

**Annual Report**  
**of the**  
**South African Chemical Institute**  
**(Incorporating the SA Institute of Assayers and Analysts)**  
27th June 2013 to 7th August 2014



**THE SOUTH AFRICAN**  
**CHEMICAL INSTITUTE**

## COUNCIL

### **Office Bearers**

President	:	Prof S Lotz
Vice President	:	Prof B Martincigh
Immediate Past President	:	Prof J Darkwa
Executive Secretary	:	Dr P Forbes
Executive Treasurer	:	Prof N Coville
Co-opted Member	:	Dr M Booth
Co-opted Member	:	Prof V Nyamori

### **Reporting Officers**

Publications Officer	:	Prof G Kruger
Publicity	:	Prof N Coville
Webmaster	:	Mrs L Smith
IUPAC	:	Dr M Booth
SACNASP	:	Prof E Breet

### **Chairpersons of Co-ordination Committees**

Eastern Cape	:	Dr Z Tshentu
Gauteng	:	Dr A Muller
Kwazulu-Natal	:	Prof B Martincigh
Western Cape	:	Prof P Mallon

### **Chairpersons of Divisions**

Analytical Chemistry	:	Prof N Nindi
Chemical Education	:	Prof M Rollnick
Chromatography (ChromSA)	:	Mrs P Forbes
Electrochemistry	:	Dr P Baker
Environmental Chemistry	:	Prof OJ Okonkwo
Mass Spectrometry (SAAMS)	:	Mr M Britton
Industrial Chemistry	:	Dr M Booth
Inorganic Chemistry	:	Prof W Van Zyl
Molecular Modelling	:	Prof G Kruger
Organic Chemistry	:	Prof I Green
Physical Chemistry	:	Dr D Billing
Green Chemistry	:	Dr R Klein
ThermSA	:	Dr L van der Merwe

## **OFFICE BEARERS**



Prof S Lotz – President



Prof B Martincigh – Vice-President



Prof J Darkwa – Immediate Past-President



Dr M Booth - Co-opted Member



Prof N Coville – Executive Treasurer



Dr P Forbes – Executive Secretary



Dr V Nyamori- Co-opted Member

## **MEETINGS**

Council meetings were held on:

27<sup>th</sup> June 2013 (AGM)

Executive Committee meetings were held on:

27<sup>th</sup> June 2013(AGM), 22<sup>nd</sup> August 2013, 22<sup>nd</sup> November 2013, 19<sup>th</sup> February 2014 and 8<sup>th</sup> March 2014

## REPORTS

	Page
President's Report	5
Awards	6
Membership	9
Programme	9
S A Journal of Chemistry	10
SACI Newsletter	13
IUPAC	14
SACNASP	20
<b>Co-ordination Committees and Division Reports</b>	
Eastern Cape	21
Gauteng	23
KwaZulu-Natal	24
Western Cape	31
Analytical	33
Chemical Education	33
ChromSA	34
Environmental	36
Carman (Physical Chemistry)	36
Electrochemistry	37
Inorganic	38
Molecular Modelling	38
Organic	42
Saams (Mass Spectrometry)	43
RSC	44
Green Chemistry	45
ThermSA	47
Financial Report for 2013/2014	48
Presidents of SACI	51
Recipients of SACI Awards	52

## PRESIDENT'S REPORT

I approach the end of my first year in office I would like to reflect on challenges and opportunities that SACI encountered during the review period. This is by no account a complete report of achievements or highlights of the institute during the past year, but rather a documentation of a selection of some occurrences, events and planned ventures. The former can be found in the annual reports of the chairpersons of co-ordinating committees and divisions.

**SACI office moves back to Gauteng:** During 2013, SACI EXEC and council approved the moving of the head office to UKZN. Early this year, SACI was confronted with the dilemma to either lose the services of the SACI administrator or move the office back to Johannesburg again. It was decided that in the interest of pending SACI events, the implications associated by training a new administrator, the fact that the majority of SACI members are in the Gauteng region and the relative ease to set up the office at the University of the Witwatersrand again, the office should move back to Gauteng. The relocation was smooth and achieved without much disruption of services due to the hard work of Neil Coville, Bice Martincigh and Laila Smith. It is evident that the functioning of the SACI office is personnel driven rather than location dependent. To find or train a skilful person who could successfully act as the office manager, run the office and be involved in organising SACI events against deadlines, require an experienced and talented administrator. The staffing situation and job description of the SACI administrator needs to be discussed in the near future. SACI is very fortunate to have a well-organised, highly efficient administrative office.

**SACI structure:** SACI council instructed SACI EXEC to investigate the present SACI structures which in turn commissioned Mike Britton to investigate the matter on its behalf. A comprehensive questionnaire was compiled and sent to all chairpersons of committees and divisions to report on their particular structure, function and operating procedures. A set of data was obtained showing many imbalances and for the first time it was possible to analyse and assess the operational effectiveness of the institute. In the light of this, the EXEC found it necessary to ask an independent expert to act as an advisor and help evaluate the data deduced from the questionnaires. Dr Ian Bratt agreed to assist SACI EXEC as advisor and both Britton and Bratt were asked for suggestions of the best possible way forward. At this stage of the process we can report that SACI requires restructuring and certain suggestions have been made, but further discussions need to take place before a detailed and final model can be constructed and implemented.

**Student representation:** The incorporation of student representatives on all levels of SACI management was proposed by the EXEC and accepted by council. A student representative at each institute of higher learning was requested and a list of contact information was compiled. These students will represent SACI at their respective institutes. The institutes of a specific region selected one of the students to represent them on the regional committee and one of the latter students to represent student matters on Council. All student representatives will be put in contact with each other via e-mail.

**International links:** The symbolic resigning of the memorandum of understanding with the president of American Chemical Society (Marinda Wu) in July 2013 at the Inorganic Conference in Durban, heralded the start of SACI's association with ACS. A delegation of ACS members attended and participated in the conference at the Elangeni hotel in Durban. The visit was followed by events organised at UKZN and where some of the delegates of ACS gave advice to young academics and senior students on writing papers and obtaining jobs under the popular banner of 'ACS on Campus'. A further chapter between the ACS and SACI will be written in Cape Town during the Frank Warren Conference which will have ACS supported speakers. The link with the

Royal Society of Chemistry remains strong and is very beneficial, especially for the institute. A group of Royal Society of Chemistry members are planning a roadshow in South Africa in November and one-day events are planned for Wits, UP and UCT.

**Professional status for chemists:** Although the process is slow and tedious with a lot of information and adjustments from SACI required by SAQA, progress is being made and will hopefully soon be completed. We are very grateful to Mike Booth who is tirelessly working to achieve the final goal of professional status for chemists.

**South African Journal of Chemistry:** The journal is growing in popularity and as a result posing serious challenges to editors to cope with the large number of submissions and SACI to cope with an increasing financial burden. The chief editor Graham Jackson (UCT), who is retiring at the end of the year, also resigned as chief-editor of the journal. On behalf of SACI council we would like to thank Graham Jackson for his dedication and hard work during the past five years of being chief editor. Gert Kruger (UKZN) was appointed new chief editor and we wish him well with this very important and challenging task. Presently Gert Kruger is very involved streamlining the electronic submission system which will make the handling of manuscripts easier, the process simpler and the turnover faster.

**SACI finances:** The general financial situation of the institute is sound and helped by the profits of the SACI Inorganic Conference (UKZN) and National Convention (East London). Too many separate accounts complicate financial administration and will be addressed during the introduction of a new structure for the institute. Investments were consolidated and financial management of assets simplified. A growth in membership numbers will have a positive effect on the institute's income.

**SACI National Convention:** The Eastern Cape region is congratulated for hosting a very successful National Convention in December in East London. The location in East London and effective hosting by the Walter Sisulu University were a first for the South African Chemical Institute.



Simon Lotz

**AWARDS 2013**  
**2014 awards will be announced at the AGM**

**THE GOLD MEDAL**

The award, a gold-plated medal bearing the Institute's name and crest on the obverse and name of the medal and the recipient and date on the reverse, is made to a person whose scientific contribution in the field of chemistry or chemical technology is adjudged to be of outstanding merit.

**Professor Bert Klumperman**  
**Department of Chemistry**  
**University of Stellenbosch**

### THE MERCK MEDAL

The medal is awarded to the senior author of the paper, or papers, published in the South African Journal of Chemistry in a specific field of chemistry, adjudged to have made the most significant contributions to the discipline. The award for 2013, covering papers published in the period 2010 to 2013, was in the field of Organic Chemistry.

#### **Synthesis and Antiplasmodial Activity of EG-Artemisinin Ethers and Artemisinin-Quinoline Hybrids**

**David D. N'Da\* and Jaco C. Breytenbach**

**S. Afr. J. Chem., 2011, 64, 163–172,**

### THE SASOL POST-GRADUATE MEDAL

The medals shall be awarded to students engaged in research towards an MSc or PhD degree at a University, or an MTech or DTech degree at a Technikon, or University or Institute of Technology. The number of medals awarded shall not exceed five per annum, and the awards are limited to one per institution. Adjudicators for the awards are fellow students.

**Ms Dezzline Ondigo**

**Rhodes University**

**Ms Manoko Maubane**

**University of the Witwatersrand**

**Mr Nicholas Njuguna**

**University of Cape Town**

**Ms Helene Wahl**

**University of Stellenbosch**

### CHEMICAL EDUCATION

The award is made to a person who has made an outstanding contribution to chemical education as judged by the person's published work in the previous 5 years. Published work may be in any form and may be related to any level or educational context.

**No Award Made**

### THE JAMES MOIR MEDALS

Medals shall be awarded to the best BSc Honours student in chemistry at each University, and the best BTech student in chemistry at each Technikon, or University or Institute of Technology. To be eligible for the award the student must have achieved a minimum final pass mark of 75%. One medal shall be available for award annually for each University, Technikon and University or Institute of Technology in the Republic of South Africa.

**Ms N Steyn**

**University of Stellenbosch**

**Ms N Mvumvu**

**University of Cape Town**

**Ms SF Douman**

**University of the Western Cape**

**Mrs R Hartzenberg**

**North-West University**

**Ms L Dralle**

**University of KwaZulu-Natal PMB**

**Ms EH Kamanga**

**University of Johannesburg**

**Ms FM Amombo Noa**

**Cape Peninsula University of**

**Technology**

**Mr AJK Kupeta**

**Vaal University of Technology**

**Ms M Mohale**

**Rhodes University**

### **THE SASOL CHEMISTRY INNOVATOR OF THE YEAR MEDAL**

The award shall be made to a person whose scientific contributions in the field of chemistry or chemical technology during the year preceding the award are adjudged to be outstandingly innovative.

**Professor Len Barbour  
Department of Chemistry  
University of Stellenbosch**

### **THE RAIKES MEDAL**

The award shall be made to a person, under the age of 40 on 31 March in the year of the award, whose original chemical research shows outstanding promise, as judged by the person's publications in reputable journals. It is further stipulated that the research shall have been performed in South Africa.

**Professor Erik Strauss  
Department of Chemistry  
University of Stellenbosch**

### **THE HENDRIK VAN ECK MEDAL**

The award shall be made to a member of the Institute who has made exceptional contributions in the business or industrial sectors and/or to the community as a whole in South Africa.

**No Award Made**

### **THE INDUSTRIAL CHEMISTRY MEDAL**

The award shall be made to a person who has conducted novel research, or enhanced existing chemical research, in a particular field in an industrial laboratory, which is adjudged to be of outstanding merit, taking into account benefits to his/her company and the chemical community at large.

**No Award Made**

### **THE ANALYTICA PRIZE**

The award is made to the author(s) of the best paper published in Analytical Reporter during the previous year.

**No Award Made**

## **MEMBERSHIP REPORT**

**May 2013 – April 2014**

The number of SACI members decreased somewhat over the last year, with the total paying membership now standing at 776 (900 for 2012/2013), whilst the non-paying members increased to 317 (176 for 2012/2013). The primary change in non-paying members was the addition of 135 Conference members during the year. The non-paying category also includes Honorary, Life, Student and Teacher members, as reflected in the table of membership figures at the end of this report. A new non-paying category of undergraduate students has attracted 12 people so far, and it is hoped that these will be converted into paying members in due course. The main movement in the paying members was in the categories of Members and Paying Students. As of 30 April 2014 there were three paid up Patron members and ten Company members. The first group of eight Fellows was announced in 2013 and the next group of fellows will be announced at the SACI AGM in August 2014.

The following three members are to be awarded Life membership in 2014, as they have been SACI members for 35 years or more and are over the age of seventy: Mr R.E. Bartel, Mr V.A. Soffiantini and Mr J.S. Harker.

In order to improve the involvement of postgraduate students in SACI, student representatives were requested from each university. To date eighteen students have been nominated and it is planned for regional representatives to be nominated from these who will liaise with the Sections. The national student representative will be the student based at the university where the SACI President is based (when applicable).

The Executive Committee would like to thank Laila for management of the membership database. Current SACI members are requested to assist in increasing our membership numbers by both encouraging colleagues and peers to join our Institute as well as by motivating their employers to consider company or patron membership.

Dr Patricia Forbes  
Executive Secretary

## **PROGRAMME COMMITTEE**

The 16th South African Chemical Institute (SACI) Inorganic Chemistry Conference (INORG2013), incorporating the Carman Physical Chemistry Symposium, was held from June 30 to July 4 at the Elangeni in Durban. The conference showcased 3 plenary and 10 keynote addresses, together with over 30 oral presentations that included many senior students. A significant number of speakers from the US and UK and elsewhere gave INORG2013 a distinct international flavour. There were also 120 poster presentations of which the top-three received cash prizes. INORG2013 covered all branches of inorganic chemistry, including coordination chemistry, organometallic chemistry, bioinorganic chemistry, catalysis, several aspects of physical chemistry and increasing sessions allocated to nanomaterials and green chemistry. The Inorganic/Physical Chemistry symbiosis seemed to work quite well. Another highlight of INORG2013 was the signing of a Memorandum of Understanding (MoU) between the ACS President Marinda Wu and the immediate-Past President of SACI, James Darkwa. This MoU is intended to catalyze close cooperation between the ACS and SACI over the next 3 years. The conference was attended by 191 delegates.

The 41<sup>st</sup> National Convention of SACI was held 1-6th December, 2013, at River Park, East London. A total of 248 delegates attended the conference. 85% of the delegates were from South Africa, while the remaining 15% came from India, Nigeria, Egypt, Mauritius, France, Italy, Finland and Sweden. Five exhibitors were also present throughout the duration of the conference. A total of 221 abstracts were received out of which 203 were accepted for either oral or poster presentation. The Convention was graced with 32 invited speakers, 108 oral speakers and 95 poster presenters. The fields covered include; Inorganic Chemistry, Physical Chemistry, Organic Chemistry, Environmental/Analytical Chemistry, Fluorine Chemistry, Chemical Engineering and Chemical Education. The largest group was the Analytical/ Environmental group followed by the Organic group and Physical chemistry group. The Chemical Education group was poorly represented. The Fluorine/Chemical Engineering group turnout was noteworthy and this group brought in a new perspective into the SACI Convention.

Overall, both conferences were successful and returned a profit for SACI.

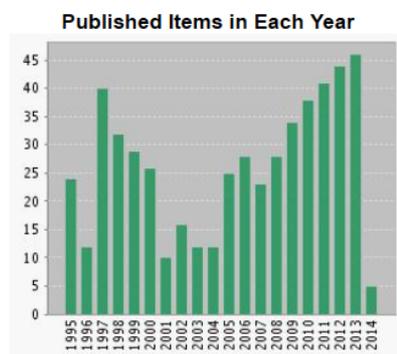
Preparations for three conferences in 2014 are well underway, namely, the 5<sup>th</sup> International IUPAC Conference on Green Chemistry to be held in Durban from 17 to 21 August, Analitika to be held from 7 to 11 September 2014 on the banks of the Vaal River at Khaya iBhubesi on the outskirts of Parys and the SACI-ACS Bi-national Organic Chemistry Conference incorporating the 13<sup>th</sup> Frank Warren Conference to be held in Stellenbosch from 30 November to 3 December 2014. All three promise to be exciting events.

Other regional events were held and reported in the monthly SACI Newsletter

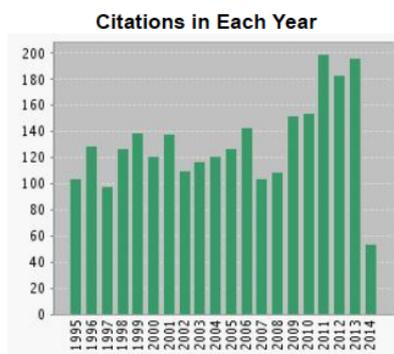
## SA JOURNAL OF CHEMISTRY

### Report SAJChem

Thanks to Graham Jackson for his contributions to the journal as editor-in-chief the last couple of years. Under his leadership the journal went from strength to strength. He introduced an electronic submission/management system that took some time to develop. It is working reasonably well at the moment. Most of the editors make use of the new system and the remaining ones have also indicated that all new papers will be handled through the system. Gert Kruger took over from Graham as editor-in-chief recently. A users-manual for the editors on using the system was recently prepared and introduced. Stats about the Journal are presented below.



The latest 20 years are displayed.  
[View a graph with all years.](#)



The latest 20 years are displayed.  
[View a graph with all years.](#)

Results found: 1156  
 Sum of the Times Cited [?]: 4310  
 Sum of Times Cited without self-citations [?]: 3863  
 Citing Articles [?]: 3683  
 Citing Articles without self-citations [?]: 3380  
 Average Citations per Item [?]: 3.73  
 h-index [?]: 21

It is clear that the number of papers per year (that are published by the journal) are steadily increasing since 2004. The number of citations are also increasing since 2008. Credit should go to the Science editors:

#### Organic Chemistry

- Professor Willem van Otterlo
- Dr Leigh-Anne Fraser
- Dr Tricia Naicker Physical Chemistry
- Professor Bice Martincigh

#### Analytical Chemistry

- Professor Luke Chimuka
- Dr Patricia Forbes Inorganic Chemistry
- Professor Simon Lotz

#### Educational Chemistry

- Professor John Bradley

#### Computational Chemistry

- Dr Gerhard Venter

#### Nanochemistry

- Professor Neerish Revaprasadu

We are considering to appoint one more inorganic editor. This will be done in consultation with Prof. Simon Lotz. The editors from the rest of the fields appear to cope with the number of submissions.

The majority of the papers published are still from South Africa. The top 100 countries of authors that have published in the journal are presented below. Iran is in second place, followed by India and China. USA is in 5<sup>th</sup> place, followed by Germany, Australia and England. At least 14 other African countries are publishing in the journal.

The first 100 Countries/Territories (by record count) are shown.

<input type="checkbox"/> SOUTH AFRICA	<input type="checkbox"/> OMAN	<input type="checkbox"/> RUSSIA
<input type="checkbox"/> IRAN	<input type="checkbox"/> ISRAEL	<input type="checkbox"/> REUNION
<input type="checkbox"/> INDIA	<input type="checkbox"/> CZECH REPUBLIC	<input type="checkbox"/> PORTUGAL
<input type="checkbox"/> PEOPLES R CHINA	<input type="checkbox"/> ZIMBABWE	<input type="checkbox"/> PAKISTAN
<input type="checkbox"/> USA	<input type="checkbox"/> ZAIRE	<input type="checkbox"/> NORWAY
<input type="checkbox"/> GERMANY	<input type="checkbox"/> SWAZILAND	<input type="checkbox"/> NAMIBIA
<input type="checkbox"/> AUSTRALIA	<input type="checkbox"/> SOUTH KOREA	<input type="checkbox"/> MEXICO
<input type="checkbox"/> ENGLAND	<input type="checkbox"/> MALAYSIA	<input type="checkbox"/> MAURITIUS
<input type="checkbox"/> TURKEY	<input type="checkbox"/> CISKEI	<input type="checkbox"/> MACEDONIA
<input type="checkbox"/> NIGERIA	<input type="checkbox"/> BELGIUM	<input type="checkbox"/> JORDAN
<input type="checkbox"/> BOTSWANA	<input type="checkbox"/> AUSTRIA	<input type="checkbox"/> JAPAN
<input type="checkbox"/> POLAND	<input type="checkbox"/> WALES	<input type="checkbox"/> HUNGARY
<input type="checkbox"/> KENYA	<input type="checkbox"/> UGANDA	<input type="checkbox"/> GUYANA
<input type="checkbox"/> ROMANIA	<input type="checkbox"/> TUNISIA	<input type="checkbox"/> ETHIOPIA
<input type="checkbox"/> EGYPT	<input type="checkbox"/> TAIWAN	<input type="checkbox"/> COTE IVOIRE
<input type="checkbox"/> ALGERIA	<input type="checkbox"/> SWITZERLAND	<input type="checkbox"/> CANADA

In 2013, we have rejected a total of 106 papers, while 46 papers were published.

In 2010 the journal published 39 articles comprising 232 journal pages; the corresponding data for 2011 was 41 papers (262 pages), 2012 was 44 paper (285 pages) and 2013 was 46 papers (289 pages).

The current system does not have stats readily available about the (average) time it takes to publish papers. My feeling is that it still takes too long (more than 2 months). We will try to speed up the process by shortening the frequency of automated reminders to reviewers. We should also find a solution to shorten the time/process before too specialized papers are referred back to the author for publication elsewhere.

I have attended two Editors meetings recently in Cape Town. The first was that of Scielo ([www.scielo.org.za](http://www.scielo.org.za)). The Scientific Electronic Library Online (**SciELO**) SA is South Africa's premier open-access (free to access and free to publish) searchable full-text journal database in service of the South African research community. It originated in Brazil.

Our journal is indeed registered with them, so we are officially OPEN ACCESS.

The next meeting was the [National Scholarly Editor's Forum](#)

There were a couple of issues that we should address in the near future:

(a) We should introduce the Creative Commons (see <http://creativecommons.org/>) copyright licence which enables us to get permission from the authors that we (and everybody else) are allowed to share and use their work as part of the normal OPEN ACCESS rules.

(b) In order to get even larger exposure on the OPEN ACCESS landscape, we should register with Directory of Open Access Journals - DOAJ (see <http://doaj.org/>). We may have to introduce some changes that ensure a minimum standard.

(c) The latest development is that Journal publishes each year the names of reviewers that have evaluated the papers (without linking them to a specific paper). We may want to consider doing that as well.

(d) WE need to ensure that we have registered all possible web site domains using our name. This makes it more difficult for predatory "publishers" to create a similar site and take potential authors for a ride, stealing the author publication Costs/fees (APCs).

In general, most journals do not have an electronic management system yet, and those that have, belong to a commercial publisher that charges significant APCs. We have perhaps the only FREE open access journal in the country (over 300 Journals).

There is a philosophical "war" between the commercial publishers that chases profits to the extend that research papers becomes very expensive. The Open Access guys also sees Impact factors as a tool to put a monetary value on journals, so that they can be bought over by commercial publishers once the impact factors becomes attractive. Somehow they (the western world through the commercial publishers) are then also able to dictate the research agenda through the formation of a western orientated "Club".

An interesting new development is that China has also recently joined Scielo. It appears to me that Open Access will only get the upper hand when they are able to offer a free (or very cheap) Open Access alternative to Web of Knowledge and ultimately Scifinder (where you can search for CAS numbers and structures as well).

### **What council should decide on:**

- (a) To officially thank prof. Jackson for his work as editor-in-chief, if it was not done yet.
- (b) The online management system requires further improvements. My proposal is that we try to convince the service provider to market his web solution to the more than 200 South African journals that do not yet have such systems, in exchange for a preferential deal for SAJChem. Prof. Simon Lotz and I will negotiate a deal and provide details/budget to council for a final decision.
- (c) The journal register with Directory of Open Access Journals - DOAJ (see <http://doaj.org/>). The editor-in-chief should ensure that all requirements are met. This should not involve any additional costs. If additional costs will be required, then a budget will be submitted to council for approval.
- (d) We should register all possible web site domains using our name, in order to protect us from “Predatory Publishers”. This will require additional costs. A budget will be submitted to council for approval.
- (e) The journal wants to introduce a Android QR code for each paper. This will enable scientists to open the paper on their Android devices by scanning the code. See the attached paper from a theological journal called “Koers”. There will be no additional costs.
- (f) The editor is requested to investigate the possibility to implement DOI numbers for the journal papers, if no additional costs are involved. I am of the opinion that the new QR codes largely neutralize the need for the DOI number.
- (g) The editors should consider to the possibility that the Journal publishes each year the names of reviewers that have evaluated the papers (without linking them to a specific paper). In case this is accepted, a proposal will be made to council for a final decision.

Best wishes  
Gert Kruger

### **SACI NEWSLETTER**

#### **SACI newsletter report**

The SACI newsletter has continued to appear on a regular basis (11 times a year). The objective is to always publish by the 2<sup>nd</sup> day of a month; this of course does not always happen due to circumstances beyond my control.

The general procedure that I follow is (i) ask EXCO members for news items ( by mid month), (ii) collect items sent to me over the month, (iii) collate the data received and (iv) send to Laila Smith who then puts it in the newsletter format that you receive. This works reasonably well. The content is dependent on what I receive/collate.

The newsletter can be long as it contains many PDFs, especially of conferences and workshops and in 2014 a better method using LINKS will be employed. This will make the Newsletter easier to read.

I wish to acknowledge the work done by Laila – her excellent web skills are what makes the chore less time consuming

Neil Coville

**IUPAC**

Name of Committee	<b>International Union of Pure and Applied Chemistry (IUPAC)</b>	
Committee members (please indicate office, year of election/nomination, gender, race and age)	<p>Assoc Prof Alan Hutton (Male, White) - University of Cape Town (Chairman)</p> <p>Dr Mike Booth (Male, White) - Chemical &amp; Allied Industries' Association</p> <p>Dr Erica Steenberg (Female, White) - RADMASTE Centre (<i>deceased 2013; see Section 6 below</i>)</p> <p>Professor Koos van Staden (Male, White) - University of Pretoria (<i>whereabouts not known – possibly emigrated</i>)</p> <p>Dr Alufelwi Tshavhungwe (Male, Black) - Dept. of Science and Technology</p> <p>Dr Sibulelo Vilakazi (Female, Black) - Mintek</p> <p>Professor Ewa Cukrowska (Female, White) - University of the Witwatersrand</p> <p>Professor James Darkwa (Male, Black) - President of SACI (University of Johannesburg)</p> <p>Ms Lynn Ngwenya (Female, Black) - ICSU Secretariat</p> <p><i>All elected 2011</i></p>	
<b>Headings</b>	<b>Activities completed – 2013</b>	<b>Activities planned – 2014</b>
1. Participation by South Africans in Union activities (Indicate name of South African, union and type and level of participation)	<p>The structure of IUPAC comprises eight divisions and three standing committees:</p> <p>Physical and Biophysical Chemistry Division (I)</p> <p>Inorganic Chemistry Division (II)</p> <p>Organic and Biomolecular Chemistry Division (III)</p> <p>Polymer Division (IV)</p> <p>Analytical Chemistry Division (V)</p> <p>Chemistry and the Environment Division (VI)</p> <p>Chemistry and Human Health Division (VII)</p> <p>Chemical Nomenclature and Structure Representation Division (VIII)</p>	

	<p>Chemical Research Applied to World Needs (CHEMRAWN) Committee on Chemistry Education (CCE) Committee on Chemistry and Industry (COCI)</p> <p>South Africa has representation on five of the Divisions (or their Sub-committees) and one of the Standing Committees. In addition we have representation on the Committee on Printed and Electronic Publications:</p> <p><b>Professor Kelly Chibale</b> - Division III (Sub-committee on Biomolecular Chemistry)</p> <p><b>Professor Liliana Mammino</b> - Division III (Sub-committee on Green Chemistry)</p> <p><b>Professor Ron Sanderson</b> - Division IV (Sub-committee on Modelling of Polymerisation Kinetics and Processes)</p> <p><b>Professor Nelson Torto</b> - National Representative - Division V (<i>emigrated to Botswana in 2013</i>)</p> <p><b>Professor Ewa Cukrowska</b> - Titular Member - Division VI (Sub-committees on Biophysico-Chemical Processes in Environmental Systems; Chemistry of Environmental Compartments)</p> <p><b>Professor Alan Hutton</b> - Associate Member - Division VIII</p> <p><b>Dr Erica Steenberg</b> - Titular Member - CCE (<i>deceased 2013; see</i></p>	
--	---	--

	<p><i>Section 6 below)</i></p> <p><b>Professor James Bull</b> - Committee on Printed and Electronic Publications; Editorial Advisory Board</p>	
2.1. Size of local community	<ul style="list-style-type: none"> <li>• Approximately 40 Fellows and Members of IUPAC</li> <li>• The estimated size of the wider Chemistry community (i.e. including those not directly participating in the Union's activities) is very approximately 8000.</li> </ul>	
2.2 South Africans serving on Unions or its subsidiary bodies	<ul style="list-style-type: none"> <li>• As far as can be established, all of the above-named committee members or representatives are South African except for Professors Darkwa, Mammino and Torto.</li> </ul>	
<p>2.3 Attendance of International Congresses/Workshops</p> <ul style="list-style-type: none"> <li>• Number of conferences attended</li> <li>• Number of South African delegates</li> <li>• Number of papers presented by South Africans (indicate any special invitations, e.g. keynote/ plenary talks)</li> </ul>	<ul style="list-style-type: none"> <li>• The 47<sup>th</sup> IUPAC General Assembly in Istanbul, Turkey, 9 – 15 August 2013, was the main IUPAC event for 2013.</li> <li>• There were five South African delegates to the General Assembly, attending various workshops and/or committee meetings associated with their IUPAC work. Several other South Africans attended the parallel 44<sup>th</sup> World Chemistry Congress, at which they made oral or poster presentations.</li> <li>• Professor Alan Hutton, Dr Sibulelo Vilakazi and Professor Ewa Cukrowska formed the South African delegation to the Council Meeting in Istanbul on 14/15 August .</li> <li>• At the General Assembly Professor Liliana Mammino was given a special award for</li> </ul>	

	<p>Distinguished Women in Chemistry.</p> <ul style="list-style-type: none"> <li>• Professor Alan Hutton was elected a Titular Member of Division VIII for the term 2014–2015, and also as the Division VIII representative on the Editorial Advisory Board of the IUPAC journal, <i>Pure and Applied Chemistry</i>.</li> </ul>	
2.4 Capacity Building with regard to Membership of National Committee and involvement of young scientists in International Meetings	<ul style="list-style-type: none"> <li>• Dr Sibulelo Vilakazi attended the 47<sup>th</sup> IUPAC General Assembly in Istanbul, Turkey, 9 – 15 August 2013, and was one of the three delegates to Council.</li> </ul>	
2.5 Involvement of young scientists in Union activities.	<ul style="list-style-type: none"> <li>• Dr Sibulelo Vilakazi attended the 47<sup>th</sup> IUPAC General Assembly in Istanbul, Turkey, 9 – 15 August 2013, and was one of the three delegates to Council.</li> </ul>	
2.6 Organisation of Union related Conferences in South Africa		<ul style="list-style-type: none"> <li>• The 5<sup>th</sup> International IUPAC Conference on Green Chemistry will be held in Durban from 17 to 21 August 2014. The Conference Chair is Professor Liliana Mammino.</li> </ul>
2.7 Contribution by members to key documents (e.g. policy docs.) and publications (please indicate why they are regarded as key)	<ul style="list-style-type: none"> <li>• Professor Hutton contributed a section on organometallic nomenclature to the document “IUPAC Brief Guide to the Nomenclature of Inorganic Chemistry”, which seeks to provide the bare essentials of inorganic nomenclature for school pupils and university students.</li> </ul>	<ul style="list-style-type: none"> <li>• To be published in 2014: “IUPAC Brief Guide to the Nomenclature of Inorganic Chemistry”, by R. M. Hartshorn (New Zealand), K.-H. Hellwich (Germany), A. Yerin (Russia), T. Damhus (Denmark), A. T. Hutton (South Africa).</li> <li>• Published in 2014: “Nomenclature of Organic Chemistry” (ed. W. Powell and H. Favre, published by IUPAC and</li> </ul>

		RSC); Professor Hutton participated in the workshops and review processes leading up to this publication.
2.8 Report back on recommendations made during the in depth review (indicate what were the recommendations and what progress has been made to attend to them.)	<ul style="list-style-type: none"> <li>n/a</li> </ul>	
3. Value to the Community and benefit to South Africa	<ul style="list-style-type: none"> <li>Visibility and active participation in the international community. Providing a channel for dissemination of latest recommendations from IUPAC.</li> </ul>	
4. Public Society Interfaces and Outreach Programmes – self initiated or facilitated by ICSU	<ul style="list-style-type: none"> <li>ICSU National Board of SA meeting held 28 February 2013 attended by Drs Erica Steenberg and Sibulelo Vilakazi.</li> <li>ICSU National Board of SA meeting held on 3 October 2013 – IUPAC report presented by Dr Sibulelo Vilakazi.</li> </ul>	<ul style="list-style-type: none"> <li>No doubt there will be similar meetings with the ICSU Board of SA planned for 2014.</li> </ul>
5. Research Highlights/ New Initiatives in South Africa (indicate what benefits will these bring for SA)		
6. Science Education (Any activities involving teachers, students, school curriculum development, graduate student development)	<p>Not aware of science education activities held in South Africa under the IUPAC umbrella.</p> <p>†The sad and untimely death of <b>Dr Erica Steenberg</b> in 2013 has left a gaping hole in South Africa’s representation in and contribution to the business of IUPAC’s Committee on Chemical Education (CCE). Shortly before her death she had</p>	<p>A replacement person to take up the Chemical Education mantle for IUPAC in South Africa has not yet been found, though the committee is actively searching for a suitable person. This will be a priority in 2014.</p>

	<p>been elected a Titular Member of CCE and she had already played a key part in its activities, e.g. at its meeting in Rome in 2012, and in the Young Ambassadors for Chemistry held in Tanzania in 2012, which she co-presented. Her presence on the IUPAC National Committee will be sorely missed, as will be the contributions that she would have made to Chemical Education nationally, and, through IUPAC, internationally.</p>	
<p>7. Highlights and/or major activities/events</p>	<p>The 47<sup>th</sup> IUPAC General Assembly in Istanbul, Turkey, 9 – 15 August 2013 was the highlight and major activity for 2013. During this Assembly South Africa was represented at the IUPAC Council Meeting by three delegates to Council.</p>	<p>For most active IUPAC members the main activities will be attendance at relevant Divisional Committee meetings and Project Working Groups. There is no General Assembly in 2014, and the next one will be held in Busan, Korea, 6–13 August 2105.</p>
<p>8. Financial assistance received by South Africans direct from ICSU bodies during 2013</p>	<p>Funding was received from NRF for Dr Sibulelo Vilakazi to attend the 47<sup>th</sup> IUPAC General Assembly in Istanbul, Turkey, 9 – 15 August 2013, as a member of the official SA delegation to Council.</p>	

## SACNASP

Prof. ELJ Breet, Emeritus Professor in Chemistry, North-West University, Potchefstroom

The South African Council for Natural Scientific Professions (SACNASP) operates under the Natural Scientific Professions Act 2003 (Act No 27 of 2003), and registers Natural Scientists in different categories and fields of practice.

- New Council

The term of office of the current Council has been extended with six months in view of revision of the Science and Technology Laws Amendment Act (Act. No. 16 of 2011). On 26 May 2014 Ms Naledi Pandor was sworn in as the Minister of Science and Technology. The constitution of a new Council is now the new Minister's prerogative. The Honourable Minister is the Executive Authority of SACNASP.

- Professional Body

SACNASP's application to SAQA registration has been approved, and SACNASP now appears on SAQA's list of accredited professional bodies.

- Registrations

During the reporting period 1258 applications were tabled at the Registration Committee. Of these, 97 (or 8%) were submitted by Chemical Scientists. A total of 1068 natural scientists were registered.

- Online Registration and Evaluation

Online registration was developed and implemented. Moreover, an online mechanism for Professional Advisory Committees (PAC's) was implemented, enabling these committees to access the database, to do their evaluations and to submit their reports online. This has resulted in a vast reduction of the paper handling overload experienced by these committees.

- New Fields of Practice and New Voluntary Associations

Extension Science was approved by Council as a new Field of Practice and promulgated in the Government Gazette on 24 January 2014. This is the first time that SACNASP has responded to a defined need to assist the Department of Agriculture, Forests and Fisheries (DAFF) to enhance its professional support of the local farming community. A proposal relating to Conservation Science is to be submitted as yet another scheduled Field of Practice, and input from the Voluntary Associations (VA's) concerned is awaited. Two VA's (National Institute for Explosives Technology and South African Wetland Society) recently applied for accreditation by SACNASP.

- Marketing of SACNASP

This important aspect was pursued with vigour, and a combination of office personnel and consultants has moved the marketing of SACNASP forward in a very professional and successful manner.

- Legal and Disciplinary Committee

This committee was formed to deal with transgressions of the SACNASP Code of Conduct. Currently, six cases of alleged misconduct are investigated.

- Liaison

SACNASP has representation on various committees/boards of i.a. ICCSSA, GSSA, Food Technology Department, CHEAC, and NSTF. As an accredited body of SAQA, SACNASP may become involved in the evaluation of candidates applying for a "Critical Skills Visa" or a "Permanent Residence Permit" according to the recently published skills and qualifications critical for South Africa (Government Gazette of 3 June 2014).

## **CO-ORDINATION COMMITTEES AND DIVISION REPORTS**

### **EASTERN CAPE**

#### **1. SACI-EC Committees 2013/2014**

##### **1.1 SACI EC Coordination Committee**

Chairperson – Prof Zenixole Tshentu (NMMU)  
Deputy Chairperson – Prof Rui Krause (RU)  
Secretary – Prof Peter Ajibade (FHU)  
Treasurer – Prof Ernst Ferg (NMMU)  
Organizer – Dr Potlaki Tseki (WSU)  
Student representative – Mr Awonke Tshetu (FHU)

##### **1.2 SACI EC student representatives**

WSU - Miss Zetu Jiba  
RU – Mr Kethobole Sekgota  
FHU – Mr Awonke Tshetu  
NMMU- Miss Xandri Schoultz

#### **2. Eastern Cape SACI Postgraduate Seminar 2013**

The 2013 Eastern Province SACI postgraduate seminar was held at the University of Fort Hare Alice campus on the 25 October 2013. All the four Universities in the region were represented and Aspen-Pharmacare was represented by Dr Harmse. About 150 delegates consisting of staff and students from Nelson Mandela Metropolitan University, University of Fort Hare, Rhodes University and Walter Sisulu University attended the event. The programme opened with a short address from the host university head of chemistry department, Dr D.M. Katwire. He welcomed colleagues from all the other universities, some of who travelled 350 km from Mthatha and 260 km from Port Elizabeth to attend the annual event. This event is always held at the end of October and it rotates annually among the four universities.

The EC Cape province Chairman, Prof. Z.R. Tshentu, gave an overview of the SACI 2013 awards and proceeded to present the awardees from the Eastern Cape. The Sasol post-graduate medal was awarded to Dr Dezzline Ondigo (formerly from Rhodes University), and the James Moir medal was awarded to Ms Mamello Mohale also from Rhodes University. Prof Tshentu also raised a lot of pertinent issues that include the need for chemistry practitioners and students to join SACI and become active participant in all SACI related activities. In conclusion, he thanked the SACI Convention Local Organizing Committee for the sterling work they have done, under the leadership of Prof Oyedeji, in organizing the convention which will be held in December 2013 in East London.

The students showed great enthusiasm in their participation in the annual events. The progress made in this event in the last five years has been tremendous. The presentations by the students varied from fundamental to applied chemistry and the event was a great afternoon of chemical science. In the junior section comprising the first year masters and honours students, their presentation included nano-materials for water purification; quinolone based anticancer agents and classical coordination chemistry. The first prize in this category was awarded to Tracey Seywood of Rhodes University while Gratien Habarurema of NMMU won the second prize. In the senior category for second year masters and doctoral students, the four presentations were all applied chemistry in context. The topics included gold nanoparticles-based colorimetric probes, fluorescent polymers for chemosensing, computational studies of ruthenium based complexes and

impulse transfer of small charges in soil samples. The first prize in this category was awarded to Nokuthula Ngomani of Rhodes University and Adebayo Adeniyi of the University of Fort Hare won the second prize.

In both the junior and senior categories, the winners were based on unanimous decision of the five judges consisting of one academic from each of the four universities in the region and the representative of the Aspen-Pharmacare. The 2014 EC postgraduate seminar will be at the Nelson Mandela Metropolitan University in Port Elizabeth. The executive committee has finalized arrangement to alter the present format of the seminar to allowed Innoventon, a research entity of NNMU, to send their students to participate in the postgraduate seminar.

Written by Prof. P. Ajibade (SACI EC secretary)

### **3. SACI 2013 National Convention Report**

The National 41st Convention of the South African Chemical Institute was held on the 1-6th December 2013 at River Park, East London. A total of 263 people attended the conference of which 248 were registered delegates. The remaining 15 people were resource persons such as drivers, WSU cooperate team (who assisted with registration, media etc). 85% of the delegates were from South Africa, while the remaining 15% came from India, Nigeria, Egypt, Mauritius, France, Italy, Finland and Sweden. Five (5) exhibitors were also present throughout the duration of the conference. 221 abstracts were received out of which 203 was accepted for either oral or poster presentation.

The convention was graced with 28 invited speakers, 108 oral speakers and 95 poster presenters. The fields covered include; Inorganic Chemistry, Physical Chemistry, Organic Chemistry, Environmental/Analytical Chemistry, Fluorine Chemistry, Chemical Engineering and Chemical Education.

The largest group was the Analytical/Environmental group followed by the Organic group and Physical chemistry group. The Chemical Education group was poorly represented. Fluorine/Chemical Engineering group turnout was noteworthy and this group brought in a new perspective into SACI convention.

#### **3.1 Arrival and Evening Welcome Function**

The registration and ice-breaker was held at the East London Golf Club from about 3-8 pm. Registration was smooth with very little hiccups - with few omissions of names. This was sorted out on the basis of proof of payment as most of the omission was due to last minute payment. Student accommodation was a serious challenge as the Backpecker Hotel which was booked for 68 students was not habitable. The picture of the rooms and facilities on ground was a great variance to the impression we saw on the internet and telephone. The students were immediately moved to Mimosa, Osner and Protea Hotels at a reasonable cost while we requested for the full refund of the deposit paid to Backpecker Hotel. The welcome function was chaired by the Eastern Cape SACI President Prof Zeni Tshentu. The Acting Vice Chancellor of Walter Sisulu University was on ground to welcome the delegates with a short opening speech.

#### **3.2 Opening Ceremony and Gold Medal Award**

The opening session which was held at River Park witnessed dignitaries such as Honourable Minister of Science and Technology, Mr Dereck Hanekom, Walter Sisulu University Administrator, Prof Van Staden, representatives of the Mayor of Buffalo Municipality and the Premiere of the Eastern Cape Province. Media – SABC 3, Daily Dispatch, Radio FM and Eastern Cape Radio Station were present. The Honourable Minister and the WSU administrator centred on

the need for new innovation and collaboration. Prof T Nyokong (2012 Gold medal recipient) and Prof B Klumperman (2013 Gold medal recipient) delivered their stimulating “gold award” lectures.

### **3.3 Plenary and Keynote lectures**

Six plenary lectures and twenty-six keynote lectures was given during the duration of the conference. The speakers were drawn from within and outside the shores of South African. The lectures synchronise into the breakaway sessions.

### **3.4 Breakaway Sessions and Poster Session**

Four parallel sessions was taken at each breakaway session. It was observed that 75 % of the oral presentation was by students. This is remarkable as it gives insight into the wealth of upcoming young scientist under grooming. All posters were presented on Tuesday and it was well attended.

### **3.5 Social events**

The braai night was held at the Golf Club, which was also well attended. Three excursions were organized for the convention – Mpongo Park, Lion Park and Mandela Museum/house. The first two groups had a great time while the Mandela museum group did not as the tour guide was hospitalised few hours to the time. This distorted the program for the day. An emergency resource person was asked to take up the challenge but the delegates wanted more. A refund of R250 was given back to each of the delegate. The Gala dinner was well attended.

### **3.6 Conference Venue**

The two venues used during the conference was strategic as it was far away from most of the B&Bs and Hotels which therefore made delegates to attend all programme for the day with full attendance. It was also far from the shops which turned out to be an advantage. Both venues were quite roomy and conducive for the programme.

### **3.7 Transport**

Transport was available all through the conference to pick and drop-off delegates from their various accommodation to the conference venue and the airport.

### **3.8 Finances**

75% of the total income came from delegates registration and 24% was from sponsors. Department of Science and Technology was our major sponsor followed by Walter Sisulu University. A summary of the money generated and expended has been presented to the SACI secretariat and treasurer. The conference was profitable.

Written by Prof Adebola Oyedeji (SACI 2013 Convention Chair)

## **GAUTENG**

### **Saci Gauteng Coordination Committee year report 2013-2014**

In the passing year the SACI Gauteng coordination committee has lost a lot of its members, and currently only Alfred Muller (UJ, Chair) and Andreas Lemmerer (Wits, treasurer) is serving. Despite the stress that this is putting on the two individuals, the following events were held successfully:

1) SACI/RSC annual dinner event, held at Wits, 5 July 2013, Guest Speaker: Prof Paul O'Brien, University of Manchester; Topic: “Of Chemists, Chemicals and Chemistry”

2) SACI young scientist symposium, held at UJ, 13 September 2013. Organizers: Prof H Kinfe and Dr E Mmutlane. The event was a full day, and not a half-day event as previous, which attracted a lot of attendance from surrounding universities.

The committee had to cancel the award ceremony that was scheduled at Wits, 24 October 2013, primarily because a suitable date could not be found for invited speakers, and the certificate and medal for the Merck award had to be reprinted due to the wrong name appearing on those.

The committee also set about to obtain more members to help with its function. Preliminary we have two new members, Charmaine Arderne and Edwin Mmutlane, both from UJ. A meeting is planned early August where we will start organizing an award event that will probably include recipients for both 2013 and 2014.

We also have started organizing the following two events:

- 1) SACI/RSC annual dinner event, to be held at UJ, Bunting road campus, end of August 2014
- 2) SACI young scientist symposium, to be held at NWU, Potchefstroom campus, September 2014

From the SACI Gauteng Coordination Committee

### **KWAZULU-NATAL** **South African Chemical Institute for 2013-2014**

The committee has met regularly, every two months, to plan various events.

On 13 June 2013 a very successful seminar entitled “Solid Phase Extraction (SPE): Method development and optimization and troubleshooting” was held at the University of KwaZulu-Natal, School of Chemistry and Physics. The seminar was presented by Zelda van Zweel from Separations. It was attended by approximately 60 persons.

From June 30 – July 4 the Inorganic 2013 Conference incorporating the Carman Physical Chemistry Symposium was held at the Elangeni Hotel on the Durban beachfront. The conference was very well attended with over 190 delegates. Congratulations to Werner van Zyl and his team for a very successful conference.

At the Inorganic Conference we also had the reciprocal signing of the Memorandum of Understanding between the American Chemical Society and the South African Chemical Institute. This partnership promises to bring much fruitful collaboration between the two societies.



Professor James Darkwa, signs a Memorandum of Understanding with Dr Marinda Wu.

On Friday 5 July the ACS on Campus event was held at the University of KwaZulu-Natal, Westville Campus. This was attended by approximately 150 postgraduate students and was a wonderful experience for the students to meet and hear the opinions of distinguished journal editors, Professors John Gladysz and Robin Rogers, as well as a number of other presentations dealing with scholarly publishing, literature searches and career choices.



Professor Robin Rogers explaining the intricacies of getting your research published.

SACI once again provided the learner entertainment at the Annual FFS Expo for Young Scientists on 25 July. The Three Magicians, Vincent Nyamori, Bernard Owaga and Bice Martincigh, entertained the Expo entrants with their chemical magic, bangs and smoke.



The three magicians together with Dr Mary Laing, one of the judges, at the FFS Expo for Young Scientists.

At the Expo we also held the prizegiving for the Crystal Growing Competition. This competition is sponsored by the Royal Society of Chemistry (Northern Section) and is organised by SACI members, Drs Werner van Zyl and Bernard Owaga. School learners are provided with materials to grow crystals and their resulting crystals are judged on quality and size.



Learners who participated in the Crystal Growing Competition together with Drs Werner van Zyl and Bernard Owaga.

On 4<sup>th</sup> September we were privileged to have Drs Peter Douglas, Matthew Davies and Mike Garley from Swansea and Bangor Universities in Wales present a public lecture entitled “Catching the Light” at the Science and Technology Centre of the University of KwaZulu-Natal, Westville Campus. The lecture highlighted the importance of photochemistry in the living world and included more than 30 exciting demonstrations. The first part of the lecture focused on how light is made, demonstrating how it can be generated electrically, thermally and chemically. The second

part showed how light is used in present-day technology and everyday life including its use in photography, electronics, entertainment, medicine and security. The lecture ended with a discussion on how light may be used in the future to solve one of the most important problems facing mankind - the production of clean and sustainable energy. The lecture was magnificent! It was jam-packed with wonderful demonstrations that showed the relevance of photochemistry to everyday phenomena. The audience learnt a lot besides being entertained,



From L to R: The three speakers: Mike Garley, Peter Douglas and Matthew Davies, together with Prof Andrew Kindness, the Head of School of Chemistry and Physics at UKZN.

During September the visitors from Bangor and Swansea Universities and staff and students from the University of KwaZulu-Natal ran scientific outreach workshops, for children of all ages, in Durban and Mafikeng. The event, *Catching the Light with the Rainbow Nation*, was an extremely ambitious project with the aim of increasing the popularity and understanding of chemistry in South Africa. Over a two-week period, more than 1300 children took part in workshops centred on chemistry and light. Additionally, the team ran public lectures, school discussion groups and had an afternoon of teaching chemistry and light to children who are helped through their education by the charity SOS Africa.

This outreach event was hosted at the School of Chemistry and Physics (UKZN University) laboratories, where local high school pupils undertook workshops on making dye-sensitised solar cells from fruit and everyday materials. Not only did this teach the children how to make and test a photovoltaic device but also emphasised the importance of renewable energy and in particular the pivotal importance of utilising solar energy.



Students of Wingen Secondary School, Durban, learn all about light and colour at the workshops.

The team also travelled through the Drakensberg Mountains to Mafikeng where they ran workshops for around 1000 children across two different high schools in the area, Golfview High School and Mafikeng High School, as well as the Early Learning Centre (ELC) for children aged 1-6 years.



Learners from Mafikeng (L) and Golf View (R) High Schools in Mafikeng making prints.



The “Catching the Light” team along with the president of the charity SOS Africa, Henry Matthews.



Young children at the Early Learning Centre, Mafikeng, make, and show-off, new t-shirts; the t-shirts will now be the school uniform every Wednesday.

The primary aim of the workshops was to inspire the children to take a greater interest in science and feedback suggests that this was achieved.

Annually the KZN Section organises the Postgraduate Colloquium. This year it was held on 26<sup>th</sup> September at the Westville Campus of the University of KwaZulu-Natal. The event was very ably organised by the Westchem Student Society. It was attended by approximately 60 postgraduate students from Durban University of Technology and University of KwaZulu-Natal. Six students, three each from UKZN Westville and UKZN Pietermaritzburg, orally presented their research projects while another 20 students presented posters on their projects. The oral and poster presentations were adjudicated and prizes were awarded.

The winners were:

**Oral Presentations:**

- First Prize: Muhammed Ismail (UKZN, Pietermaritzburg Campus)
- Second Prize: Izzeldin Hamza (UKZN, Westville Campus)

**Poster Presentations:**

- First Prize: Leigh Hunter (UKZN, Pietermaritzburg Campus)
- Second Prize: Victoria Chiazzari (UKZN, Pietermaritzburg Campus)
- Third Prize: Narainamah Gounden (UKZN, Westville Campus)

At the event the 2013 James Moir Medal was awarded to Ms Lesley Dralle from UKZN Pietermaritzburg Campus for achieving over 75% in her Honours degree.



Lesley Dralle receiving the James Moir Medal from the Chair of the SACI KZN Section, Professor Bice Martincigh.



Muhammed Ismail receiving his award.



Izzeldin Hamza receiving his award.



Leigh Hunter receiving his award.



Victoria Chiazzari receiving her award.



Narainamah Gounden receiving her award.

We would like to thank the Royal Society of Chemistry (Northern Section) for generously providing the prizes for the event.

Annually the KZN Section organises the Honours/BTech Symposium. This year it was held on 31<sup>st</sup> October at the Durban University of Technology. The event was kindly organised by Professor Vincent Bisetty of DUT. It was attended by the fourth year students from Durban University of Technology, University of KwaZulu-Natal and Mangosuthu University of Technology. Unfortunately, the University of Zululand was unable to participate this year.

Dr Ntsapokazi Deppa, a chemist in the Technology and Engineering Group at Tongaat Hulett Sugar, gave the welcoming address. She spoke on the qualities required of a chemist to be successful in industry. Nine students, two from DUT, one from MUT, and three each from UKZN Westville and UKZN Pietermaritzburg, orally presented their BTech/Honours research projects while another 5 students presented posters on their projects. The oral and poster presentations were adjudicated and prizes were awarded.

The winners were:

**Oral Presentations:**

First Prize: Sumayya Chohan (UKZN, Pietermaritzburg Campus)

Second Prize: Michael Oerder (UKZN, Westville Campus)

**Poster Presentations:**

First Prize: Nqobile Ndlangamandla (UKZN, Pietermaritzburg Campus)

The prizes were kindly sponsored by Metrohm SA and the Royal Society of Chemistry (Northern Section). We would like to thank them for their generous assistance with sponsorship for this event.



The three prizewinners from L to R: Michael Oerder, Sumayya Chohan and Nqobile Ndlangamandla.

This year the annual Magic Show was held on Friday, 22 November at the University of KwaZulu-Natal, Westville Campus in Durban. This event has been held in KZN for some 30 years and was started by the late Professor Mike Laing. His spectacular show was well known far and wide. When it first started it featured ladies being magically cut in half, Miss Rabbit popping out of a box and all kinds of extraordinary events.

This year the show was performed by the Three Magicians, who entertained both young and old with their chemical magic, bangs and smoke. Over 300 people attended the event which ended with the serving of magical ice cream. We were extremely pleased with the good attendance and the wonderful audience participation and enthusiasm.



The Magicians arrive in magical wuffle dust!



The Magicians pondering over some complex magic.



An extremely enthusiastic audience!



A young member of the audience expressed his appreciation.

The SACI KZN Section would like to thank the staff of the School of Chemistry and Physics and the WestChem Student Society for assistance.

On Thursday, 28 November a very successful Gas Chromatography Workshop was held at the School of Chemistry and Physics of the University of KwaZulu-Natal, Westville Campus. We were very fortunate to have Jack Cochran, the Director of New Business and Technology at Restek Corporation in the USA, present his tips and techniques for gas chromatographic analyses. Over 70 participants attended the workshop and whether a novice or an old hand at GC everyone went away having learnt something. We are very grateful to SEP Scientific and Sue Petzer for sponsoring the workshop.



Jack Cochran of Restek Corporation.

On Wednesday, 11 December all KZN SACI and RSC members were invited to a lunch and awards ceremony at Ammazulu African Palace in Kloof. At the event RSC members were awarded their 40-year membership pins. Approximately 25 members attended and the enchanting venue was enjoyed by all.



The recipients of the RSC 40-year membership pins.

The committee has been busy with the organization of the forthcoming 5<sup>th</sup> International IUPAC Conference on Green Chemistry. This will be held at the Elangeni Hotel from 17 August to 21 August 2014. The Honourable Minister of Science and Technology, Naledi Pandor, will open the conference. Also present will be representatives of the IUPAC, ACS, RSC and FASC. The finances of the Section are relatively healthy.

### **Prof Bice Martincigh**

#### **WESTERN CAPE**

#### **Report of the Western Cape Section of the South African Chemical Institute 2013-2014**

The Western Cape section of SACI had a relatively quiet year. Despite this, there are a number of highlights for the reporting period, not the least of which was the fact that 3 members from the Western Cape received prestigious SACI awards!

#### **SACI/RSC Dinner of the Western Cape Section.**

The joint annual dinner of the Western Cape Section of SACI and the RSC was held at the Wild Fig Restaurant in Cape Town on the 24<sup>th</sup> of October 2013. The dinner was very well attended with about 100 members and guest enjoying the evening. Prof Alan Hutton was the master of ceremonies for the evening and Prof David Gammon was the invited speaker. Prof Gammon gave a very entertaining talk on “how he recovered for some of his most memorable mistakes in chemistry”. This was particularly relevant to the many young researchers in the audience as it is always good to know that even very successfully chemistry make mistakes, but what matters is how you recover from that mistake!

This year the co-ordination committee in the Western Cape decided that we would like to take the opportunity to acknowledge the various SACI awardees in the Western Cape at the dinner. In the past many of the SACI awards were presented to students at functions arranged by the individual departments. While we hope that this tradition continues, it was felt that the various achievements should be celebrated by the broader chemistry community of the Western Cape. All the student awardees from the Western Cape were invited and sponsored to attend the dinner and formally receive their awards. We were very pleased that all the James Moir Medal Winners (except one) as well as the SASOL postgraduate award winners were able to attend the dinner. The following awards were presented at the dinner by Prof Peter Mallon the Chair of the Western Cape coordination committee of SACI.

James Moir Medals - Ms N Mvumva –UCT, Ms SF Douman – UWC and Ms FM Amombo Noa-CPUT (MS N Styen from the SU was unable to attend) SASOL postgraduate medals: Nicholas Njugune – UCT and Helene Wahl – SU. In addition, members from the Western Cape who received SACI awards were also acknowledged. These were: Prof Bert Klumperman – The SACI Gold Medal, Prof Erik Strauss – Raikes Medal and Prof Len Barbour – SASOL Chemistry innovator of the year. Prof Luigi Nassimbeni was presented with his SACI Lifetime Membership certificate, which is very appropriate acknowledgment of his outstanding contribution to chemistry in South Africa in general but also specifically to chemistry in the Western Cape over many years. A very special award was made to Prof James Bull. The award was a plaque presented by IUPAC in recognition of his outstanding work over a period of 14 years as the Scientific Editor of the IUPAC journal Pure & Applied Chemistry. During this time he exhibited the highest ethical standards in managing the content of IUPAC's flagship journal. During his tenure as the Scientific Editor, the Impact Factor of the journal has grown steadily to 3.4 in 2012. Professor Bull steps down from this position at the end of 2013. Prof Alan Hutton presented the award to Prof Bull on behalf of IUPAC and read out the citation from the current IUPAC president Prof Kazuyuki Tatsumi (Japan). Our thanks must go to Alan Hutton and his team for organising this very successful and enjoyable event.

### **SACI Young Chemists' Symposium – Western Cape Section**

On 27 November 2014, Stellenbosch University hosted this year's Western Cape Section SACI Young Chemists' Symposium. The event was organised on behalf of SACI Western Cape by AlchemUS, the society representing all chemists at the University of Stellenbosch. The day was attended by 60 delegates from University of Stellenbosch, UCT and UWC, ranging from final-year undergraduate students to post-doctoral fellows.

The day commenced with a welcoming address by AlchemUS President, Laura van Laeren, who also discussed the aim and activities of the society. This was followed by an informative and enlightening talk by Prof Len Barbour, who addressed what students should expect after a PhD, as well as what a career in academics entails.

Eight students took the opportunity to present their research in oral presentations, and an additional nine discussed their work in the form of poster presentations. The presentations covered a wide range of topics, from the complexities of solid state NMR, to the challenges of medicinal organic chemistry. The day concluded with a prize giving, with the best oral presentation and best poster presentation being awarded to Kathryn Wicht and John Woodland respectively (both from UCT). The student symposium has become firmly established as an ideal showcase for the sharing of information and ideas as well as establishing links with all the young research chemist in the Western Cape.

### **AGM and lecture:**

The 70<sup>th</sup> AGM of the Western Cape Section was held on 12 August 2013. At the meeting the current co-ordination committee was re-elected for a further 2 year term. As has been mentioned previously the co-ordination committee of SACI Western Cape and the RSC Southern Region co-ordination committee from the joint committee for activities in the Western Cape. After the AGM, a public lecture by Prof Jonathan Williams from the University of Bath in the UK presented a very interesting lecture on "Catalytic Synthesis of Amines and Amides".

Prof Peter Mallon

Chair of the co-ordinating committee of SACI Western Cape



Some of the SACI prize winners at the Annual SACI/RSC Dinner, including the James Moir Medal winners, the two SASOL postgraduate medal recipients, Prof Len Barbour (SASOL innovator of the year), Prof Luigi Nassimbeni (SACI Lifetime Member) with Prof Peter Mallon (Chair of the SACI Western Cape Coordination Committee).

### **ANALYTICAL**

No Report

### **CHEMICAL EDUCATION**

#### **Report to the Council June 2014**

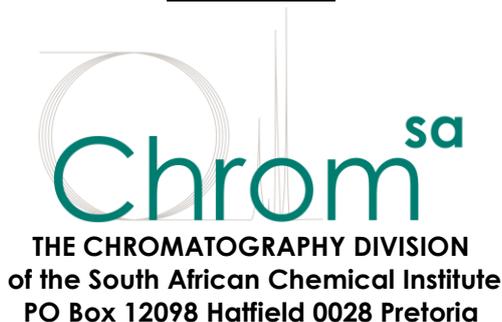
I regret to report not much has changed in the last year in that I have done very little for the division this year. I consider the division and its activities to be very important in SACI but pressure of work has made it difficult to fulfill my duties. I have tried unsuccessfully to persuade other colleagues to take on this work. I have however attended both NSTF meetings on behalf of SACI.

The NSTF meeting procedures are freely available on their website and their communication is very thorough.

In March I was approached to assist with chemistry workshops for teachers with the facilitation of the American Chemical Society. The plan is to bring a facilitator from the USA to run several workshops in the country. Local expenses need to be funded locally. I made a budget for the local workshops and offered to fund the Johannesburg expenses from my research grant if I can utilize the workshops for data collection which would take about 2 hours out of the workshops. We appealed to SACI regions to assist with financing but little actual funding was forthcoming apart from suggestions on how to save on equipment. In July we received a call for proposals to Proset for funding and we intend to apply to them for assistance with these workshops. The proposal will be in by August 8.

Marissa Rollnick

## CHROMSA



### **FOR THE PERIOD MAY 2013 TO APRIL 2014**

#### **A) COMMITTEE and MEMBERSHIP:**

Four committee meetings were held during the above period. The committee members are:

Dr Patricia Forbes (Chairperson)

Hannalien Meyer (Immediate Past Chairperson)

Dr Magda Rösemann (Treasurer, Vice-Chairperson)

Belinda Hickman Mosdell (Minutes secretary)

Prof Luke Chimuka and Dr Tyren Dodgen (Student Liaison)

Dr Yvette Naudé (Honorary Secretary and Membership)

Additional members: Anita Botha, Wiana Louw, Martin Brits, Vuyo Silwana.

Prof André de Villiers is the ChromSA representative for the Western Cape. Additional members of the Western Cape committee are Prof Ben Burger, Dr Ivan Green, Brenda Marx, Dr Iain Moodie, Dr Gordon Shephard, Dr Denice Smit, Dr Marietjie Stander, Dr Mare Vlok and Merrill Wicht.

Dr Martin Dovey is the ChromSA representative for KwaZulu Natal.

There are currently over 400 members on the ChromSA mailing list.

#### **B) ANNUAL GENERAL MEETING:**

The AGM was held on 13 November 2013 at the Southern African Grain Laboratory and 31 people attended.

#### **C) AWARDS:**

Jayne de Vos (NMISA) and Hannalien Meyer (SAGL) were both awarded ChromSA Chromatographer of the Year awards for 2013, in the categories of chromatography publications and promotion of chromatography in South Africa, respectively. They received their awards at an event held on 19 March 2014 at UP.

#### **D) FINANCES:**

The funds held by the National ChromSA division are >R445 000 (main income sources for the period were the LC-MS short course and interest on investments), whilst ChromSA Western Cape has funds of ~R217 000.

#### **E) EVENTS ORGANISED:**

The period under review was very busy, with numerous events being organized for our members:

- The division assisted with the organization of the ICCA Conference, which was held from 8 to 12 July 2013 at UP. A number of ChromSA members attended and presented at this event.
- A short course entitled “Tips and tricks to improve your gas chromatography: better, faster, cheaper” was presented by Jack Cochran (Restek, USA) at the SAGL on 12 November 2013. Forty five people attended the course, which was sponsored by ChromSA and was offered free of charge to ChromSA members.
- A short course on LC-MS was held in conjunction with SAAMS from 10-13 February 2014 at NMISA. It was presented by Alek Dooley from AB Sciex and Separations sponsored the course. 60 people attended and an additional 40 people were on the waiting list, which clearly demonstrated the need for this course and its successful organization (w.r.t. location, topic, presenters, and pricing).
- In addition, the following lectures and events were held in Gauteng during the period under review and were well attended:

<b>Speakers</b>	<b>Title</b>	<b>Date</b>	<b>Sponsor</b>
NWU academics	NWU Potch campus visit and laboratory tour (in conjunction with SAAMS)	15 May 2013	Bruker
Dr Bernard de Villiers	Sold phase extraction: method development, optimization & trouble shooting	26 June 2013	Separations
8 postgraduate students from UJ, TUT, UP, Wits, NWU	2013 Chromatography Postgraduate Student Workshop	17 September 2013	Shimadzu
Jack Cochran	High PAH levels in Mate teas	13 November 2013	ChromSA
Hannalien Meyer & Jayne de Vos	Chromatographer of the Year 2013 event Interesting chromatograms in the application laboratory The science of the possible – establishing GCxGC-TOFMS as a viable technique for dioxin analysis	19 March 2014	ChromSA

- The following events took place in the Western Cape:

<b>Speakers</b>	<b>Title</b>	<b>Date</b>	<b>Sponsor</b>
Prof André de Villiers	Chromatographer of the Year 2012 event Recent developments in the liquid chromatographic analysis of polyphenols	28 May 2013	None
Dr Gordon Shephard	Unravelling the dark side of mother nature: 25 years with the fumonisin mycotoxins	22 October 2013	Microsep
Dr Claudio Brunelli	Advances and implementation of SFC for drug development in the pharmaceutical industry	11 March 2014	None

## **F) FUTURE EVENTS:**

The main focus for the next year is in assisting with the organisation of the Analitika 2014 Conference to be held in Parys from 7 to 11 September 2014. This event is being organized jointly by SAAMS, ThermSA, ChromSA, the Spectroscopic Society and the Analytical division of SACI. ChromSA is sponsoring two international plenary/invited speakers and is sponsoring the conference registration fees for two postgraduate students. A number of lectures and events are also planned for the year ahead.

## **G) CONCLUDING COMMENTS:**

It is very encouraging to note the continued increase in interest and involvement of postgraduate students in the activities of ChromSA. A special thank you is extended to Leandri van der Wat, a UP postgraduate student who maintains the ChromSA Facebook page, as well as to Laila Smith of the SACI Head Office, who is the Webmaster of the ChromSA webpage, which is linked to the SACI website.

It was only possible to hold so many successful events in the year with the dedicated hard work of the ChromSA national committee members and regional representatives, who voluntarily give of their valuable time and energy. I would therefore like to sincerely thank all committee members for their contributions. The ongoing valuable support of ChromSA's sponsors is also highly appreciated and all ChromSA members who contribute to the vibrancy of the division are thanked for their participation in our events. Our excellent collaboration with the SAAMS division has led to many mutual benefits, and is seen as one of the key elements to the success of our division.

Dr Patricia Forbes

Chairperson, ChromSA

Date: 1 July 2014.

## **ENVIROMENTAL CHEMISTRY**

No Report

## **PHYSICAL CHEMISTRY**

No Report

## ELECTROCHEMISTRY



### **Electrochemistry Divisional Report**

Chair: Prof PGL Baker

#### ***Diary reminder:***

ElectrochemSA plans to host its 3rd International symposium on Electrochemistry in 26-28 May 2015. The 3rd International symposium of ElectrochemSA, will follow the example of these previous meetings. The guest speakers that have been confirmed for participation in the meeting, based on their areas of expertise are:

#### **(i) Prof. Tia Keyes (Dublin City University, Dublin Ireland)**

Prof Tia Keyes is associate professor of physical chemistry at the School of Chemical Sciences, where she has been a member of academic staff since 2002. Her research interests lie in the fields of molecular spectroscopy & photophysics and in supramolecular & interfacial chemistry.

[http://www.dcu.ie/info/staff\\_member.php?id\\_no=1002](http://www.dcu.ie/info/staff_member.php?id_no=1002)

#### **(ii) Prof Robert Forster (Dublin City University, Dublin Ireland)**

Prof Forster focuses on the development of new materials to pioneer the creation of novel materials that have useful electronic or photonic properties because they are highly ordered on the molecular length scale. These materials are rationally designed for applications in molecule-based electronics, display devices and sensors.

[http://www.dcu.ie/info/staff\\_member.php?id\\_no=684](http://www.dcu.ie/info/staff_member.php?id_no=684)

These plenary speakers personify the new direction that Electrochemistry competitively occupies on the global circuit. The laboratories of Prof Keyes and Prof Forster respectively have state of the art equipment and many postdoc fellows consistently engaged in advancing research at the new materials, new technology frontiers and mentoring postgraduate students. Their expertise in photo-electrochemistry, luminescence, new materials and unique tandem spectro-electrochemical instrumentation is pivotal for guiding Chemistry research today.

#### **Special issue:**

The conference organisers will approach *Electrochimica Acta* or *Biosensors & Bioelectronics* for a special issue dedicated to the conference proceedings. This negotiation is not yet finalised.

#### **Logistical arrangements:**

The conference organisers have secured the venue and is currently working towards securing the necessary financial support for all aspects of hosting the international symposium. Available details will be posted on the ElectrochemSA website by mid –August 2014.

#### **Prof Priscilla G L Baker**

Chair: Electrochemistry division 2006- 07 August 2014

## INORGANIC CHEMISTRY

No Report

## MOLECULAR MODELLING

### MINUTES OF THE SACI SPECIAL INTEREST GROUP – MOLECULAR MODELLING DIVISION ANNUAL MEETING

DATE AND TIME: 5 DECEMBER 2013 FROM 12:15 TO 13:15

VENUE: ROOM 1.61-1.62 CAPE TOWN INTERNATIONAL CONVENTION CENTRE

#### PRESENT:

Gert Kruger (**GK**) (Chair) [kruger@ukzn.ac.za](mailto:kruger@ukzn.ac.za) UKZN

Dr CGCE van Sittert (**CVS**) (secretary) [cornie.vansittert@nwu.ac.za](mailto:cornie.vansittert@nwu.ac.za) NWU

Werner Janse van Rensburg [werner.jansevanrensburg@sasol.com](mailto:werner.jansevanrensburg@sasol.com) SASOL

Stefan Coetzee (**SC**) [spookperd@gmail.com](mailto:spookperd@gmail.com) UP

Olayide Arodola [olayide.rodola@gmail.com](mailto:olayide.rodola@gmail.com)

[surimoonsamy20@gmail.com](mailto:surimoonsamy20@gmail.com)

Eric Mbele (**EM**) [embele@csir.co.za](mailto:embele@csir.co.za) CHPC, CSIR

Jeanet Conradie (**JC**) [ConradJ@ufs.ac.za](mailto:ConradJ@ufs.ac.za) UV

Marile Landman [marile.landman@up.ac.za](mailto:marile.landman@up.ac.za) UP

Peet van Rooyen [PHVR@up.ac.za](mailto:PHVR@up.ac.za) UP

Karel van Eschwage [veschwkg@ufs.ac.za](mailto:veschwkg@ufs.ac.za) UFS

Oluwatoyin Adeleke [oluwatoyin.adeleke@gmail.com](mailto:oluwatoyin.adeleke@gmail.com) CHPC, CSIR

Francois Wewers [wewersf@cput.ac.za](mailto:wewersf@cput.ac.za) CPUT

Anton Lopis [aslopis@gmail.com](mailto:aslopis@gmail.com) Mintek

Nelson Dzade [dzanel55@yahoo.co.uk](mailto:dzanel55@yahoo.co.uk) UCL

Barareh Honarparvar [Honarparvar@ukzn.ac.za](mailto:Honarparvar@ukzn.ac.za) UKZN

#### APOLOGIES:

None

#### WELCOME

The chair welcomed all members present. **GK** invites any person present at the meeting to join the committee in the light that the term of **GK** and **CVS** expired. The meeting reselect **GK** and **CVS** for another term. The agenda for the meeting included and addressed progress on issues from the previous minutes recorded at the 2013 SIG meeting.

## **1. SOFTWARE REQUIREMENTS/INVENTORY**

### **1.1. CURRENT**

#### ***MATERIAL STUDIO (MS)***

- **SC** mentioned that the latest version, MS 7.0, is available. It includes pipeline and scripting
- **EM** mention that MS 7.0 is not installed on CHPC as of yet. Licenses for MS6.0 and M.S7.0 must be requested.
- **SC** complained about the limited scaling available for Forcite.

#### ***AMBER 12***

- It is working all issues were solved.

#### ***GAUSSIAN 9***

- Newest Gaussian is available. Two versions are available (A0.1 and A0.2)
- A request is put forward that the scalability of Gaussian should be given in CHPC Wiki.
- The maximum for Gaussian is 32 CPU's.
- **GK** mentioned that 8 CPU's is the maximum CPU's needed for Gaussian. If more CPU's than number of atoms is selected the calculation will loop.

#### ***VASP***

- No problems were reported.

#### ***Schrödinger***

- No problems were reported.

#### ***Symmetry Adapted Perturbation Theory (SAPT) -freeware***

- In 2013 **TF** requested that the installation of SAPT be treated as high priority. **EM** gave feedback. It is not running yet.

### **1.2. NEW**

#### ***NWCHEM***

- No feedback

#### ***NAMD***

- The software was installed on the GPU's were AMBER is running. **EM** commented that there is very few users using the software.

## ***DESMOND***

- Not installed
- **GK** mentioned that the protocol for new software require that users that canvased for new software must use it.

## ***REAXFF***

- It is available in MS. For that reason it is not needed anymore as separate program.

## ***PIPELINE PILOT (PP)***

- It is available in MS7.0

## ***QUANTUM EXPRESSO***

- Colleges out of Africa requested it.

## ***GROMAX***

- It is installed and UKZN is testing it.

## ***MOLCAS***

- No feedback

## **1.3 TOP 4 PROGRAMS USED ON CHPC**

- **EM** mentioned that the top 4 programs used on the CHPC are GAUSSIAN, MS, VASP and AMBER
- **GK** thanked the CHPC

## **1.4 PROTOCOL FOR NEW SOFTWARE**

- *Identify the software*
- *Interest must be generated from the computational community*
- *Rally support from the same community*
- *Identify a key person that will drive the above process from start to finish including getting the support of the CHPC based on the above criteria*

## **2. QUEUING SYSTEM**

- **EM** invites the members of the SIG to presentation 6 December 2013 where the new CHPC system will be discussed. GAUSSIAN and AMBER will be used to test new system. **EM** gave the assurance that the system is much more elegant.

### *Parallelisation of Gaussian*

- The SIG requested **EM** that a workshop be arranged for users of GAUSSIAN.
- **GK** request that WIKI be expanded and be send to users.

### *Policy for using MS, DS and Gaussian*

- No feedback on a guide on how one may optimally use (scaling system for effectiveness) the clusters for a calculation without wasting CPUs.

## **3. TRAINING ACTIVITIES**

The meeting requested that a workshop on the use of GAUSSIAN be presented at the 2014 Annual CHPC meeting. **EM** suggested two workshops concurrently. For GAUSSIAN. The first one, an introduction to GAUSSIAN and the second one a more advance GAUSSIAN training workshop. It was suggested that the user should be asked (via e-mail) to determine the scope of the two workshops.

Other suggestion for training was:

- a workshop by Mahmoud Soliman on AMBER
- Linux training requested by **JC**

## **4. INDUSTRIAL INVOLVEMENT**

- CHPC currently addressing this issue – No feedback

## **5. GENERAL/SPECIFIC PROBLEMS**

No feedback

## **6. WEB**

It was mentioned that advertisement of facilities and expertise should be done. The WIKI must be improved and all SIG members should register to be able to access the WIKI via porthole. Under the SIG there should be a contact list. **EM** undertook to add Chem list in WIKI. The list should have automated address list.

## **7. RESEARCH OUTPUTS**

No feedback.

## 8. OTHER

- The meeting request more information on what has been installed on CHPC.
- GK will send information on bio-information course to all SIG members.
- As suggest was made to invite a high flyer in computational chemistry for the 2014 Annual meeting.

### ORGANIC CHEMISTRY

2013-2014

The main event organised by the SACI Organic Division was with the Deutsche Gemeinschaft für Chemie which culminated in the 3rd Bi-national convention held from 29<sup>th</sup> September -4<sup>th</sup> October at the Evangelische Academie at Tutzing on Lake Starnberg in Germany.

Ten South African invited speakers delivered lectures as did an equivalent number of our German colleagues and some 12 research students from SA presented posters alongside their German equivalents. A pleasing number of additional staff and students also attended but had to carry the full costs themselves since there was subvention for the invited students only. The two main organisers were Profs Charles de Koning(SA) and Hans Gunther-Schmaltz(G). As a result of the excellent networking established at the conference a number of our German colleagues have visited SA and some will be visiting before year's end and we are looking forward to such exchanges enormously. A few SA organic chemists have also visited Germany and thus we eagerly await student exchanges in the very near future.

The Western Cape Organic Chemistry Divisional Members are currently organising the next Frank Warren symposium at Stellenbosch during the first week of December and the focus has been together with the ACS to invite 9 excellent up-and-coming American Organic chemists to deliver plenary lectures which will be matched by some 15 invited lectures from our SA contingent to afford them this exposure. Of course plentiful opportunity has been set aside for the young chemists to feature in the programme as well. The committee is chaired by the most competent and resourceful Prof Willem van Otterlo.

Prof I R Green: Chairman Organic Division.



## Report for the period July 2013 to June 2014

### 1. Committee

Four committee meetings were held during the year. The committee members are:

Mike Britton (Chairperson)

Duncan Cromarty (Vice-chairperson)

Schalk de Kock (Immediate-past Chairperson and Treasurer)

Egmont Rohwer (International Representative)

Maré Linsky (Minute Secretary)

Tony Hassett (Membership and Webmaster)

Louis van Huyssteen (Vendor Industry Representative)

Ljiljana Marjanovic

Eve Kroukamp

Brendon Naicker

#### Co-opted member:

Ian Dubery (ACGT metabolomics interest group)

#### Regional representatives:

Johan Jordaan North-West Province

André de Villiers Western Cape

Hugh Patterton Free State

### 2. Membership

SAAMS currently has 361 members.

### 3. Finances

On 30 April 2014, SAAMS' assets amounted to R270 410.

### 4. Functions and activities

ICCA 2013 (Pretoria, 8 to 12 July)

SAAMS participated in the 12th International Chemistry Conference Africa with three committee members serving on the Scientific Committee.

Visit to Coca-Cola Africa Technical Centre (Midrand, 3 October)

After several interesting introductory presentations, the more than 50 people present visited the truly impressive and well-equipped laboratory facilities. The afternoon concluded with refreshments sponsored by Coca-Cola and Microsep.

LCMS Course (Pretoria, 10 to 13 February)

The course, organised jointly with ChromSA, was presented by Alek Dooley from AB Sciex and sponsored by Separations. Very positive feedback was received from the 55 delegates and it is planned to hold similar courses in future.

Annual SAAMS dinner (Pretoria, 7 March)

The 35 SAAMS members and guests present attended a fascinating talk on "The Art of Bioprospecting" by Prof Vinesh Maharaj of the Department of Chemistry at the University of Pretoria before enjoying a buffet dinner and refreshments sponsored by Microsep.

Analitika 2014 (Parys, 7 to 11 September)

SAAMS, together with ChromSA, the Analytical Division, ThermSA and the SA Spectroscopic Society (SASS), are currently organising this Conference. Thirteen prominent overseas and local scientists have agreed to participate as invited speakers and abstracts for more than 50 oral and 55 poster presentations have been accepted.

## 5. General

### Anatech Instruments Students Sponsorship Program

This program, which is administered jointly by SAAMS and ChromSA, awarded the following sponsorships during the year:

- SACI Convention (East London, 1 to 6 December 2013) – 4 students
- Analitika 2014 (Parys, 7 to 11 September) – 10 students

### African Centre for Gene Technologies (ACGT)

Following ongoing collaboration with the ACGT metabolomics interest group over several years, Prof Ian Dubery from the University of Johannesburg has been co-opted onto the SAAMS committee to represent the group.

The achievements of the past year were only made possible by the dedication and hard work of the SAAMS committee members, the sustained support from our sponsors and the active participation of our members. I would like to thank you all for your valuable contributions!

Mike Britton  
SAAMS Chairperson  
27 June 2014

## RSC



## Report for SACI Council meeting 6<sup>th</sup> August 2014

### Summary of activities for 2014

- Support for Sci Bono Science centre including the Emasondosondo Chemistry Bus and donation of textbooks for schools
- Support for KZN Science Centre
- Support for local chemistry conferences (poster prizes and student sponsorship)
- Donations of RSC books to local universities (Wits, UKZN, Limpopo)
- Judging and special subject prizes for Chemistry projects at Eskom Young Scientists Expo
- Support for Seabe High School Project (Peter Malatji)

### **Increased RSC activity in South Africa**

- Visit by Helen Driver (RSC International Development Manager) as part of UK Technical delegation
- Sponsorship of Green Chemistry Conference (Aug 2014)
- Road shows at SA Universities – Wits, UJ, UKZN, UCT (Nov 2014)
- Ongoing support for Pan-African Chemistry Network (PACN)
- Additional support for Sci Bono Centre

### **Involvement with SACI**

- Joint RSC SA North/SACI Gauteng annual dinner (29<sup>th</sup> August)
- Joint RSC SA North/SACI KZN function for members
- Sponsorship of prizes at SACI Young Chemists symposium
- Sponsorship of prizes at U Limpopo/U Venda symposium (23<sup>rd</sup> Oct)
- Sponsorship prizes for KZN Student symposia (23<sup>rd</sup> Sep/24<sup>th</sup> Oct)
- Support for KZN Schools' Crystal growing competition
- Organisation of public lectures to promote Chemistry

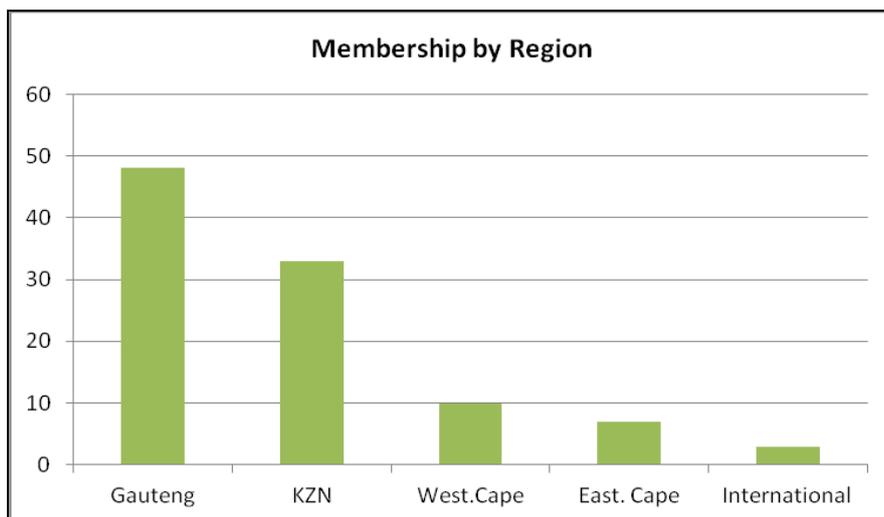
Ian M Bratt (Dr)  
Chairman, RSC SA North



### **GREEN CHEMISTRY**

Green Chemistry continues to grow and diversify in South Africa, both in terms of the number of people involved and the range of approaches to improving the environmental impact/sustainability of our work in terms of energy (catalysis, microwave chemistry), renewable resources (biofuels, use of chitosan, natural products), and reduced emissions (flow chemistry, “green solvents”, supercritical fluid technology) – to mention only a few. These initiatives have increased in both research activities and teaching activities across the board.

The inception of the Green Chemistry Division of SACI occurred in 2011 and in 2012, its membership was 22. Within the short time since then, through the excellent work of its first committee, the division has grown to 101 members (Figure 1)! The activities planned for the next eighteen months are directly aimed at increasing membership in order to better effect the aims of the division. Most of the membership is focused in the Gauteng and KZN regions, but there is potential for growth in the Western Cape and Eastern Cape. Approximately one third of the membership of the Green Chemistry division are post graduate students, which indicates a potential for future growth as these members enter the professional arena.



### **Election of new Management Committee**

In December 2013 a new committee was elected:

Rosa Klein (Rhodes), Chair

Rui Krause (Rhodes), (Secretary)

Vincent Nyamori (UKZN), (Treasurer)

Werner van Zyl (UKZN), Vice Chair

Martin Onani (UWC)

Philip Labuschagne (CSIR), (industrial representative)

Alu Tshavhungwe (DST), (government representative)

The committee can be contacted through the secretariat ([greenchem@ukzn.ac.za](mailto:greenchem@ukzn.ac.za)) or through the chair ([r.klein@ru.ac.za](mailto:r.klein@ru.ac.za)).

### **The 41st National Convention of the South African Chemical Institute**

The 41st National Convention of the South African Chemical Institute hosted a morning session for Green Chemistry which was well attended. Thanks must go to the organizing committee for drawing together an excellent group of speakers as well as others of interest to Green Chemists throughout the Convention. The keynote speaker for this session was Dr Vincent Nyamori, and the session was followed by a meeting of division members and interested parties to nominate office bearers.

### **International IUPAC Green Chemistry Conference in Durban in 2014**

The Green Chemistry Division is currently involved with organizing the IUPAC Green Chemistry Conference to be held in Durban in August 2014. This is expected to bring a lot of foreign networking to the shores of South Africa and should launch much more local and international collaboration. This will also be an opportunity for South African members of the Green Chemistry fraternity to network and build strength through collaboration.

### **Finances:**

The Division is looking at ways to fund workshops and invited speakers in order to bring the philosophy of Green Chemistry into the mainstream of chemical practice within South Africa. Incorporating the Division within national or other international conferences should help in that regard. It is also important to note that the Green Chemistry Management Committee is very gratefully and acknowledges the R5000 donation from SACI, awarded as a loan towards their activities.

Rosalyn Klein

## ThermSA

### **Committee**

ThermSA elected a new committee in July 2014, as the current committee's term has ended. The new committee is:

Chairperson:	Dr Liezel van der Merwe (UP) (also ICTAC Representative)
Immediate Past Chairperson:	Dr. Kobus Wagener (Necsa)
Treasurer:	Ms. Isbé van der Westhuizen (UP)
Secretary:	Mr. Andrew Pienaar (Necsa)
Website/Communication:	Mr. Danie Moolman (Necsa)
Additional member:	Mr. Benni Vilakazi (Necsa)
Regional Representative:	Prof. Chris Woolard (NMMU)

ThermSA is also considering the inclusion of a representative of the instrumentation vendors in the committee. The details around this will be finalised at the next committee meeting.

### **ICTAC**

A decision on joining ICTAC (International Confederation for Thermal Analysis and Calorimetry) has not yet been made, and the new committee will be tasked to make a recommendation.

### **Membership**

There was a modest growth in membership from the previous year. There are currently 39 members of SACI who are members of ThermSA. In addition there are 4 members who are not SACI members.

### **Workshop**

ThermSA hosted a successful workshop at the University of Pretoria during September 2013. The workshop was attended by more than 50 delegates from all walks of industry and academia. Speakers for the workshop included both local experts and several international guests representing the major suppliers of thermal analysis equipment in South Africa. The workshop highlighted the need for a platform such as ThermSA for exchange of knowledge regarding the use of thermal analysis in chemistry.

### **Analitika 2014**

ThermSA was invited to join several of the other leading scientific bodies such as ChromSA and SASS to host the Analitika2014 conference, with a session devoted solely to the use of thermal analysis techniques. We were honoured when Dr. E. Cavalheiro, an international leader in thermal analysis, accepted an invitation as plenary speaker for ThermSA.

### **Dr JB Wagener**

Chairperson: ThermSA

### **AD Pienaar**

Secretary: ThermSA

22 July 2014

## FINANCIAL REPORT

SOUTH AFRICAN CHEMICAL INSTITUTE SECRETARIAT BUDGET AND BALANCE SHEET FOR THE PERIOD 1 MAY 2012 TO 30 APRIL 2014

	2013-2014	2013-2014	2014-2015
Income	Budget	Received	Budget
Membership Fees	R 430 267.00	R 395 035.00	R 460 000.00
Journal Income	R 20 000.00	R 29 214.09	R 20 000.00
IUPAC Income		R 11 220.00	R 12 000.00
Merchandise/Ties and Scarfs	R 2 000.00	R 4 600.00	R 10 000.00
Advertising Income	R 20 000.00	R 17 200.00	R 20 000.00
<b>Total Income</b>	<b>R 472 267.00</b>	<b>R 457 269.09</b>	<b>R 522 000.00</b>

Expenditure	Budget	Paid	Budget
Journal Expenses	R 60 000.00	R 57 665.26	R 70 000.00
Bank Charges	R 4 500.00	R 4 723.00	R 5 000.00
Computer/Software/Pastel/Internet/SAJC	R 35 000.00	R 40 133.00	R 20 000.00
Courier and Postage	R 3 000.00	R 3 541.00	R 3 500.00
Entertainment Expenses (Council/Exco Functions)	R 10 000.00	R 8 661.54	R 10 000.00
General Expenses	R 5 000.00	R 3 685.00	R 6 000.00
Printing, Stationery and Photocopying	R 5 000.00	R 8 125.55	R 10 000.00
Salaries and Wages	R 271 388.00	R 261 251.33	R 375 388.00
Telephone and Fax	R 10 000.00	R 8 940.00	R 10 000.00
Travel and Accommodation	R 20 000.00	R 16 463.40	R 25 000.00
Presidents Travel	R 10 000.00	R -	R 10 000.00
Subscriptions (IUPAC/FASC/EBSCO/NSTF)	R 3 500.00	R 15 533.35	R 16 000.00
Auditors	R 10 500.00	R 9 075.00	R 9 000.00
Medal Prize Money and Minting of Medals	R 15 000.00	R 9 892.65	R 15 000.00
Medal Functions/Donations	R 3 000.00	R -	R 5 000.00
Rental	R -	R -	R 24 000.00
Merchandise	R 23 560.00	R 23 560.00	
<b>Total Expenditure</b>	<b>R 489 448.00</b>	<b>R 471 250.08</b>	<b>R 613 888.00</b>

Item	Profit/Loss	Profit/Loss	Profit/Loss
Total Income	R 472 267.00	R 457 269.09	R 522 000.00
Total Expenditure	R 489 448.00	R 471 250.08	R 613 888.00
<b>Balance</b>	<b>R -17 181.00</b>	<b>R -13 980.99</b>	<b>R -91 888.00</b>

### FUNDS

SACI Admin account	Movement	Opening Balance	Total
UKZN Admin account	R -	R -	R 45 996.65
Standard Bank Cheque Account	R -	R -	R 75 350.57

Central Fund Account	Movement	Opening Balance	Total
Investec Equity Fund			R 348 324.92

Old Mutual	monies reinvested	see comments	R	345 488.51
Standard Bank Market Link Account	in 2014	in notes	R	376 086.12
SIM General Equity fund			R	347 430.02
Stanlib Prperty Income Fund			R	348 329.85
<b>Total</b>		<b>R 1 334 081.87</b>	<b>R</b>	<b>1 765 659.42</b>

<b>Seed Monies and Loans</b>	<b>Loan</b>		<b>Total</b>
ThermSA	R 5 000.00		R 5 000.00
Green Chemistry	R 5 000.00		R 5 000.00
Green Chemistry Conference	R 52 590.00		R 52 590.00
<b>Total</b>			<b>R 62 590.00</b>

<b>Profit Derived from Conferences</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>
<b>Total</b>	R 1 163.00	R 25 386.00	R 260 413.00

<b>Divisions' Market Link Accounts</b>	<b>Movement</b>	<b>Opening Balance</b>	<b>Total</b>
Inorganic Chemistry	R 32 914.15	R 57 106.83	R 90 020.98
Computational Chemistry	R 125.48	R 5 981.17	R 6 106.65
Chemical Education	R -	R 975.18	R 975.18
Organic Chemistry Gauteng	R -57 620.59	R 130 017.69	R 72 397.10
Eastern Cape	R 86 919.41	R 935.10	R 87 854.51
Analytical Bursary Fund	R 7 164.53	R 197 202.34	R 204 366.87
Analytical	R 870.90	R 23 728.75	R 24 599.65
Organic Chemistry KZN	R 2 358.45	R 69 865.00	R 72 223.45
Kwazulu Natal	R 11 566.21	R 15 612.62	R 27 178.83
Electrochemistry	R 1 534.45	R 45 455.15	R 46 989.60
Gauteng	R -11 734.09	R 103 069.61	R 91 335.52
ThermSA	R 6 219.30	R 3 524.32	R 9 743.62
Green Chemistry	R 15 630.07	R 5 004.93	R 20 635.00
<b>Total</b>		<b>R 658 478.69</b>	<b>R 754 426.96</b>

The SACI financial base continues to be sound. This has been due to two factors: (i) our investments and (ii) profits on conferences. The successful conferences (Inorg, SACI Convention, in particular) have meant that any difference between income generated (mainly fees) and expenses (mainly our SACI office) are readily covered.

The main upheaval we experienced was the move of the SACI office back to Gauteng. This did not cost money, but did result in glitches during the transition phase. However, with internet banking and e-mail communication the move from a treasurer's perspective was straightforward. The return to Gauteng will mean our running expenses will increase as discussed below.

The SACI asset base is sound and consists of (i) investments of R1765759.42 (up from R1334098.37 in 2013), (ii) seed monies of R62590 and (iii) bank assets of R121347.22. Further, the Divisions and Sections have reserves of R754 426.96 (marginal increase in year). It is also to be noted that there are still some Divisions/Sections with reserves not listed in the above totals.

A consideration of the budget and expenses for 2013/2014 reveals:

- 1) Decreased membership fees but increased Journal income. All other income items close to budgeted amounts.
- 2) IUPAC subscriptions and payments cancelled each other
- 3) Presidents travel allowance not used

### **Budget for 2014/2015**

The budget items remain the same as in previous years. The major increase in expenses relates to the move back to Gauteng. The University of the Witwatersrand charges rental (*ca.* R24000 pa) and an overhead (30% on salary). This gives rise to the substantial increase in the Office bill (not an increase in wages). In 2012/2013 the monies received (excluding interest on investments) led to only a small loss (R13980.90) but in the next financial year we are budgeting for a more substantial loss (R91888.00). It is to be noted that the past financial year's budget and spending patterns were similar (difference of *ca.* R3200) which means we are capturing our spending and income patterns reasonably well.

### **Investments**

The investment portfolio has been changed in this last financial year. Prior to this the investments were separately held and EXCO was not receiving any financial advice. It was therefore decided to consolidate the investments with Stanlib which would ease administration and also we now have an advisor who provides quarterly advice on the performance of the investments. A once-off cost of 3.4% was charged but this should easily be recouped with current market performance. My thanks go to Prof Martincigh for doing all the work in achieving this change. She will report on the changes she instigated. The investment did grow but because of the changes in investment portfolios (plus addition of conference profits) it is not easy to put a figure on the growth. This will be easier to capture in 2015.

### **Thanks**

I wish to record my thanks to Ms Laila Smith for her ability to keep the SACI accounts up to date and in sound order.

Prof Neil Coville  
SACI Treasurer 2012/2014

## PRESIDENTS OF THE INSTITUTE

1916-1917	J S Jamieson	1957-1958	A L Abbot
1917-1918	R B Denison	1958-1959	H A E McKenzie
1918-1919	J A Wilkinson	1959-1960	G W Perold
1919-1920	J McCrae	1960-1961	F L Warren
1920-1921	J Lewis	1961-1962	W S Rapson
1921-1922	G H Stanley	1962-1963	F L Clark
1922-1923	J Gray	1963-1964	E F C H Rohwer
1923-1924	H H Green	1964-1965	L J le Roux
1924-1925	J Moir	1965-1966	R E Robinson
1925-1926	H H Dodds	1966-1967	V Pretorius
1926-1927	J A Wilkinson	1967-1968	M Lamchen
1927-1928	B de C Marchand	1968-1969	M Mroost
1928-1929	C C Frye	1969-1970	P C Carman
1929-1930	M Rindl	1970-1971	P R C Cooke
1930-1931	F W Fox	1971-1972	J F Preston
1931-1932	A Harding Kloot	1972-1973	F E Malherbe
1932-1933	H R Raikes	1973-1974	C F Garbers
1933-1934	B van der Riet	1974-1975	N Stutterheim
1934-1935	J B Robertson	1975-1976	S Goodman
1935-1936	St C O Sinclair	1976-1978	V C O Schuler
1936-1937	J A McLachlan	1978-1979	D E A Rivett
1937-1938	T D Hall	1979-1980	A Goosen
1938-1939	F J de Villiers	1980-1981	R R Arndt
1939-1940	H J van Eck	1981-1982	R O Perry
1940-1941	F G Braithwaite	1982-1984	C J H Schutte
1941-1942	J P van Zyl	1984-1986	P Bloom
1942-1943	W F Barker	1986-1988	J R Bull
1943-1944	P Kamerman	1988-1990	J D Bradley
1944-1945	J E Worsdale	1990-1992	A M Heyns
1945-1946	T J Wilken Jorden	1992-1994	M D Booth
1946-1947	E Taberner	1994-1996	T M Letcher
1947-1948	H L de Waal	1996-1998	E L J Breet
1948-1949	W H Dyson	1998-2000	C J Rademeyer
1949-1950	H J Koch	2000-2001	B Rae
1950-1951	P v d R Copeman	2001-2003	G E Jackson
1951-1952	L F Addis Smith	2003-2005	E Meintjies
1952-1953	A J Petrick	2005-2007	T A Ford
1953-1954	L D C Bok	2007-2009	NJ Coville
1954-1955	S S Israelstam	2009-2011	IR Green
1955-1956	FW Hayes	2011-2013	J Darkwa
1956-1957	F Hawke	2013 -2014	S Lotz

## **RECIPIENTS OF THE GOLD MEDAL OF THE INSTITUTE**

1970	L H Ahrens	1993	R J Haines
1971	P C Carman	1994	A M Heyns
1972	S G Shuttleworth	1995	S E Drewes
1973	W S Rapson	1996	D Ferreira
1974	P E Rousseau	1997	N J Coville
1975	V Pretorius	1998	W McGill
1976	C van der Merwe Brink	1999	T M Letcher
1977	D G Roux	2000	M E Brown
1978	G J Stander	2001	J P Michael
1979	R E Robinson	2002	H G Raubenheimer
1980	C F Garbers	2003	L Nassimbeni
1981	P R Enslin	2004	B Burger
1982	GW Perold	2005	No Award
1983	J C A Boeyens	2006	T A Ford
1984	J R Bull	2007	P Kaye
1985	A M Stephen	2008	No Award
1986	M Peisach	2009	M R Caira
1987	PS Steyn	2010	No Award
1988	C W Holzapfel	2011	CJH Schutte
1989	No Award	2012	T Nyokong
1990	J G H du Preez	2013	B Klumperman
1991	No Award		
1992	A Goosen		

## RECIPIENTS OF THE RAIKES MEDAL

1961	PC Haaroff	1986	M O Albers
1962	AJ de Koning	1987	No Award
1963	No Award	1988	No Award
1964	No Award	1989	H M Marques
1965	No Award	1990	C A Strydom
1966	Se Drewes	1991	M D Adams
1967	W Robb	1992	J H Potgieter
1968	CHJ Shutte	1993	G H Verdoorn
1969	RA Basson	1994	N V Jarvis
1970	No Award	1995	M Raynor
1971	No Award	1996	No Award
1972	D P Botes	1997	No Award
1973	RJ Haines	1998	No Award
1974	PS Steyn	1999	K J Naidoo
1975	No Award	2000	M H S Gradwell
1976	R D Hancock	2001	M J Mphahlele
1977	G V Fazakerley	2002	RI Stefan
1978	R van Eldik	2003	No Award
1979	K De Haas	2004	W A L van Otterlo
1980	G J Mc Dougall	2005	No Award
1981	T V Ashworth	2006	No Award
1982	R L Paul	2007	J R Zeevaart
1983	No Award	2008	OQ Munro
1984	No Award	2009	R Meijboom
1985	No Award	2010	M Fernandes
		2011	G Smith
		2012	H Tutu
		2013	E Strauss

## **RECIPIENTS OF THE AECI MEDAL**

1961	P R Enslin, L A Anderson and W T de Kock	1979	G M L Cragg
1962	F J Joubert and T Haylett	1980	J C A Boeyens
1963	O A Swanepoel	1981	E Singleton
1964	V Pretorius and P C van Berge	1982	C Pohlandt
1965	M Peisach and C O Poole	1983	J M Koekemoer and G J Lourens
1966	C v d M Brink, W Nel, G H J Rall, J C Weitz and K G R Pachler	1984	No Award
1967	M B Hanley, S C Churms and E C Leisegang	1985	R M A von Wandruszka
1968	G W Perold and H K L Hunt	1986	E Singleton
1969	J Turkstra, G B Behrens and W J de Wet	1987	A E Watson
1970	W J Engelbrecht and M J de Vries	1988	C W Holzapfel
1971	J G H du Preez	1989	T A Ford
1972	J A van den Berg	1990	E Singleton
1973	J C A Boeyens	1991	P P Coetzee
1974	T W Steele	1992	J R Bull
1975	A Goosen	1993	A Amman
1976	P C Carman	1994	N J Coville
1977	E F C Rohwer and J J Cruywagen	1995	J F van Staden
1978	F E W Strelow	1996	P P T Kaye
		1997	T A Ford
		1998	J M Anderson

## **RECIPIENTS OF THE MERCK MEDAL**

2000	J F van Staden	2007	J J Pienaar
2001	G H P Roos	2008	PP Coetzee
2002	N J Coville	2009	CW van der Westhuizen
2003	J C A Boeyens	2010	NJ Coville
2004	I Cukrowski	2011	RH Simoyi
2005	B Staskun	2012	DA Katskov
2006	H M Marques	2013	DD N'Da

## **RECIPIENTS OF THE HENDRIK VAN ECK MEDAL**

1983	A E Rupert	2000	No Award
1984	N Stutterheim	2001	No Award
1985	No Award	2002	P S Steyn
1986	No Award	2003	No Award
1987	No Award	2004	No Award
1988	No Award	2005	No Award
1989	No Award	2006	No Award
1990	No Award	2007	No Award
1991	C F Garbers	2008	No Award
1992	No Award	2009	No Award
1993	F E Malherbe	2010	No Award
1994	No Award	2011	No Award
1995	No Award	2012	No Award
1996	R R Arndt	2013	No Awards
1997	No Award		
1998	No Award		
1999	No Award		

## **RECIPIENTS OF THE INDUSTRIAL CHEMISTRY MEDAL**

1961	GE Mapstone	2003	No Award
1962	No Award	2004	K McIntosh
1963	No Award	2005	No Award
1994	A Geertsema	2006	No Award
1995	F Fisher	2007	No Award
1996	No Award	2008	No Award
1997	No Award	2009	No Award
1998	No Award	2010	No Award
1999	No Award	2011	J Dixon
2000	N Ravenscroft	2012	No Award
2001	T Grimmbacher	2013	No Award

2002 No Award

**RECIPIENTS OF THE MISCHA MROST (ANALYTICA) PRIZE**

1977	J M Pratt	1995	M J Laing
1978	I R Leith	1996	G J Stander
1979	H J Hattingh	1997	J H Potgieter
1980	P Theron	1998	No Award
1981	J Zlotnick	1999	P Apps
1982	G L Moore	2000	N J Coville
1983	M F Dutton	2001	E W Neuse
1984	No Award	2002	No Award
1985	R Osborne	2003	S S Potgieter
1986	G L Moore	2004	No Award
1987	M A B Pougnet and M A E Wandt	2005	P W Lotz
1988	S Parris	2006	No Award
1989	T M Letcher	2007	No Award
1990	M A B Pougnet	2008	No Award
1991	C Pohlandt-Watson and E A Jones	2009	No Award
1992	D Gravett and L Salter	2010	No Award
1993	No Award	2011	No Award
1994	No Award	2012	No Award
		2013	No Award

## **RECIPIENTS OF SASOL POST-GRADUATE MEDAL**

- 1994 JJ Nair, OQ Munro, PG Mountford, MHS Gradwell  
1995 BG Taverner, JL Scott, SL Roberts, P Mason  
1997 J A Ferreira, J du Toit, V Sewram, D Bessarabov, A Horne  
1998 M A Hearshaw, W A L van Otterlo, J J C Erasmus, H A Mahomed, J J C Grove  
1999 H van Rensburg, M A Fernandes, G Cripps  
2000 S Otto, A Rousseau  
2001 K Kaschula, W van Rensburg, K Blann  
2002 H de Bod, M Onani, C B Perry, D Webber  
2003 L Mpholle, K Barnes, C Gray  
2004 A Landman, E E Mmutlane, T le Roex, M Shezi  
2005 C Pelly, N Govender  
2006 A Lemmerer, J N Zimba, M Lawton  
2007 G Morgans  
2008 SD Mhlanga, K de Villiers, S Hadebe, M Shaw  
2009 S Pelly, C B Barnett, G A Boyle, T I Nkambule  
2010 D Bezuidenhout, E Nxumalo  
2011 W Motswainyana, O Onajole, D Cruishcank, A Shaikjee, R Wamsley  
2012 T Chetty, CF Zipp D, Kuter  
2013 D Ondigo, M Maubane, N Njuguna, H Wahl

## **RECIPIENTS OF THE JAMES MOIR MEDAL**

- 1999 J P K Reynhardt, A J de Villiers, R Best, K Thornell, S V Goodall, K Blann, U Naidoo, N I Harmse, D P de Carcenac, R Cock, J C Nel  
2000 N Grootboom, E Lamprecht, Amaluleke, D Rautenbach, G L Natrass, A M Castille, W Gerber  
2001 J van Rensburg, T Le Roex, X K Peter, J Taljaard, K Lobb, G Venter, A van Aswegen  
2002 L Greyvenstein, D Patten, Y Baijnath, T Raasch, K Stern, M du Toit, S Botha, O Horwood  
2003 V Buchanan, E T Borkum, E Erasmus, P Reddy, P Franklyn  
2004 W Barnard, R Gessner, A Gordon, Z Hall, G Lloyd, L Rota  
2005 D I Bezuidenhout, C Booyjzsen, J Coetzee, R Janse van Vuuren, Y Koen, C A Laing, E Marais, S Mohamed, M S Mokhadinyana, N Moodley, J Paraskevopoulos, T S Pentz  
2006 T Paquet, I Rootman, N Rose, P D R Kptze, S Travis, N Miti, D Duma, V A Patterson, M van Rhyn  
2007 L Loots, M Adendorf, S Botha, MW Smith, P Skillington, N E Hendricks, T Hughes, B Waldron, M N Kay, D J Brankin  
2008 SA Herbert, KE Mason-Jones, N Silwana, C Reynolds, JI du Toit, A Manival, A Cullen, TR Madihlaba, B Truscott.

- 2009 E Hanekom, W Xu, S M Jing, C F Zipp, Y Nortje, K J Gillham, B Dzepina, P Nyamukamba, A C Conibear, A Ilchev, P I Tshoke, K Potgieter  
B Simpson
- 2010 C Eley, A Falch, I Grobler, K Hadje Georgiou, N Jijana, P Khalili, R Koen, L Komarsamy, H Maritz, W Petersen, A Pholosi, CA Renison, BK Sebogisi, P Sobantu, S Thompson
- 2011 M Lephoto, H Mungondori, R Pretorius, C Rassie, S Robinson, T Pieterse, A Sayed, K Wicht, M Ungerer
- 2012 L van der Westhuizen, L van der Wat, BB Davies, B Camden-Smith, J Coetzee, MB Ismail, T Gunther, JM Taylor, TN Phaahlamohlaka, I Clifford
- 2013 N Steyn, N Mvumvu, SF Douman, R Hartzenberg, L Dralle, EH Kamanga, FM Amombo Noa, AJK Kupeta, M Mohale

### **RECIPIENTS OF THE CHEMICAL EDUCATION MEDAL**

- 1993 MJ Laing
- 1994 J Elsworth
- 1995 M Selvaratnam
- 1996 No Award
- 1997 GC Gerrans
- 1998 No Award
- 1999 SJ Nel
- 2000 P Huddle
- 2001 No Award
- 2002 MS Rollnick
- 2003 No Award
- 2004 B Davidowitz
- 2005 No Award
- 2006 G O M Onwu
- 2007 M White
- 2008 M Potgieter
- 2009 GV Green
- 2010 E Steenberg
- 2011 P Loyson
- 2012 JD Sewry
- 2013 No Award

**RECIPIENTS OF THE SASOL**

**INNOVATOR OF THE YEAR AWARD**

2002	No Award
2003	No Award
2004	MJ Green
2005	I Smith
2006	No Award
2007	No Award
2008	No Award
2009	No Award
2010	No Award
2011	No Award
2012	No Award
2013	Prof L Barbour