# **Annual Report** of the

# **South African Chemical Institute**

(Incorporating the SA Institute of Assayers and Analysts)

12th August 2011 to 28th June 2012



# THE SOUTH AFRICAN CHEMICAL INSTITUTE

#### **COUNCIL**

#### **Office Bearers**

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

## **Reporting Officers**

Publications Officer : Prof G Jackson

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 (Analytica): Prof N Torto
Chemical Education: Prof M Rollnick
Chromatography (ChromSA): Mrs P Forbes
Electrochemistry: Dr P Baker

Prof E Cukrowska **Environmental Chemistry** Mass Spectrometry (SAAMS) Mr M Britton **Industrial Chemistry** Dr M Booth **Inorganic Chemistry** Prof S Lotz Molecular Modelling Prof G Kruger **Organic Chemistry** Prof I Green Physical Chemistry Dr D Billing **Green Chemistry** Dr V Nyamori **ThermSA** Dr J Wagener

# **OFFICE BEARERS**



Prof J Darkwa – President



Prof S Lotz – Vice-President



Dr M Booth - Co-opted Member



Prof I Green – Immediate Past-President



Dr P Forbes – Executive Secretary



Prof N Coville – Executive Treasurer

# **MEETINGS**

Council meetings were held on: 12<sup>th</sup> August 2011 (AGM)

Executive Committee meetings were held on:

13<sup>th</sup> August 2011(AGM), 13<sup>th</sup> October 2011, 26<sup>th</sup> January 2012 and 7<sup>th</sup> May 2012

# **REPORTS**

	Page
President's Report	5
Awards	7
Membership	9
Programme	11
S A Journal of Chemistry	12
SACI Newsletter	16
IUPAC	16
SACNASP	19
<b>Co-ordination Committees and Division Reports</b>	
Eastern Cape	20
Gauteng	24
KwaZulu-Natal	24
Western Cape	25
Analytica	26
Chemical Education	26
ChromSA	27
Environmental	29
Carman (Physical Chemistry)	29
Electrochemistry	29
Inorganic	30
Molecular Modelling	30
Organic	33
Saams (Mass Spectrometry)	33
RSC	35
Green Chemistry	37
ThermSA	38
Financial Report for 2009/2010	39
SACI History over the past 25 years	44
Presidents of SACI	45
Recipients of SACI Awards	46

#### PRESIDENT'S REPORT

I started my two year term as President of the Chemical Institute in August 2011 and outlined some of the activities and challenges that lay ahead. Prime amongst these was the Centenary celebration in 2012. This report, therefore, is an update to the Chemical Institute on my talk in August last year.

#### 1. Centenary celebration:

Upon assuming our two year term of office, the Executive Committee of the South African Chemical Institute started right away with detailed planning of activities for the centenary of the Chemical Institute. These included three main national activities: one in January, the birthday month, the second a main centenary event in June and a final event in November. Each of the coordinating committees, as well as Limpopo and Free State, were also charged with having their own centenary events at a time determined by them. All of these centenary events are under the centenary theme "100 years of SACI: The Past, The Present, The future". I am glad to report that the centenary year started with a very successful half-day symposium on January 26<sup>th</sup> at WITS to usher in 100 years of SACI.

The Eastern Cape recently held its centenary event, with a very interesting lecture by Professor Peter Loyson entitled "A brief history of SACI" that includes how SACI has evolved in the Eastern Cape; thus allowing younger members of the Chemical Institute in the Eastern Cape to see the forbearers of the Chemical Institute in their region, especially as the region prepares to host the next SACI convention.

Tomorrow, we hold a day's symposium as the main centenary event and I am glad to say that the line-up of talks will do justice to the theme of the centenary as the Chemical Institute continues to show the relevance of chemistry to the daily lives of people the world over. I am also looking forward to rest of the activities for the year.

#### 2. International links:

We continue to strengthen our existing external links while we strive to build new ones. Our links with the Royal Society of Chemistry (RSC) continues to grow from strength to strength. Our activities over the last five years include having RSC support for local conferences, holding RSC sponsored workshops and courses; the latest being the Catalysis course held at WITS in November 2011. This relation is so healthy that both organizations have agreed to renew the MoU we signed in 2007. I look forward to welcoming Professor David Philips to the signing ceremony on June 29<sup>th</sup>. I am glad he is also able to join us for the rest of the day's activities.

Our links with the Federation of African Societies of Chemistry (FASC) continues to grow, and I am pleased that a FASC representative is able to join us this year to observe our AGM and also to take part in tomorrow's centenary event.

We continue to expand our links with other chemical societies. During the SACI convention in 2011, SACI held preliminary talks with the American Chemical Society (ACS) on the possibility of forming partnerships that would strengthen both organizations. I am pleased to tell the Chemical Institute that our links with the ACS is growing, and that we not only have two ACS representatives attending the June 29<sup>th</sup> centenary event, but they will also observe our AGM on June 28<sup>th</sup>. During their visit Exco will engage the ACS representatives on the possibility of formalizing our ties with them in an MoU similar to what we have with the RSC.

#### 3. Membership:

For the past six years Exco and Council have embarked on various schemes to increase membership and this is beginning to pay off. For the first time in many years SACI membership in all categories has past the thousand membership mark. This is very pleasing indeed. My sincere gratitude goes to all past Presidents, Exco and Council members whose collective effort has brought us this far. An even bigger thank you goes to Mrs Laila Smith, the administrator in the SACI office, whose tireless efforts in tracking down members who we had lost over the years to come back to the Chemical Institute. It is crucial that we keep increasing our paying membership as we strive to balance our budget.

Patron and company membership is also on the increase. This currently stands at four Patron and six Company members. We are grateful to these ten companies, but we are nowhere close to where we need to be and in this current year Exco will double its efforts to bring back lost company and patron members, while recruiting new ones.

Another aspect pertaining to membership, which I drew attention to last year as I was coming into office, is the creation of Fellows as a new category of SACI membership. We have now completed the consultation that has created this category of membership; but in the processes SACI members decided to do away with the category of "Honourary Member of SACI". These decisions need a change in the SACI constitution to put both decisions into effect. Exco is currently proposing amendments to the constitution and seek approval to theamended constitution soon. I anticipate that by the next AGM we would be able to announce our first batch of Fellows of the Chemical Institute.

#### 4. Our financial situation:

The general financial situation of the Chemical Institute is not bad. We still have a budget deficit emanating mainly from expenditure that runs the SACI office. However, Council made a conscious decision 5 years ago to offset this deficit from returns on the Chemical Institute's investments to allow the Chemical Institute to rebuild membership numbers to a point where dues and other income will be able to support the annual budget. It is my belief that in the next couple of years our numbership will increase to a point where SACI will strike this balance.

#### 5. SA Journal of Chemistry:

One of my first appeal to SACI members when I assumed office as President was to increase our support for the SA Journal of Chemistry. I am glad to say that a lot of people have responded to this appeal and the result is increased number of submission to the journal. The flip side is the associated increase in the cost of running the journal. Exco is currently looking at various models to offset the cost of publication and hope to find a solution that would address this problem. What is pleasing, though, is that with increasing number of manuscripts on nano chemistry, the Editor-in-Chief has added an Editor for nano chemistry to the editorial team.

#### 6. Towards recognizing Chemists as "Professionals":

Thhe South African government is looking at getting various scientific and technological practitioners to carry the designation of "Professionals" a manner that we currently consider Doctors, Lawyers, Engineers etc. to be. In this regard the South African Qualifications Authority (SAQA) has embarked on a pilot project with selected Professional Societies to establish processes and requirements for someone with the requisite qualifications and experience in a discipline to be

recognized for example as a "Professional Chemist". The South African Institute of Physics is one of the Professional Societies being used in this pilot project. Exco is therefore working with both SAQA and Institute of Physics to establish requirements and procedures for Chemists in order for chemists to use the designation of "Professional Chemist". To this end Exco has invited the President of the Institute of Physics to address the AGM on the Physics experience and how it has dealt with its registration with SAQA on this matter.

Lastly, it is pleasing to note that half way through my term of office a number of the issues I identified coming into office have been dealt with or are being dealt with. It is my hope that by this time next year those that remain would have been dealt with. My sincere gratitude to all Exco and Council members and the rest of the SACI membership for support; but I would like to single out Mrs. Laila Smith and Professor Neil Coville for special mention without who most of what I have reported here would not have happened.

James Darkwa

# <u>AWARDS 2011</u> 2012 awards will be announced at the AGM

#### THE GOLD MEDAL

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

Professor Casper J H Schutte Department of Chemistry University of Pretoria

#### 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 2011, covering papers published in the period 2007 to 2010, was in the field of Physical Chemistry.

Professor Reuben H Simoyi Department of Chemistry Portland State University Portland Oregon, USA

Kinetics and mechanism of formation of S-nitrosocysteine, S. Afr. J. Chem., 2010, 63, 215–223

#### THE SASOL POST-GRADUATE MEDAL

The medals are struck in silver, and bear the SASOL logo on the obverse, and the Institute's name and crest, together with the name of the recipient and the date on the reverse. The medals shall be awarded to students engaged in research towards a MSc or PhD degree at a South African University, or a MTech or DTech degree at a South African University of Technology. The number of medals awarded shall not exceed five per annum, and the awards are limited to one per institution.

Mr. William MotswainyanaUniversity of the Western Cape Mr. OluseyeOnajole University of KwaZulu-Natal, Westville campus

Ms. DyanneCruishcank University of Cape Town

Mr. Ahmed Shaikjee University of the Witwatersrand

Mr. Ryan Wamsley Rhodes University

#### CHEMICAL EDUCATION

The medal is struck in silver and bears the Institute's name and crest on the obverse, and the name of the medal, together with the name of the recipient and the date on the reverse. The award shall be made to a person who has made an outstanding contribution to chemical education, as judged by the person's published work in the previous five years. Published work may be in any form and may be related to any level or educational context.

Professor Peter Loyson Nelson Mandela Metropolitan University

#### THE JAMES MOIR MEDALS

The medals are struck in bronze, and bear the Institute's name and crest on the obverse, and the name of the medal together with the name of the recipient and the date on the reverse. Medals shall be awarded to the best BSc Honours student in chemistry at each University and University 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 and University of Technology in the Republic of South Africa.

Ms.MapudumoLephoto University of Johannesburg

Mr.Henry Mungodori Fort Hare University
Ms. Rene Pretoius University of Pretoria

Ms.Candice Rassie

University of the WesternCape

Mr.Sean Robinson Stellenbosch University
Ms. Tanya Pieterse Universityof the Free State

Ms.AminaSayed Cape PeninsulaUniversity of Technology

MsKathryn Wicht University of Cape Town

Ms. Marietjie Ungerer North-West University (Potchestroom)

#### 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.

No Award Made

#### THE RAIKES MEDAL

The medal is gold-plated, and bears a likeness of Humphrey Rivaz Raikes with his name on the obverse, and the Institute's name and crest, and the name of the recipient and the date on the reverse. The award shall be made to a person, under the age of 40 on 31 December proceeding 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.

Dr Gregory Smith Department of Chemistry University of Cape Town

#### THE HENDRIK VAN ECK MEDAL

The medal is gold-plated, and bears the Institute's name and crest on the obverse, and the name of the medal, together with the name of the recipient and the date on the reverse. 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 medal is struck in silver and bears the Institute's name and crest on the obverse, and the name of the medal, together with the name of the recipient and the date on the reverse. The award shall be made to a person who has made an outstanding contribution to chemical education, as judged by the person's published work in the previous five years. Published work may be in any form and may be related to any level or educational context.

Dr JohnthoDixon SASOL

#### 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**

It is very pleasing to note that the number of SACI members has increased significantly over the last year, with total paying membership now standing at 880, as reflected in the table of membership figures at the end of this report. The main movement was an increase in both members from 370 to 476, and student members (paying students increased from 292 to 328 and non-paying students increased from 28 to 39). When the non-paying members (228) are included, the total membership of SACI is now well over 1 000, which is most encouraging.

The increase in membership was in part as a result of the "membership amnesty" drive which received good response. This campaign was introduced as part of the Centenary celebrations to encourage new members to join SACI as well as past members to renew their membership.

Arrear payments were written off and free membership was given until June 2012, as a token of goodwill to members.

A total of 69 non-paying conference members are also reflected in the membership table. Non-SACI members who attend a SACI conference are given the option of joining SACI for free as a conference member for a period of a year. They receive the monthly SACI newsletter and email communication, with the hope that they will convert to paying members in due course.

There are currently thirteen sections of SACI, with membership ranging from 22 to 360 per division, although it must be remembered that some divisions have additional non-SACI members which would not be reflected in these numbers. Gauteng remains the largest division (730 members), followed by the Western Cape (208 members).

We obtained one additional patron member and one company member during the year, and this is an area of SACI membership which we plan to focus on improving during the coming year.

The Executive Committee has undertaken to explore the possibility of introducing a "Fellows" membership category, with the option of replacing the existing Honorary membership category. The documentation related to this was drafted and the concept was put to the vote by SACI members. The outcome was that we should go ahead with the Fellows category and discontinue the Honorary category (existing Honorary members will retain this title). The changes to SACI documentation required are in the process of being drafted, prior to final ratification by Exco; Council and SACI members.

The Executive Committee would like to thank Laila for her excellent management of the membership database, and we would appreciate it if current SACI members would assist us in increasing our membership by encouraging colleagues and peers to join our Institute.

# SACI Membership - 30 April 2012 CURRENT MEMBERSHIP FIGURES - Paid up

#### Breakdown of Full Membership

Dieundown of I un Membership											
	Apr- 11		Jul- 11		Oct- 11		Jan- 12		Apr- 12	Total Paying	880
Members	370	-164	206	81	287	<i>79</i>	366	110	476		
Retired Members	19	-1	18	1	19	0	19	2	21		
Associate Members	46	-22	24	5	29	10	39	6	45		
Married Associates	1	O	1	0	1	0	1	O	1		
Students (Paying)	292	-85	207	34	241	26	267	61	328		
Patron Members	3	-1	2	1	3	0	3	1	4		
Company Members	4	-1	3	1	4	0	4	1	5		

<b>Non-Paying Memb</b>	ers									
Honorary Members	20	0	20	0	20	20	-1	19	Total Non- Paying	228
Life Members	82	0	82	3	85	85	-3	82	1 u., 111g	
Students (non-paying)	28	5	33	4	37	40	-1	39		
Teachers	13	5	18	1	19	19	0	19		
Conference members								69		
Divisions					Sections					
Analytical Chemistry	360				Eastern Cape	56				
Chromatography	163				Western Cape	208				
Chemical Education	87				Gauteng	730				
Electro Chemistry	68				KZN	94				
Environmental	229				International	20				
Chemistry					Members					
Industrial Chemistry	228									
Inorganic Chemistry	166									
Mass Spectrometry	77									
Molecular Modeling	50									
Organic Chemistry	162									
Physical Chemistry	97									
ThermSA	30									
Green Chemistry	22									

#### **Patron Members**

BASF Holdings SA Bruker South Africa (Pty) Ltd Coca-Cola South Africa (Pty) Ltd Merck (Pty) Ltd SA

3M South Africa (Pty) Ltd Chem Science Laboratories cc Consol Glass (Pty) Ltd

**Company Members** (including additional member added in May 2012)

Dow Southern Africa (Pty) Ltd Microchem Lab Services

Wherethem Lab Services

SMM Instruments (Pty) Limited

Dr Patricia Forbes

#### **PROGRAMME COMMITTE**

#### **Conferences and Symposia:**

- 1. Warren Conference was a reported success and information about the next meeting in the Western Cape will be made available at a later stage. A number of Conferences, workshops and meetings are planned for the second semester (see SACI programme listings and newsletter). Centenary celebrations hosted in the different regions were well attended and now will culminate in the main national event that is planned for the 29<sup>th</sup> June at the University of the Witwatersrand and SciBono Discovery Centre in Newtown. Later in the year further centenary celebrations will continue in the form of a half day symposia in the Pretoria region (UP) at the end of September and a final event to close the year is planned for November in the Western Cape.
- 2. It is now clear that the ICCA Conference will be held in the second week of July 2013 in Pretoria and will be organized by a committee under the chairmanship of Professor Nindi from Unisa. The

event will be organized on the campus of the University of Pretoria with extensive use of student hostel accommodation. The Organizers could not be convinced to join the SACI National Convention in East London at the end of 2013. They expect 300-500 delegates, but this will not be a SACI supported event.

3. Inorganic 2013 is scheduled for the first week in July in Durban and organized by Werner van Zyl of UKZN. The date changed to Sunday 30 June until Thursday 4<sup>th</sup> July 2013. The idea is to run Carman parallel to this Conference, but this has not yet been confirmed or finalized. Students will be accommodated in student hostels to release pressure on transport. Werner intends making announcements in the June/July newsletter of SACI about Inorganic 2013.

**Prof Simon Lotz** 

#### **SA JOURNAL OF CHEMISTRY**

Scientific editors: J. D. Bradley (Chemical Education), S. Lotz (Inorganic Chemistry), N.Torto (analytical chemistry), H. G. Kruger (Organic Chemistry), W. van Otterlo (Organic Chemistry), L. Fraser (Organic Chemistry), B. S. Martincigh (Physical Chemistry), L. Nassembeni (Physical Chemistry), N. Revaprasadu (Nanochemistry) and G Venter (Computational Chemistry). Coordinating editor: G. E. Jackson.

#### Administrative

The board of scientific editors has been expanded to cope with the increase number of manuscript submissions. A new editor for Inorganic Chemistry, Prof Simon Lotz, has been appointed. The large number of submissions in the field on NanoChemistry has seen the need for a specialist editor in this field, Prof N Revaprasadu.

#### **Impact Factor**

The current impact factor of the journal is 0.57. This puts it just above the Russian Journal of Inorganic Chemistry. Table 1 shows the trend in the impact factor. There has been a steady increase over the last few years.

#### **Statistics for 2011-2012**

The steady increase in the number of manuscripts submitted since 2003 has been maintained, with 217 manuscripts received from June to June 2011-2012. This reflects only those manuscripts that were sent for review and excludes those manuscripts that were deemed so poor as to warrant early rejection. The average publication time for 2011 is the same as 2010, while the fastest time from submission to publication is in line with those of previous years (see Table 2). The rejection rate is still high, reflecting the poor quality of some of the manuscripts received, and the diligence with which the scientific editors and referees undertake their duties.

The international nature of the journal is one of its positive features, and for those years for which accurate statistics are available, South African manuscripts represented only ~16% of those submitted. This is 3% higher than previous years and is most likely a result of the invitation to contribute to the "International Year of Chemistry". The quality of the South African papers however is high and this is reflected by the proportion of papers published relative to the total (see Table 3); for a number of years now South African papers published has been below 50%. India, China and Iran are the three countries for which the journal appears to be most attractive (see Table

4). It is hoped that, while the journal will continue to attract manuscripts from other countries, the number of South African submissions will increase once local authors regain confidence in the journal since it went electronic in 2000.

The sharp increase in the number of manuscripts submitted since 2006 has seen its greatest effect in the area of Organic Chemistry (see Table 5). The spread among the remaining disciplines remains virtually unchanged, with Chemical Education continuing to attract very few submissions, reflecting the relatively small number of active researchers in that field. The number of papers published in each discipline is in proportion with the total numbers of manuscripts received (see Table 5). Two new disciplines have been introduced, Computational Chemistry and Nano-chemistry.

Because of a number of cases of fraud and plagiarism last year, now all submissions are passed through TURITIN for originality checks.

#### **Concluding Remarks**

The journal is continuing to experience growth. 2011 was the largest issue of the journal since it went electronic. A matter for concern, however, expressed in previous annual reports, is the increasing number of poor quality manuscripts being received. These can be a source of embarrassment to potential referees, and an early rejection procedure have been implemented. The criteria for submission of papers on new synthetic methodology has also been considerably tightened. There is always room for improvement in the turnaround time between submission and publication. The difficulty of extracting reports from the more recalcitrant referees and in ensuring that authors return their revised manuscripts with the minimum of delay is putting an increased burden on our scientific editors. To aid in this process, and to even the work-load, the journal now has 3 Scientific Editors for Organic chemistry and a new editor has also been appointed to cover Computational Chemistry. Luigi Nassembeni has been helping with the early rejection process in Physical Chemistry. The fact that the whole publication process is dependent on the goodwill of voluntary referees, who have to balance many conflicting demands on their time, is appreciated, but they need to be made aware of their crucial role in reducing turnaround times.

Table 1. Impact factor trends

	1	
Year	5 year average	Yearly
2007	0,275	0,327
2008	0,313	0,44
2009	0,451	0,429
2010	0,496	0,567

**Table 2.** Numbers of manuscripts received per year, numbers of journal pages, numbers of manuscripts published, rejected or withdrawn, and pending, rejection rates and times to publication.

Year	No. of	No. of	No. of	No. of	No. of	Rejection	Average	Fastest time
	manuscri	journal	papers	manuscripts	manuscripts	rate/%	time to	to
	pts	pages	publishe	rejected or	pending		publication	publication
	received		d	withdrawn			/months	/months
2003		62	16	22	0	57.9	9.2	2.7
	38							
2004		56	17	38	0	69.1	9.9	2.4
	55							
2005		143	21	42	0	66.7	11.3	3.1
	63							
2006		140	19	84	0	81.6	8.6	1.8
	103							
2007		128	19	81	20	67.5	6.1	2.5
	120							
2008		161	24	52	12	59.1	6.3	2.6
2000	88	101	21	32	12	37.1	0.5	2.0
2009		204	34	63	0	66.3	6.1	2.3
2007	101	204	34	03	· ·	00.3	0.1	2.3
2010	123	233	39	167	27	68.3	5.9	1.2
2011	182	262	41	78	63	65.5	6.0	0.3
2012*	112	124	20	41	71	67.2	5.8	0.9

<sup>\*</sup>Up to 30 June 2012.

**Table 3**. Breakdown of submitted articles with respect to country of origin.

Country	2011	2012 <sup>a</sup>
SA	47 (26%)	13 (12%)
India	28	19
China	28	16
Iran	36	38
Nigeria	7	5
Pakistan	7	2
Turkey	4	6
Mexico	3	0
Egypt	2	2
Thailand	1	2
Other	17	25
Total	182	112

<sup>&</sup>lt;sup>a</sup> Up to 30 June 2011.

 Table 4. Breakdown of published articles with respect to country of origin.

Country	2005	2006	2007	2010	2011
SA	13 (52%)	16 (57%)	7 (30%)	13 (33%)	17 (41%)
Botswana	2				
Zimbabwe				1	
Turkey			1	2	
China	5	2	3	3	3
Algeria			1		
India	1	3	6	9	3
Kenya	1		1	1	
Korea	1				
Nigeria	1	2		1	
USA	1			2	
Iran		3	4	5	6
Cote		1			
d'Ivoire					
Other		1		2	12
Total	25	28	23	39	41

**Table 5**. Breakdown of published articles with respect to scientific discipline.

Year	Analytical	Education	Inorganic	Organic	Physical	Comp	Nano	Total
2003	3	1	1	5	2			12
2004	6	1	2	2	1			12
2005	9	1	2	5	8			25
2006	6	0	3	14	5			28
2007	5	0	2	11	5			23
2010	3	1	10	20	5			39
2011	6	4	3	10	10	5	3	41

#### **SACI NEWSLETTER**

During the past year the newsletter has gone out regularly once a month. An attempt has been made to send out the Newsletter by the 1<sup>st</sup> day of every month and this generally happens. The December edition has to go out by mid-December due to the effect of public holidays. A classical format is now being used for the newsletters: a short editorial, a letter from the President, information on issues that affect SACI members (Anniversary, SAQA, International Year of Chemistry etc.), Members news, Division/Section news, General news, Conference adverts, Conference lists, Job/Post-doc opportunities. The procedure adopted is that I collect the news, collate and arrange the order of the information and then send to Laila who prepares and 'prettifies' the document and generates the PDF for members.

As will always be the case, publication of news items is dependent on information sent to me. This of course means some bias in coverage, but this can be changed by members' interactions with the Newsletter. I am open to suggestions as to how to modify what we are currently producing. Issues that need to be addressed:

- 1) There is still a bias towards academic information. I would like to see more industrial chemistry information.
- 2) More information is needed from outside the Gauteng area.
- 3) I would like to see the newsletter move towards more paid advertising.
- 4) While the newsletter is being used to advertise jobs, more needs to be done here. This would then make the newsletter more useful to members.
- 5) In the ideal world it would nice to have more reports from sections/divisions.

Neil Coville

# <u>IUPAC</u> Interim Annual Report for 2011

Name of Committee		
Committee members (please indicate office, year of	Professor Alan Hutton (Male, White) Town (Chairman)	- University of Cape
election/nomination, gender, race and age)	Dr Mike Booth (Male, White) Industries' Association	- Chemical & Allied
	Dr Erica Steenberg (Female, White)	- RADMASTE Centre
	Professor Pieter Steyn (Male, White) Stellenbosch	- University of
	Professor Koos van Staden (Male, White)	- University of Pretoria
	Dr Alufelwi Tshavhungwe (Male, Black) Technology	- Dept. of Science and
	Dr Leah Vilakazi (Female, Black)	- Mintek
	Professor Ewa Cukrowska (Female, White) Witwatersrand	- University of the
	Professor James Darkwa (Male, Black)	- University of Johannesburg
	Ms Lynn Ngwenya (Female, Black)	- ICSU Secretariat

Headings	Activities completed – January to December 2011	Activities planned – January to December 2012
Participation by South Africans in Union activities (Indicate name of South African, Union and type and level of participation)	The structure of IUPAC comprises eight divisions and three standing committees:  Physical and Biophysical Chemistry Division (I) Inorganic Chemistry Division (II) Organic and Biomolecular Chemistry Division (III) Polymer Division (IV) Analytical Chemistry Division (V) Chemistry and the Environment Division (VI) Chemistry and Human Health Division (VII) Chemical Nomenclature and Structure Representation Division (VIII)  Chemical Research Applied to World Needs (CHEMRAWN) Committee on Chemistry Education (CCE) Committee on Chemistry and Industry (COCI)  South Africa has representation on five of the Divisions (or their Subcommittees) and one of the Standing Committees In addition we have representation on the Committee on Printed and Electronic Publications:  Professor Kelly Chibale - Division III (Sub-committee on Biomolecular Chemistry) Professor Liliana Mammino - Division III (Sub-committee on Green Chemistry) Professor Ron Sanderson - Division IV (Sub-committee on Modelling of Polymerisation Kinetics and Processes) Professor Nelson Torto - National Representative - Division V Professor Ewa Cukrowska - Titular Member - Division VI (Sub-committees on Biophysico-Chemical Processes in Environmental Systems; Chemistry of Environmental Compartments) Professor Alan Hutton - Titular Member - Division VIII Dr Erica Steenberg - National Representative - CCE Professor Jimmy Bull - Committee on Printed and Electronic Publications; Editorial Advisory Board	Professor Alan Hutton elected Associate Member of Division VIII from Jan 2012.  Dr Erica Steenberg elected Titular Member of Committee on Chemical Education (CCE) from Jan 2012.

Headings	Activities completed – January to December 2011	Activities planned – January to December 2012
Size of local community	Approximately 40 Fellows and Members	
Attendance of International Congresses/Worksh ops	Professors Hutton, Cukrowska and Dr Vilakazi comprised the SA delegation to the 46 <sup>th</sup> IUPAC Council Meeting in San Juan, Puerto Rico, 3-4 August 2011. Other members attending the 46 <sup>th</sup> IUPAC General Assembly in Puerto Rico (30 July – 7 August) for Division, Sub-committee or Project Group meetings were Dr Erica Steenberg and Professor Nelson Torto.	<ul> <li>Young Ambassadors for Chemistry, Kasulu, Tanzania, 23 – 27 April 2012 attended by Dr Erica Steenberg (CCE). Dr Steenberg will attend meeting of CCE in Rome in July 2012.</li> <li>Members will attend relevant Division, Sub-committee or Project Group meetings during the course of the year.</li> <li>Much of the work of Division representatives is carried out by e-mail throughout the year.</li> </ul>
Involvement of young scientists in Union activities.	<ul> <li>SACI Conference, 16-21 January 2011</li> <li>ICFPAM Conference, 22-27 May 2011</li> </ul>	
Contribution by members to key documents (e.g. policy docs.) and publications (please indicate why they are regarded as key)	Professor Hutton contributed a Chapter entitled "Nomenclature of Organometallic Compounds" to the revised edition of "Principles of Chemical Nomenclature", edited by G.J.Leigh, published by IUPAC and The Royal Society of Chemistry in 2011, pp. 109 - 132 [ISBN 978-1-84973-007-5].	
Value to the community and benefit to South Africa	Visibility and active participation in the international community. Providing a channel for dissemination of latest recommendations from IUPAC.	
Public Society Interfaces and Outreach Programmes – self initiated or facilitated by ICSU	<ul> <li>UNESCO – IUPAC Global Programme in Microchemistry</li> <li>Dr Erica Steenberg represented the IUPAC National Committee at the ICSU Consultative Forum on 20 July.</li> </ul>	ICSU National Board of SA meeting held 28 February 2012 attended by Dr Erica Steenberg.
Science Education (Any activities involving teachers, students, school curriculum development, graduate student development)	IYC Global Experiment	
Highlights and/or major events	<ul> <li>46<sup>th</sup> IUPAC General Assembly, Puerto Rico, 30 July – 7 August (see details above).</li> <li>IYC Activities –</li> <li>Edition of Quest Magazine for Schools and Universities on Chemistry.</li> <li>Edition of South African Journal of Science devoted to Chemistry.</li> </ul>	Publicising chemistry at Science Festivals and Science Centres.

#### **SACNASP**

The South African Council for Natural Scientific Professions (SACNASP) was established under the Natural Scientific Professions Act 2003 (Act No 27 of 2003) for the registration of Professional, Candidate and Certificated Natural Scientists, and to provide for matters connected therewith.

#### • Fields of Practice

Schedule I of the Act makes provision for registration within about twenty different fields of practice. There are proposals to include "Toxicological Sciences" and to reinstate "Forestry Sciences" in a future revision of the Act. There is a Code of Conduct with which all persons registered with SACNASP must comply with.

#### SACI Representation

SACI, and similar other scientific societies, may apply to be a Voluntary Association (VA) of SACNASP, and members from these VA's are elected to constitute Professional Advisory Committees (PAC's) to evaluate applications for registration within their respective fields of practice. The current members of the PAC for Chemistry is Ernst Breet (NWU), as Chairperson, Pieter Marais (TUT), Mike Booth (CAIA) and James Darkwa (UJ).

#### CPD System

A Continuous Professional Development (CPD) point system was introduced for two fields of practice (Geological and Animal Sciences) on a trial basis before the concept is adopted across the board.

#### New Rules for Cert. Sci. Nat.

Two levels (A & B) of the Certificated Natural Scientist category were recently introduced. This will enable registration of significant numbers of Technicians in view of the requirements for Occupational Specific Dispensation (OSD) in the governmental sector.

#### Registration Statistics

The registration statistics on 30 April 2012 shows a total of 4 914 registered scientists (with 568 pending), a 25% increase on the registration figure of the previous year. Government employees are increasingly under pressure to register in order to move onto a professional career path and remuneration scale. The five fields of practice accommodating most of the registered scientists are Geological Science (28%), Earth Science (11%), Environmental Science (10%), Agricultural Science (8%) and Animal Science (8%), with Chemical Science (7%) in the sixth position. A total of 53 chemists registered in the past year, with 23 in the Certificated, 3 in the Candidate and 27 in the Professional Natural Scientist categories.

## • Non-Registerable Qualifications

A few universities will be approached directly regarding deficiencies in qualifications offered by these universities in order to ensure recurriculation in line with SACNASP requirements.

#### New Logo

A new logo and corporate identity was created for SACNASP and officially launched at a recent Regional Breakfast Session of the Executive Director (Dr. Rolf Becker) and a television interview with him on Good Morning Africa. A newly designed website was also launched and a Facebook page was started. The heraldic coat of arms will remain as official symbol on registration certificates and on the annual report.

Prof. ELJ Breet

#### CO-ORDINATION COMMITTEES AND DIVISION REPORTS

# **EASTERN CAPE**

#### 1. Pretoria Portland Cement (PPC) School Outreach Project-17 August 2011

In line with the activities of the international year of chemistry, Pretoria Portland Cement (PPC) in collaboration with the Nelson Mandela Metropolitan University (NMMU) Chemistry Department held an outreach project on the 17 August 2011 which involved grades 11 & 12 learners from Tamsanqa High School (a former high school of Ms Azola Hlaula who at the time was the Quality Assurance Chemist PPC in PE) in KwaZakhele Township in Port Elizabeth (PE). The event was co-ordinated by Ms Hlaula from PPC (PE). Ms Hlaula chose this school because from her experience the school did not offer practical experiments due to the lack of resources. This experience motivated her to inspire someone else to consider Chemistry as a career option.

PPC was the host institution for this event and the learners were transported to their premises. The school was very excited about this project, and a selection of the experiments from the syllabus was done by the teacher by considering only the crucial ones for the matric syllabus. NMMU assisted in preparing and presenting the experiments. The PPC Sales and Marketing Department was also approached to support in the prize giving section and the support was overwhelming. Suggestion were made to extend the project beyond the practical experiments, and NMMU saw this as an opportunity to inform the kids about the courses offered by the NMMU Chemistry Department and possible careers in Chemistry.

The event was held at the Learning and Development Centre and it started with a presentation by Mr Vusani Ntombana (PPC technical laboratory personnel) on a brief history of PPC and how cement is made as well as on the applications of cement. This was followed by a presentation by Mr Percy Hlangothi (lecturer in the NMMU Chemistry Department) on the "Possible Careers in Chemistry", and more especially what the NMMU Chemistry Department has to offer. To make it more appealing, the staff compliment was shown and specifically the people that are coming from humble beginnings that the learners can identify with. The application forms for studies at the University and for financial assistance were available together with the NMMU prospectus.

The experiments that were prepared by NMMU were: investigating the factors that affect the rate of reaction (three experiments), application of electrochemical cells, and the demonstration of Le-Chatelier's principle using acid-base reactions. To keep the excitement going relevant questions that relate to the experiments were asked, and a learner who gave the first correct answer was awarded a PPC T-shirt.

Mr Percy Hlangothi from NMMU had this to say about the event, "it was indeed one of the great events organized as part of the on-going International Year of Chemistry (IYC) celebrations. The feedback that I got through my casual interaction with the learners after the activities confirmed

that the day was truly special to them and every effort made by Ms Hlaula and the NMMU team was indeed worth it. Surely proper planning from Ms Hlaula side, her heart-warming nature and good interpersonal relations, and wonderful gifts handed out on behalf of PPC brought about the excitement and made the day extra special to us as NMMU and the learners as well". Mr Vusani Ntombana from PPC also thanked the organiser (Ms Hlaula) for affording the technical department of PPC the opportunity to share a good time with the learners. He added that, "time out of classrooms and get to know about PPC and PPC Products was a huge benefit for them". During the prize giving each pupil was given a PPC pen and key holder, and question and answer sessions T-shirts and laptop bags were handed out. As a token of appreciation for the time invested the NMMU postgraduate students were given PPC branded caps.

Ms Azola Hlaula thanked Bernard Venter (General Manager of PPC PE) for allowing for the platform for the learners of Tamsanqa High School to learn in a different and exciting environment, and Mr Vusani Ntombana (PPC Technical Lab) for the knowledge and experience he shared with the learners as well as NMMU for affording the learners the opportunity to create excitement and fun around the chemistry experiments especially Percy Hlangothi and the senior students (Mr Lukhanyo Bolo, Mr Lwando Bonga and Mr Thembelani Phangalala) from the University. Ms Azola Hlaula also thanked the facilitation provided by the South African Chemical Institute (SACI) Eastern Cape Chairman, Dr Zenixole Tshentu. The Sales and Marketing team completed this event by sponsoring the prizes and refreshments were served.

# 2. Post-graduate Students Research Seminars-14 October 2011

The annual regional post-graduate chemistry seminars took place on Friday 14 October 2011 at Rhodes University. Post-graduate students and staff from the Chemistry Departments of the four Universities in the Eastern Cape Province gathered together to listen to the latest Chemistry Research being carried out at the various universities. The participating universities were: Rhodes, Fort Hare, Walter Sisulu and the Nelson Mandela Metropolitan University (NMMU). Representatives from Aspen Pharmacare (Dr Nigel Harmse) and Lasec (Mr Anthony Benecke) were also present at this event.

Professor Mike Davies-Coleman, acting Head of the Department of Chemistry at Rhodes University in the absence of Prof Nelson Torto, briefly welcomed the delegates. This was followed by a presentation by Dr Zenixole Tshentu (chairperson of SACI EC) who addressed the audience about SACI on issues such as; new leadership at SACI, SACI awards, SACI programmes, and finally the SACI EC leadership structure. He also urged delegates to consider publishing in the South African Journal of Chemistry and to become members of the South African Chemical Institute. He then presented the Sasol Postgraduate Medal to Mr Ryan Walmsley (Rhodes University) and the James Moir medals to Mr Matthew Coombes (Rhodes University) and Mr Henry Mungodori (University of Fort Hare). He concluded by thanking the sponsors: Aspen Pharmacare, Lasec SA, Spellbound Laboratory Solutions and Rhodes University Chemistry Department as well as the members of the organizing committee: Ms Dambisa Zenani, Ms Barbara Ah Yui, Mrs Benita Tarr, Mr Ryan Walmsley, and Dr Rosalyn Klein.

The seminar programme included a Junior Section incorporating BSc Hons/B Tech and 1<sup>st</sup> year MSc, and a Senior Section covering the higher studies (2<sup>nd</sup> year MSc and PhD), and were chaired by Drs Chidawanyika and Degni (Rhodes University postdocs) respectively. There were 3 speakers in the Junior Section, two from Rhodes (Mr Meloddy Manyeruke and Ms Jessica Taylor) and one from Fort Hare (Mr Henry Mungondori). The senior section had 4 speakers: one from Fort Hare (Mr Vala Mavula), two from MMMU (Mr Brenton Simpson and Ms Nonzaliseko Yumata) and one from Rhodes (Ms Nolwazi Nombona). A panel of judges, consisting of Prof Oyedeji from WSU, Dr Katwire from UFH, Mr Hlangothi from NMMU, Dr Klein from Rhodes (head of the

panel) and Dr Harmse from Aspen Pharmacare, allocated marks for each student presentation. The top two speakers in each category were rewarded with cash prizes, sponsored by Aspen Pharmacare (1<sup>st</sup> and 2<sup>nd</sup> prize, senior section), Lasec for the 1<sup>st</sup> prize in the junior section as well as Spellbound/SACI for the 2nd prize in the junior section.

The 1<sup>st</sup> prize in the Junior category went to Ms Jessica Taylor from Rhodes with the title: Synthesis of Upconverting Nanoparticles Utilising Lanthanide Doping, whilst the 2<sup>nd</sup> prize went to Mr Meloddy Manyeruke from Rhodes with the title: Synthesis of Disubstituted Bioactive Imidazoles. The 1<sup>st</sup> prize in the senior category went to Ms Nolwazi Nombona from Rhodes with the title: Phthalocyanine for use in Photodynamic Therapy; and the 2<sup>nd</sup> prize went to Mr Brenton Simpson from NMMU with the title: Modeling of the crystallization process of highly concentrated ammonium nitrate emulsions.

The quality of the presentations was outstanding, and the standard of the chemistry presented showed that the Eastern Cape is engaging within the current research trends in the subject. After the academic programme was concluded, students and staff enjoyed refreshments sponsored by Aspen Pharmacare, SACI and Rhodes University Chemistry Department.

#### 3. Chemical Education Seminar and Medal Presentation (Prof Loyson)-21 Oct 2011

A Chemical Education seminar was presented by the Eastern Province branch of the South African Chemical Institute on Friday 21 October 2011 where the Matriculation results in Science/Chemistry in the Eastern Cape were discussed by Mrs Joyce Sewry and the SACI Medal for Chemical Education was presented to Prof Peter Loyson, after which Prof Loyson gave a lecture entitled: A distillation of 35 years lecturing chemistry. The seminar was held in the Senate Chambers at the Nelson Mandela Metropolitan University in Port Elizabeth and attended by about 60 delegates. The facilitator was Dr Zenixole Tshentu who is the current chairman of the Eastern Province section of SACI.

Prof Tommy Gerber, Head of the Department of Chemistry at NMMU, welcomed the delegates, after which Mrs Joyce Sewry from Rhodes University gave the opening address entitled: Chemistry at the secondary/tertiary education interface. She reported on the dismal pass rate of matriculants in the Eastern Province in Physical Science with only 14 % getting more than 40% in 2009 and 23% in 2010. Factors such as the lack of qualified teachers, the FET curriculum and lack of practical work facilities are responsible for the low pass mark. Current NSC chemistry topics were then compared with 1<sup>st</sup> year university material. It was alarming to see that a number of important topics covered in the 1<sup>st</sup> year were not examined at NSC level in grade 12. These were stoichiometry, atomic structure and bonding, acids and bases, biological building blocks and inorganic chemistry. It was suggested that less time should be devoted to organic chemistry in 1<sup>st</sup> year, and more on stoichiometry, atomic structure / bonding and acids / bases. Various aspects of Johnstone's theory were discussed with reference to 1<sup>st</sup> year chemistry, eg ability to do the calculations versus understanding.

Dr Tshentu then read a short CV of Peter Loyson and presented him with the SACI Chemical Education Medal for 2011, after which Prof Loyson was invited to give his lecture, covering 35 years of teaching chemistry, with an emphasis on physical chemistry. Student misconceptions were treated first, then his own teaching methods were highlighted, where he uses everyday examples to put concepts across and always looks for applications of the theory. Further ideas that may facilitate the understanding of physical chemistry were then discussed after which some physical chemistry practicals were highlighted for their great educational value (eg silver electrode equilibrium). He stressed the importance of the Journal of Chemical Education which he says is invaluable for a chemical educator. He finished off by looking at some electro-analytical

techniques which have always fascinated him (polarography, cyclic voltammetry, and others).

Dr Tshentu then addressed the audience on the activities of SACI and encouraged staff to become members. He then invited the delegates to refreshments, kindly sponsored by SACI Eastern Cape.

#### 4. Centenary Celebration: half-day symposium-28 May 2012

#### Theme: The past, present and future of chemistry-An Eastern Cape perspective

The EC chapter of SACI organized a symposium to mark the centenary celebration. The event was hosted by the Walter Sisulu University Chemistry Department at the East London Health Resource Centre on the 28<sup>th</sup> of May 2012. About fifty people (staff and postgraduate students) were in attendance from the four universities including three retired Professors, Prof Jan du Preez (UPE), Prof Peter Loyson (NMMU) and Prof. Wegallr (UFH), and Emeritus Prof Perry Kaye. The Executive Dean of Science and Engineering at WSU, Prof Sandile Songca, was also one of the invited speakers. Dr Tseki from WSU welcomed everybody on behalf of the EC coordination committee of SACI and stated that the presentations offer us an opportunity to revisit the past and chart the way forward for chemistry in the province and the society at large. Prof. Peter Loyson took the audience through memory lane about the history of SACI. His presentation was an eye opener for the audience especially the younger generations about the rich heritage of the society starting with its formation, the existence of chemical societies focussing on different areas of engagement, the need for a chemistry body leading to the formation of SA Association of Analytical Chemists and eventual change of name to the South African Chemical Institute (SACI). He also highlighted some of the contributions of the past SACI presidents up to the current one as well as some former members including the first female member- Dr Maria Brayer Brandwijk. He concluded his presentation with profound joy about the contributions the institute has made for chemistry in South Africa in the past century and looks forward to the next century with greater hope.

Prof. Jan du Preez (who will be turning 82 years of age in October 2012) travelled all the way from his retirement home in Stilbaai to attend the symposium in East London. His presentation was about "four decades of research (1967-2008) at UPE/NNMU". In his presentation, he showcased the development of research capacity at Nelson Mandela Metropolitan University (Former University of Port Elizabeth) from humble beginning to producing many postgraduate students (MSc and PhD) some of which are originally from disadvantaged background and who now are doing quite well in various industries and universities all over South Africa and beyond. He used his own experience to educate and encourage current generation of researchers about ways of raising funds from the industry and government agency so that the postgraduate students bursary can be supplemented to a practical living bursary. Prof Jan du Preez also emphasised on the need to motivate the students, good teaching practice and harmonious working relationship with administrators and cleaners as some of the reasons behind the successes of UPE/NNMU. Dr Katwire from the University of Fort Hare in his presentation gave a historical perspective of the department. He stated that for many decades, the department was a teaching department fulfilling a mandate of educating black students from the former Ciskei homeland. In the last six years, with new academic staff members that are passionate about research, the department has transformed from mainly teaching to teaching and research. This culminated in the department graduating four PhDs in 2011 and steady increase in research publications from the department. At present, the department has about thirty post graduate students but in spite of the success and progress in the department in the last few years, Dr Katwire who is at present the head of department at UFH, lamented that the department is in dire need of research infrastructure to support the department going forward. He also lamented that attempts by some staff and students to access instruments from other universities within the province has not been very effective because some of these

universities have quite a number of postgraduate students that make access for Fort Hare staff limited. Thus, people from his department also go to KZN, Gauteng and the Western Cape.

In his presentation title "organic chemistry at Rhodes in the last 25 years", Emeritus Prof. Perry Kaye showcased "Team Chemistry" at Rhodes University. He profiled the people that make the department and the team effort of developing research in the last 25 years, especially organic chemistry that has now reached a level of theoretical and medicinal studies from persevered synthesis beginnings. He painted a picture of the Rhodes Chemistry department having 5 postgraduate students in 1987 and that now 60 registered MSc and PhD students in 2011. He stated that the department with less than ten academic staff members graduated 15 PhDs in April 2012, the first of its kind in the Faculty and the entire University. He said that the success at Rhodes was due to having the right people, an effective technical infrastructure and good institutional support system. Professor Songca, in his presentation titled "ICTs in chemistry and chemical education", emphasized the need for ICT in teaching and research in chemistry. He showcased how WSU with multi-campus on vast expanse of land has maximized the use of ICT to the benefit of the student and staff members. He stated that there is urgent need for chemistry departments in South Africa that are well resourced to make access to equipments available electronically to other researchers. He listed the challenges to E-learning and E-research and some suggestions for effective implementation and concluded that in spite of the possible drawback, the earlier chemistry departments in South Africa are linked electronically and work synergistically, the better for the country.

The chairman of the SACI EC section, Dr Zenixole Tshentu, in his concluding remarks thanked the host (WSU, Dr Tseki and Mr Manamela), the sponsors, the invited speakers and the audience for making the event a success. He raised two issues of concern: teaching curricula and the looming legislation on certification of chemists. He said there is urgent need to harmonise teaching curricula and accommodate the teaching of Analytical Chemistry (from the findings of the Analytical Chemistry Division through a consultative process with the chemical industry). He implored members to publish their research work in South African Journal of Chemistry to raise the profile of the journal and also encouraged non-members to join the SACI membership. The EC SACI membership recruitment drive will start in July/Aug 2012. The event was sponsored by the SACI national office and WSU chemistry department. The two sessions were chaired by Prof. Ernst Ferg (NNMU) and Prof. Peter Ajibade (UFH).

Dr Zenixole Tshentu

#### **GAUTENG**

No Report

#### **KWAZULU-NATAL**

During this period a number of events were hosted by members of the KZN section of the South African Chemical Institute. These included:-

21 February 2011 Magic Show for first year chemistry students (UKZN-PMB)

28 July 2011 Magic Show for FFS Expo for Young Scientists

1 August 2011 Dr Phil Germansderfer (Fluid management Systems, Inc.)

14 September 2011 Research Colloquium for MSc and PhD students from tertiary institutions in

KZN. At this event Professor Reuben Simoyi was awarded the Merck medal for his research publication "Kinetics and mechanism of formation of Snitrocysteine. Prof Simoyi is a visiting research academic from Portland

State University.

1 November 2011 Dr Jan van der Merwe – "HPLC/MS and its applications in proteome

research" (sponsored by ThermoFisher Scientific).

12 March 2012 Professor Mike Davies-Coleman (Rhodes) (joint with RSC) "Medicines

from Marine Invertebrates" This presentation was open to the general public and two talks were presented one in Pietermaritzburg and the other in

Westville Durban.

At the most recent KZN SACI committee meeting Professor Bice

Martincigh was elected as the new Chairperson for the KZN section, taking

over from Professor Ross Robinson.

**Prof Ross Robinson** 

#### **WESTERN CAPE**

During the last year we have been very happy to welcome two new members to the Western Cape Coordination Committee in the form of Margret Blackie and Willem van Ottlerlo. These two new committee members have already made a significant contribution to the efforts of the joint SACI and RSC coordination committee.

We once again had a very successful Young Chemist Symposia which this year was hosted by the postgraduate students of the University of the Western Cape. There were presentations from postgraduate researchers from each of the Universities in the Western Cape and in all about 45 research students attended this one day event. The occasion presented an excellent opportunity for some awards to be made by the Past President of SACI, Prof Ivan Green. Prof Green presented the James Moir medals to Sean Robinson of Stellenbosch University and Kathryn Wicht from UCT while SASOL Post Graduate awards were made to Ms D Cruickshank from UCT and William Motswainyana from the UWC.

The biennial Frank Warren Lecture was presented on the 26th October by the Past President of SACI, Emeritus Professor Ivan R Green at the University of Stellenbosch. This event forms part of the joint programme between the RSC and SACI in the Western Cape and is organised bt the RSC. Prof Charles de Koning from Wits, provided an introduction to the speaker and gave a brief summary of his career. Prof Susan Bourne presented Ivan with a Certificate of Appreciation on behalf of SACI for the last 43 years of service he has made to SACI and Chemistry as a whole in the Western Cape. He delivered an address on "Biologically Active Molecules based on Natural Product Scaffolds". It was very encouraging to see a good spread of those attended including a strong UCT contingent as well as Staff and Students from Stellenbosch and the UWC.

Prof Ben Burger, retired Professor of Organic Chemistry at Stellenbosch University celebrated his 50th anniversary as a member of the staff at the University. To give recognition to this remarkable achievement, the ChromSA section of SACI in the Western Cape organised a special lecture by Prof Burger. Some 60 people attended the evening lecture entitled: *The Peaks and Valleys of 50 years in Gas Chromatography*. Many of the audience members were old students of Prof Burger and it was certainly a fitting tribute to him for the services he rendered. Prof Burger described his

many experiences in the field of both developing new chromatographic techniques, as well as reinventing and polishing older ones.

Lastly the annual SACI/RSC dinner took place at the CPUT Hotel School at Granger Bay on the 18th October 2011 and was attended by about 60 members and included a very strong student contingent. The event was coordinated Prof Susan Bourne. Prof James Bull, a past President of SACI and the ex-editor of the *SAJChem* and *Pure and Applied Chemistry* gave an interesting overview of the joys of his term of office as the editor of these journals. No one could have wished for a better venue being on the Western seaboard facing Robben Island and at sunset with sun downers in hand!

Prof Peter Mallon

#### **ANALYTICA**

The Analytical Chemistry Division continues to collaborate with other organisations on aspects of mentoring, dissemination of research conducted in Africa and curricula. The following are planned activities

#### 1) Dissemination of analytical of research results:

Members of the Analytical Division have been encouraged to attend the SEANAC conference in Maputo 8-11<sup>th</sup> July 2012. The conference will have pre-symposium workshops for students on aspects of sample preparation as well as manuscript and proposal writing. These workshops will be offered in collaboration with the American chemical society. The SEANAC symposium will also publish a special issue of teh IUPAC journal of Pure and Applied Chemistry to include all invited presentations in the form of reviews. SEANAC is sponsoring accommodation, at a 3 star Hotel for all participating students.

2) Enhanced triple helix interaction to promote analytical Chemistry:

Efforts are on-going

3) **Development of a database for Analytical Chemistry in South Africa**. Efforts are on-going. SACI secretariat provided an updated list to facilitate the process.

4) Harmonisation of Analytical Chemistry Curricula

Further discussions will be held at the SEANAC conference so as to map the way forward as the conference presents an opportunity to interact with analytical chemists from all over Africa.

**Prof Nelson Torto** 

## CHEMICAL EDUCATION

No Report

#### **CHROMSA**

#### A) COMMITTEE:

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

Dr Patricia Forbes (Chairperson)

Mrs Hannalien Meyer (Immediate Past Chairperson)

Dr Magda Rösemann (Treasurer, Vice-Chairperson)

Mrs Belinda Hickman (Minutes secretary)

Prof Luke Chimuka (Student Liaison)

Mrs Yvette Naudé (Honarary Secretary and Membership)

Mrs Anita Botha (Programme co-ordinator)

Alexander Whaley (Webmaster)

Additional members: Dr Peter Gorst-Allman, Dr Maria Fernandes-Whaley, Mrs Wiana Louw.

Grant Killian resigned from the national committee due to his relocation to Cape Town.

Dr André de Villiers has taken over from Dr Marietjie Stander as the ChromSA representative for the Western Cape. Additional members of the Western Cape committee are Ben Burger, Ivan Green, Brenda Marx, Iain Moodie, Gordon Shephard, Denice Smit, Marietjie Stander, Stefan Louw and Merrill Wicht.

Dr Martin Dovey is the ChromSA representative for KwaZulu Natal.

#### B) ANNUAL GENERAL MEETING:

The AGM was held on 24 November 2011 at the South African Grain Laboratories. Attendance was excellent, with 52 people present. Dr Tim Laurens gave a lecture at the event.

#### C) AWARDS:

Prof Luke Chimuka was presented with the ChromSA Chromatographer of the Year award for 2011 at a formal event held at the University of the Witwatersrand in March.

#### D) FINANCES:

The finances of ChromSA continue to be sound. The funds held by the National ChromSA division are ~R260 000, whilst ChromSA Western Cape has funds of ~R240 000

#### E) EVENTS ORGANISED:

The following lectures were held in Gauteng during the period under review and were well attended:

Speakers Maria Fernandes Whaley	Title Mycotoxins and mielies! To eat or not to eat?	<b>Date</b> 26 May 2011	Sponsor Microsep
Seven postgraduate students	2011 Chromatography Postgraduate Student	22 Sept 2011	Life & Analytical Sciences
Tim Laurens	Workshop (held at UP)  The forensie investigation of	24 Nov 2011	ChromSA
Tim Laurens	The forensic investigation of drugs-of-abuse and the current status in South Africa	24 NOV 2011	Separations
Luke Chimuka	Why sample preparation is still important in the chemical sciences	22 March 2012	Waters Microsep Wits ChromSA

The following events took place in the Western Cape:

Speakers Steven Lai & Keith Compson (Waters)	Title  Metabonomics tools for the study of endongenous metabolites with mass spectrometry in the beverage and wine industries &  Waters Synapt G2 HDMS: an ion mobility QToF enabled MS for protein characterization	<b>Date</b> 27 July 2011
Phil Germansderfer (Fluid Management Systems, USA)	How to get the most out of your laboratory through extraction and clean-up automation	02 August 2011
Ben Burger	The Peaks and Valleys of 50 Years in Gas Chromatography	12 April 2012

#### F) FUTURE EVENTS:

Much of the committee's efforts are going into the planning of the 2012 ChromSAAMS conference to be held in October. The national ChromSA committee, as well as that of the Western Cape region, is providing sponsorships for postgraduate students (as well as researchers w.r.t. the Western Cape sponsorship) to attend the conference.

#### G) CONCLUDING COMMENTS:

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. It is very encouraging to note the increased interest and involvement of postgraduate students in the activities of ChromSA. A special thank you is extended to Genna-Leigh Geldenhuys, a postgraduate student who maintains the ChromSA Facebook page and to Randall Smith for initiating it.

Dr Patricia Forbes

#### **ENVIROMENTAL CHEMISTRY**

No Report

#### **PHYSICAL CHEMISTRY**

No Report

# **ELECTROCHEMISTRY**

#### **Events and Activities:**

Past events:

The 5th workshop of the Electrochemistry division of SACI (ElectrochemSA Workshop IV) entitled "Science to Technology (S2T)" was recently held at University of the Western Cape, Bellville, South Africa on 28<sup>th</sup> May 2012. Representative of the Technology transfer office (UWC), Technology Innovation Agency (TIA), NRF and Department of Science and Technology (DST) provided an overview of the role that each partner could play in facilitating the S<sub>2</sub>T process. Delegates representation included University of Johannesburg, CSIR (Stellenbosch), Ithemba Labs and University of the Western Cape. Our guest speaker was renowned author and research innovator Professor Omowunmi Sadik (State University of New York, Binghamton) who is also director of the University's Center for Advanced Sensors and Environmental Systems (CASE) research. She presented a case study based on their experience with respect to the research and development of the novel micro-biosensor system, called the UPACTM (Capwave Sensors (http://www.capwavesensors.com/), its successful transition to prototype and eventually market release and sales. The rationale of the workshop was to bring students and developing researchers together with representatives from the strategic role players to explore the process of taking science to technology. The programme was concluded with a networking dinner at Bloemendal Restaurant (Tygerberg Hills). A detailed programme for the event attached. The income received from student registration fees (30 x R500 =15 500) was used to cover the cost of event organisation, printing and dinner.

#### Forthcoming events:

The ElectrochemSA organizing committee is hard at work preparing the scientific programme and logistics of the 2<sup>nd</sup> International symposium on Electrchemistry with the theme "Electrochemistry for Energy". The call for abstract submission and registration is available online and an indication of string support for the event is evident. The plenary speaker for the symposium will be **Prof. Bruno G. Pollet**; *FRSC* (Director of HySA Systems Competence Centre, Professor of Hydrogen and Fuel Cells). The symposium will run over two days with a poster session and dinnder on the Thursday evening.

Registration fee structure is as follows:

FULL REGISTRATION (SACI member)	□R2500 SACI MEMBERSHIP
NO	
FULL REGISTRATION (non-SACI member)	□R3000
STUDENT REGISTRATION	□ R1500
EXHIBITION STAND	□ @ R2500

One more workshop is planned for the period August- September 2012 presented by visiting lecturers who participate in the newly launched Msc Nanoscience prgramme at UWC

Prof Priscilla G L Baker

#### **INORGANIC CHEMISTRY**

Many events organized by regional divisions have been reported on in the regular monthly SACI Newsletters. It is clear from the reports that in spite of many emerging smaller sub-disciplines and interest groups and their participation in workshops/gatherings, Inorganic Chemistry is still very much alive and still acts as an umbrella grouping when events are organized and speakers selected. All researchers associated with Inorganic Chemistry should unite and inform the SACI office at Wits about their events, visitors, seminars, etc. It is envisaged that each SACI branch in the country should have a publicity member (also for Inorganic Chemistry) to distribute information, report on activities and share overseas visitors.

The Journal of the South African Chemical Institute is rapidly increasing its International image, and as a result its impact factor, and more local researchers in Inorganic Chemistry are using and supporting the Journal to communicate results.

Many excellent regional meetings have been organized to celebrate 100 years of SACI in South Africa. The main event in Johannesburg will be held on the 29<sup>th</sup> June 2012 and will host local speakers and International guests. The centenary celebrations were the focal point of many activities this year which were financially supported by SACI. The 16th SACI National Inorganic Conference is being organized for June/July 2013 in Durban, KwaZulu Natal and will be followed by the National SACI Convention in December 2013 in East London.

**Prof Simon Lotz** 

#### MOLECULAR MODELLING

Molecular Modelling Breakaway Session; CHPC Minutes of SACI Molecular Modelling Division: AGM

Tuesday, 6 Dec 2011 Commencement: 9:00am

Present: See attached list

The chairperson (Prof. Vincent Bisetty) welcomed the members present and informed everyone that he was standing-in for the Prof Kruger, who was unable to attend due to a family obligation. He stated that the reason for the meeting is to identify needs and problems researchers experience with regards to CHPC and in general in order to try to find solutions for the needs and problems experience by the Molecular Modelling community.

The following issues were raised and discussed:

#### 1. Software requirements

#### Programs currently in use:

Amber 9

Gaussian G09 (not working properly)

• Gauss View is not installed. Prof. Ford mention that it is not needed.

Materials Studio 5.5 (6.0 to be implemented soon) – All modules, unlimited licenses

• In March-June 2012 usages of Materials Studio will be evaluated to decide if CHPC will continue to support it for another year.

Dicovery Studio (not operational yet) – All modules, unlimited licenses

Schrödinger (jobs keep failing)

SAPT (installations not successful)

#### Suggested New Programs:

NAMD (run with AMBER)

Desmond (run with AMBER)

REAXFF – suggested by Mr. Roberts

MOLCAS – suggested by Dr. Navizet

Pipeline Pilot (for Materials Studio and Discovery Studio) will be obtained if there is enough interest.

Dr. van Sittert suggested that there must be a protocol for requesting new software from CHPC. The meeting agreed.

#### The suggested protocol is as follow:

New programs must be tested by the person/group suggesting it on their local PC or HPC systems first. Then information should be disseminated and feedback must be given to this meeting. If supported the motivation to purchase will be given to the CHPC.

# 2. Specific Problems (Operations of the CHPC):

#### General:

- Feedback from Help desk to be improved, as there are very little or no response given.
- There is no contact person over weekends although it is said that support is 24/7. Standby person needed over weekends.
- CHPC needs to perform quality checks during the installation of new and current programs to ensure the validity of the output jobs and in this instance SAPT, Gaussian 09 and AMBER.
- A designated person from the CHPC is required to handle specific concerns of this community of users.

# Specific:

- Some of the members of the meeting experience problems to access Materials Studio on the CHPC. It was suggested they contact Oscar.
- The RAM available on the CHPC is insufficient for some calculations. It was suggested that temporarily more cores should be used for these calculations, but the problem will be investigated.
- Queuing system:
  - It was suggested that the information with regard to the rules and guidelines of the job submission to CHPC be circulated to the members.
  - o Jobs are too long in queues. It was suggested that no of jobs submitted per person should be limited prioritizing? The suggestion was 12 jobs per person in queue.

- o Jobs get killed without notice.
- o Specific problems with queuing system should be discussed with Oscar.

#### 3. Training initiatives:

#### General:

It was recommended that colleagues are introduced to new software purchased by CHPC in the form of workshops since we all may not be aware of its uses and capabilities.

#### Specific:

Dr. van Sittert from NWU where approached by Dr. Jeff Chen of the CHPC in regard to Introductory course on Molecular Modelling.

Dr. van Sittert informed the meeting that she submitted a proposal for a 5-day introductory course on molecular modelling aimed at honours and master's students wanting to pursue research including molecular modelling. If the meeting supports the proposal it will be presented to the CHPC by Dr. Chen. The proposal is for one group of 20-25 students per year or two groups for 10 students each per year. There are indications the students would receive a travel grant and accommodation for the week of the course. The initiative will only be carried out if there is interest from the computational chemistry community.

The members of the meeting indicated that they would be interested to send their students for the training. Dr. van Sittert requested that names of prospective students should be submitted to her.

#### 4. Industrial Involvement:

It was suggested that CHPC broaden the scope of the users to include industrial applications. A list of potential industries will be complied and circulated. At this point it was suggested that CHPC needs to embark on a marketing drive.

#### 5. Wiki

It was suggested that a database comprising of user details (including contact details) along with keywords of the area of expertise including the software tools currently in use should be compiled. This should then be circulated to the SACI MM group.

This database should be made available to anybody that may be interested via a wiki on the CHPC website. The wiki should also include the current software installed on CHPC.

This will help future students to make choices for postgraduate studies as well as to encourage networking between the current computational community on a national scale.

#### **6.** Research Outputs:

Users were encouraged to acknowledge the usage of the CHPC facilities in their publications. A description of the wording will be circulated. This is also important to make further investments in CHPC possible.

The members of the meeting requested that a contact person for notification of articles and theses where CHPC facilities were used be identified.

Prof. Ford commended the Molecular Modelling Division of SACI for the work done in the past few years.

Prof. Bissety thanked all members for being present at the meeting.

Meeting terminated at 10:30am.

#### **ORGANIC CHEMISTRY**

A very successful and enjoyable Organic Conference was held at the University of the Free State from 15-18<sup>th</sup> April 2012 and represented the 12<sup>th</sup> Frank Warren Conference since this name was coupled to the event. Prof Jan van der Westhuizen and his committee are to be congratulated on a most intensive and interesting programme which saw many excellent speakers, both locally sourced as well as from overseas, delivering plenary and invited lectures as well as interacting with MSc and PhD students during their poster presentations. Gratifying as well were the contributions from post doc students from overseas universities to the programme.

My personal appreciation and that of the entire Council of SACI to Prof van der Westhuizen and his committee for their time and effort put into organising the conference for the Division.

A full report will soon become available on the SACI website.

The 13th Frank Warren Conference will be held in the Western Cape in 2014 and I have initiated proceedings at Stellenbosch where Prof Willem van Otterlo has indicated that he will take on the responsibility of inviting colleagues from UCT, UWC and CPUT who together with those from US to form a committee and commence with planning of this event. Prof van Otterlo made the comment to me that: "If it's worth doing, it needs to be done well." Knowing the calibre of the Organic Chemists in the Cape this will indeed be a memorable event.

All SACI Organic Divisional Members need to keep their eyes on the SACI website as details unfold.

Ivan Green

#### **SAAMS**

#### 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 Hasset (Membership and Webmaster)
Louis van Huyssteen (Vendor Industry Representative)

Andrew Dinsmore Ljiljana Marjanovic Johan Jordaan

#### 2. Membership

SAAMS currently has 273 members, only 77 of whom are also affiliated to SACI; confirming that mass spectrometry serves a wide variety of scientific disciplines.

During the year a questionnaire, which was sent to all members to gauge their level of involvement in mass spectrometry, yielded 80 responses. The data obtained will be used to ensure that future events address the interests of our members.

#### 3. Finances

The past year was a quiet year financially, with no major fund-generating events. On 30 April 2012, SAAMS' assets amounted to R160 000.

The financial statements for the past few years were audited and presented to members at the AGM.

# 4. Functions and activities

#### Proteomics workshop (CSIR, 11 to 14 July)

This event exceeded all expectations and a total of 68 people registered for the two-day seminar, with 21 participants attending the practical workshop that followed. Due to the high demand, another workshop is planned shortly.

#### High resolution MS seminar (Wits, 18 August)

Very positive feedback was received from the more than 50 people who attended this afternoon seminar. Four lectures on the theory and applications of high resolution- and accelerator mass spectrometry were followed by a buffet supper sponsored by Thermo Fisher Scientific.

#### <u>Instrument demonstration, lecture and AGM</u> (University of Pretoria, 17 February)

During the afternoon, representatives from LECO and Microsep were available to demonstrate the two new mass spectrometers recently installed in the Chemistry Department of UP.

After a short AGM, Dr Frieda Dehrmann from SA Breweries entertained the 50 guests with a very interesting talk on *The Art and Science of Beer Tasting*, ending with a mini tasting session sponsored by SAB.

The evening concluded with a scrumptious dinner sponsored by Microsep and LECO.

#### Lecture on LC-MS/MS (Sci-Enza Centre, UP, 22 May)

Forty seven people attended the informative lecture on *Quantitation of Food Residues using LC-MS/MS* presented by Dr Jens Dahlmann of AB Sciex and enjoyed the snacks and refreshments sponsored by AB Sciex after the lecture.

#### ChromSAAMS 2012 (Dikhololo, 7 to 10 October 2012)

Arrangements are well in hand for the next ChromSAAMS conference (which is organised quadrennially together with ChromSA, and will be the highlight of 2012 on the SAAMS calendar), as well as for the LC-MS course to be held on the succeeding two days at NMISA. SAAMS was able to obtain sponsorship from the International Mass Spectrometry Foundation (of which it is a founding member) for Professor Jane Thomas-Oates from the UK to present a plenary lecture at the conference.

#### 5. General

Together with ChromSA, SAAMS is developing a model for the joint organisation of a conference by more than one SACI Division, often supported by groups outside of SACI. This model, which includes the sharing of financial profits and risks from the event, is based on the guidelines successfully used for ChromSAAMS conferences over many years.

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

## **RSC**

Activities of the section for 2011 were detailed more fully in the Annual Report which is available on request. This report describes the section activities from mid-2011 to mid-2012 especially in relation to SACI.

Activities supported by the RSC at Sci-Bono Science Centre in Newtown included ongoing support for the Emasondosondo Chemistry Bus and the Laboratory at the Science Centre, the return visit of Tim Harrison who gave lectures to over 2000 students during National Science Week in August and the donation of an additional 100 copies of Access to Chemistry for distribution to local schools. 200 pens, 200 'bugs' and 100 wristbands were also obtained as handouts for the Sci Bono Centre to promote chemistry.

The periodic table project, started a couple of years ago, was finally completed – at least the first phase. The information blocks have now been completed for all the elements. Progress was also made in obtaining the periodic table videos and the project to install these on a monitor adjacent to the periodic table (phase 2) will hopefully be completed later in 2012. This will be followed by an official opening although the periodic table is already in daily use at the Sci Bono centre.

A new project which was undertaken in 2011 was a request to support a specific school, Seabe High School in Mpumalanga, for an International Year of Chemistry project. The project was initiated by Peter Malatji, a PhD student at UCT, who previously attended the school. Students were asked to design a poster, build a model or write an essay on some aspect of Chemistry. Trophies and cash prizes were awarded to the winners in front of the whole school. Hopefully this will encourage many students to study Chemistry and even consider it as a career. The project was a great success and it is hoped to repeat this again in 2012.

Two regular projects are the Eskom Science Expo and the SACI Young Chemists symposium. The former this year moved from its previous venue at the University of Pretoria Sports Grounds to the Birchwood Hotel in Boksburg. The RSC judges this time were Suzanne Finney and Noah Halwindi. Encouragingly there were more projects in the Chemistry section of the Expo this year than previous years and the standard of the Grade 10-12 projects had improved considerably.

The 2011 SACI Young Chemists symposium, at which MSc and PhD students present their work to their peers was held at the Vaal University of Technology. It was combined with the Nanotechnology Young Researchers Symposium (which took place in the morning with the SACI presentations in the afternoon) which meant a full auditorium. Judges Noah Halwindi and Ian Bratt had their work cut out but managed to agree on the eventual winners who came from four different institutions.

Over the past few years, the local section has donated RSC books to the libraries or resource rooms of the various Chemistry Departments of universities within its area. This year it was the turn of Venda University and the University of Limpopo to benefit from this project. Chemistry libraries are often under resourced so these donations are well-received especially as the section qualifies for a 35% discount on books purchased for donation.

Another donation, this time directly linked to the International Year of Chemistry was that of 21 water testing kits to local Gauteng schools. This was done through Radmaste who produce the kits. The handover of the kits by Mike Laws and Andreas Lemmerer only took place on 23<sup>rd</sup> November but schools still had time to enter their results into the International Year of Chemistry database as part of the Global Water Experiment.

Once again the section sponsored attendance by students to a local conference. This year we sponsored three students to attend the second South Africa Young Scientists conference which was held in Pretoria in September. The section also sponsored the poster prizes at the CATSA conference which was held in Johannesburg in November 2011.

The section co-sponsored (with SACI) an IYC lecture on "Chemistry in Egypt" which was presented by Professor Peter Loyson from Nelson Mandela Metropolitan University at Wits on 13<sup>th</sup> October. Approximately 60 people attended the lecture which was followed by drinks and snacks.

The 33<sup>rd</sup> AGM was held at the same venue on 18<sup>th</sup> November 2011. The attendance was again disappointing. This was followed by a dinner at which the committee hosted visiting Professors Graham Hutchings and James Anderson who were in South Africa to present a course on catalysis at Wits sponsored by the RSC. Course participants came from all over Africa.

The following week the Annual Dinner which this year, for the first time ever, was a joint function with the SACI Gauteng section, was held at our usual venue, Hofmeyr House at Wits. The guest speaker was Pretoria research student, Bianca Verlinden, who stirred up a lot of debate on her topic of "Genetically modified organisms".

The membership of the section has remained fairly constant with a slight decrease to 104 at present. A few members have dropped off the list to be replaced by some new ones. It is still disappointing that only a small percentage of our members attend section functions and become involved in the section's activities.

Ian Bratt again attended the RSC General Assembly (as he did in 2009) which was held in Birmingham on the  $11^{th}/12^{th}$  November 2011.

It is now five years since the RSC-SACI cooperation agreement was signed and this was due for renewal in March 2012. President of the RSC, Professor David Phillips will be visiting South Africa in June to attend the SACI Centenary meeting and to sign a new Memorandum of Understanding between the two organisations. Our relationship with SACI has gone from strength to strength and closer ties are currently being forged with the SACI Gauteng section.

Already this year the RSC has sponsored a lecture in Kwa Zulu Natal thanks to Ross Robinson who organized the event and there are plans for a schools crystal growing contest later in the year. The section has also sponsored a joint RSC/SACI Gauteng lecture at Wits with plans for future lectures and a joint annual dinner in place.

Sponsorship of conferences (poster prizes and student attendance) has expanded this year to include the Frank Warren, Nano Africa 2012, ChromSAAMS2012, Indaba and CATSA conferences. Book donations this year will be made to the University of Pretoria, Tshwane University of Technology and the University of Johannesburg Chemistry departments as well as additional copies of Access to Chemistry to local schools via Sci-Bono.

The usual projects of supporting the Eskom Science Expo, the SACI Young Chemists Symposium, Seabe High School and, of course the major collaboration with the Sci-Bono Science Centre will continue during the rest of the year.

Dr Ian M Bratt

#### **Green Chemistry**

The Green Chemistry Division of SACI was initially formed in 2011 at the 40<sup>th</sup> National Convention of SACI which incorporated the 3<sup>rd</sup> FASC Congress and during the event, a day was set aside, solely devoted to Green Chemistry. At that meeting a committee was elected and to date those members are still involved in establishing the fledging division. This committee has set up a website and an e-mail address in order for the Division to gain exposure amongst the members. Through e-mails, the website has been very interactive to the public, mainly on issues such as sustainable energy or cleaner chemical processes. We have received numerous interactions ranging from high school students doing projects, industrial chemists, to international chemical organizations. Hence, we are about to generate a section on Frequently Asked Questions (FAQs) within the Green Chemistry website.

#### Website:

The website has been up and running for a while at the following link:

http://www.greenchemistry.co.za/greenchemistry/default.html

Apart from the FAQs section suggested above, the website still has the potential to be improved in order to be more informative and interactive. Also Laila Smith was asked to add the new e-mail address in order to update the current contact address.

#### E-mail address:

The e-mail address, greenchem@ukzn.ac.za, was created a year ago and is checked by the Green Chemistry secretary frequently. All the division members and interested parties are welcome to contact the committee with anything of interest.

#### **David Wylie in the US:**

David Wylie is the Program Manager of the ACS Green Chemistry Institute based in Washington DC and he was informed about our efforts, our willingness to collaborate on projects, and how the ACS can help. It is expected that some synergy will be created between our Division and the ACS Green Chemistry Institute.

#### **Journal Publications:**

Over 20 articles just between June 2011 and 2012 related to Green Chemistry, in particular on better synthetic strategies, have been published in the South Africa Journal of Chemistry. This shows that this area of chemistry is growing rapidly and with foresight the Institute set up the Division.

#### **Conferences:**

Vincent Nyamori will attend the *4th International IUPAC Conference on Green Chemistry* from the 25-29 August, 2012 at Foz do Iguaçu/PR, Brazil. **We extend this invitation to all South African SACI members.** We hope this visit together with the resulting interaction with Green Chemistry gurus will result in some of the key presenters being invited to South Africa to run a series of lectures or workshops.

During Dec. 2011, Dr Nyamori presented his work in a workshop organized by the Department of Chemistry, Egerton University, Njoro Campus, Kenya. He gave a talk entitled, "Functionalization of CNTs for potential use in photovoltaic solar cells as an alternative Greener Source of Energy".

In 2011, which was the International Year of Chemistry, postgraduate students within UKZN organised monthly talks whereby many topics covered aspects of Green Chemistry and how we can improve the way we carry out our chemistry using some of the green chemistry principles. The talks focused on aspects such as sustainable energy, cleaner synthetic methods and the practice

of atom economy among others. All these talks were given under the motto "better practice and improved approaches for improved chemistry and for the betterment of our future".

The Green Chemistry Division will be incorporated in the forthcoming INORG2013 conference to be held at UKZN from 30 June – 4 July 2013, and it is hoped that this will increase delegate's awareness about the Division.

#### **Membership:**

The current number of registered Green Chemists in this division is in the range of about 150 members. We also hope with time this number will increase.

#### **Finances:**

The Division is looking at ways to find funds for future workshops and invited speakers. Incorporating the Division within national or other conferences should help in that regard.

#### **Management Committee members:**

**Chair:** Dr Vincent O. Nyamori (UKZN)

E-mail: nyamori@ukzn.ac.za

**Tell:** 031-260 8256

**Secretary:** Dr Werner E. van Zyl (UKZN)

E-mail: Vanzylw@ukzn.ac.za

**Tell:** 031-260 3188

**Treasurer:** Dr Muhammad D. Bala (UKZN)

E-mail: bala@ukzn.ac.za
Tell: 031-260 2616

Member: Victoria Anderson (Anglo American) E-mail: vanderson@angloamerican.co.za

**Tell:** 011-377 4790

**Member:** Dr Alufelwi M. Tshavhungwe (DST) **E-mail:** alufelwi.tshavhungwe@dst.gov.za

**Tell:** 021-843 6433

Member: Dr Sabelo Mhlanga (Wits) E-mail: sabelo.mhlanga@wits.ac.za

**Tell:** 011-717 6705

Dr Vincent O. Nyamori

#### **ThermSA**

ThermSA was introduced to the scientific community at a meeting held at the University of Pretoria on 15 March 2012. The meeting was attended by 36 members and prospective members of ThermSA, as well as several vendors of thermal analysis equipment. A presentation was made to the meeting on the founding and purpose of ThermSA. It was decided that the committee will consist of at least 5 members. Nominations were requested for the new committee. The proposed statutes were presented to the meeting. There was some lively discussion on the purpose and scope of the society and several actions were suggested.

#### Committee

The members of ThermSA nominated the following committee members:

- Danie Moolman (Necsa)
- Andrew Pienaar (Necsa)
- Isbé van der Westhuizen (UP)
- Kobus Wagener (Necsa)
- Chris Woolard (Sasol)

As only five members were nominated there was no need for an election. The new committee will take office from 1 July and will meet to elect the chairperson and other office bearers.

#### **Membership**

There are currently 30 members of SACI who have indicated their preference to join ThermSA. One of the most important activities for the coming year will be a drive to recruit more members.

#### **Planned activities**

As soon as the portfolios of the committee members are finalised, work will begin on the activities of ThermSA.

ThermSA plans to advance the cause of thermal analysis through one day seminars, courses and conferences (possibly affiliated to SACI conferences). International contact through affiliation with international thermal analysis organisations (such as ICTAC) will also be sought.

Dr JB Wagener

#### **FINANCIAL REPORT**

The audited financial report that covers the past financial year ( $1^{st}$  May  $2011 - 30^{th}$  April 2012) has been summarised below. The full report has been lodged with the SACI office.

#### Assets and Equities and Liabilities as of April 30 2012

See Table 1

Assets: Investments and monies held by Sections/Divisions

It will be seen that our assets have increased substantially. This reflects the profit of the SACI Convention.

It is also to be noted that some Sections/Divisions maintain their own funds (R423 125)

#### **Income Statement as of April 30 2012**

See Table 2

The surplus reflects the SACI Convention profit.

#### The 'working' budget

Table 3 gives the budget that explains the overall financial statement in an easy to read format. It is the budget format used at the Executive Meetings.

To note:

- 1) The data reflects transactions that relate to the SACI office. It does not include the assets held by those Divisions/Sections who hold their own funds (WP/Chromsa/Mass Spec)
- 2) SACI runs at a loss with respect to fees generation. This loss is covered by (i) profits from conferences (ii) interest on savings/investments. (Table 4)
- 3) The executive set aside R200000 (part of profit from the SACI Convention) towards the SACI 100<sup>th</sup> celebrations in 2012. This included hiring a public Relations company, producing a booklet on SACI history, etc. (Table 5)

Prof Neil Coville

## Table 1 Audited Balance Sheet

#### THE SOUTH AFRICAN CHEMICAL INSTITUTE

#### **BALANCE SHEET AS AT 30 APRIL 2012**

	Note	2012 R	2011 R
ASSETS			
Non-current assets  Property, plant and equipment Funds held Loans to divisions Other financial assets	2 3 4 5	1 034 871 12 857 423 125 5 000 593 889	1 020 266 14 286 423 125 21 889 560 966
Current assets Inventory Trade and other receivables Cash at bank, on hand and on call	6 7	1 535 685 36 538 12 637 1 486 510	835 256 37 277 19 100 778 879
Total assets		2 570 556	1 855 522
EQUITY AND LIABILITIES			
Equity Capital Accumulated funds		2 482 300 594 820 1 887 480	1 837 064 594 820 1 242 244
Current liabilities Trade and other payables RSC Workshop funds held		88 256 52 971 35 285	18 458 18 458 -
Total funds and liabilities		2 570 556	1 855 522

#### Table 2 Audited Income statement

#### THE SOUTH AFRICAN CHEMICAL INSTITUTE

# INCOME STATEMENT FOR THE YEAR ENDED 30 APRIL 2012

	Note	2012 R	2011 R
Revenue		371 960	333 130
Cost of sales		(5 710)	(6 645)
Gross profit		366 250	326 485
Other income		916 351	361 552
Advertising		13 000	26 650
Bad debts recovered		9 505	11 730
Division income		72 154	72 340
Division income - Profit conferences		123 863	-
Donations received	7	-	3 320
Interest received - Divisions		25 366	17 166
Interest received - SACI		21 279	3 591
Journal income		19 037	19 001
Other income		5 600	142 906
Profit on investments		54 732	70 378
Profit received from conferences		571 815	21 120
		1 282 601	688 037
Expenditure		637 365	438 397
Anniversary expenses		61 337	-
Auditor's remuneration - fees		9 075	8 250
Awards		19 096	10 114
Bad debts		46 055	-
Bank charges - Divisions		592	196
Bank charges - SACI		3 582	3 499
Computer expenses		9 186	12 122
Courier and postage		6 277	3 388
Depreciation		1 429	3 329
Discount allowed		75	100
Division expenses		72 763	56 815
Donations paid		-	2 500
Employee costs		300 238	264 885
Entertainment and refreshments		8 903	6 211
General expenses		1 550	5 540
Journal expenses		49 749	-
Lease rentals on operating lease		12 000	24 500
Printing and stationery		7 139	3 453
Secretarial fee		0.070	550
Subscriptions		3 278	3 326
Telephone and fax		7 982	9 111
Travel - local		17 079	20 508
Surplus for the year		645 236	249 640
-			

## Table 3 Executive Budget (May 1 2011 – April 30 2012)

#### SOUTH AFRICAN CHEMICAL INSTITUTE SECRETARIAT BUDGET AND BALANCE SHEET FOR THE PERIOD 1 MAY 2011 TO 30 APRIL 2012

		2011-2012	2011-2012	2012-201	.3
Income		Budget	Received	Budget	
Membership Fees	R	265 000.00	R 324 085.00	R 363	691.0
ournal Income	R	18 000.00	R 19 037.38		000.0
Jnallocated Income			R 15 814.00		
Merchandise			R 4 000.00		
Advertising Income	R	21 000.00	R 10 400.00	R 21	000.0
Total Income	R	304 000.00	R 373 336.38		691.0
Expenditure		Budget	Paid	Budget	
ournal Expenses	R	35 000.00			000.0
Bank Charges	R	4 500.00	R 3 582.39		500.0
Computer/Software/Pastel/Internet/SAJC	R	15 000.00	R 9 185.60		000.0
Courier and Postage	R	5 000.00	R 6 277.08		000.0
Entertainment Expenses (Council/Exco Functions)	R	7 000.00	R 8 903.45		000.0
General Expenses	R	3 000.00	R 1550.00		000.0
Printing, Stationery and Photocopying	R	15 000.00	R 7 138.71		000.0
Salaries and Wages incl. Wits 25% Administration Fee	R	275 000.00	R 300 238.00		260.0
Telephone and Fax	R	10 000.00	R 8 200.00		000.0
-	R	20 000.00	R 8 200.00		000.0
Travel and Accommodation	R				
Subscriptions (IUPAC/FASC/EBSCO/NSTF)		4 000.00	R 3 278.90		000.0
Auditors	R	8 500.00	R 8 250.00		500.0
Medal Prize Money and Minting of Medals	R	8 500.00	R 19 096.00		000.0
Medal Functions/Donations	R	3 000.00	R -		000.0
Rental	R	20 000.00	R 12 000.00		000.0
Merchandise	R	-	R -	R	-
Total Expenditure	R	433 500.00	R 454 527.07	R 510	<del>260.0</del>
Item		Budget	Real	Real	
Total Income	R	304 000.00			691.0
Total Expenditure	R	433 500.00			260.0
Balance	R	-129 500.00	R -81 190.69	R -107	
balalice	N	-129 300.00	r -01 190.09	N -107	309.0
SACI 100th Celebration				R 61	336.7
SACI 100th Celebration				K OI	330.7
Central Fund Account		Movement	Opening Balance	Total	
nvestec Equity Fund	R	-22.43	R 71 094.77	1000	072.3
Investee Equity Fund	R	18 002.93	R 193 901.66		904.5
Nedcor Income Generator	R	-	R 20 000.00		000.0
Nedcor Call Account	R	2 271.92	R 34 334.96		606.8
Old Mutual	R	32 945.62	R 342 910.94		856.5
Sanlam Industrial Fund	R	JZ J4J.0Z	R 104 943.90		
Standard Bank Cheque Account	R	50 754.06	R 4 647.44		401.5
Standard Bank Crieque Account Standard Bank Market Link Account	R	489 732.38	R 53 540.98		273.3
	IX.	489 732.38	N 53 540.98	R 1419	
				K 1419	<del>,,,,</del> ,
Total		Loan	Opening Balance	Total	
Total Seed Monies and Loans	R	<b>Loan</b> 5 000.00	Opening Balance R -	Total	200.0
Seed Monies and Loans ThermSA	R	<b>Loan</b> 5 000.00		R 5	0.00
Total Seed Monies and Loans	R			R 5	000.0
Seed Monies and Loans ThermSA	R			R 5	

Movement	Opening Balance	Total
R 1864.69	R 53 161.41	R 55 026.10
R 132.64	R 5 708.96	R 5 841.60
- >	R 975.18	R 975.18
R 3 673.75	R 99 217.13	R 102 890.88
10 557.60	R 9 092.12	R 19 649.72
2	132.64 - 3 673.75	132.64 R 5 708.96 - R 975.18 3 673.75 R 99 217.13

Table 4 Profit/Loss for financial year (based of fees)

	Budget 2011-2012		Real 2012-2013
Total Income	R 304 000.00	R 373 336.38	R 402 691.00
Total Expenditure	R 433 500.00	R 454 527.07	R 510 260.00
Balance	R -129 500.00	R -81 190.69	R -107 569.00

**Table 5 Centenary Celebrations Budget** 

Date	Budget
	200000
	50000
Total in	250000
26 Jan 2012	20000
Late in Oct/Nov	15000
May 2012	15000
	15000
	15000
	10000
	10000
June 29th	100000
June 29th	50000
Total out	250000
	Total in  26 Jan 2012  Late in Oct/Nov  May 2012  June 29th  June 29th

#### The History of SACI over the past 25 years

After failing to find someone else to undertake this task, I was asked by Council to write a brief account of SACI's history over the last 25 years. Past records of SACI's various EXCO and Council meetings had just been transferred onto disc and I thought that this would facilitate my task quite substantially. The problem was soon apparent in that I had a single laptop computer and even if I was able to open a number of documents simultaneously to read and assimilate and then attempt to write the history in some coherent way, the task suddenly became huge. One would essentially need to spend a month on a secluded island to do this.

Fortunately, and since I had actually been quite involved with the administrative side of SACI during the past 25 years I then decided to write the history from a more personal perspective and thus embarked on this philosophy. In following this route it meant I had to make a call on what to include and what to exclude. This might have lead me in omitting items others might consider to be important and thus I sent the draft document to a number of the Members who also lived through this era for their critique and comment and so the final document includes comments and additions from other senior SACI Members and not just my own.

I have tried to encapsulate very briefly the events which I consider to have stood out in my mind as being directional for SACI's advancement as an entity to serve all its Members and one which has its ear to the Member's ground.

This has been a wonderful trip for me in that issues which one has forgotten about suddenly regained an existence which when placed in perspective, allow one to note the constructive development and direction SACI has taken over the past 25 years.

I believe SACI should endeavour to maintain a 25 year written cycle of its history for the new generations to read since this will help them to appreciate the important role SACI has played in its service to the scientific community.

Prof Ivan R Green

## PRESIDENTS OF THE INSTITUTE

1916-1917	J S Jamieson		
1917-1918	R B Denison	1957-1958	A L Abbot
1918-1919	J A Wilkinson	1958-1959	H A E McKenzie
1919-1920	J McCrae	1959-1960	G W Perold
1920-1921	J Lewis	1960-1961	F L Warren
1921-1922	G H Stanley	1961-1962	W S Rapson
1922-1923	J Gray	1962-1963	F L Clark
1923-1924	H H Green	1963-1964	EFCH Rohwer
1924-1925	J Moir	1964-1965	L J le Roux
1925-1926	H H Dodds	1965-1966	R E Robinson
1926-1927	J A Wilkinson	1966-1967	V Pretorius
1927-1928	B de C Marchand	1967-1968	M Lamchen
1927-1928	C C Frye	1968-1969	M Mrost
1929-1929	M Rindl	1969-1970	P C Carman
1929-1930	F W Fox	1970-1971	PR CCooke
1930-1931	A Harding Kloot	1971-1972	J F Preston
1931-1932	H R Raikes	1972-1973	F E Malherbe
1932-1933	B van der Riet	1973-1974	C F Garbers
1933-1934	J B Robertson	1974-1975	N Stutterheim
1934-1935	St C O Sinclair	1975-1976	S Goodman
1935-1930	J A McLachlan	1976-1978	V C O Schuler
1930-1937	T D Hall	1978-1979	DEA Rivett
1937-1938	F J de Villiers	1979-1980	A Goosen
1938-1939	H J van Eck	1980-1981	R R Arndt
1939-1940	F G Braithwaite	1981-1982	R O Perry
		1982-1984	C J H Schutte
1941-1942 1942-1943	J P van Zyl W F Barker	1984-1986	P Bloom
1942-1943	P Kamerman	1986-1988	J R Bull
1943-1944 1944-1945	J E Worsdale	1988-1990	J D Bradley
	T J Wilken Jorden	1990-1992	A M Heyns
1945-1946	E Taberner	1992-1994	M D Booth
1946-1947	H L de Waal	1994-1996	T M Letcher
1947-1948		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		

# 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		
1990	J G H du Preez		
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

## RECIPIENTS OF THE AECI MEDAL

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

## 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		
2006	H M Marques		

## RECIPIENTS OF THE HENDRIK VAN ECK MEDAL

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

## RECIPIENTS OF THE INDUSTRIAL CHEMISTRY MEDAL

1961	GE Mapstone	2001	T Grimmbacher
1962	No Award	2002	No Award
1963	No Award	2003	No Award
1994	A Geertsema	2004	K McIntosh
1995	F Fisher	2005	No Award
1996	No Award	2006	No Award
1997	No Award	2007	No Award
1998	No Award	2008	No Award
1999	No Award	2009 2010	No Award No Award
2000	N Ravenscroft	2010	J Dixon

## 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	2005	P W Lotz
	M A E Wandt	2006	No Award
1988	S Parris	2007	No Award
1989	T M Letcher	2008	No Award
1990	M A B Pougnet	2009	No Award
1991	C Pohlandt-Watson and	2010	No Award
	E A Jones	2011	No Award
1992	D Gravett and L Salter		
1993	No Award		
1994	No Award		

#### RECIPIENTS OF SASOL POST-GRADUATE MEDAL

JJ Nair, OQ Munro, PG Mountford, MHS Gradwell 1994 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 A Lemmerer, J N Zimba, M Lawton 2006 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

#### 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 Nattrass, 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

#### RECIPIENTS OF THE CHEMICAL EDUCATION MEDAL

MJ Laing 1993 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 GOMOnwu 2007 M White 2008 M Potgieter 2009 GV Green 2010 E Steenberg 2011 P Loyson

### RECIPIENTS OF THE SASOL

#### **INNOVATOR OF THE YEAR AWARD**

2004	M J Green
2005	I Smith
2006	No Award
2007	No Award
2008	No Award
2009	No Award
2010	No Award
2011	No Award

2002 No Award 2003 No Award