

Convocation Address:

Education is a Chain Reaction that lasts a lifetime

Dr. Kingsley A. de Alwis, *BSc(Cey), PhD(Alberta), FNASSL, Hony.F.I.ChemC*
President National Academy of Science Sri Lanka,
President elect. Science Council of Asia,
Consultant Agronomist to FAO, WB and IFAD,
Retired Science Advisor (Agriculture) to FAC,
Former Head, Land Use Division, Irrigation Department

Let me at the outset thank Prof. Sotheeswaran, Dean of the College, and Prof. J. N. O. Fernando Rector of the College for their kind invitation to me and my wife to be a part of this convocation. I am greatly honoured and it gives me great pleasure to have been asked to be the Chief Guest and to deliver the Ninth Convocation Address.

A convocation is a very special event in the academic calendar of the College of Chemical Sciences of the Institute of Chemistry Ceylon as it brings together the students, their parents and the academic staff to celebrate what is essentially a joint achievement of all three groups. I would like to take this opportunity therefore to address these remarks to each and all of them.

First, I would like to say a few words to those of you who are graduating today. I believe there are 83 Graduate Chemists, 34 DLTC Chemistry Technicians as well as a few Licentiate Chemists and Advanced Diplomates in the list. You are very fortunate indeed to have received such a high-quality education as the one you have had at the College of Chemical Sciences. This is especially true if you plan to go in for further studies in the field of chemistry or any of the sciences for that matter, since chemistry is the basis for the physical sciences, the life sciences, the earth sciences and the applied sciences. But it is also true if you plan to seek employment directly after graduation in the same or even some other field, because you are now equipped with the proven ability to carry out your assignments in any job with discipline and dedication.

I wish that you graduands would appreciate the role of your parents whose love, sacrifices and sometimes even reluctant pressure on you, have brought you this academic success. Give them a big hand. Stand up and look for your parents wherever they may be seated and wave to them or greet them from where you are. And after this ceremony, be sure to give them a big hug.

To the parents who are here, I would like to say how fortunate you are to have been able to give your

sons and daughters a tertiary education in chemical sciences which is the equivalent to that available at any high class university in the world, at such a reasonable cost.

To the faculty members who are present here today, I offer my congratulations for the great job you are doing, teaching with such dedication and such a high sense of professionalism, and thereby setting an example to the state universities and the education sector as a whole.

I can do no better to describe the educational service offered by the College of Chemical Sciences than to quote Prof. Oleap Fernando. In a recent article he says:

"The two tertiary level programmes conducted by the College of Chemical Sciences (CCS) over the past four decades have proved to be typical examples of the type of tertiary education that can be provided at low cost, without delay, efficiently, effectively and without the constraining effects of state bureaucracy and political interference.

The Graduateship Programme in Chemistry of the CCS today produces annually well over 40 percent of Sri Lanka's Special Degree level Chemists within a four year period at an average cost of about Rs 3 lakhs which surely must be the cheapest of any such programme in any part of the world. With an average cost of well over Rs 1 million to produce a similar graduate in the Sri Lankan University system, it should be noted that the 905 Graduate Chemists produced by the CCS through 30 batches (1983-2011) represent a human resource development (HRD) which would have otherwise cost the national exchequer, well over one billion rupees.

Opening up educational opportunities outside the state university sector in Sri Lanka, particularly through the non bureaucratic and non-politically-oriented professional bodies, can in fact have a symbiotic and synergetic effect as well. The College of Chemical Sciences of the Institute of Chemistry Ceylon has convincingly proved how this could be done in

order to take Sri Lanka towards making it a knowledge hub in a very practical and efficient manner.”

There is a lesson here for our politicians who are constantly shouting from the rooftops that only state education can deliver the goods.

I now wish to give you, both students and parents, an opportunity to show the feelings of gratitude, that I am sure you have, towards the faculty and staff of this fabulous institution, the CCS, for having contributed their time, energy, experience and erudition to impart their knowledge to those who are graduating today. So, let us give the faculty at CCS a big hand.

However, today is primarily the day of the students and a Convocation Address is traditionally expected to direct a few words of advice towards them. The convocation marks the culmination of a chapter in a student's education. It is a time of relief for the student and his or her parents - and in some cases, for the teachers as well. However, it is also a time of sadness caused by the realization that the bond with the teachers has to be severed and the student will now be out there in the world on his or her own.

I congratulate all of you who are graduating today. Some of you are being recognized and honoured for your outstanding performance and you deserve our highest appreciation. All of you have undergone a thorough grounding in the Chemical Sciences, which if all goes well, will start you off on a successful career. Considering the state of the economy, I am sure that many of you are anxious about whether you will have a long wait after your graduation to get a job. As you go back home and time passes, this anxiety is likely to increase. But remember that your anxiety will be nothing compared to that of your parents! But don't worry. Take heart from the fact that chemistry underlies every other branch of science and many non-scientific pursuits as well. I recently did a Google search for chemists' jobs. Not that I am searching for a job at my age, but I was curious about what sort of opportunities are available out there for young chemists graduating today. Here is the list I found in the New Scientist magazine of 2nd January alone; it gives the available jobs for chemists with the number of vacancies in each category in parentheses:

Agricultural Chemistry (16); Analytical Chemistry (70); Biochemistry (30); Catalysis (7); Chemical Engineering (21); Chemical Information (1); Computational Chemistry (4); Electrochemistry (4); Environmental Chemistry (14); Food Science & Nutrition (17); Forensics (1); Geochemistry

(5); Industrial Chemistry (13); Inorganic Chemistry (6); Materials Science (15); Medical Affairs (10); Medicinal Chemistry (6); Molecular Chemistry (4); Nuclear & Technology (2); Organic Chemistry (17); Petroleum chemistry (1); Pharmaceutical Chemistry (25); Pharmacovigilance (2); Physical Chemistry (15); Polymer Chemistry (12); Process Chemistry (14); Quality Control/QA (45); Regulatory Affairs (33); Spectroscopy (8); Synthetic Chemistry (6); Toxicology (5); Other (11) (A total of 440 openings in 32 job categories).

There are, of course, many other chemists' jobs that are not in this list that are available from time to time, even in Sri Lanka. A job for which a chemist could apply may also be clothed in different terminology e.g. as “analyst” or “technologist”. You could also end up as a chemistry teacher in a university or a school. Some of you are specifically trained as laboratory technicians and there are many openings in this field. So take heart and be sure that with the excellent training you have got, there is a job out there, waiting for you. One career I do not recommend for you, even though it is perhaps the most lucrative one in Sri Lanka today, is that of a politician. You could have gone into that profession without the qualification you are getting today or even after dropping out of school!

However, don't look out exclusively for a job dealing with chemistry. I would like to give an example from my own experience in this respect. I started with a special degree in chemistry from the University of Ceylon, as it was then called. My first job was as Assistant Soil Chemist in the Department of Agriculture, where I was involved mainly in Soil Survey and Land Classification, not just chemistry of the soil. I had to learn many new disciplines to carry out my work as part of the team that made the first National Soil Map for Sri Lanka. I learned that in this job chemistry, or even soil chemistry, was not enough to understand the principles of soil science. One also needed knowledge of soil physics, soil biology, soil microbiology, soil fertility, geology, mineralogy, hydrogeology, hydrology, geomorphology, climatology, remote sensing, cartography, agronomy and agriculture among other disciplines. Subsequently, I went for my Ph.D. training in Canada where I had to follow courses in all these subjects before getting down to my research program. On my return to Sri Lanka and in due course I became Head of the Land Use Division of the Irrigation Department.

In this position, I found that even knowing all these technical disciplines was not enough. I had to learn

something about administration to manage and motivate a team of soil scientists, soil surveyors, cartographers and laboratory staff. I had to learn how to deal with the stifling bureaucracy of Government Departments and Ministries, I had to learn how to deal with foreign agencies and the "experts" they sent, who in many cases, were not experts at all. And I had to learn how to say no to politicians who wanted jobs and contracts to be given to their friends and relatives without going through the proper procedures. And none of these things had to do with the Chemistry I learned at the University.

All this helped me when I took up a position as Agricultural Officer and later became Senior Adviser (Agriculture) with the FAO, the Food and Agriculture Organization of the United Nations, in Rome. But I had still more learning to do. In this job, I had to go on missions to many Franco phone countries, for which I had to quickly brush up my French, of which I had only a smattering to begin with. I also had to work with, and later lead, multi disciplinary teams to prepare projects in the agricultural sector for investment by the World Bank and other International Financing Agencies. These projects involved agricultural development, research and extension, irrigation, livestock development, forestry, tree crops development, etc. and I had to teach myself the basics of all these disciplines. I also had to study some economics, economic and financial analysis, and the associated computer programs.

The point I am trying to make with all this is that the learning process, be it formal education at an academic institution such as the College of Chemical Sciences, or learning on the job, is *never* finished. If you are not learning something new every day in your job, you will never progress. The way knowledge and technology are progressing today, you will surely fall behind and the work you do will become irrelevant if you don't keep up with new developments in your field. This stagnation is illustrated by some lecturers who repeat the same lectures year after year and claim to have 20 years of teaching experience, but what they really have is one year's experience repeated 20 times! It is also illustrated by senior professors who are unable to access the large amount of knowledge available on the internet, to communicate with fellow scientists abroad and to keep up-to-date with new developments in the scientific world, simply because they are computer illiterate.

So, do not think of this as the end of the book, it is only the end of a chapter. Learning is a lifelong experience. As Socrates said, "Education is the kindling of a flame, not the filling of a vessel". Learn something new today. So, do not think of this as the end of the book, it is only the end of a chapter. Education is a lifelong process and may be compared to a chain reaction which lasts a lifetime.

Good luck and God bless you all.

The Report of the Honorary Rector

Looking forward to the completion of four decades of Professional Chemical Education (at Graduateship and Technician levels) in Sri Lanka.....

Professor J. N. Oleap Fernando, *CChem; CSci*
Honorary Rector & Honorary Professor, CCS,
Emeritus Professor Open University of Sri Lanka

It is with a continuing sense of humble accomplishment, immense satisfaction, justifiable pride and looking forward to the completion of the fortieth year of professional chemical education at a tertiary level by the Institute of Chemistry Ceylon that I present to you once again the Annual Report of the multifarious and varied activities of the College of Chemical Sciences.

Graduateship Programme in Chemistry

The 30th batch of 83 Graduate Chemists receiving their certificates today comprise the fifth batch to be

admitted to Adamantane House in February 2009 as the 31st incoming batch. Our average annual output of 83 over these past four years (2009 – 2012) is in striking contrast to an average annual output of 45 over the previous four years (2005-2008). This (virtual) doubling of the output has however not been at any expense of quality and standards; it has in fact occurred with a considerable increase in facilities provided including a remarkable increase of the number of internal academic staff from one in 2005 to nine in 2012 representing increased accessibility of regular staff to students; the number of regular teaching assistants

employed by the College has increased from 3 in 2005 to about 20 in 2012. The total regular staff of the Institute (including non academic staff) increased from 16 in 2005 to 50 in 2012.

In 2004 when we celebrated the 25th Anniversary of the establishment of the Graduateship programme (in 1979) we were happy to graduate the daughter of a Graduate Chemist who joined the inaugural batch. We are now happy to record the passing out of the daughter (Ms. Lakmini Egodewatte) of a very senior, respected and loyal member of our institute, though not our own Graduate Chemist - Mr E.G Somapala. Over the past three decades we have had about six children of Chemists joining the programme but this is the first time that a child of a non CCS Chemist has passed out. I wish to extend on this occasion an invitation to more of our members to enroll their children in our programme, thereby not only benefiting to become a Graduate Chemist in the shortest possible time but also with the complete waiver of tuition fees. I should also record that Lakmini has done very well to be placed overall third in the final pass list.

Our current output of Graduate Chemists without any delay within a four year period at a very low personal cost to students (of about Rs. 350,000 over 4 years) constitutes well over 40% of Sri Lanka's total production of Graduate Chemists from several tertiary level institutions. The total output over 34 years from 30 batches has increased to 905 and we look forward to a total output of almost 1000 within the next nine months when the 31th batch will pass out, during the 40th year of the provision of tertiary chemical education by the Institute of Chemistry Ceylon. Using the most recently available average national figure of over Rs. 1 million for the production of a four year BSc graduate in the university system, our production turns out in notional financial terms to a human resource monetary equivalent of well over one billion rupees. Such an unexpected and unpredicted human resource development has been realized by the Institute of Chemistry Ceylon at no expense whatsoever to the national exchequer. Our professional body of Sri Lankan Chemists can be justly proud and satisfied with this most wonderful achievement which quite clearly stands as a unique model for any educational programme that can be offered by any institution in Sri Lanka.

I had the great privilege and pleasure over the past few months (during my personal holiday in the North American Continent) to meet, see and observe personally the most impressive and heartening

achievements of about 35 of our Graduate Chemists, mostly in Graduate studies and a few in employment. I was also able to personally meet some of the supervisors of the former students who are pursuing PhD studies in USA and Canada. Particularly in contrast to a similar visit I made to the North American Continent in 2006, I could very clearly gauge the increased degree of positive feedback from supervisors as well as the enhanced level of confidence, zeal and maturity exhibited by our own Graduate Chemists. I was indeed proud to observe the manner and language in which they described the graduate work they were carrying out and how they were able to do so in the midst of numerous obstacles!

I am extremely glad to report that at least one such student has submitted three papers for the forthcoming annual meeting of the American Chemical Society after a mere three months of graduate research. According to the ongoing surveys carried out by us, it is not unlikely that there would be about 100 with PhD degrees at the end of 2013 in contrast to about fifty at the end of 2011. Increasing numbers of our Graduate Chemists are proceeding to numerous universities in many developed countries with the goal of obtaining post graduate degrees.

Increasing numbers of secondary students are also knocking at the doors of Adamantane House. We had 95 such applicants before the release of the 2011 A/L results and in striking contrast, we had 175 applicants before the release of 2012 A/L results. Recognizing the customary increase in number of applicants soon after A/L results are announced, we took steps, without disappointing any such potential Graduate Chemists, to duplicate the Graduateship Programme on three week days in addition to the traditional weekend programme with effect from this year. The total number of registrants after the A/L results were released has thus climbed up to a record number of 205.

Formal Accreditation of the Graduateship Programme by the Royal Society of Chemistry, UK.

We accepted an offer made last year by the Royal Society of Chemistry, to consider accreditation of our Graduateship Programme. A three member team for the RSC visited Adamantane House during the Institute Annual Session in June 2012. This visit involved active and independent discussions with the lecturers, staff and students. Invaluable suggestions to improve the programme have been made and numerous documents regarding our activities were submitted to the team. We have now been informed that once certain adjustments

and improvements are made, we are likely to be accredited later this year. This would be another important milestone in our tertiary education history.

Diploma in Laboratory Technology Programme in Chemistry (DLTC)

As one of the very few present here who witnessed the historic commencement of our first formal educational programme in 1973 (at the Technician level) at Aquinas University College at a time when the Institute of Chemistry Ceylon was a crawling baby, I am indeed extremely happy to record that this 2 year tertiary programme at a middle level, open basically to those even with GCE (O/L) qualifications, has also progressed exponentially upwards with the shift of the programme to our own Adamantane House in 2005. 34 have passed out this year as the 38th batch bringing the overall total to 864. The average output has also doubled from 21 (2000-2006) to 42 (2007-2012).

The DLTC programme continues to date as the only such programme producing Chemistry Technicians at a middle level in Sri Lanka. As we approach the 40th year of the commencement of this wonderful and useful programme and the completion of four decades of professional chemical education in Sri Lanka, we remember with gratitude and respect the foresight, forethought and the altruistic sense that enabled our respected predecessors to even think of such a Technician level programme in order to meet a serious lacuna and need at the middle level in Sri Lanka. I used the word *altruistic* since very small payments were made to lecturers and the Institute as a body did not make any charge for all the academic services provided (including even the issue of the Institute Certificate to successful students) over the first decade of the programme. Increasing numbers of DLTC diplomates are also now registering to follow the Graduateship programme.

The annual intake into the DLTC programme has also registered an astronomical increase over the past few years from 50-60 to a record number of 130 as the 40th batch which commenced their programme last December. This increase too has now necessitated the duplication of this programme as well on week days.

Building Programme

Our continuing inability, despite written promises and even the payment of an advance three years ago, to obtain on lease a much needed additional block of land, which is still available, from the UDA in close proximity to Adamantane House has unfortunately

been more than a tragedy and a typical example of the lack of appreciation of the contribution of a professional body to supplement human resource development at a tertiary level in Sri Lanka. Land is being allocated for various purposes which do not meet any of the altruistic ideals of bodies such as ours. We have therefore been compelled to embark on a five/six storey building on the balance half of the small 25 perch block of land surrounding Adamantane House although it will make the limited space we have very crowded! The piling work was undertaken between July and November 2012 at a cost of 18 million rupees while the main building construction which commenced in November is progressing well and is due for completion at an estimated cost of 40 million rupees before the end of 2013. The total cost of the new building and subsequent refurbishment will therefore be around 80-90 million rupees.

The extension will add a further 9250 square feet of additional space increasing the total area at Rajagiriya to about 20,300 square feet. There will be a bridge at every level between the two buildings. It is hoped that with the completion of the extension, we will be able to provide overall additional space for lecture halls, undergraduate laboratories, library, toilets and staff rooms together with provision for a research laboratory. Increased numbers of students for both our programmes have already compelled us to establish an additional lecture hall in level 3 at the existing building as well as open a Supplementary Campus comprising 2000 square feet of space rented nearby from the College of Surgeons. These modifications will be able to ameliorate the current acute lack of space at least until the permanent extension is completed at the end of this year.

We would wish to make the enlarged building we will have, at least modestly, even more attractive, comfortable and user friendly than what we have at present. It should be a model example to what a professional body could achieve even without any financial input from the government or any other funding agency. Practically all the funding so far for our buildings has come from the fees collected from our students which has been well collected, well spent, well saved and well invested! It is worthwhile to mention and record that so far not a single official/officer has gone abroad on Institute/College expense for any activity. No space in our buildings has ever been rented out since, whatever space we have is used entirely for the conduct of our own use including the educational programmes. This is in striking contrast to perhaps all

similar allocations of land that have been made by the UDA over the past 3-4 decades. Some of the buildings on land allocated are used by some bodies entirely for earning rental income. What a tragic catastrophe?

A very well respected senior member and former President of our beloved Institute (Dr. R. O. B. Wijesekera) has in a recent letter to us indicated how much he is filled with admiration for the effort made by the CCS to convert a very modest narrow academic outfit that threatened to remain as such forever into a vibrant agent for the national Chemical professional community to give our Institute dimension and stability. We are indeed energized, inspired, motivated and emboldened by such genuine expressions while appreciating and taking note also of critical comments made by others. May I therefore use this opportunity to appeal to and encourage our wider chemical professional community, young and old, which includes 905 Graduate Chemists who have directly benefited from our unique efforts to make a positive contribution, financial or otherwise, big or small, towards the refurbishment costs of the extension and improvements to the refurbishment of the existing building. That would be in the fortieth year of the commencement of formal educational programmes, an expression of your joy, pleasure, satisfaction and commitment to make your own contribution towards supplementing the financial resources generated from our students over the past four decades. Will that not be a genuine practical appreciation and formal expression of what the Institute and the College have been able to now achieve starting from very small beginnings?

Ruby Anniversary of Chemical Educational Programmes of the Institute over four decades

It has been decided to hold an International Symposium/Conference on Chemical Education on the theme "Professional Chemical Education and Research for Industrial Development and Sustainable Economic Growth" to commemorate this welcome anniversary in early April 2014. Amongst the preliminary suggestions / decisions already in the pipeline for this purpose are

- (i) to hold our tenth Convocation as part of the Ceremonial Inauguration of the Conference
- (ii) to invite the Federation of Asian Chemical Societies to hold an Executive Committee meeting in Colombo in conjunction with the Conference
- (iii) to organize a CHEMEX – 3 Exhibition together with the formal hard opening of our extension

Your help, advice and assistance towards this endeavor will be much appreciated.

Full time Academic Staff of the College of Chemical Sciences

The appointment of the Dr. (Ms)Thiripuranathan Gobika as a Senior Lecturer (on contract) from January 2012 has increased the total number of our Graduate Chemists on our regular academic staff to five and the total number of regular academic staff to ten.

With the commencement of week-day lectures, for both the Graduateship and DLTC programmes, we would require more regular academic staff of high academic caliber to be recruited. We look forward therefore to the return of Chemistry Graduates with good academic records (whether produced by us or elsewhere) for consideration for appointment in the CCS for both full time and part time assignments.

Sixth Research Session

The sixth Research Session of the College was held on 26th October 2012 with Mr. K.R Dayananda, Graduate Chemist (1984), as Chief Guest. 25 Graduate Chemists passing out today presented the results of their research/ study on this occasion as part of their examination process.

National Titration Competition

The National Titration Competition amongst A/L school students was conducted for the 2nd year in succession in November 2012 and was once again very ably co-ordinated by Prof. H. D. Gunawardena. 139 students from 22 schools participated. Students from Devi Balika Vidyalaya won the first three places in the competition for the second successive year.

The Inter Level Debating Competition organized by the College was continued for the fifth consecutive year on 15th December 2012.

Extra Curricular Activities

Our College increasingly encouraged numerous extracurricular activities to enable our students to enhance their leadership, sporting and organizational skills as well as display their hidden talents in a formal manner. College involvement also now includes substantial financial contributions towards such activities organized by and/or through the Student Association. These activities included Aura-2013 (talent-show), Religious activities, Social Action Programmes, Entertainment, the commencement of a Rotract Club and Sports. A Cricket Club has already been established and Swimming facilities are about to be provided. We look forward to enhancement of such

activities since we are of firm opinion that such involvement enhances the academic outputs of students as well as making them better and stronger in the wide world to which they will depart after their studies with us. The All-rounder Awards initiated and donated by past Student Association President, Mr. Chamikara Wijesinghe, that are being awarded today for the 3rd year in succession, are no doubt a welcome initiative to enhance such extra-curricular activities. It is noteworthy to record that the Shireen Jayasuriya Gold Medalist for the best academic performance this year has also emerged as the best All-Rounder. Let this be a good example and model for the future!

Acknowledgements

I wish to acknowledge with grateful thanks the receipt of an increasing number of prizes at various levels of the Graduateship Programme. These include

1. Deepa Sotheeswaran Gaschik Prize for Agrochemicals donated by Ms. Deepa Sotheeswaran Gaschik in Germany
2. Dharmarathne Wasala Prize for Computational Chemistry endowed by Dr. Wishva Herath, one of our own Graduate Chemists, now employed in Singapore
3. Piyadasa & Kalyanawathi de Silva Memorial Prize for Quality Management donated by Ms. Nalini De Silva
4. Professors Saman & Asoka Pathirathne Award for overall excellence in Analytical Chemistry donated by Professor K.A.S Pathirathne
5. Mr. A.M Jayasekara & Mrs. Kusum Aththanayaka Family Prize for Separational Techniques donated by Mr. A.M Jayasekara

I am happy to record that 15 Scholarships & 105 Prizes/Merit Bursaries have been awarded this year

through endowments as well as annual awards. The total value of these awards at all four levels during the current year amounted to Rs. 800,000. We thank all our numerous donors for their great generosity and support which has enabled us to award valuable prizes and medals for all the courses we offer at all levels. We award subject prizes for almost all our courses and most of them are donated / endowed. However a few are still available for sponsorship and the welcome support of donors is eagerly solicited and awaited.

Conclusion

We continue to go forward with confidence, enthusiasm, satisfaction and a sense of fulfillment that the Institute of Chemistry Ceylon has been able over the past four decades to make an immense contribution towards Human Resources Development of Graduate Chemists and DLTC Diplomates in Sri Lanka. From very small beginnings we have in the language of a former president, been able to convert a very modest narrow outfit that threatened to remain as such forever into a vibrant agent to give our Institute dimension and stability. Savings have been used to improve the human resources available for all work of the Institute and to improve and enhance Institute and College infrastructure 65 % of the membership of our Institute now constitutes our own Graduates Chemists. It is therefore very clear that the future progress and development of the Institute and the College are increasingly dependent on our own alumini who as Institute members are also collectively share holders and stake holders. I am glad that both Institute secretaries continue to be our own Graduates Chemists. I therefore repeat my plea and express our fervent hope and expectation that our alumini will take on this responsibility more fully and seriously treat the Institute and the College as their academic parent.

Thank you all very much.

Yet Another Senior Professor appointed to CCS

We are glad to note that Professor E Dilip de Silva, PhD (Hawaii), BSc (Colombo) will be joining the CCS as a full time senior Professor on contract from 1st November 2013. Professor de Silva, who is a Senior Professor at the University of Colombo will be using the major part of his sabbatical leave until July 2014. The Sixth Professorial Oration of the CCS titled "Manoalides to Dhilirolides; A Fascinating Journey from Pacific Marine Reefs to Tropical Rain Forests" will be delivered by Professor de Silva on 22nd November at 4 pm at Adamantane House.

43rd Annual Sessions of the Institute of Chemistry Ceylon 2014

Theme:

Curricula and Evaluation in Chemistry for a Sustainable Economy

Date: June, 2014

CALL FOR ABSTRACTS AND EXTENDED ABSTRACTS

Last Date for receiving abstracts and extended abstracts is 31st January 2014

AWARDS 2014

The following awards will be presented at the Annual Sessions 2014 of the Institute of Chemistry Ceylon.

- **Dr. C.L. de Silva Gold Medal Award**

Awarded for an outstanding research contribution in any branch of Chemical Sciences and/ or the use of such research for National Development during the last five (5) years in Sri Lanka. Credit will be given for the utilization of local raw materials, and where the contribution has already resulted in (i) a publication in a Citation Indexed Journal or (ii) Registering a Patent or (iii) where the contribution has already resulted in a positive impact in the development and innovation in the industry.

- **INSTITUTE OF CHEMISTRY SILVER MEDALS**

Devanathan Memorial Award

Awarded for an exceptional research contribution of an original nature in the field of Physical Chemistry and or related areas, such as Physical-Inorganic, Physical-Organic and Biophysical chemistry.

Chandrasena Memorial Award

Awarded for an exceptional research contribution of an original nature in the field of Organic Chemistry and/or related areas such as Biochemistry, Pharmacognosy, Molecular Biology and Bioactivity studies.

Ramakrishna Memorial Award

Awarded for an exceptional research contribution of an original nature in the field of Inorganic and/ or Analytical Chemistry and/or related areas such as Bio-inorganic Chemistry or Bio-analytical Chemistry.

- **INSTITUTE OF CHEMISTRY BRONZE MEDALS**

Kandiah Memorial Awards

Awarded for the best research contribution in Chemistry carried out by a postgraduate student registered for a postgraduate degree by either course work or/ and research at a Higher Educational Institute in Sri Lanka and for work carried out in Sri Lanka, with the exception of special analysis that cannot be done in the country. Such results should be less than 20% of the findings from the work. Sandwich programs carried out partially abroad do not qualify for the award.

Kandiah Award for Basic Chemistry

For research predominately in basic Chemistry (Organic, Inorganic, Physical, and Analytical).

Kandiah Award for Applied Chemistry

For research in Chemistry related areas such as polymer, food, biochemistry, biotechnology, where interdisciplinary research is involved and provided that chemistry has a central role and comprises at least 50% of the content.

Kandiah Memorial Graduateship Award

For the best piece of research in the Chemical Sciences carried out by a Graduate Chemist of the College of Chemical Sciences/ Institute Chemistry Ceylon registered with a Higher Education Institute for a Post Graduate Degree.

- **Professor M. U. S. Sultanbawa Award for Research in Chemistry**

Awarded for the best research paper presented at the Annual Sessions of the Institute of Chemistry Ceylon, for work carried out and completed in Sri Lanka.

Closing date for receiving applications/nominations for the above awards: 28th February 2014

Further information could be obtained from the Registrar, Institute of Chemistry Ceylon or www.ichemc.edu.lk