketipearachchi, O.A. Ileperuma, and M.K.A. Priyadarshana; Photoreduction of Dinitrogen to Ammonia by Ultra-fine particles of FeOOH formed by photohydrolysis of Iron(II) bicarbonate. ***Langmuir****, 7, 2166 (1991).*
Journal Impact factor; 3.933

13. K. Tennakone, O.A. Ileperuma, J.M.S. Bandara, **C.T.K. Thaminimulla** and U.S. Ketipearachchi; Simultaneous Reductive and Oxidative Photocatalytic Nitrogen Fixation in Hydrous Ferric Oxide Loaded Nafion Films Submerged in Aerated Water. ***J.Chem. Soc. Chem. Commun*****,** *579,* (*1991).*
Journal Impact factor; 6.567

3.1.2 Manuscripts

Accepted:

I. **C. T. K. Tilakaratne,** T. M. S. S. K. Y. Ekanayake , and C. Dahanayake; Students' understanding of science process skills: Based on a study with a sample of grade 6 and seven students from Sri Lanka. [International Journal of Environmental and Science Education.

under preparation:

II. **C. T. K. Tilakaratne,** T. M. S. S. K. Ekanayake , and M. Dissanayake; Teachers' views about teaching science to junior secondary school students.

III. **C. T. K. Tilakaratne,** and T. M. S. S. K. Ekanayake; secondary students' perception towards science.

3.1.3 Peer reviewed Presentations at National/International Conferences/Symposia

Published in abstract form;

1. **Tilakaratne C.T.K.,** Ekanayake TMSSKY, and Dissanayake DMMP "Junior secondary science teachers' views about science teaching", *International Research Sessions of University of Peradeniya (iPURSE) vol 20, 44, 2016.*

2. **C.T.K. Tilakaratne** *"Teaching scientific concepts through simple models and Native social communication techniques"***.** (*Abstract of proceedings of International training workshop on Science Education for Sustainable development, Dhaka, Bangladesh, 22 pg, June (2011).*

3. Mr. J. Akilavasan, and **C.T.K. Tilakaratne** *"Some Observations for Effective Communication for Rural Area Science Teachers in Sri Lanka". (Abstract of*

proceedings of International training workshop on Science Education for sustainable development, Dhaka, Bangladesh, 15 pg, June (2011).

4. K. Tennakone, O.A. Ileperuma, **C.T.K. Tilakaratne**, and I.R.M. Kottegoda "Photomeneralization of textile dyes". *Sri Lanka Association for the Advancement of Science vol. 52, 192 (1996).*

5. K. Tennakone, K.G. U. Wijayantha, I.R.M. Kottegoda, and **C.T.K. Tilakaratne** "Photocatalytic extraction of Lead from aqueous medium using polypropylene films coated with TiO_2". *Sri Lanka Association for the Advancement of Science vol 52, 192 (1996).*

6. K. Tennakone, I.R.M. Kottegoda, **C.T.K. Tilakaratne**, and K.G. U. Wijayantha "Mineralization of organic pollutants in Kandy lake Water by Semiconductor photocatalysis". *Sri Lanka Association for the Advancement of Science vol 51, 353 (1995).*

7. **C.T.K. Tilakaratne,** I.R.M. Kottegoda, P.M. Sirimanne, and K. Tennakone "Photocatalytic degradation of organic contaminants in water with TiO_2 supported on polythene films". *Sri Lanka Association for the Advancement of Science vol 50, 205(1994).*

8. K. Tennakone, O.A. Ileperuma, **C.T.K. Thaminimulla**, J.M.S. Bandara, and W.C.B. Kiridena "Photocatalysis of aqueous manganese bicarbonate". *Sri Lanka Association for the Advancement of Science, vol 49, 209-210 (1993).*

9. **C.T.K. Thaminimulla**, and O.A. Ileperuma " *Photoreduction of dinitrogen on metal doped titanium dioxide". Sri Lanka Association for the Advancement of Science, vol 46, 171,(1990).*

Presented

1. **Tilakaratne C.T.K.,** Ekanayake T.M.S.S.K.Y, and Dissanayake D.M.M.P. "Junior secondary science teachers' views about science teaching",*Peradeniya University International Research Sessions -iPURSE (2016)*

2. **C.T.K. Tilakaratne,** "Teaching scientific concepts through simple models and Native social communication techniques"**.** *International training workshop on Science Education for Sustainable development, Dhaka, Bangladesh* (2011).

3. Mineralization of organic pollutants in Kandy lake Water by Semiconductor photocatalysis. K. Tennakone, **C.T.K. Thaminimulla**, I.R.M. Kottegoda., K.G. U. Wijayantha. *This communication was presented at the fifty first session of the Sri Lanka Association for the Advancement of Science (1995).*

4. K. Tennakone, **C.T.K. Thaminimulla**, and I.R.M. Kottegoda; Photocatalytic degradation of organic contaminants in water with TiO_2 supported on polythene films. *This communication was presented at the fiftieth session of the Sri Lanka Association for the Advancement of Science (1994).*

5. K. Tennakone, O.A. Ileperuma, **C.T.K. Thaminimulla**, J.M.S. Bandara, and W.C.B. Kiridena; Photocatalysis of aqueous manganese bicarbonate. *This communication was presented at the forty ninth Session of the Sri Lanka Association for the Advancement of Science (1993).*

6. O.A.Ileperuma, W.C.B.Kiridena, **C.T.K.Thaminimulla,** and J.M.S.Bandara; Photoreduction of N_2 to NH_3 on the composite catalyst of MoO_3/TiO_2 Presented at the third *International Symposium on Solid State Physics, 22-27 April 1991, Kandy Sri Lanka(1991).*

7. **C.T.K. Thaminimulla**, and O.A. Ileperuma. Photoreduction of dinitrogen on metal doped titanium dioxide. *This communication was presented at the forty Sixth Session of the Sri Lanka Association for the Advancement of Science (1990).*

3.1.4 Articles; science magazines and news papers

1. K. Tilakaratne and Yumal Kuruppu, "Biomimicry", Vidurava science Magazine, National Science Foundation, volume 31, number 01, (26-27pg) 2014.

2. C.T.K. Tilakaratne and Sathya Dissanayake, " නැනෝ කුරුමිටිටාගේ යෝධ ශක්‍යතා"- (article on Power of Nano-Science & Nano-Technology in Sinhala), Vidusara, Science Magazine Vol. 18, 2nd May, (14-15pg) 2012.

3. C.T.K. Tilakaratne and A. Nanayakkara, " තර්කයෙන් ගැටලුවට විසඳුමක් : විද්‍යාත්මක ක්‍රමය"(article explaining the possibility of using the Scientific method in daily life), Vidurawa, National Science Foundation Science Magazine for the general public Vol. 29, No.1, (22-26 pg) 2012.

4. C.T.K. Tilakaratne; "The brain machine interface for active minds trapped in paralysed bodies." Pragñā, vol XVIII (4-6 pg) 2007.

5. C.T.K. Tilakaratne; "Phyto-remediation: A new hope for the cleanup of contaminated soils and water". Pragñā, vol XVII(3), (8-10 pg) 2006.

6. C.T.K. Tilakaratne and A. Nanayakkara; "Time, Space, You and Me" world year of Physics, Institute of Physics, Sri Lanka V0l 3(1), (10-15 pg) 2005.

7. C.T.K. Tilakaratne ; "Meeting future energy needs" . Pragñā, vol XIV, No. 1 & 2, (4-7 pg)2001.

8. News paper tabloid: 2013
   Home lab tabloid: To enhance the science tempo of the school students a tabloid was distributed among the school children with the "Vijaya Lama News paper". 130,000 tabloids were distributed free of charge with the "Vijaya Lama Newspaper" on 17th September 2013

4. CONTRIBUTION AS AN ORGANIZER TO FOSTER THE EXCHANGE OF TECHNICAL AND SCIENTIFIC INFORMATION FOR THE SCIENTIFIC COMMUNITY

19th to 23rd September 2016	*National Workshop on Separation Techniques in Natural Product Research* The workshop was organized jointly with the Natural Products Research Group of NIFS.
15th August 2016	*Mini Symposium on Outlook on Chronic Kidney Disease of unknown etiology (CKDu).* It was conducted together with Sri Lankan CKDu research experts to give an overview of the ground status of CKDu research to the expert group visited Sri Lanka.
13th to 17th October 2014	*National workshop on "Investigating bioactive metabolites from natural sources"* Organized jointly with the research group of Natural Products
28th to 29th June 2012	*Solar photovoltaic Technology "current status and Trends in Thin Film Solar PV Technology"* Organized jointly with Prof.MAKL Dissanayake in collaboration with the sivanathan Laboratories
3rd February 2012	" How to Enhance Research Activities" by Prof.DM Galloway,UK was organized for Research Assistants of IFS
28th to 30th July 2011	***SOLAR ASIA 2011*** *International conference on "solar energy materials solar cells and solar energy application"* Organized jointly with Prof.MAKL Dissanayake
3rd to 8th October2011	*International Symposium on "Natural Product and their Application in Health & Agriculture"* Organized jointly with Natural products research group
19th December 2011	*Effective use of microbial biofertilisers for an improved economy and environment in Sri Lanka* Organized jointly with Prof.G.Seneviratne
25th &26th March 2010	*"Bioassays for Natural product research"* Organized jointly with Natural product chemistry research group/IFS
17th &18th August 2010	*"Improving the Science Communication Skills of Researchers"*
29th & 30th October 2009	*Training program for Technical offices on Instrumentation* Organized jointly with Prof. NS Kumar for Fifteen technical officers of various government institutes
3rd March 2008	*"Prof. Aries Kovoor Memorial Symposium"*

25th & 26th August 2006	*Training workshop for the scientists on "Skills for science communication to the public"* Organized jointly with NSF
31st October 2006	*Short course on theory and practice of FTIR Spectroscopy* Organized jointly with Prof. Tennakone
15th August 2005	*Workshop on "Lighting: its Physics, Chemistry and impact on life* Organized jointly with Prof. Tennakone
22nd December 2004	One day Short Course on "**Biological Treatment for Industrial Wastewater** " conducted by Prof. Ng Wun Jern, Environmental Science & Engineering Programme, Faculty of Engineering, National University of Singapore Organized jointly with Environmental Engineering Laboratory, Faculty of Engineering, University of Peradeniya.
23rd November 2004	*Short - course on Semiconductor Physics & Technology,* by Prof. Han J Queisser , For Research Assistants of IFS
6th & 7th November 2004	*Short - course on Semiconductor Physics & Photovoltaic* conducted by Prof. Han J Queisser, former Director, Max Planck Institute, Stuttgart , For Research Assistants of IFS
29th March to 3rd April 2003	*International symposium and Field Workshop in Sri Lanka on " The role of Sri Lanka in Rodinia and Gondwana Assembly and Break-up"* Organized jointly with Dr. Kehelpannala
9th & 10th , 16th & 17th and 23rd & 24th September 2000	*Workshop on Computer Interfacing IFS staff in the view to upgrade the interfacing of instruments* Organized jointly with Prof. Nanayakkara
15th August 2000	*Mini Workshop on Restoration of Eutrophic Lakes and Reservoirs* Organized jointly with Prof. Silva

5. CONTRIBUTION AS AN ORGANIZER TO ENHANCE THE PUBLIC UNDERSTANDING OF SCIENCE AMONG TEACHERS, STUDENTS & THE GENERAL PUBLIC

18th February 2016	*"From chemical to Eco friendly agriculture- Role of microbial biofertilizers"* for Government officials Organized jointly with Prof.A.Kulasooriya & Prof G.senevirathne
20th & 21st March 2015	*School Science & Engineering Programme- SSEP (2015)* for the students who have excelled in GCE Advanced Level examination in 2014 in mathematical stream. [147 students from all over the country] This was an awareness programme to give a clear understanding of the difference between Engineering and Science, and Essential role of critical thinking and creativity in the process of teaching and learning.

23rd August 2012	*Effective use of Microbial biofertilisers for an improved economy and environment in Sri Lanka* For Managers of krushi sewa piyasa, Organized jointly with Prof.A.Kulasooriya & Prof G.senevirathne
20th & 21st February	Two day workshop on Geology for 130 G.C.E. O/L teachers At the IFS the auditorium
17th June 2011	*"Use of Drama for Effective Teaching of Science"* 30 Teachers from Central Province, at the IFS auditorium
15th July 2011	"Transfer of Low Cost water treatment technologies" For Vidatha Officers

6. OTHER APPROPRIATE CONTRIBUTIONS AT NATIONAL LEVEL & LOCAL LEVEL TO PROMOTE SCIENCE

2016	All island competition "Science copies Natures Secrets" 2016 The objective of the competition was to inspire school children to look at nature from a new angle by giving understanding of the ways in which nature helps our existence and the ways in which nature is imitated (biomimicry) to make human life better. The competition was organized for Sinhala, Tamil, and English medium students of grade nine. http://biomimicry.sciencerays.com/
21st & 22nd September 2015	Education Exhibition; Central province education exhibition at the Gurudeniya teacher training school. More than 8000 participants participated for this exhibition. Demonstrations of science models and special lectures were done for school students and teachers.
11th November 2014	World Science week competitions; For Students of Kandy schools Competition 1; "Space in a nut shell" *Students were asked to prepare short videos or Power Point presentations under the theme "Space Technology, for the benefit of human beings"* Competition 2; "Life in space" *This competition was based on an activity that students were assigned at the workshop. Students were expected to provide solutions to overcome difficulties that they would have to face if they were to live in another celestial body* Competition 3; "Space Conqueror" *space model creating competition*,
15th November 2014	The public awareness programme on "Space Technology for the benefit of human beings" General public Conducted at the Kandy City Center. 1500 people participated in this programme which consisted of an exhibition, demonstrations of space models, and special events for kids etc.

2013	All island competition "Understanding the World through Science Competition" 2013 The objective of the competition was to promote science concepts among students, and to enhance their inquiring mind towards science while making them inquisitive about science in the surrounding. We received about 5,000 entries for this competition. [form students of grade 6-11] http://worldthroughscience.sciencerays.com/2013/
21-23rd September 2012	Exhibition; Dr.CWW Kannangara Memorial Programme. At Hadunu Wewa Central College
2011	All island competition for students on Nano-Science "Nano-Science & Nanotechnology for a better future" 2011
21st to 25th October 2009	Exhibition stall at "Mada Rata Navodaya"- Organized by Department of Education, Central Province
3rd & 4th October 2010	Exhibition stall at "VIDATHA National Science Day Exhibition" Held at District Secretariat, Kandy;
3rd to 7th Febraury 2010	Exhibition stall at " Dayata Kirula"-Educational & development exhibition At Pallekale Kandy
2009	All island competition on Scientific concepts for students 2009 *The competition was mainly focussed to awake enthusiasm of students to choose science and to make them understand the complex science facts.* *Competition on scientific concepts was organized in Sinhala and Tamil medium under two categories [year 7-9, and 10-11]*
2009	All island competition for Science teachers 2009 *Science should be taught in logical and formal manner. However scientific concepts and knowledge should be presented to the students in an intuitive manner relating to their day to day experience. Therefore, the competition was organized for science teachers such that they will use their creativity, scientific knowledge and artistic talents to form create poems, drama, games etc. describing scientific concepts in a simple and an interesting manner.*
23rd June 2002	Exhibition stall at "DEST Exhibition" at the Science Faculty, University of Colombo Our participation was mainly to give a broad picture about the IFS and its activities to the general public.

7. CONTRIBUTION AS A RESOURCE PERSON TO ENHANCE RESEARCH MINDSET OF TEACHERS AND STUDENTS

7.1 Resource Person - "Introduction to research methodology"
For teachers and student of Central Province, Organized by NSF at IFS auditorium (11/5/2015)

7.2 Resource Person - "Short course on Teaching Methodologies in science education" for teachers organized by Post Graduate Institute of Science(27/2/2016)

7.3 Resource Person - "Inculcating Science towards an Innovative Future"
1160 science teachers of the central province were trained to use scientific method in a more appropriate way in daily life (2014)

7.4 Resource Person- "Can we use scientific method in daily life?" in the School Science Programme which was conducted for the very bright G.C.E.(A/L) Science students, who represented all districts of the country (20/8/2008 &6/12/2008)

7.5 Resource Person - "How to plan a science project" NSF Auditorium (5/6/2008)

7.6 Resource Person - "Research Methodology on Project ideas in Science" for Central province Teachers and students, Organized by NSF (13/3/2007)

8. CONTRIBUTION AS A RESOURCE PERSON TO POPULARIZE SCIENCE AMONG TEACHERS AND STUDENTS

8.1. Resource Person - "Nano-Science & Nanotechnology for a better future"

25th June 2015	One Hundred G.C.E A/L students of Madampe Central College, Madampe
22nd December 2014	Hundred students of Elkaduwa Divisional secretariat at Elkaduwa Sinhala Maha Vidyalaya
17th September 2014	Hundred students of Panvila Divisional secretariat at Panvila Rajasinhe Vidyalaya
06th May 2014	Two hundred students of Raththota Divisional secretariat at Parakrama Vidyalaya
19th Feruary 2013	Fifty nine teachers and two hundred and fifty nine students from Ampara
04th November 2012	Hundred and fifty students of year eleven students of Kotmale Educational Zone
02nd November 2012	Hundred and twenty, year nine students of Yatawatta M.M.V, Matale
13th September 2012	Hundred and fifty, year nine students of Poramadull Central College, Haguranketha
11th September 2012	Hundred and fifty year nine students of Poramadull Central College, Haguranketha

6th July 2012	Hundred and fifty students of grade 9 of Madurankuliya Maha Vidyalaya.
21st June 2012	Three hundred students of Aliwanguwa Maha Vidyalaya, D-10 Maithri Vidyalaya and Padavi Parakrama Vidyalaya in Trincomalee
30th May 2012	Two hundred students of Halawatha Senanayake Madyavidyalaya, Madampe
04th May 2012	Thirty G.C.E. O/L Science teachers from Kothmale Educational Zone
23rd November 2011	Two hundred students and Teachers at Haguranketha Vidatha Center
11th November 2011	Two hundred students and Teachers of Rahula College, Katugastota
7th November 2011	Seventy five Science Teachers of Gampola Zone
11th July 2011	Seventy five Science Teachers of Gampola Zone
28th October 2010	Hundred G.C.E.O/L Sinhala medium Science Teachers of Central Province
18th October 2010	Hundred G.C.E.O/L English medium Science Teachers of Central Province
4th September 2010	Three Hundred Students at Vidatha Exhibition

8.2 Resource Person – *"How to use Scientific method in Daily Life"*

15th March 2011	Forty students of St. Gabriel Balika Vidyalaya, Hatton

8.3 Resource Person- *"How to teach/learn Science in a simple and enjoyable way"*

23rd June 2009	Hundred and fifty students and three teachers from Sangamitta Balika Maha Vidyala, Matale
17thJune 2009	Sixty four students and two teachers from Nugawela Central College

8.4 Resource Person- *"How to teach scientific concepts and Scientific methods learn Science in a simple way"*

19th & 26th May 2009	Hundred teachers of Central Province
18th October 2008	G.C.E. Ordinary Level Science teacher (Sinhala medium) in Central Province. It was a one day training programme with hands on experience session, held at the IFS Auditorium

8.5 Resource Person - "Importance of learning Science & Science Communication"

26th February 2016	"The importance of learning Science" School science day of Gampola Educational Zone
20th September 2015	Lecture on "The importance of learning Science" at the School science day of Medamahanuwara M.M.V
20th September 2015	Lecture on "The importance of learning Science" year 6 and 7 students of Wattegama Educational
30th September 2014	Lecture on "The importance of learning Science" at Dunhinna Secondary School, Theldeniya for two hundred students
11th August 2010	Hundred and fifty students of the School Science Programme which was conducted for the very bright G.C.E.(A/L) Science students representing all districts of the country

8.6 Resource Person - "Biomimicry: Science copies Natures Secrets"

23rd June 2014	Two Hundred Students of Holy Family B.M.V., Kurunegala
3rd March 2013	For teachers of North-Central Province Organized by NSF at the Education Development Centre, Ibbagamuwa
13th December 2011	Hundred and fifty students of the School Science Programme which was conducted for the very bright G.C.E.(A/L) Science students, who representing all districts of the country

8.7 Resource Person - "Science camp with hands on experience"

20th September 2015	Science magic show for 900 students of Wattegama Educational Zone
25th June 2014	Science camp for 965 students of grade 6,7, and 8 of Mahamaya Girls' College, Kandy
14th,28th May2013 *4th June 2013*	Science camps for all students of grade 6 in Kotmale Education Zone Delta Gamunupura Vidiyalaya 200 students Harangala Maha Vidiyalaya 200 students Kubal oluwa Maha Vidiyalaya in Pundaluoya 200 students
22nd March 2013	Forty students of G.C.E. O/L Students of Walagamba Vidyalaya, Kegalle
7th February 2013	One hundred and twenty grade 10 students of Yatawatta Weera Parakrama Madya Maha Vidyalaya, Matale

8.8 Resource Person-

"Skills for science communication to the public using electronic media" Academics, Scientist of Central Province Jointly organized with NSF at IFS auditorium [26/8/2006]

8.9 Resource Person-

Mihimadala Science Magazine on TV- 2nd Phase: video programme on "Bio-mimicry for development of Science " 2013

9. POPULARIZING SCIENCE THROUGH ELECTRONIC MEDIA

9.1 Open Science Circle in Electronic Media- Science forum via mobile phones "Vidu Nena Hawula"

Vidu Nena Hawula Science Message Service, also known as OSCEM (Open Science Circle in Electronic Media) was launched on 2nd January 2012 (according to my concept) with the aim of improving the science literacy and scientific temperament of Sri Lankans.

OSCEM is the first Science Message Service in South Asia and offers a combination of services to its members to improve scientific knowledge as well as to develop the inquiring minds, and the enthusiasm about science among the school community and the general public.

A daily science message service and an open science quiz based on weekly questions via text messages (SMS), e-mail and social media networks is provide. This free service is provided on all weekdays in both Sinhala and English media.

In addition, it provides a Science Blog and an open forum for the subscribers to discuss their problems related to science behind day-to-day activities with the scientific community. This free service is provided on all weekdays except on government holidays.

http://vidunenahawula.sciencerays.com

Grand milestones of OSCEM;

- Won a National award in the category of e-learning and education at the E-Swabhimani National Best E-content Award 2014.
- 500th Science Message was sent by the honourable minister of Technology and Research, Minister Patalee Champika Ranawake on 15th July 2014.
- 1000th Science Message was sent by the honourable minister of Science,Technology and Research, Minister Susil Premajayantha on 31st August 2016.

Annually, a Gold medal was awarded for the top ranker in the *Vidu Nena Hauwla* weekly science quiz.

9.2 Science Youtube Channel; Vidu Nena Dasuna -VND

The project - Vidunena Dasuna Youtube Channel was launched with the aim of demonstrating science lessons and experiments to students in Sinhala and making science a simple and interesting subject for them. This project was initiated on 26th March 2012 and later being funded by the National Science Foundation (2014-2015) and currently consists of about 30 short videos covering different lessons & experiments included in the G.C.E. Ordinary Level and Advanced Level Syllabuses as

well as other experiments that can be done by students themselves. Subject matters were selected based on the requests made by teachers and students.
www.youtube.com/user/IFSVND
Vidu Nena Dasuna has received many positive feedbacks and is being viewed by a lot.

Total views: 3,06,435 (as at 13th May)

9.3 MASS project (Mobile Apps for Science Students)

MASS is the first ever known Mobile Application project that creates mobile apps in Sinhala to make Sri Lankan students learn science in a novel and more exciting manner.
The first App of this project "Periodic Elements" was published on 24th March 2014. It was created in the form of an interesting educational game, not only makes it easy for the students to memorize the properties of the chemical elements that are included in their syllabuses, but also gives them the opportunity to learn chemistry as a new & unique adventure. All glossaries can be accessed without an internet connection (offline access). The app can be downloaded from the following link:
http://nifs.ac.lk/?page_id= 3267

The second mobile app of this projects has been named as "Sinhala – English Science Glossary " and published on Google Play Store on 25th May, 2016.
With this app, the users can search words in both Sinhala and English languages. While typing words, it also shows search suggestions and search results are categorized by the subject for selected word.

There are more than 90,000 words which covers science disciplines such as Agriculture, Botany, Education, IT, Mathematics, Physics, Statistics, Chemistry, Geography, Library Science, Geo Science, Computer Science, Molecular biology, Nursing and Zoology. After download, all glossaries can access without a internet connection (offline access). Download the app from the following link: http://nifs.ac.lk/?page_id= 3267

9.4 Sinhala science web "Vidu Mang Petha":

Most websites on science are in English language and Vidumannpatha is an attempt to open up science to those interested in learning new concepts in science and achievements in science in a local language. Vidumannpatha is the first Sinhala science website (www.vidumanpetha.com) in the world. Apart from its extremely useful search engine, the website tries to enthuse learners by providing innovative interactive and enjoyable mechanisms for learning science through quizzes and games. Many articles on topical areas of science written by scientists and students can be accessed through the website. The site provides step-by-step guidance on setting up a simple home laboratory. Experiments which could be performed using readily available material even without a home laboratory are used to introduce simple concepts in science and their use in explaining the results of the experiments. Most of these experiments cover areas of the school curriculum and can therefore be a powerful learning tool for schoolchildren. By providing free access and unrestricted reuse of its content the site contributes to the popularization of science.

Milestones of the web project;

- This website was initially hosted in the NSF sever in year 2005 as a Personnel project of Dr. K Tilakaratne and Prof Asiri Nanayakkara. In 2009, the project was handed over to IFS.
- Official web launching- 15th July 2009
- Grand Jury special merit award for the year 2012, under the category of e-Education & Learning was awarded to Vidumanpetha web site.

9.5 e-science glossaries with intelligent search engines

A. English-Sinhala e-glossary in science with an intelligent search engine was published jointly with Prof. Asiri Nanayakkara (2004). This contain 41,800 scientific terms in Biology, Chemistry, Computer science, Mathematics, Physics, and Geology.

B. English-Tamil e-glossary in science with an intelligent search engine was published jointly with Prof. Asiri Nanayakkara (2006). This contain 45,000 scientific terms in Biology, Chemistry, Computer science, Mathematics, and Physics.

C. English-Sinhala e-dictionary in Chemistry with an intelligent search engine was published (2008). This contain 1000 scientific terms

10. EDITING/ COMPILING OF COLLECTIONS OF ESSAYS AND BOOKS

1. Complied the 1st Hand Book for Post Graduate Institute of Science; "PGIS Hand Book 1998" . ISBN 955-589-017-x
2. Editor- IFS science Bulletin Pragñā 2000- 2008 (bi-annual). ISSN 1391-6033
3. Member of the editorial board of ***Scientia*** IFS science Bulletin 2010
4. Annual Research Reports were compiled from 2000-2009
5. Compiled the course notes for School Science Programme 2000-2010
6. Member, Editorial Board of NIFS Annual Research Review

11. CREATING NEW STUDY MATERIALS TO POPULARIZE SCIENCE: "Scieno-gadgets" to simplify Science teaching

Main focus of creating scientific tools & kits was, to enhance the enthusiasm of students towards science. Following science kits were designed and constructed to increase the student interest towards science:

Wind chimes:	To Learn Electrochemical series & Reactivity series with fun
Wall clock:	To memories periodic element
Origami science teller:	Learning science facts with origami
Sci-lander:	Desktop calendar to learn science concepts

Flip flop, Science learner:	For easy learning of science facts
Home lab:	Ways to build a home lab with easily available materials
Science Games:	To learn reactivity series, periodic elements and compound formula
Rattle ball:	To learn Nano science facts
Self-explaining periodic table	For O/L students (e-project)
Building bonds with circles and buttons	To familiarize chemical bonding
Visualizing the mole concept; molecular weight	Demonstrating the amount of different material which need for one molecule [1 mole of NaCl,, one mole of cupper, one mole of Mecury, one mole of water, one mole of Sugar etc.

12. POSITIONS HELD:

- Theam Leader [Science & Technology for kids], National Science Centre, Sri Lanka [2014-2015].
- Member, Working committee on Science Popularization
  [March, 2016 to March, 2018 and November, 2013 to November, 2015]
- Member, NSF National committee on Science Popularization
  [April, 2011 to April,2013]
- Member, NSF, Special Committee on Popularization of Science
  [Febrauary,2007 to March,2008]
- Member, Advisory board to Science Popularization division of NSF
  [April,2008 to April,2010]
- Contact person of IFS for the National Research, Development and Innovation Surveys-conducted by NSF
  [2004 to date]
- NIFS representative for the Scientific Dialogue with UNESCO Director General
  [16/8/2016]
- Liaison officer of NIFS for data collection for the National Science & Technology status report 2015, 2016 [*NASTEC]*

13. CONTRIBUTIONS FOR INSTITUTIONAL DEVELOPMENT:

- I render my services in different committees of IFS;
  - Member, Tender Board - appointed by the board of Governor (2001 to 2014)
  - Chairman Board of Survey (2002)
  - Chairman – Credit committee for distress loan (2003 to 2014)
  - Member of the committee for planning of future IFS building (2003)
  - Member House –Keeping committee
  - Member, EPF loan Committee 2002, 2003, and 2004
  - Member Salary Committee 2008; to rectify the salary anomalies of IFS staff
  - Member on several committees for renewal of contracts/ promotions/ recruitments 2000-2014
  - President welfare society of IFS -2001
  - President- Institute of Fundamental Studies Employees' Association(IFSEA) 2009
  - Secretary- Institute of Fundamental Studies Employees' Association(IFSEA) 2008

- **Documentary about IFS:** The very first documentary about IFS was prepared by the Science Dissemination Unit. I was responsible for overall development and production of this documentary. [2002]

- **Computer Museum:** In order to give information to the IFS visitors, about the evolution of computers, a computer museum was built using outdated old generation computers and peripherals such as printers, dumb monitors etc. [2003]

- Workshop was organized for IFS staff on finance and Administration 29th and 30th August 2003

14. AWARDS, RECOGNITION, GRANTS

1. Winner

   Won a National Award under the category of e-Learning & Education at the e-Swabhimani, National Best e-content award 2014 for the Science Short Message service. The e-Swabhimani is an initiative of the Information Communication technology agency of Sri Lanka aimed at recognizing excellence in digital content creation.

2. Merit award

   Won Grand Jury special merit award under the category of e-Learning & Education at the e-Swabhimani, National Best e-content award 2014 for Sinhala Science Web site

3. Grant awards

   I. United Nations Educational, Scientific and Cultural Organization (UNESCO), project No. 6651137004SRL "Inculcate Scientific Methodology and Novel teaching techniques for the level of Junior Secondary Education in Sri Lanka". In year 2013- US dollars 25,000 [Rs. 2,330,653.50]

II. National Science Foundation Sri Lanka, for Science You-tube Channel-"Vidu Nena Dasuna". Rs. 8,96,000.00

4. Travel grants
   a. From Tokyo Institute of Technology for "Tokyo Tech-UNESCO Fellowship Symposium"
   b. From Commission for Science and Technology for Sustainable Development for "Workshop on Science Education for Sustainable Development"

15. POSTGRADUATE DEGREE SUPERVISION:

1. M.Sc. in Science Education: H.M.R.P.K. Herath, Title of thesis: Effect use of simple models for learning chemistry in an enjoyable manner. PGIS, University of Peradeniya, 2013 Supervisor: Dr. C.T.K. Tilakaratne

2. M.Sc. in Science Education: F. S. N. Mohamed, Title of thesis: Difficulties faced in teaching and learning physics in grade six science: a case study in Matale educational zone. PGIS, University of Peradeniya, 2017 Supervisor: Dr. C.T.K. Tilakaratne