

**Annual Report  
of the  
South African Chemical Institute**

15th August 2019 to 20th August 2020



**THE SOUTH AFRICAN  
CHEMICAL INSTITUTE**

## COUNCIL

### Office Bearers

|                             |                    |
|-----------------------------|--------------------|
| President                   | Prof P Mallon      |
| Vice President              | Prof W Van Otterlo |
| Immediate Past President    | Prof V Nyamori     |
| Executive Secretary         | Prof Z Tshentu     |
| Executive Treasurer         | Mrs S Finney       |
| Co-opted Member             | Dr M Booth         |
| Co-opted Member             | Dr C Billing       |
| Co-opted Member             | Prof H Marques     |
| Co-opted Member             | Prof B Martincigh  |
| Co-opted Member             | Prof N Bathori     |
| SACI Student Representative | Ms M Matthews      |

### Reporting Officers

|                      |                      |
|----------------------|----------------------|
| Publications Officer | Prof Patricia Forbes |
| Publicity            | Prof B Martincigh    |
| Webmaster            | Mrs L Smith          |
| IUPAC                | Prof J Darkwa        |
| SACNASP              | Prof E Breet         |

### Chairpersons of Sections

|               |                 |
|---------------|-----------------|
| Eastern Cape  | Dr R Krause     |
| SACI North    | Prof C Nkambule |
| SACI Central  |                 |
| Kwazulu-Natal | Prof B Owaga    |
| Western Cape  | Prof N Báthori  |

### Chairpersons of Divisions

|                           |                    |
|---------------------------|--------------------|
| Analytical Chemistry      | Prof N Nindi       |
| Chemical Education        | Prof H Drummond    |
| Chromatography (ChromSA)  | Prof P Forbes      |
| Electrochemistry          | Prof O Arotiba     |
| Environmental Chemistry   | Prof OJ Okonkwo    |
| Mass Spectrometry (SAAMS) | Ms M Linsky        |
| Industrial Chemistry      | Dr M Booth         |
| Inorganic Chemistry       | Prof TJ Egan       |
| Molecular Modelling       | Dr C van Sittert   |
| Organic Chemistry         | Dr C Veale         |
| Physical Chemistry        |                    |
| Green Chemistry           | Dr R Klein         |
| ThermSA                   | Dr L van der Merwe |

## OFFICE BEARERS



Prof P Mallon  
President



Prof W van Otterlo  
Vice-President



Prof V Nyamori  
Immediate Past- President



Prof Z Tshentu  
Executive Secretary



Mrs S Finney  
Executive Treasurer



Prof B Martincigh  
Co-opted Member



Dr M Booth  
Co-opted Member



Ms M Matthews  
Student Representative



Prof N Bathori  
Co-opted Member



Dr C Billing  
Co-opted Member



Prof H Marques  
Co-opted Member

## MEETINGS

Council meetings were held on:

15<sup>th</sup> August 2019 (AGM)

Executive Committee meetings were held on:

15<sup>th</sup> August 2019 (AGM), 28<sup>th</sup> November 2019, 18<sup>th</sup> March 2020, 28<sup>th</sup> May 2020, 24<sup>th</sup> June 2020 and  
18<sup>th</sup> August 2020

## REPORTS

|                                     | Page |
|-------------------------------------|------|
| President's Report                  | 5    |
| Awards                              | 7    |
| Membership                          | 9    |
| Programme                           | 16   |
| S A Journal of Chemistry            | 18   |
| SACI Newsletter                     | 21   |
| IUPAC                               | 21   |
| SACNASP                             | 22   |
| <b>Section and Division Reports</b> |      |
| Eastern Cape                        | 23   |
| SACI Central                        | 24   |
| SACI North                          | 26   |
| KwaZulu-Natal                       | 33   |
| Western Cape                        | 40   |
| Analytical                          | 62   |
| Chemical Education                  | 62   |
| ChromSA                             | 63   |
| Environmental                       | 65   |
| Carman (Physical Chemistry)         | 67   |
| Electrochemistry                    | 67   |
| Inorganic                           | 68   |
| Industrial                          | 68   |
| Molecular Modelling                 | 68   |
| Organic                             | 69   |
| Saams (Mass Spectrometry)           | 69   |
| Green Chemistry                     | 72   |
| ThermSA                             | 73   |
| SACI Student report                 | 73   |
| Financial Report for 2019/2020      | 75   |
| Presidents of SACI                  | 79   |
| Recipients of SACI Awards           | 80   |

## **PRESIDENT'S REPORT**

I am writing this report during times that are no doubt unprecedented for all our members. 2020 is certainly a year that we will not forget! Regretfully the current COVID-19 pandemic and the disruptions associated with this have had an impact on our Institute in terms of our activities and also presents challenges to us financially. Despite the current challenges, we should be reminded that this is not the first global pandemic that our Institute has faced in our 107-year history! Just 6 years after the establishment of SACI, South Africa and the world faced the Spanish Flu pandemic. It is not clear of the direct impact of this on the Institute, but what is clear is that despite this challenge SACI not only survived, but also thrived in the years immediately following this crisis.

The current COVID-19 pandemic has had a dramatic and long lasting effect on how all of us work. Many of our members have had to adapt to working from home and those based at Universities had the experience of moving to emergency online teaching. Our postgraduate researchers had a forced pause in their research and many of our members that work in industry have had to adapt to the new realities of working under the lockdown level 4 and 3 restrictions. It is remarkable how quickly we have all had to adapt to working with new platforms. A few months ago, platforms such as Zoom and Microsoft Teams were just tools we occasionally used, but now they are essential in order for many of us to continue to work remotely. For the first time in its history, the Council meeting will take place on a virtual platform. I think many of you will agree, however, that that downside of this is the lack of human interactions and the coincidental social interaction that happen in face-to-face events. On the positive side, the convenience of the online platforms also means that generally these online events attract more attendees. It will be interesting to see how the “new normal” will influence how our Institute will operate in the near and long term future.

One of the proactive steps taken by SACI during the crisis was the issuing of the “Statement from SACI Council on tertiary training in chemistry as a result of disruptions to the 2020 academic year due to the COVID-19 pandemic.” We trust that this statement has proved to be useful as the various tertiary institutions around the country work to ensure the successful completion of the 2020 academic year.

The measures enacted nationally and internationally to mitigate the spread of the COVID-19 virus have had a dramatic effect on the regular conference programme. In many cases, conferences had initially been moved back by a month or two, but progressively the realization set in that the disruptions due to travel restrictions would be in place for much longer than initially hoped. This has presented a challenge to conference series and conference organizers. The long-term delay in conferences also means that 2021 could potentially be an extremely crowded conference year. The EXCO considered the impact on the SACI conference calendar. After careful consultation with each of the conference organisers, the decision was taken that the best course of action is to simply move the conference calendar on by one year. This was not an easy decision given the negative impact of the loss of income from conferences for the hosting Sections, Divisions as well as SACI National. However, when all the factors are taken into account, this was deemed to be the best course of action to avoid conference overload in 2021 and the associated drop in attendance numbers as well as the expected conference sponsor fatigue. This means that the SACI National Convention will happen towards the end of 2022 and not 2021 as scheduled. All other Divisional conferences will also move along accordingly and more detail of the revised programme can be found in this report. This decision is in line with many international conference series. South Africa was supposed to host the IUPAC 26<sup>th</sup> International Conference on Chemistry Education in Cape Town in July of this year, but this has also been postponed until July 2021. We thank Bette Davidowitz and her team for all the work and effort put into the conference so far. We look forward to hosting this important international conference in 2021 when international travel once again becomes possible!

As most members will be aware, SACI has embarked on a constitutional review to update and streamline the functioning of the Institute. This process has been driven by Dr Ian Bratt and the Institute

owes him a big debt of gratitude for all the work Ian put into drafting the new Constitution and its associated rules. Initially the plan was to have the new constitution formally approved and in place during 2020. However, the EXCO took the decision to delay the formal approval process due to the uncertainty around the issue of the SAQA professional designation and the implications this has on the new constitution. Regretfully there have been some legal disputes concerning SAQA and SACNASP concerning the authority over professional designations. SACI like many other professional bodies has been caught in the middle of this dispute. After a series of communications and meetings with SACNASP, it has become clear that from a legal point of view, SACI and SAQA will no longer be able to issue the PrChemSA designation and formally, SACNASP is the only body authorised to designate professional natural scientists in South Africa. It is important to note that SACI has always had a large role to play within the SACNASP designation process and within SACNASP in general and this will continue in the future. In the meantime, SACNASP has promised to setup a task team to facilitate the migration of the PrChemSA members to SACNASP registration and more details of this will be communicated to all members in the coming months. The good news is that the PrChemSA will remain in place for the transition period and no member will be stranded without a professional designation while there is a migration to the SACNASP designation. Now that progress has been made on the issue of the SAQA and SANSASP designation, EXCO has decided to move forward with the steps needed for the approval the new constitution and details of this process will come out in the coming months.

SACI launched an effort towards the end of 2017 to preserve and document the history of the Institute by requesting that member of more than 40 years reflect on their experiences of the Institute. Neil Coville facilitated this process and I am very pleased to say that these have now been published on our website under the “Reminiscences –Members” tag. For those that have not already done so I strongly urge you to read these very insightful comments!

2020 saw the formal launch of the Commonwealth Chemistry Group. SACI is a founding member of this federation and SACI and chemistry in Southern Africa is well represented on the founding board with myself and Past President James Darkwa serving as members. Dr Vicky Gardiner the current President of the Royal Australian Chemical Institute has been elected to serve as the inaugural President of Commonwealth Chemistry. Sadly, the COVID-19 pandemic has put a damper on the Commonwealth Chemistry Launch conference that was to have been held in Trinidad in May. SACI selected three early career chemistry to represent the Institute at the launch conference, namely Dr Wade Pietersen (University of Cape Town), Dr Banothile Makhubela (University of Johannesburg) and Dr Sadhna Mathura (University of the Witwatersrand). Hopefully they will still be able to attend the rescheduled launch conference in May of 2021 in Trinidad to represent SACI and South Africa!

Finally, I want to thank all of our members and specifically all those that volunteer to take on leadership roles within the various sections and divisions of the Institute. The Division and Sections have always been the lifeblood of the Institute. These have been trying times but I have no doubt that the resilience and perseverance of the members and the various co-ordination committee will ensure that we continue to add value to our members even if face-to-face meetings will not be possible in the immediate future!



**Prof Peter Mallon**  
**President of SACI**

## **AWARDS 2019**

### **2020 awards will be announced at the AGM**

#### **THE GOLD MEDAL**

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

**Prof Klaus Koch**  
**Stellenbosch University**

#### **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 2018, covering papers published in the period 2012 to 2017, was the most cited (without self-citation) SA authored paper in the field of Chemistry.

**Lawrence M. Madikizela\*, Sindisiwe F. Muthwa and Luke Chimuka**

**S. Afr. J. Chem., 2014, 67, 143–150,**

**Determination of Triclosan and Ketoprofen in River Water and Wastewater by Solid Phase Extraction and High Performance Liquid Chromatography**

#### **THE SACI POST-GRADUATE AWARDS**

The awards shall be made to student members of the Institute engaged in research towards a MSc or PhD degree and registered in a School/Department of Chemistry at a South African University, or a MTech or DTech degree registered in a School/Department of Chemistry 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. Past SACI/Sasol Postgraduate Awardees are not eligible for nomination for a second award of the medal. The recipients of the award shall be known as The SACI Postgraduate Awardees.

**Dr Hanieh Montaseri – University of Pretoria**  
**Ms Mathapela Seopela – Tshwane University of Technology**  
**Dr Tabitha Amollo – University of KwaZulu-Natal**  
**Mr Upenyu Muza – Stellenbosch University**  
**Ms Lize Greyling– Nelson Mandela University**

#### **THE CHEMICAL EDUCATION MEDAL**

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

**Mrs MH Du Toit**  
**North West University**

### **THE JAMES MOIR MEDALS**

Medals shall be awarded to the best 2016 to the best fourth year student in chemistry at each University and University of Technology. To be eligible for the award the student must have achieved a minimum average final pass mark of 75%.

| <b>Awardees</b>     | <b>University</b>                                |
|---------------------|--|
| <b>TP Mabate</b>    | <b>University of Johannesburg, Auckland Park</b> |
| <b>Z Madikizela</b> | <b>University of Fort Hare</b>                   |
| <b>BA Fortuin</b>   | <b>University of the Western Cape</b>            |
| <b>SB Tshifaro</b>  | <b>University of Venda</b>                       |
| <b>L Garnie</b>     | <b>University of Cape Town</b>                   |
| <b>A Khasipo</b>    | <b>Nelson Mandela University</b>                 |
| <b>DB Malihase</b>  | <b>Wits University</b>                           |
| <b>N Mqoni</b>      | <b>North West University</b>                     |
| <b>WJ Rudolph</b>   | <b>University of Pretoria</b>                    |
| <b>S Abdullah</b>   | <b>University of KwaZulu-Natal</b>               |
| <b>R Mphephu</b>    | <b>University of Limpopo</b>                     |
| <b>JL Thibaud</b>   | <b>Stellenbosch University</b>                   |
| <b>Y Sukku</b>      | <b>DUT</b>                                       |
| <b>N Mpiti</b>      | <b>Rhodes University</b>                         |
| <b>M Seloi</b>      | <b>Vaal University of Technology</b>             |

### **THE RAIKES MEDAL**

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

**No Award**

# MEMBERSHIP REPORT

SACI Membership - 30 April 2020  
**CURRENT MEMBERSHIP FIGURES**

**Breakdown of Full Membership**

|                                     | Apr-16    | Apr-17    | Apr-18    | Apr-19    | Apr-20    | Total paying |           |            |           |                  |
|-------------------------------------|-----------|-----------|-----------|-----------|-----------|--------------|-----------|------------|-----------|------------------|
| Corporate Members                   | 370       | -8        | 362       | 22        | 364       | 4            | 368       | -18        | 370       |                  |
| RPL Member                          |           |           |           | 3         | 3         | -3           | 0         | 3          | 3         |                  |
| Retired Members                     | 11        | 3         | 14        | 0         | 14        | 1            | 15        | -3         | 12        |                  |
| Associate Members Old               | 70        | 24        | 94        | -47       | 47        | -14          | 33        | -11        | 22        |                  |
| Associate Members New               |           |           |           | 27        | 27        | 20           | 47        | -1         | 46        |                  |
| Married Associates                  | 2         | 0         | 2         | 0         | 2         | 0            | 2         | -1         | 1         |                  |
| Students(Paying)                    | 227       | 28        | 255       | 49        | 304       | 44           | 348       | -86        | 262       |                  |
| Patron Members                      | 3         | 0         | 3         | 0         | 3         | -1           | 2         | -1         | 1         |                  |
| Company members                     | 5         | 2         | 7         | -1        | 6         | 0            | 6         | -2         | 4         |                  |
| Post Doc                            | 27        | 17        | 44        | 19        | 63        | -1           | 62        | -2         | 60        |                  |
| <b>Non-Paying</b>                   |           |           |           |           |           |              |           |            |           |                  |
| Honorary Members                    | 19        | 0         | 19        | -2        | 17        | 0            | 17        | 0          | 17        | Total Non Paying |
| Life Members(50YR Members)          | 99        | -1        | 98        | 2         | 100       | 4            | 104       | -1         | 103       | 275              |
| Students Honour(non Paying)         | 64        | 7         | 71        | -65       | 6         | 9            | 15        | 35         | 60        |                  |
| Teachers                            | 32        | 4         | 36        | 0         | 36        | -1           | 35        | 1          | 36        |                  |
| Under Graduate Students             | 23        | 4         | 27        | 1         | 28        | 7            | 35        | 34         | 69        |                  |
| <b>PrChemSA Total approved (94)</b> | <b>0</b>  | <b>41</b> | <b>41</b> | <b>44</b> | <b>85</b> | <b>-4</b>    | <b>81</b> | <b>-22</b> | <b>59</b> |                  |
| <b>Fellows Total approved (31)</b>  | <b>15</b> | <b>8</b>  | <b>21</b> | <b>3</b>  | <b>24</b> | <b>2</b>     | <b>26</b> | <b>5</b>   | <b>31</b> |                  |

**Patron Member**

Bruker South Africa (Pty) Ltd

**Company Members**

Separation Scientific SA (Pty) Ltd

Consol Glass Pty Ltd

Wildlife Pharmaceuticals (Pty) Ltd

Microsep

**Divisions**

|                               |     |
|-------------------------------|-----|
| Analytical Chemistry Division | 369 |
| Chemical Education Division   | 141 |
| Chromatography Division       | 140 |
| Therm SA                      | 56  |
| Environmental Division        | 256 |
| Industrial Chemistry Division | 254 |
| Inorganic Chemistry Division  | 232 |
| Organic Chemistry Division    | 356 |
| Electrochemistry Division     | 93  |
| Green Chemistry Division      | 162 |
| Physical Chemistry Division   | 193 |
| Molecular Modelling Division  | 37  |
| Mass Spectrometry Division    | 119 |

**Sections**

|                       |     |
|-----------------------|-----|
| Western Cape          | 160 |
| Kwazulu Natal         | 129 |
| North                 | 189 |
| Central               | 425 |
| Eastern Cape          | 97  |
| International Members | 56  |

## Membership report –2019/2020 (by Z. Tshentu)

### 1.1 General membership

The table below illustrates our membership statistics over five-year membership periods:

| Membership type         | April 2016 | April 2017  | April 2018  | April 2019  | April 2020  |
|-------------------------|------------|-------------|-------------|-------------|-------------|
| Corporate               | 370        | 362         | 387         | 388         | 373         |
| Associate               | 72         | 96          | 76          | 82          | 69          |
| Retired                 | 11         | 14          | 14          | 15          | 12          |
| Students (PG)           | 227        | 255         | 304         | 348         | 262         |
| Postdocs                | 27         | 44          | 63          | 62          | 60          |
| Patron                  | 3          | 3           | 3           | 2           | 1           |
| Company                 | 5          | 7           | 6           | 6           | 4           |
| <b>Total Paying</b>     | <b>715</b> | <b>781</b>  | <b>853</b>  | <b>903</b>  | <b>781</b>  |
| Honorary                | 19         | 19          | 17          | 17          | 17          |
| Life                    | 99         | 98          | 100         | 104         | 103         |
| Students (Hons)         | 64         | 71          | 6           | 15          | 50          |
| Teachers                | 32         | 36          | 36          | 35          | 36          |
| Students (UG)           | 23         | 27          | 28          | 35          | 69          |
| <b>Total Non-paying</b> | <b>237</b> | <b>251</b>  | <b>187</b>  | <b>206</b>  | <b>275</b>  |
| <b>Total</b>            | <b>952</b> | <b>1032</b> | <b>1040</b> | <b>1109</b> | <b>1056</b> |

There is a drop of 15 corporate and 13 associate members in 2020, respectively. This marks a drop in numbers of paying membership. The major drop comes from postgraduate students (-86) and this is attributed to lack of conferences in the second half of 2019/first half of 2020. But there was an increase of 69 non-paying members.

One patron member (Merck (Pty) Ltd SA) and two company members (Perkin Elmer and Anton Paar Southern Africa) did not pay membership fees for 2020.

### 1.2 PrChemSA and FSACI 2020

|                        | 2016 | 2017 | 2018 | 2019 | 2020 |
|------------------------|------|------|------|------|------|
| <b>PrChemSA</b>        | 0    | 41   | 85   | 81   | 69   |
| <b>Fellows of SACI</b> | 15   | 21   | 24   | 26   | 31   |

There is a drop in PrChemSA members but this cannot be attributed to the imminent change to SACNASP as members have not yet been informed about these discussions. For 2020, only the renewal will be done not new applications. The change could bring a reputational risk to the institute, but it will have to be managed carefully.

Seven Fellow nominations were received in 2020, and the review process has commenced.

### 1.3 Division and Section Membership 2020

| <b>Division</b>               | <b>2019</b> | <b>2020</b> |
|-------------------------------|-------------|-------------|
| Analytical Chemistry Division | 535         | 369         |
| Chemical Education Division   | 149         | 141         |
| Chromatography Division       | 177         | 140         |
| ThermSA                       | 73          | 56          |
| Environmental Division        | 298         | 256         |
| Industrial Chemistry Division | 288         | 254         |
| Inorganic Chemistry Division  | 285         | 232         |
| Organic Chemistry Division    | 413         | 356         |
| Electrochemistry Division     | 97          | 93          |
| Green Chemistry Division      | 201         | 162         |
| Physical Chemistry Division   | 216         | 193         |
| Molecular Modelling Division  | 29          | 37          |
| Mass Spectrometry Division    | 156         | 119         |
| <b>Section</b>                | <b>2019</b> | <b>2020</b> |
| Western Cape                  | 179         | 160         |
| Kwazulu Natal                 | 150         | 129         |
| North                         | 245         | 189         |
| Central                       | 507         | 425         |
| Eastern Cape                  | 79          | 97          |
| International Members         | 66          | 56          |

Generally, there is a drop in Division membership from 2019 to 2020 as well as Section members. There is a slight increase in EC numbers from 79 members in April 2019 to 97 in April 2020. There is a drop in international membership from 66 members in 2019 to 56 in April 2020. International members come from the following countries: Zimbabwe (23), Lesotho (1), Germany (2), UK (1), USA (2), Namibia (1), India (1), Nigeria (2), Kenya (1), Australia (2), China (1), and Swaziland (3).

There is a question of fragmentation of divisions and what should constitute a division. It also expected that the divisions have activities to keep the institute alive. The same is expected for Sections. It seems that there is a need to redefine what makes Divisions and Sections.

SASOR President was in the process of getting their executive join as members of SACI when he realized that their members may not have chemistry qualifications. The associate member could be suitable but the misalignment was much greater. A statement from the SASOR President (Mr Dave Perrett) is as follows; "most rheologists have a qualification in mathematics, the physical sciences (e.g. chemistry, physics, geology, biology), and engineering. So why do we want to align ourselves with SACI when chemistry is not a major part? Like Thermal Analysis (ThermSA), chemistry does play a small role in the end product which effects the flow behaviour. Maybe this is all in vain and we should remain independent."

**1.4 Fellow of SACI (FSACI) 2020:** Will be announced at the AGM 20 August 2020

**1.5 Life Members 2020:** Will be announced at the AGM 20 August 2020

## 1.6 Membership information 2020/2021

### Types of membership:

1. Member (R894.00)
2. Associate Member (R894.00)
3. Retired Member (R229.00)
4. Patron Member (R16 320.00)
5. Company Member (R8 164.00)
6. Student Member - Undergraduate Chemistry Student (Free membership)
7. Student Member - Honours/BTech (Free membership)
8. Student Member - MSc/PhD/MTech/DTech (R166.00)
9. Post-Doctoral Member (R229.00)
10. Secondary School - Chemistry Teacher (Free membership)
11. Life Membership (Free membership, must have been a member of the institute for 35 or more years and be over 70 years of age).
12. SACI Fellow Membership (by prestigious appointment of a full SACI member in good standing with the Institute. One must have been a member of the Institute for at least ten years. In addition, they must have demonstrated excellence and leadership in the areas of both: (a) the profession, education and/or management of chemistry, and (b) volunteer service to the chemical community.
13. Professional Chemist (PrChemSA) (R260 renewal fee). NB: In order to be accepted as a Professional Chemist one must apply and be accepted as a SACI member and maintain the SACI membership.

### Regulations Governing Admission:

#### 1. Member

The Council may admit as a Member:

A person who has completed a four-year course in any branch of chemistry and has been granted a degree, diploma or certificate of an approved examining body, and (except in special cases) who has been engaged in full-time chemical work or further study in chemistry for at least three years; in exceptional circumstances, any person whose position and experience in chemistry justifies such admission.

#### 2. Associate Member

The Council may admit as an Associate member:

A person regardless of qualification and experience, who is passionate about chemistry.

#### 3. Patron and Company Members

Any company having interests in chemistry and chemical technology is eligible for election as a Patron or as a Company Member.

Patron members can get up to 10 members within their company to get SACI benefits and discounts for registration at SACI conferences and conventions. Patron Companies get a 15% discount on exhibition space at SACI conferences and conventions, and free advertising in SACI newsletter and website.

Company members can get up to 5 members within their company to get SACI benefits and discounts for registration at SACI conferences and conventions. Companies get a 10% discount to exhibit at SACI conferences and conventions, and free advertising in SACI newsletter and website.

#### 4. Students in Training

*Bona fide* students studying with the objective of qualifying for the practice of Chemistry, and being not less than 17 years old, may be admitted as student Members and shall be allowed reduced subscriptions.

5. Free membership to undergraduate and honours students registered at Chemistry department of Institutions – proof of registration will be required on the application form

#### Method of application:

Complete the on-line application form at [http://www.saci.co.za/apply\\_for\\_membership.html](http://www.saci.co.za/apply_for_membership.html).

Note particularly the need to identify three referees, at least one of whom is a Member of the SA Chemical Institute. Make sure you have filled in an email address.

Obtain documentary evidence (e.g. official letters, degrees or diploma certificates, or certified copies of these) of your experience and qualifications and attach it to the online application.

Once the application has been processed and approved you will receive an invoice from Head Office with banking details.

When payment is made please use your membership number as reference. The annual subscription year runs from 1st July to 30th June each year. The subscription of members admitted between 1st January and 30th June is reduced by one-half.

#### Benefits of Belonging to SACI:

1. SACI is the only body in South Africa which is concerned solely with the promotion of the interests of chemistry and chemists. This involves representation on SACNASP, NSTF/SETAG, CHIETA and other government and non-government organizations.

2. SACI has both a geographical (in terms of Sections, namely Central (Gauteng, North-West and Free State), North (Limpopo and Mpumalanga), Western Cape, Eastern Cape and KwaZulu-Natal) and a discipline-based structure. The thirteen Divisions include Analytical, Environmental, Industrial, Inorganic, Organic and Physical chemistry, Molecular modelling, Electrochemistry, Chemical education, Green chemistry, ThermSA, ChromSA and SAAMS.

3. Membership is open to all those with qualifications in chemistry or have an interest in chemistry.
4. SACI holds a Convention every three years. Many of the Divisions also hold regular biennial specialist conferences.
5. Reduced registration fees apply for SACI members to SACI-sponsored conferences and workshops.
6. Membership of SACI entitles chemists to join IUPAC, and enjoy access to IUPAC publications and services.
7. SACI publishes an electronic research journal, the South African Journal of Chemistry, which is Open-Access and part of the Scielo platform. It is indexed by Chemical Abstracts Service (CAS), Current Web Contents, Chemistry Citation Index, Index to Scientific Reviews and Speleological Abstracts. It is accredited by DHET.
8. SACI makes annual awards to its members recognizing outstanding achievements by chemists.
9. SACI fosters and encourages student participation in events of interest to chemists, such as Young Chemists' Events, research colloquia, postgraduate symposia, etc.
10. SACI publishes a monthly newsletter, which reports news and events of interest to chemists.
11. SACI has links with other related institutions and associations, for example the South African Institution of Chemical Engineers, the Chemical and Allied Industries Association, American Chemical Society (ACS), Royal Society of Chemistry (RSC) and the European Federation for Medicinal Chemistry (EFMC).
12. Membership of SACI gives benefits when attending RSC events.
14. SACI carries out an annual salary survey.
15. Access to SACI webpages is by membership only. Non-members have limited access.

**Prof. Zenixole Tshentu**  
**Executive Secretary**

## PROGRAMME COMMITTEE

The 2020 conference season was a tough one with many local and international conferences being cancelled or postponed due to the covid-19 lockdowns and travel restrictions.

In terms of an international conference that was able to still go ahead in the reporting year was the **70th Annual Meeting of the International Society for Electrochemistry** which took place in Durban (4-9 of August 2019) with 900 delegates. Associated with this international event, SACI's Electrochemistry Division hosted a pre-event satellite meeting themed **Energy Storage and Industry 4.0: Challenges and Prospects** (ENSTIN2019, 31 July – 2 August 2019, Pilanesberg National Park). In addition, afterwards, the Electrochemistry Division also organized the **5th International Symposium on Electrochemistry** ("Electrochemistry at Nanostructured interfaces") at the University of the Western Cape (11-14 August 2019), under chair Prof. Priscilla Baker. It should also be noted that the Electrochemistry Division intends to be involved in the presentation of an online workshop towards the end of 2020.



ENSTIN 2019 delegates

An important decision taken by EXCO at a special meeting in June 2020 was to move the entire SACI conference calendar on by one year (with the most significant impact being that the **SACI National Convention**, under chair Prof Catharine Esterhuysen (Stellenbosch University), moves to 2022) – please find a copy of the updated conference calendar below. Despite the significant impact on the SACI coffers of not having a national convention in 2021, the potential overloading of the 2021 calendar and the realistic danger of sponsor “burnout” meant that this shift was justifiable. The impact of this decision will see regular local conferences like the **19th Inorganic/Carman Chemistry Conference** (Host: South Gauteng), **ChromSA/SAAMS** (tentative new date September 2021) and **31st CATSA Annual Conference** (Host: UKZN, tentative date 7-10 November 2021) all move to the 2021 calendar, so please keep an eye out for the revised dates which will be released as soon as they are confirmed. Although there are no SACI events scheduled before 30 April 2021, the modified conference calendar is expected to move along “full steam ahead” within covid-19-mitigating stipulations.

It should also be noted that the **ABC Chemistry Conference**, hosted by FASC and SACI, initially scheduled to be held in Marrakech, Morocco in December 2021, will now take place later in December 2022. In terms of other planned conferences that were postponed in 2020, the **26th IUPAC International Conference on Chemistry Education** (Cape Town), which was due to be held in July 2020, has now been moved to July 2022.

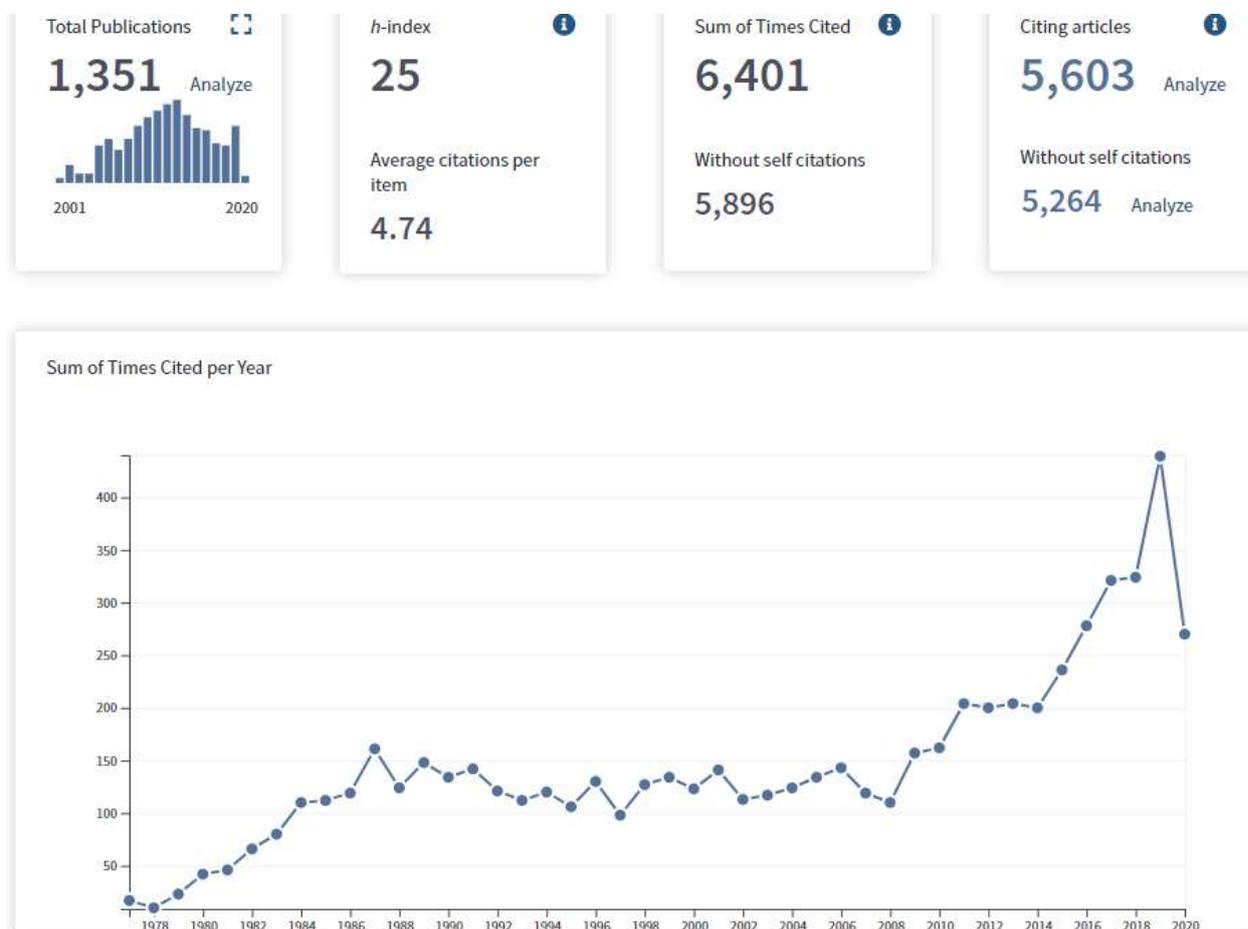
| <b>Date</b> | <b>Convention*</b>                      | <b>Inorganic/Carman*</b>                            | <b>Org/Frank Warren*</b>                  | <b>Analitika/ChromSA/SAAMS</b> | <b>Others</b>   |
|-------------|---|---|---|--------------------------------|---|
| <b>2019</b> |   |   | 15th Frank Warren, KwaZulu-Natal Mid-year |                                | 30th CATSA annual conference, 5th International Symposium on Electrochemistry 11-14 August        |
| <b>2020</b> |   |   |   |                                |   |
| <b>2021</b> |   | 19th Inorganic/Carman Chemistry Conf, South Gauteng |   | ChromSA/SAAMS; Sept/October    | 31st CATSA annual conference (7-10 Nov)   |
| <b>2022</b> | 44th SACI Convention, Western Cape, Dec |   |   |                                | 32nd CATSA annual conference; ABC Chem Conf., Marrakech, Morocco, Dec; 26th ICCE (chem. Ed.) July |
| <b>2023</b> |   |   | 16th Frank Warren, North Gauteng          | Analitika; September/October   | 33rd CATSA annual conference  |
| <b>2024</b> |   | 20th Inorganic/Carman Chemistry Conf, KwaZulu-Natal |   |                                | 34th CATSA annual conference  |
| <b>2025</b> | 45th SACI Convention, South Gauteng     |   |   | ChromSA/SAAMS; Sept/October    | 35th CATSA annual conference  |
| <b>2026</b> |   |   | 17th Frank Warren, South Gauteng          |                                | 36th CATSA annual conference  |
|             | * Events are at least six months apart  |   |   |                                |   |

**Prof Willem van Otterlo**  
**Vice President and Chair of the programme committee**

## SA JOURNAL OF CHEMISTRY

All SAJC papers are freely available online via the Sabinet website from Volume 53 in 2000 to the current volume (with additional older volumes also being available online via the link “OA African Journal Archive”) see: <https://journals.co.za/content/journal/chem>. The journal submission page can be found at <http://www.saci.co.za/journal/>.

Statistics relating to the journal are presented in Figure 1 (downloaded from the Web of Science August 2020). The numbers of citations have steadily increased since 2008 (the dip in 2020 should be corrected by the end of the year). The impact factor of the journal has consequently improved significantly from 0.65 reported in the annual report last year, to a Scopus CiteScore of 1.21 in 2018, and to 2.2 (CiteScore 2019), which is very encouraging and should be used to promote more South African authors to publish in SAJC. Special acknowledgement should go to our dedicated editorial team as listed in the Table 1, which includes some new members who were co-opted during the year in fields where additional assistance was required or where previous members had stepped down.



**Figure 1: Web of Science citation report for South African Journal of Chemistry**

**Table 1: The 2020 SAJC editorial team**

|   |  |
|---|--|
| <p><b>Physical Chemistry</b></p> <ol style="list-style-type: none"> <li>1. Prof Bice Martincigh</li> <li>2. Prof Jeanet Conradie</li> <li>3. Prof Elizabeth Erasmus</li> </ol> <p><b>Educational Chemistry</b></p> <ol style="list-style-type: none"> <li>4. Prof Bette Davidowitz</li> </ol> <p><b>Analytical Chemistry</b></p> <ol style="list-style-type: none"> <li>5. Dr Lawrence M Madikizela</li> <li>6. Dr Marc Humpries</li> <li>7. Prof Priscilla Baker</li> <li>8. Prof Vernon Somerset</li> <li>9. Prof Luke Chimuka</li> </ol> <p><b>Inorganic Chemistry</b></p> <ol style="list-style-type: none"> <li>10. Dr. Glenn Maguire</li> <li>11. Dr Sam Mahomed</li> </ol> <p><b>Computational Chemistry</b></p> <ol style="list-style-type: none"> <li>12. Prof Gert Kruger</li> <li>13. Dr Thishana Singh</li> </ol> <p><b>Materials Science and Nanotechnology</b></p> <ol style="list-style-type: none"> <li>14. Dr Lucky Sikhwivhilu</li> <li>15. Prof Patrick Ndungu</li> <li>16. Prof Nosipho Moloto</li> </ol> | <p><b>Assistant Editors</b></p> <ol style="list-style-type: none"> <li>17. Dr Siyabonga Maphumulo</li> <li>18. Dr Thashree Marimuthu</li> <li>19. Mr Sooraj Baijnath</li> </ol> <p><b>Editors-in-Chief</b></p> <ol style="list-style-type: none"> <li>20. Prof Patricia Forbes</li> <li>21. Prof Cornie van Sittert</li> </ol> <p><b>Publisher</b></p> <ol style="list-style-type: none"> <li>22. Mr Nico Dippenaar</li> </ol> <p><b>System Support and Developer</b></p> <ol style="list-style-type: none"> <li>23. Mr Colin Schwagele</li> </ol> |
|---|--|

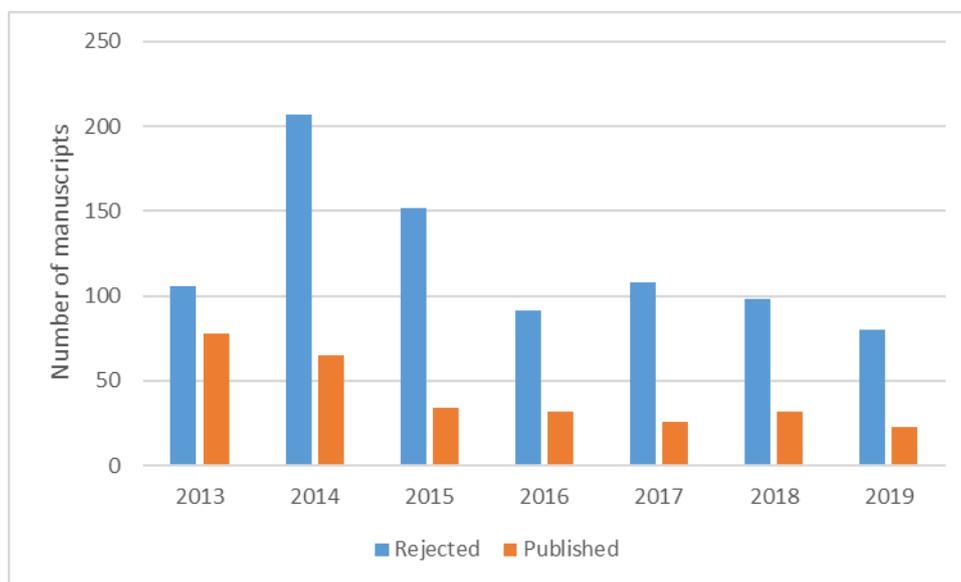
Since the beginning of 2016, the journal has two Editors-in-Chief on a rotational basis: First it was Profs Gert Kruger and Luke Chimuka. In 2018, this was followed by Prof Tricia Naicker whom replaced Kruger; in 2019 Prof Patricia Forbes replaced Chimuka; and in 2020 Prof Cornie van Sittert replaced Naicker. Currently Prof Forbes is the Editor-in-Chief 1 that oversees the journal and its operation together with the “Screening to Approved” processes for all new submissions. Prof van Sittert is Editor-in-Chief 2 and takes over from the approved to published processes for all submissions referred to as the “End process”. Prof Tricia Naicker is thanked for her significant efforts in successfully clearing the backlog of submissions from previous years during her term of office.

The 1351 publication records found from the Web of Science search shown in Figure 1 are overall primarily from South Africa (73%), followed by Iran (6%), India (5%), China (4%) and the USA (3%). For those records from 2019 to present the relative contribution by country is rather different: South Africa (38%), Iran (18%), Nigeria (11%), India (9%) and USA (9%), followed by Pakistan, Saudi Arabia and Algeria. Aside from South Africa researchers from seven other African countries have published in SAJC from the start of 2019 to present.

Figure 2 shows the number of papers rejected and published from 2013 to 2019 based on the year in which the manuscripts were submitted as per the online management system reports (note that the 2018 data has been updated since last year’s annual report and now reflects the final results of the full year). In general, the number of published articles per year seem to be stabilizing around 25-30 per year of submission with more than half of the submitted papers being rejected or withdrawn, which has helped to improve the quality of the published papers. To date, 80 of 109 submissions made in 2019 were rejected/withdrawn whilst 23 have been published/approved and 6 are still in progress. A total of 97

papers have been submitted in 2020 to date and 46 of these have been rejected, primarily due to plagiarism issues, poor scientific quality, being outside the scope of SAJC or too specialized, or due to unacceptably poor English.

In 2010 the journal published 39 articles comprising 232 journal pages; the corresponding data for 2011 was 41 papers (262 pages), 2012 was 44 papers (285 pages), 2013 was 46 papers (289 pages), 2014 was 39 papers (240 pages), 2015 was 34 paper (262 pages), 2016 was 32 papers (253 pages), 2017 was 26 papers (208 pages), 2018 was 21 papers (195 pages) and 2019 was 34 papers (273 pages). Note: this data is based on published annual issue information from Sabinet, and publications in a specific year would include some submissions made in previous years.



**Figure 2: Number of papers rejected and published from 2013 to 2019 based on year of submission (note 6 papers are still in progress from 2019)**

The submissions received per field are detailed in Table 2. In 2019, we agreed to a South African Journal of Chemistry Special Issue entitled "Africa-UK partnership for the computer-aided development of sustainable catalysts". Twelve manuscripts were submitted for this special issue, which are currently being processed. The impact of the special issue on the number of computational chemistry submissions is clearly evident in Table 2, which has put a strain on the subject editors and the pool of reviewers who assist in this field.

**Table 2: Data from the online SAJC submission system relating to submissions per field of chemistry from 2013 to date**

|                   | 2013 | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 to date |
|-------------------|------|------|------|------|------|------|------|--------------|
| Total Submissions | 140  | 243  | 189  | 158  | 108  | 130  | 109  | 97           |
| Analytical        | 22   | 45   | 61   | 53   | 37   | 34   | 36   | 26           |
| Computational     | 15   | 12   | 14   | 12   | 9    | 6    | 15   | 21           |
| Education         | 5    | 7    | 3    | 5    | 0    | 3    | 5    | 1            |
| Inorganic         | 25   | 26   | 20   | 17   | 13   | 13   | 8    | 10           |
| Nano              | 12   | 21   | 10   | 16   | 12   | 23   | 9    | 7            |
| Organic           | 34   | 103  | 53   | 37   | 28   | 24   | 24   | 16           |
| Physical          | 27   | 28   | 29   | 18   | 9    | 27   | 12   | 16           |

The average number of days for acceptance and rejection varies from year to year and from manuscript to manuscript, but it is an area which requires improvement. The biggest challenge is finding quality, willing reviewers who are also prompt in their responses, as this is the limiting factor in the whole review process. Another problem is slow response of some subject editors due to their other commitments, and sometimes authors take more than the specified time to respond, especially now with the Covid-19 situation.

The current publisher/typesetter has notified us of his planned retirement and the closure of his company at the end of 2020. Quotations from other service providers are therefore currently being obtained. In addition, possible means to reduce the costs of the journal to SACI are under consideration, including a limit on number of pages per publication, as well as a limit on the number of figures and tables. The provision of a template to authors has also been suggested by subject editors and is an option which is being explored. A proposal on the way forward will be submitted for consideration in due course.

#### **Finances of the Journal:**

Annual costs are about R18 800 to Sabinet for hosting the journal and were R61 415 for creating proofs in 2019 (R203 per page for 34 papers). We also pay R1207 per month (R14 484 per annum) for hosting and maintenance of the online management system website. Total costs per year are therefore approximately R94 700.00

**Prof Patricia Forbes**  
**Editor-in-Chief of SAJC**

#### **SACI NEWSLETTER**

The Newsletter is published monthly and reports on Sectional and Divisional events that have taken place. In addition, we report on activities of societies that SACI is affiliated to, for example, IUPAC, NSTF, RSC, FASC, Commonwealth Federation, etc. Conference calls are also placed in the newsletter as are job advertisements and items of research interest.

A small charge for advertisements in the newsletter is requested and this assists with raising funds to keep SACI alive. I would like to thank all the contributors to the Newsletter and would like to invite any member to send me contributions of interest to other SACI members.

**Prof B Martincigh**  
**Publicity**

#### **IUPAC**

As has been the case with most international bodies, IUPAC activities have been severely disrupted due to the COVID-19 pandemic. Most Divisional conferences and meetings have had to migrate to online platforms or have been postponed. Most notably as it relates to South Africa was the postponement of the 26<sup>th</sup> IUPAC Conference on Chemical Education (ICCE) from July 2020 to July 2021. In 2020, IUPAC has undertaken a structural review. The Structure Review Group is chaired by Dr. Mark Cesa and this group will make recommendation to be tabled at the next General Assembly which is due to take place in Montreal Canada in August 2021. After the great success of the 1<sup>st</sup> IUPAC Global Women's Breakfast in 2019, the second Global event took place in February this year. It was great to see that once again there were a number of events hosted in South Africa as part of this global initiative to acknowledge the contribution of women to chemistry. The IUPAC national committee would once again like to encourage South African chemists to get involved in the various IUPAC Divisions and Committees!

**Prof Peter Mallon**  
**Chair of the SA IUPAC National Committee**

During the course of the year the Institute has had discussions with SAQA and SACNASP with the view to bring together under one umbrella members who are registered with SACNASP and those that are professional chemists through the SAQA designation, thereby fulfilling the legal requirements for all natural scientists to be registered with SACNASP. To this end the professional chemist designation PrChemSA will cease to exist at the end of the present term in November and all members will be registered with the proposed title of Pr.Sci.Nat (chemistry).

A number of issues have still to be ironed out, primarily the cost to members of the new designation but the process should be complete by the first quarter of next year. All existing members registered as PrChemSAs and the members who are registered with SACNASP will then be informed of the change.

**Dr Mike Booth**  
**Chair PrChemSA committee**

The South African Council for Natural Scientific Professions (SACNASP), mandated by Act No 27 of 2003, registers Natural Scientists in different Fields of Practice (FOP's), each of which has a Professional Advisory Committee (PAC) chaired by a representative from the different Voluntary Associations (VA's).

- **Registration Statistics**

SACNASP currently has 750 active registrations in Chemical Science, of which 352 are Professional, 191 are Certificated and 207 are Candidate.

- **PrChemSA Designation Terminated**

SACI has had discussions with SACNASP (the three B's Breet, Booth and Bratt) and SAQA to fulfil the legal requirement of all Natural Scientists to be registered with SACNASP. To this end the SAQA designation PrChemSA will cease to exist soon, and SACI members will be registered with the proposed designation Pr.Sci.Nat. (Chemistry). There are still a few issues to be ironed out, such as the cost to members of the new designation, and possible inclusion of the SACI membership fee within the registration fee.

- **African Scientists Directory**

All African Scientists with Doctoral degrees (and Master's degrees in Engineering/Health Sciences) are invited to enter their professional details on the African Scientists Directory.

- **Voluntary Association Biennial Meeting**

SACNASP hosted the 1st Voluntary Association (VA) Biennial Meeting on 27 August 2019 to strengthen the relationship between SACNASP and its constituent VA's in creating an enabling environment for Professional Natural Scientists.

- **Science Forum South Africa (SFSA)**

The Innovation Bridge (IB) and Science Forum South Africa (SFSA) jointly staged an event on "Igniting Conversations about Science for Innovation with Impact" at the CSIR on 4-6 December 2019. SACNASP held its own session during the forum with the theme "Implications of the Fourth Industrial Revolution (4IR) for Natural Scientists" under chairmanship of Prof Robin Crewe, and with a panel including several distinguished scientists.

- **National Science Week**

National Science Week (NSW) is an annual countrywide celebration of science event of the Department of Science and Technology (DST). SACNASP participated in the 2019 event by handing out periodic tables to pupils in various schools.

- **New Website Services**

The new updated website can be accessed on [www.sacnasp.org.za](http://www.sacnasp.org.za) by using one's registration number as username and one's ID number as password. SACNASP is offering a new value-added service whereby all registered scientists can key in their skills and contact details by login to [portal.sacnasp.org.za](http://portal.sacnasp.org.za), and these will be searchable on the database of registered scientists to bring them into contact with employers in need of their skills. All Continuing Professional Development (CPD) related activities can be accessed on [cpd.sacnasp.org.za](http://cpd.sacnasp.org.za).

- **Awarding Top-Performing Natural Science Students**

SACNASP annually awards a natural science graduate to improve critical scarce skills and identify talented individuals from disadvantaged backgrounds by covering the fees for the first-year and paying a R3 000 value monetary award.

**Prof. ELJ Breet Pr.Sci. Nat., SACNASP PAC Chair for Chemistry  
Chairperson of PAC for Chemistry**

## **SECTION AND DIVISION REPORTS**

### **EASTERN CAPE**

SACI Eastern Cape has benefited from the dedicated engagement of some highly motivated academics over the past two years. Dr Mama (NMU), Mrs Toma and Prof Songca (WSU), Dr Katwire (UFH), and Prof Krause (RU) have maintained the student engagement in the annual Post graduate seminars, and expanded the membership by running a second event in the year: the Innovation and Career Fair in April. Last year's Post graduate seminars were supported by students from all four regional institutions, with NMU and Rhodes taking the honours. Unfortunately the second annual Innovation and Career fair was abandoned due to unfavourable conditions (COVID-19 related), but we are gearing up for another one next year. Without the involvement of SACI in our local events we would not be able to support the development of chemical enterprise in the area, and we really appreciate the weight of a national organization in drawing together industrial partners to support development in our area.



**Prof Rosalyn Klein  
Eastern Cape Section**

## SACI CENTRAL

### PHOTO-GALLERY: Global Women's Breakfast (IUPAC GWB2020), Johannesburg, South Africa



© Royal Society of Chemistry

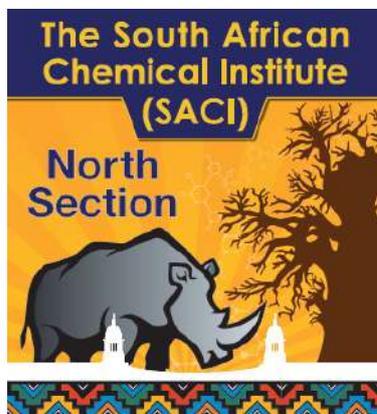
Registered charity number 207890



Further pictures can be obtained from the SACI administrator Laila Smith on [laila.smith@wits.ac.za](mailto:laila.smith@wits.ac.za).

Unfortunately, the Central Section has no acting Chair. Plans, however, are afoot to revitalize this important Section of the Institute.

**Prof Neil Coville**



## SACI North Section Committee Members

| MEMBER                   | PORTFOLIO                | INSTITUTION   |
|--------------------------|--------------------------|---|
| DE LANGE J (Dr)          | Student Matters          | University of Pretoria (UP)                           |
| KHANYILE N (Dr)          | <i>W/O Portfolio</i>     | University of Mpumalanga (UMP)                        |
| MAMPA RM (Prof)          | Scientific Program       | University of Limpopo (UL)                            |
| MAPHORU MV (Dr)          | <i>W/O Portfolio</i>     | Tshwane University of Technology (TUT)                |
| MNYAKENI-MOLEELE SS (Dr) | Deputy Chairperson       | University of Venda (UNIVEN)                          |
| MODIBEDI RM (Dr)         | Treasurer & Sponsorships | Council for Scientific and Industrial Research (CSIR) |
| MOGANE MG (Mrs)          | Membership               | Sefako Makgatho Health Sciences University (SMU)      |
| NKAMBULE CM (Prof)       | Chairperson              | Tshwane University of Technology (TUT)                |
| SONOPO MS (Dr)           | Secretary                | South African Nuclear Energy Corporation (NECSA)      |

### 1. Committee Meetings

The section held four (4) meetings since the last SACI AGM on 15 August 2019; here are the key points and decisions:

- 12 September 2019 at the University of Limpopo. Dr J De Lange (UP) and Mrs M Mogane (SMU) joined the committee as institutional representatives replacing Dr D Riley and Dr F Muganza, respectively. The organizing committee from UNIVEN gave a final presentation on the preparations for the 2019 Young Chemist Symposium (YCS) to be hosted on 31 October 2019.

- 30 October 2019 at Peermont Metcourt Khoroni, Thohoyandou. This is the annual meeting on the eve of the YCS. The incumbent Chairperson requested to be relieved of the duty due to extra responsibilities at the home institution; there was a general reshuffle of portfolios. It was resolved that the 2020 YCS will be hosted by UP. The 2021 YCS will be hosted by UL or NECSA; there will be no YCS in 2022 since the North Section will host the Frank Warren Conference (FWC)
- 12 March 2020 at the CSIR (Pretoria) with UNIVEN joining via Skype. The meeting resolved that additional institutional representatives must be co-opted into the committee as part of succession planning. UP has agreed to a 20 GB Cloud storage to host the SACI-NS Virtual Office. The preferred date for the YCS is 29 October 2020. The preferred date for the 2022FWC is the first week in December, and since Limpopo has never hosted a SACI conference the LOC will endeavour to locate a suitable venue in Limpopo
- 22 July 2020, socially distancing meeting via Zoom. Dr M Maphoru (TUT) and Dr N Khanyile (UMP) joined the committee as new members. The 2020 YCS will likely be postponed, but a virtual symposium will be organized to explore the new realities of conferences in the COVID era.

## **2. Financial Statements**

- On 21 July 2020 the balance on the account of SACI North Section was R38 596.86
- The account of the 43<sup>rd</sup> SACI National Convention which was hosted by the SACI-NS in 2018 has been closed with a net profit of R 91 209.89

## **3. Symposia and Conferences**

- The 2019 YCS was hosted by the UNIVEN on 31 October 2019.

On Thursday, 31 October 2019, the Chemistry Department of the University of Venda (UNIVEN) hosted the South African Chemical Institute (SACI) Young Chemists Symposium to encourage young Chemists about the Scientific and technological relationships. This Symposium was held at the University's Research Conference Centre. 102 Delegates from the SACI North section comprising of Univen, UL, UP, TUT, NECSA and CSIR attended the symposium. 80 Abstracts were received for this symposium and were scrutinized by the Local Organizing Committee comprising of the following personnel:

Chairperson: Dr SS Mnyakeni Moleele

Deputy chairperson: Mr ET Ramuafhi

Treasury: Dr MV Bvumbi and Mr FB Mutshaeni

Secretariat: Dr LC Murulana and Ms NR Maseko

In her welcoming speech, the Dean of the School of Mathematical and Natural Sciences, Prof Natasha Potgieter mentioned that it is good to see young people gathered which shows that they have a passion in what they do.



*Prof Natasha Potgieter: Dean of the School of Mathematical and Natural Sciences*

Guest Speaker, Dr Lucky Sikhwivhilu from Mintek spoke about Chemist of the Future: understanding Science and Technological relationships. He spoke about definitions of chemistry and how chemistry is applied on a daily basis. Dr Sikhwivhilu told postgraduate students to position themselves in a way that they can make money for a living. "With chemistry, we can create future solutions, we can also create future businesses. As a student, ask yourself why you are doing chemistry, how are you going to make a living with the qualification that you have and to what extent are you ready to study."



*Dr Lucky Sikhwivhilu from Mintek: Guest Speaker*

### Top performers of the Symposium

Prizes for the symposium were gracefully provided by the Royal Society of Chemistry which was represented by Dr Lynne Pilcher. Four different categories determined and the winners are shown in the table below.

Award winners of the symposium

| Position | Honours Posters               | Postgraduates Posters     | PhD oral                 | MSc oral                  |
|----------|-------------------------------|---------------------------|--------------------------|---------------------------|
| 1        | Lucille Mbonzhe, Univen       | Mthokozisi Mabuza, Univen | Khuliso Maphakela, TUT   | Thomas Bates, UP          |
| 2        | Ndamulelo Phosha, Univen      | Anitah Nkuna, Univen      | Mphoma Matseke, CSIR     | Motlatso Malapane, Univen |
| 3        | Maduvha Tshidevhele, Univen   | Lethula Mofokeng, CSIR    | Tebogo Mokgehele, Univen | Goitsemodimo Rakodi, TUT  |
| 4        | Mmabatho Dinala, TUT          |                           |                          |                           |
| 5        | Thompho Ravele, Univen        |                           |                          |                           |
| 6        | Tshilidzi Rampfumedzi, Univen |                           |                          |                           |



*Award winners posing with their certificates*

The SACI symposium coincided with the UNIVEN Science Company Expo hosted by the School of Mathematical and Natural Sciences organized by the Chemistry Department. This gave the symposium delegates time to interact with the exhibitors and learn the latest in research equipment and consumables on offer. The exhibiting companies were Inqaba biotech, Prestige Laboratory Suppliers, Hanna Instruments, Laboratory Consumables and Chemical Suppliers, Monitoring and Control Laboratories, United Scientific, Chemetrix, Labotech, Metrohm, Merck, Labex, Metrohm and Analytical solutions.



*SACI delegates interaction with exhibitors*

The delegates were also entertained by the University of Venda's traditional dance group who performed the Tshikona dance.



## New SACI North Section Committee Members

The new committee was elected where Prof Comfort Nkambule from TUT was elected the next Chair of SACI. Deputy Chair is Dr Simon Mnyakeni-Moleele from UNIVEN; Treasurer is Dr Mmalewane Modibedi from CSIR; Dr Molahlehi Sonopo from NECSA was elected as the secretary; Dr Jurgens de Lange from UP is the Student Representative; Mrs Maria Mogane for Membership Scientific Programme and Prof Richard Mampa for Events. The 2020 SACI Young Chemists Symposium will be hosted by the University of Pretoria



*New SACI Young Chemist committee*

- The LOC for the 2022 FWC will be fully constituted in 2020; Prof CM Nkambule is the interim Chairperson of the LOC

### 4. Membership Matters

- SACI National Awards
  - **Lifetime Membership:** HH Hahn, MTS Britton (NECSA); MTS Britton received his certificate from the Chairperson, Prof CM Nkambule, at the RSC-SACI lunch at the Wanderers Club on 22 September 2019
  - **Postgraduate Medal:** H Montaseri (UP), TN Phaahlamohlaka, MP Seopela (TUT)
  - **James Moir Medal:** R Mphephu (UL), WJ Rudolph (UP), SB Tshifaro (UNIVEN)
- As of 30 April 2020 the membership roll shows that there are 198 members in the North Section

**Prof C Nkambule**  
**Chairperson North Section**

## KWAZULU-NATAL

### **SACI-KZN REPORT AUGUST 2019 – AUGUST 2020**

The South African Chemical Institute, KwaZulu-Natal Section had a number of activities held from August 2019 to August 2020, even though a better part of 2020 was quiet due the global pandemic – COVID-19. First, we had the SACI KZN HONS/BTECH symposium, held at the University of KwaZulu-Natal (PMB campus) on 18 October 2019 where students from DUT, UniZulu, MUT, UKZN Westville and UKZN Pietermaritzburg presented 10 oral and a number of poster presentations. The oral and poster presentations were adjudicated and two prizes were awarded for each of the two categories, the oral and poster presentations. The winners are listed below together with their respective institution. The prizes were sponsored by the RSC North section, whom we kindly acknowledge.

We also had the Annual General Meeting (AGM) alongside the SACI KZN-RSC lunch on 4 December 2019. At the lunch various awards were handed to members recognized for different categories.

The annual SACI Postgraduate Research Colloquium was to be held at University of Zululand but due to COVID-19 could not be held. Plans to have a virtual meeting are ongoing and we'll hopefully have the meeting soon.

After a year's absence, the ever popular Christmas Magic Show was held in November 2019 and this saw an attendance of about 100 school kids along with their parents. The event was run by our magicians Profs Bice Martincigh, Vincent Nyamori and Bernard Owaga who were accompanied by two new acrobat-magicians from the UKZN Physics discipline, Prof Thomas Konrad and Dr Miquel. The event was held at the UKZN Westville Campus. An event to honour The Year of the Periodic Table that was to involve school children in and around KZN did not attract entrants for unknown reasons.

#### *SACI KZN 2019 SACI HONS/BTECH symposium held at PMB Campus, University of KwaZulu-Natal on 16 October 2019*

The SACI KZN Section organises the annual Honours/BTech Symposium. The event was kindly organised by Drs. Vineet Jeena and Desigan Reddy from PMB campus of the University of KwaZulu-Natal. The 2019 SACI Hons/BTech Symposium was held at the PMB Campus,

Drewes Lecture Hall on Wednesday 16 October 2019 and approximately 100 students turned up for the event from universities across the KZN province, including Durban University of Technology, University of KwaZulu-Natal, University of Zululand and Mangosuthu University of Technology. The event sees academics and students converging in one area to discuss employment, funding, research and developments within the field of chemistry.

The symposium caters for postgraduate students doing their Honours and Bachelor of Technology degrees. The students are given an opportunity to present their research to fellow students and academics. Top students that are studying chemistry are selected from each university and compete against each other for the best presentation.

Ten students, two from DUT, two from UniZulu, two from MUT, and two each from UKZN Westville and UKZN Pietermaritzburg campuses, presented their BTech/Honours research projects orally while another 10 students presented posters on their projects. The oral and poster presentations were adjudicated and two prizes were awarded for each of the two categories, the oral and poster presentations. The winners are listed below together with their respective institution. The prizes were sponsored by the RSC North section, whom we kindly acknowledge.

**Oral presentations:**

**1<sup>st</sup> place: Stephanie A Fraser: UKZN WVL**

**2<sup>nd</sup> place: Pfarelo Mulaudzi: UKZN WVL**

**Poster presentations:**

**1st prize: Nonhle Mabaso, UKZN PMB**

**2<sup>nd</sup> place: Zulu Somgungqu, UKZN PMB**

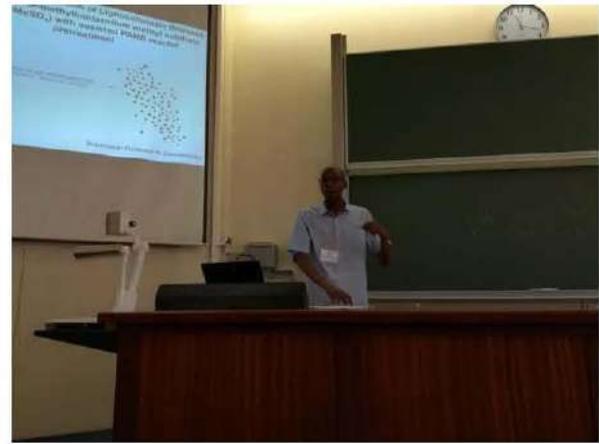
Some photos of the awardees are given below.



Oral prize winners holding certificates along with some symposium attendees:  
Left: Miss Stephanie Fraser; Miss Pfarelo Mulaudzi; Miss Nonhle Mabaso and Mr Zulu Somgungqu.



Left: Prof Nyamori presenting Stephanie Fraser with her certificate. Right: Dr Shoji Mzamo chairing one of the sessions.



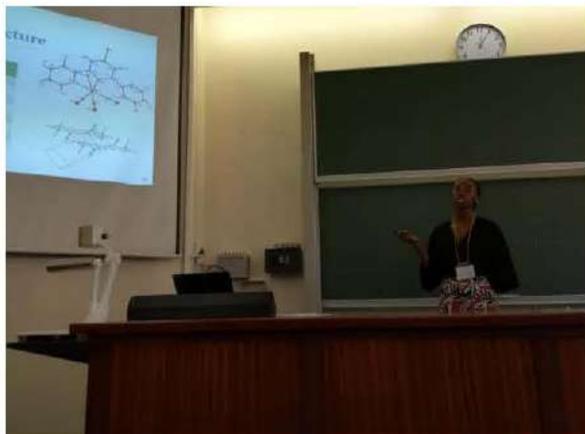
A Govender (Durban University of Technology)



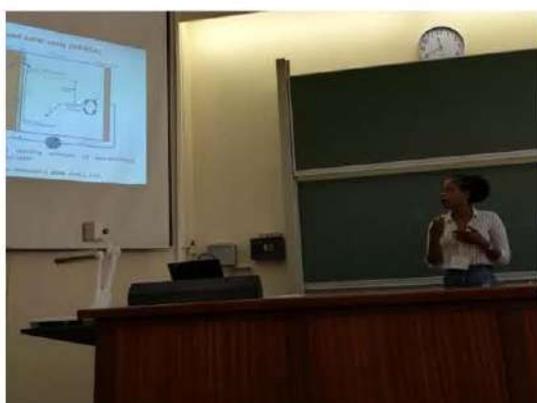
T Shabangu and MD Gwebu (University of Zululand)



BA Fynn (Durban University of Technology) and T Chetty (University of KwaZulu-Natal, Westville)



T Masimula and T Xolo (University of KwaZulu-Natal, Pietermaritzburg)



M Pfarelo and SA Fraser (University of KwaZulu-Natal, Westville) and

Oral Presenters from the four institutions

**Report compiled by Bernard Owaga / Desigan Reddy / Vineet Jeena**

### ***2019 SACI KZN /RSC Lunch and SACI KZN AGM***

The Annual General Meeting of the KZN Section was held on Wednesday, 4th December 2019 from 12h30 at the School of Chemistry and Physics, University of KwaZulu-Natal, Westville Campus, Level 2 Tearoom. The attendance was good and on the agenda for the meeting some of the items, included, the chairperson's report, the financial report and Awards of the Institute. Among the awardees were George Carr and Siegfried Drewes who were awarded Fellow status of the Institute. George has been a stalwart of the Natal, and later KwaZulu-Natal, section committee for very many years - his service spans an unbroken period dating back to the mid-1970s. During that time has been chairman (twice), treasurer (twice) and secretary. As an industrial chemist he has been able to add quite a different viewpoint from those of the other, mostly academic, members of the committee, and his insight has been most valuable in the

planning of the section's events over the years. He recently decided that he should retire from the committee. We thank him very much for his unstinting service to the Institute. Professor Drewes was Head of Organic Chemistry for many years, and also Head of Department for a number of years. On retirement, he was appointed Emeritus Professor within the Chemistry department at UKZN. He was an A-rated scientist within the NRF system and was a recipient of the Institute's prestigious Gold Medal in 1995.

The Raikes Medal was awarded to Dr Lawrence Madikizela as the senior author for the publication: *South African Journal of Chemistry*, 2014, **67**, 143-150, entitled: "Determination of Triclosan and Ketoprofen in River Water and Wastewater by Solid Phase Extraction and High Performance Liquid Chromatography" and authored by Lawrence M. Madikizela\*, Sindisiwe F. Muthwa and Luke Chimuka.

The SACI Postgraduate Medal was awarded to Dr Tabitha Amollo and the James Moir medal was awarded to Mr Shabaaz Abdullah of UKZN and Y Sukku of DUT.

Some photos of the awardees are given below:



George Carr receiving his certificate. He was awarded Fellow status of the Institute.



**Dr Lawrence Madikizela receiving The Raikes Medal**



**Mr S Abdullah of UKZN receiving his certificate and the James Moir medal**



Y Sukku of DUT receiving his certificate and the James Moir medal

We are looking forward to more events this year and early next year.

Bernard O Owaga (Chairperson SACI-KZN)

**Prof Bernard O Owaga**  
**Chairperson KZN Section**

### **WESTERN CAPE**

**AlchemUS Magic Show** (by Marisa Strydom, AlchemUS chairperson)

On the 13<sup>th</sup> September 2019 AlchemUS, the student society of the Department of Chemistry and Polymer Science at Stellenbosch University, hosted their Magic Show. It is an annual event where local schools and the public are invited to watch a production made magical using chemical experiments. It is a social outreach program for children in underprivileged primary schools in the Stellenbosch area to be introduced to science in a fun way. This year a total of 236 school learners were invited to the show, which is one of the biggest audiences to attend in many years.

The grade 5 learners of St Idas primary, Kayamandi Primary and Cloetesville Primary came to Stellenbosch University to attend the show held in the First Year Building. Busses were arranged to transport the learners from their schools to the university and back, made possible by the financial assistance from SACI Western Cape and SUNCOI.

Since 2019 is the International Year of the Periodic Table, the theme for the show was based on the Periodic Table. The story was about a group of Reject Superheroes who needed to travel back in time and save Dimitri Mendeleev, who was kidnapped in an attempt to stop him from developing the Periodic Table. The show was made magical by chemical experiments incorporated into the story, like the heroes using invisible ink to find out the location of the villain's lair, or Mendeleev using elephant's toothpaste to celebrate being back in his laboratory. The Head of Department for Chemistry and

Polymer Science at SU, Prof Peter Mallon, welcomed all the students with a short talk on the importance of the Periodic Table. The show was also followed by a presentation on the chemistry behind the magic by a PhD student, Dewald van Heerden, where the science behind the experiments used in the show was explained.

AlchemUS would like to thank everyone who helped make the event a success, including all the scriptwriters, the actors, the experimental team, and people who helped prepare everything for the show: Sebastian Nieto Lawrence, Heinrich Laker, Dr Rehana Malgas-Enus, Jaco van Rooyen, Nonkosi Matinise, James Crowder, Nicole Visagie, Jan Costandius, Jaques Buys, Kayah Gould, Lydia Jordaan, Caylin Visagie, Marisa Strydom, Megan Matthews, Remofilwe Manye, Stacey Roman, Gabby Garbonova, and Jan Costandius.

We are especially grateful for SACI Western Cape division and SUNCOI for their financial contributions. Hopefully we can build on the success of this year's show to make next year's event even bigger and better.



**Audience of school learners.**



**Audience of school learners.**



**Most of the cast before the show.**



**First scene in Mendeleev's laboratory**



**A chemical experiment display incorporated into the story.**



**Reject superheroes interrogating the henchman.**



**The full cast, narrator and experimental team.**



**The audience, full cast, narrator and experimental team.**

## **19 September 2019**

### **Intersarsity Quiz Night** (by John Woodland)

The 2019 Intersarsity Quiz Night was held at Stellenbosch University on the 19th of September. A single team from UCT, pitted against seven teams of students and academics mainly from Stellenbosch, was victorious and therefore defended the institution's title from the previous quiz in 2016. The winning UCT team comprised Jean and Stephen (H3D), Nicole and Richard (Supramolecular Group), and Ola, Iqbal and Doaa (Hunter Group). Due to student unrest, full teams from CPUT and UWC were, unfortunately, unable to participate.

A big thank you, also, to Prof David Gammon who compiled the questions - ranging from the Periodic Table to sport, geography and South African current affairs - and Prof Alan Hutton who played the role of quiz master in his inimitable style, occasionally keeping the teams (with names ranging from "Space Group" and "Uncertainty Principles" to "The Element of Surprise") in check.

Thank you to SACI and the RSC for their support and to Megan and her colleague Chandre for their efforts in preparing such an enjoyable, successful, and well-run event. This contributed towards building a sense of camaraderie amongst our community of chemists, and permitted colleagues (for a night, at least!) to let down their hair.



Attendees of the 2019 Intersvarsity Quiz Night



The UCT team



The winner takes all... the chocolate and bubbly

20 September 2019

**Rainbow, Bingo for the Beautiful: Celebrating the International Year of the Periodic Table at Cape Peninsula University of technology** (Organiser and Reporter: Associate Professor Merrill Wicht) The celebration of the 150<sup>th</sup> anniversary of Mendeleev's Periodic Table was a special event for Chemists and Scientists to partake in. The occasion was promoted by the South African Chemical Institute with sponsorship of funds to make this a special day in the lives of the Students, Staff, Technical staff and Learners in the new Chemistry building at the Cape Peninsula University of Technology.

The department has a Service Learning Project with an NGO in Phillipi, called Beautiful Gate. It seemed appropriate to invite 60 high school learners, all Physical Science students, to celebrate with us at CPUT. They were transported by bus to the campus and joined us for games in the Chemical Engineering and Chemistry building.

We began with "Bingo" with the Learners in groups of four, trying to outsmart each other with the CPUT Master's students Yamkela and Bonggi calling out clues for them to solve. Some were easy, others more difficult for the Learners from Grade 8 to 12, with learners trying to find answers we had posted around the room. The groups were all named after Periodic Table groupings. The halogens and transition metal groups were the Bingo stars.

The CPUT students had been assigned a poster assignment in their subject Atomic Spectroscopy. The groups had made posters which dealt with the history of the Periodic Table, and an element they had chosen to discuss. The posters were erected in the foyer of the building and were judged by two staff members, Ncediwe Ndube-Tsolekile and Niki Bathori. The students shared their interest in the posters which compared a wide range of emission spectra for the elements.

**CPUT's Service Learning Department came on board and provided the participants with a light lunch of hot dogs and a drink.**

A day at a Chemistry department would be amiss without a visit to the laboratories. The Postgrad students and Technical staff had set up a variety of experiments for the Learners to observe. A PostDoc, David, organized the groups to visit the laboratories and see a variety of experiments including Elephant's toothpaste, White smoke, the reaction of lithium and sodium in a water bath, and a rainbow of colours burning in methanol. This was definitely the highlight of the day and we watched Zandi and Pumza (Technical staff), Lucie, Yamkela and Bongi showing us the wonders of Chemistry. The CPUT assistants were all wearing SACI Periodic Day T-shirts, much to the envy of the Learners and students. During the afternoon, the Learners made Newspaper Gazettes with information on the history of the Periodic Table. The Alkali metals and Noble gas groups presented us with beautiful Newspaper pages. Master's student Justin gave them a short talk on Chemistry based on the Periodic Table. We judged them all as the best groups with awards of chocolates and at the end of the day they were given an Element Cookie for them to eat as they left CPUT.

**Our gratitude goes to SACI for the sponsorship received, CPUT Service Learning Department for their assistance with lunch and corporate gifts, and to the Chemistry Department and HOD, Vernon Somerset, for hosting the day. We are most grateful to Beautiful Gate NGO for allowing the Learners to visit us, and we hope they enjoyed their afternoon at CPUT. Our thanks also goes to Junia, Eudes and Roland (Postgrad students) for their assistance and support of the day.**



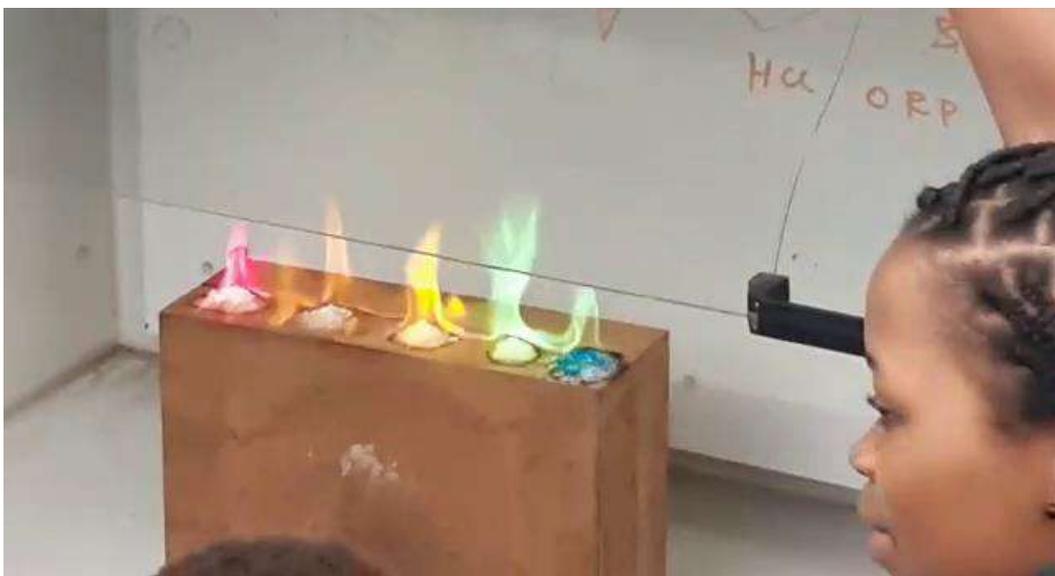
**Beautiful Gate Learners with the CPUT Student Assistants in Periodic Table T-shirts in the front**



*Periodic Table of cookies with Elements for Learners to take home*



*Students and staff Eudes, Yamkela, Junia, Merrill, Lucie, Bonggi, Niki and David*



*Bonggi showing the Learners the rainbow of metal salts in the Fume Hood*



*Halogens trying to find the correct Element for their Bingo sheet*

**18 November 2019**

**77<sup>th</sup> Annual General Meeting of the SACI Western Cape Section** (by Niki Báthori)

The 77<sup>th</sup> SACI AGM of the Western Cape section was held on the 18<sup>th</sup> of November 2019 at Stellenbosch University. The AGM was attended by about 50 people (academic, professional and student members).

The meeting started with accepting the minutes of the 76<sup>th</sup> AGM. The WC chairperson, Nikoletta B. Báthori, presented the financial report (compiled by the treasurer, Margaret Blackie) and summarized the activities of the past year. The mandate of the existing Western Cape committee was extended for 2019-2020 with the addition of a new member. We thanked Godwin Dziwornu's service as the UCT student representative in the past years and welcomed Larnelle Garnie who will fulfil this position. We also expressed our gratitude to Robbie Luckay (SU) who was the secretary of the Western Cape Section for eighteen years. Robbie received a certificate of appreciation in recognition of his many years of service to the Western Cape Section. The position of the secretary will be fulfilled by Edith Antunes (UWC). The AGM ended at about 18h00.



*Dr Robbie Luckay (SU)*

The SACI AGM was followed by an invited lecture by Prof. Timothy Dafforn, a visiting scholar at Stellenbosch University from the School of Biosciences at the University of Birmingham (UK). Prof. Peter Mallon, HOD of SU and President of SACI, introduced the speaker and gave a comprehensive summary of his research interest. Prof. Dafforn's talk, entitled 'Using one of industry's most abundant polymers to make one of nature's most delicate', focused on the recently developed method for extraction of membrane proteins by applying a co-polymer formed from styrene and maleic acid. The lecture was followed by a vibrant Q&A session, finished at 19h00, and was followed by refreshments and lively discussions.

## **20 November 2019**

### **Discussions on the Periodic Table at the University of the Western Cape** (by Fanelwa Ajayi)

On the 20<sup>th</sup> November 2019, the Community Engagement Team of the Chemistry Department at the University of the Western Cape hosted the first of two Discussions on the Periodic Table. In attendance were students and staff members from the University of the Western Cape, Stellenbosch University, Cape Peninsula University of Technology, and the University of Cape Town, making a total of 75 attendees.

This initiative was made possible by The South African Chemical Institute (Western Cape Division) in association with the Royal Society of Chemistry with the aim of creating an informal platform for Chemists of all ages and academic experiences to interact and forge future partnerships.

The first speaker of the day was Associate Professor Delia Haynes from the Department of Chemistry and Polymer Science at Stellenbosch University. She spoke at length about the history, giving an introduction to society of the Periodic Table. It was refreshing to all the Chemists to realize that there more scientists apart from Mendeelev who made a meaningful contribution to the development of the Periodic Table. She ended her talk by playing a song about the Periodic Table.

She was followed by Mr Andre Spies from the Department of Chemistry at the Cape Peninsula University of Technology. Mr Spies emphasized the importance and academic benefits of teaching the Periodic Table earlier to learners. It was fascinating to the audience to hear him relay several examples on how teachers and lecturers could teach the content related to the Periodic Table. He concluded with words of encouragement; that as Chemists we should have a duty to society of sharing our Chemistry knowledge in a good and motivating manner.

The event was concluded by a networking session where students and academics had an opportunity to get to know one another. It is a wish that more such events could take place in 2020.

A special acknowledgement to the SACI Western Cape Division and the Royal Chemical Society for their financial contributions. SACI would like to thank Dr Prinessa Chellan and Dr Cesarina Edmonds-Smith for making this event a success.



*Mr Andre Spies addressing the audience*



*Prof Delia Haynes addressing the audience*



*Prof Delia Haynes receiving her gift of appreciation from UWC student Ms Sandiswa Gxekwa on behalf of SACI.*



*Mr Andre Spies receiving a Thank You gift from UWC student Ms Sandiswa Gxekwa on behalf of SACI, with Prof Fanelwa Ajayi to the left.*

**27 November 2019**

**IYPT Event at Stellenbosch University** (by Prinessa Chellan)

The final round of exciting talks about the Periodic Table was held at the Department of Chemistry and Polymer Science at Stellenbosch University on 27 November 2019. The event was well attended by both students, staff and members of the public. We were especially happy with the number of students from our sister institutions, the University of the Western Cape, the Cape Peninsula University of Technology and the University of Cape Town. Our first speaker was Prof. Fanelwa Ajayi (UWC) who gave us a really great overview of the current teaching technologies being developed by South African innovators for learning and using the Periodic Table. In particular, she highlighted the efforts of a local start up, Sisanda Tech, that is using Augmented Reality (AR) technologies for STEM education, including their free Period.ie app which allows you to explore all of the elements of the Periodic Table.

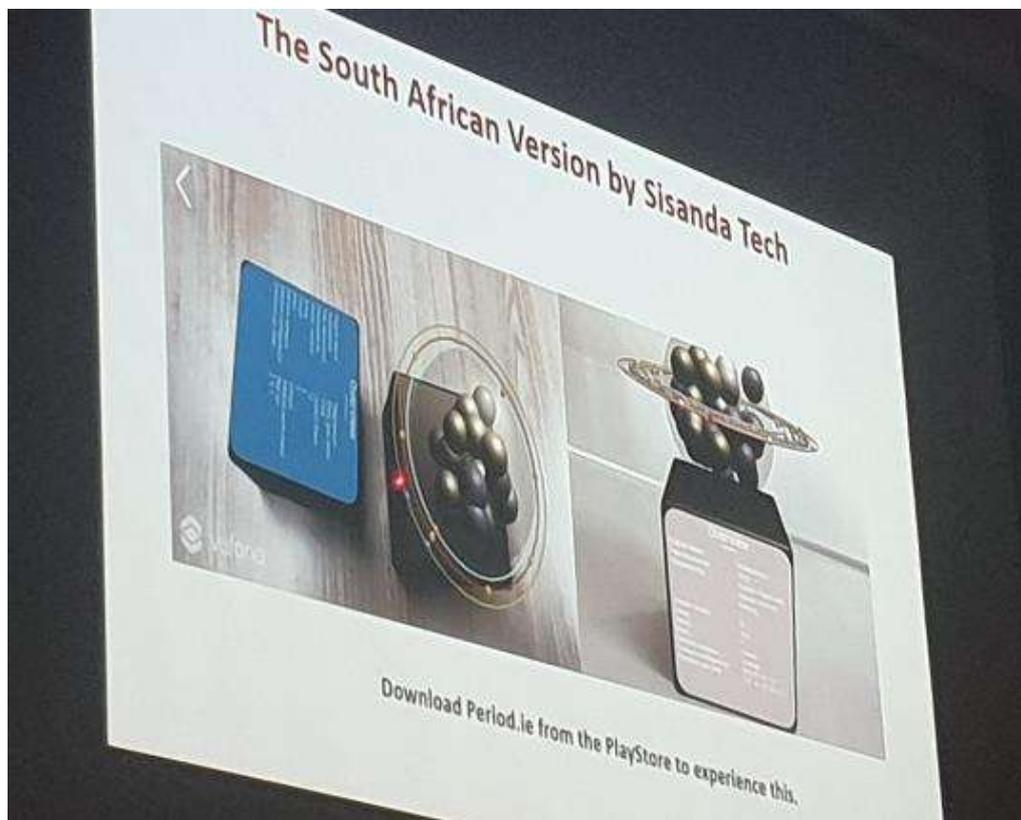
Closing our series of talks was Prof. Timothy Egan (UCT), who took us on a fascinating journey on the development of the Periodic Table filled with interesting facts about the many scientists that discovered each element. One of these scientists was Antoine-Laurent de Lavoisier, who is credited with turning the study of chemistry from qualitative to quantitative nature as well as the discovery of the integral role oxygen plays in combustion reactions. In the late 18<sup>th</sup> century, he documented and named the elements hydrogen and oxygen.

We rounded out the evening with an informal networking session in the Foyer of our historic De Beers building. This gave students and the public a rare opportunity to engage with our expert speakers over a glass of good Stellenbosch wine.

This successful event would not have been possible without the support of the South African Chemical Society.



*Our distinguished speakers, Prof. Fanelwa Ajayi and Prof. Timothy Egan*



*A slide from Prof. Fanelwa's talk where she described the Period.ie app.*



*Prof. Timothy Egan engaging the audience with some of the stories behind some of our favourite elements!*

**26 November 2020**

**RSC-SACI Annual Dinner** (by Niki Báthori)

The annual joint RSC and SACI dinner of the Western Cape section was held on the 26<sup>th</sup> of November at the Kelvin Grove Sports Club and hosted 78 attendees from the four universities of the Western Cape. The guest speaker of the event was Professor Anton le Roex, Emeritus Professor of Geochemistry and former Dean of the Faculty of Science at UCT, who entertained us with his personal experience while “Braving the Elements”.

We congratulated the three James Moir medallists, Ms Larnelle Garnie (University of Cape Town), Ms Brigitte Fortuin (University of the Western Cape) and Ms Jessica Thibaud (Stellenbosch University). Mr Upenyu Muza, from Stellenbosch University, was awarded the SACI Post-graduate award. The Western Cape section is very proud of the new SACI Fellows, Prof Ray Haines (UKZN), Prof Susan Bourne (UCT) and Prof Timothy Egan (UCT). The 2019 SACI Gold Medal was awarded to Prof. Klaus Koch (Stellenbosch University). Sadly, Klaus passed away on the 2<sup>nd</sup> of January 2020 after bravely battling a serious illness. It says a lot about Klaus’ personality that he came to the dinner to celebrate with us and gave a unique, very personal acceptance speech. To express our respect and appreciation for Klaus’ life, here we publish the speech of Klaus (shared with us by Sabine Koch).

*“I wish to dedicate the award of the SACI gold medal in memory of St Paul’s College, and particularly to my tough, nevertheless inspiring, Biology and General Science teacher, Ms June Horwitz, who taught us for three short years from Standard 6 to the Junior Certificate examination, prior to the start of my matriculation.*

*She would have been very proud to have been here today. I recall after my first Biology mid-year examination, she rushed into class announcing that she had awarded me 95%, her highest mark ever for my test and the detailed biological drawing of a locust!*

*Subsequently she announced that I had a flair for chemistry and handed me the key to our school laboratory with the warning not to blow it up... I spent many happy weekends there, doing “Gedanken-” and other experiments.*

*She also arranged a quarterly subscription from the South African Foundation for Education, Science and Technology for me, which I read avidly. It was on this basis that after an official quiz I was nominated as the only scholar from the then South West Africa to participate in the 7th National Science Youth Week, from the 5th -9th July 1971 in Pretoria. This was the highlight of my youth. The six brightest candidates proceeded to London to the International meeting.*

*Thus I was exposed to the vast empire of Science and its potential applications- thank you Ms Horwitz! After a year of pretty reluctant compulsory military service in Outshoorn in 1972 at the 1st SA Infantry Battalion, I discovered the University of Cape Town on a weekend pass. I resolved to register there for Chemistry and Physics in 1973 after considering an MB ChB.*

*I would be amiss not to acknowledge the many inspiring lectures and professors, of whom I was in awe and who inspired, guided and tried to polish me during this time. It seemed to me that they had “too much knowledge” and I would just make a BSc. At the risk of omitting someone important whom I may have forgotten, I would like to mention the names of Professors Alistair Steven, Ernest Prout, HMNH Irving (Oxford), Drs Linder, Nassimbeni Torrington, Robin Giles and Gordon Cragg with whom I did my Honours project in Steroid synthesis ...and yes , I nearly became an organic Chemist , not forgetting Mr Bill Campbell.*

*I completed my PhD in 1979 with a new UCT appointee Dr Victor Fazakerly, who introduced me to the wonders of Fourier Transform Nuclear Magnetic Resonance Spectroscopy and gave me the carte-blanche to explore in part the chemistry of Platinum via this technique using the then newly-discovered*

*Pt based anti-cancer drug, Cisplatin.*

*The rest is history.*

*I would like to end with two pertinent observations which I have come to believe in during my academic career. These may serve as a guideline for young aspirants...*

*One is a somewhat blunt quote by Leonardo da Vinci from a book *The Making of Leonardo* which I am currently reading.*

*“He who does not try to surpass his teacher is mediocre” This has always been the message I tried to enjoin my students to engage with – some did managed this, some didn’t. My students have always taken pride of place with me.*

*On a more profound level I wish to quote from the marvellous book *Consilience: The Unity of Knowledge* by Edward O Wilson, with his observation:*

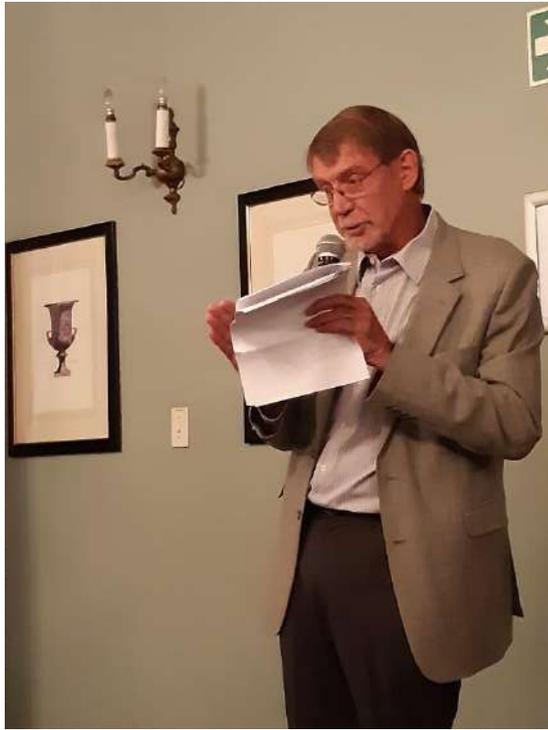
*Today the greatest divide within humanity is not between the races or religions or even, as it is widely believed, between the literate and the illiterate. It is the chasm that separates scientific from pre-scientific cultures. Without the instruments and accumulated knowledge of the natural sciences – physics, chemistry, biology – we humans are trapped in a cognitive prison.*

*In an increasingly rudderless, chaotic and fake-news infested populist world, the acquired reasonable “truths” are continuously undermined and flaunted. We must do everything possible to bridge the chasm that separates scientific from pre-scientific cultures ... not science for science’s sake, not for scientific stamp collecting, but must develop and preserve the value of scientific analytical thinking and its skills for the sake of our continued sustainable and agreeable future survival.*

*Thank you for listening, the honour of the 2019 Gold Medal recognition and good evening to you all!”*



*From left to right: Prof. Peter Mallon (SACI President), Prof. Klaus Koch (Gold Medallist of the South African Chemical Institute 2020), Prof. Nikoletta B. Báthori (SACI WC Chair).*



*Guest speaker of the evening, Prof. Anton le Roex (UCT)*



*From left to right: Prof. Peter Mallon (SACI President), Prof. Susan Bourne (SACI Fellow, UCT), Prof. Klaus Koch (Gold Medallist, SU), Prof. Timothy Egan (SACI Fellow, UCT), three James Moir medallists, Ms Larnelle Garnie (James Moir medal, UCT), Ms Jessica Thibaud (James Moir medal, SU) and Mr Upenyu Muza (SACI Post-graduate award, SU)*



*Attendees at the SACI/RSC 2019 annual dinner*

**12 Feb 2020**

**IUPAC Global Women's Breakfast 2020** (by Cesarina Edmonds-Smith)

On 12 February 2020, over 50 women from the four tertiary institutions across the Western Cape- the University of Cape Town (UCT), Stellenbosch University (SU), the University of the Western Cape (UWC) and the Cape Peninsula University of Technology (CPUT), as well as representatives from Lasec, gathered at the picturesque tea garden at the Rhodes Memorial restaurant for the third Global Women's Breakfast.

On January 18, 2011 the first International Union of Pure and Applied Chemistry (IUPAC) Global Women's Breakfast: Women Sharing a Chemical Moment in Time was organised as part of the International Year of Chemistry (IYC2011). On that day, there were close to 100 breakfasts in 44 countries attended by approximately 5000 women chemists, making it one of the largest gatherings of women scientists at that time.

On 12 February 2019, Dr Laura McConnell and Prof Mary Garson organised the second IUPAC Global Women's Breakfast: Empowering Women in Chemistry as part of the celebrations for the centenary founding of IUPAC. Women chemists and male supporters from over 50 different countries took part. Worldwide there were over 200 breakfasts, with more than five thousand women involved, almost certainly making it the largest "virtual" gathering of women chemists worldwide.

The third in the series: The Global Women's Breakfast- Building Bonds to Create Future Leaders, was again held on 12 February 2020, one day after the United Nations Day of Women and Girls in Science. This year there were 242 breakfasts that took place around the world- a global breakfast map was created which illustrated the location of each registered breakfast.



*Global breakfast map created by IUPAC highlighting the location of each registered breakfast for 2020.*

The Global Women's Breakfast was designed to assist women chemists to expand their network of contacts, both locally and internationally. Women at different stages of their individual careers were encouraged to inform each other about their career progress, and together explore opportunities, in professional development and in research or teaching horizons. Organisations of all types; universities, companies, national chemistry societies, government laboratories, and other scientific organisations, as well as individual groups of chemists, were invited to participate.

Locally, this event was hosted by the Department of Chemistry, UCT and women postgraduate students, academics, scientific officers and sales representatives enjoyed a morning of networking and forming new bonds. The morning comprised of an introduction and brief history highlighting the importance of this initiative by Dr Cesarina Edmonds-Smith, followed by a relaxed breakfast where delegates chatted about what life is like as women in science and exchanged stories about their personal journeys which was empowering and inspiring to all who attended. Delegates from the four different universities were mixed to ensure that each person networked with someone new to encourage the development of a diverse network.

We would like to extend our heartfelt thanks to our sponsors who made this event possible: The Royal Society of Chemistry (RSC), the South African Chemical Institute (SACI), Whitehead Scientific and Lasec.

*Cesarina Edmonds-Smith and Dr Roxanne Mohunlal Organisers of the Global Women's Breakfast 2020, Department of Chemistry, UCT*

<https://iupac.org/global-womens-breakfast/>

<https://doi.org/10.1515/ci.2011.33.2.16>



*Participants of the Global Women's Breakfast 2020 hosted by the Department of Chemistry, UCT at the Rhodes Memorial Tea Garden, Cape Town, South Africa*



*Breakfast treats at the Global Women's Breakfast 2020*



*Delegates networking at the Global Women's Breakfast 2020*

**Prof Nikoletta B. Báthori**  
**Chairperson of SACI Western Cape**

## ANALYTICAL CHEMISTRY

Nothing to report

**Prof MM Nindi**  
**Analytical Chemistry**

## CHEMICAL EDUCATION

Mrs Marie du Toit, University of North-West, was the recipient of the SACI Chemical Education Medal in 2019. Part of her work includes the Small-scale MYLAB kit, which include Grade 4-12 Teacher's Manuals and Learner's Manuals. The kit includes everything that is needed to enable learners in rural schools to do practical work.

The Chemical Education Division gave input into the ProSET Stimulator project. The aim of this project is to encourage the next generation to plan for their future careers within the fields of science, technology, engineering and mathematics, through an interactive Exploratorium with knowledge at their fingertips. Individual members were invited to contribute to this exciting project.

The International Conference on Chemical Education, ICCE2020 was due to take place in Cape Town in July 2020. Unfortunately, due to Covid-19, it had to be postponed. We first hoped that it could take place in January 2021, but due to the continuing cases and the uncertainty about international travel The IUPAC Committee for Chemistry Education has agreed to a further postponement of the conference to July 2022. The conference will be known as ICCE 2022 and will run from 18-22 July 2022. Prof Bette Davidowitz is the chair of the local organising committee.

**Prof H Drummond**  
**Chemical Education**



THE CHROMATOGRAPHY DIVISION  
of the South African Chemical Institute  
PO Box 12098 Hatfield 0028 Pretoria

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## ANNUAL REPORT ON THE ACTIVITIES OF THE CHROMATOGRAPHY DIVISION FOR THE PERIOD MAY 2019 TO APRIL 2020

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

Three committee meetings were held during the above period.

The national committee members are:

- Prof Patricia Forbes (Chairperson)
- Wiana Louw (Immediate Past Chairperson)
- Belinda Hickman Mosdell (Vice Chairperson and Treasurer)
- Dr Yvette Naudé (Honorary Secretary and Membership)
- Mamsy Motlanthe (Minutes secretary)
- Madelien Wooding and Sifiso Nsibande (Student liaison)
- Additional members: Vuyo Silwana, Charl Yeates, Marion Rippon and Margaux Lim Ah Tock.
- Prof André de Villiers is the ChromSA representative for the Western Cape. Additional members of the Western Cape committee are Ben Burger, Dalene de Beer, Ivan Green, Wessel Kriek, Brenda Marx, Marietjie Stander, Karl Storbeck, Hannes van der Merwe, Mare Vlok, and Merrill Wicht.
- Dr Lawrence Madikizela is the ChromSA representative for KwaZulu Natal.
- Dr Nikita Tavangwa is the representative in Limpopo.

Prof Forbes represented ChromSA at the SACI Council meeting and AGM on 15 August 2019.

There are currently over 540 members on the ChromSA mailing list.

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

The AGM was held on 25 November 2019 at Future Africa, University of Pretoria and 31 people attended. The audited financial statements were presented and accepted at this meeting.

### C) CHROMATOGRAPHER OF THE YEAR AWARD:

The external reviewers of the nominations for the 2019 ChromSA Chromatographer of the Year award decided that it be awarded to Prof Patricia Forbes of the Chemistry Department of the University of Pretoria. The award was based on her general contributions to promote chromatography in South Africa and her scientific publications in the field of chromatography relating to the applications of new chromatographic techniques. The award was due to be presented at a ChromSA event on 17 March 2020 at UP, but this had to be postponed due to closure of the campus as a result of Covid-19.

### D) FINANCES:

The funds held by the National ChromSA division are >R416 000, whilst ChromSA Western Cape has funds of >R265 000.

### E) EVENTS ORGANISED:

A number of events were organized for our members in Gauteng during the period under review:

- An Advanced GC-MS short course was presented by Dr Peter Gorst-Allman from 16 – 17 July 2019 in Pretoria. ChromSA sponsored the attendance of one postgraduate student to attend this course (Miss Yvonne Wojno from the University of Pretoria).
- A postgraduate student event was held at the University of Johannesburg on 26 September 2019, which was sponsored by Shimadzu. Nine masters and four PhD students presented from six institutions. ChromSA sponsored prizes to the following students:
  - First place PhD prize: Mokgehle Letsolo, University of Johannesburg
  - First place MSc prize: Chanel Pretorius, University of Johannesburg
  - Second place MSc prize: Vuyolwethu Seterjwa, Tshwane University of Technology.
- Additional lectures held in Gauteng were as follows:

| Speaker             | Title   | Date             | Sponsor  |
|---------------------|---|------------------|----------|
| Leandri van der Wat | How much analytical chemistry goes into my face cream?  | 10 July 2019     | ChromSA  |
| Dr Sarah Dowd       | GC- and LC-MS tools for analysis of extractables and leachable compounds from packaging materials | 10 October 2019  | Microsep |
| Dr Marc Bouwer      | Insect chemical ecology from analytical chemistry to field application                            | 20 November 2019 | ChromSA  |

- o The Western Cape committee mainly focused on the organization of the ChromSAAMS 2020 Conference. They also hosted the following lecture:

| Speaker          | Title   | Date         | Sponsor |
|------------------|---|--------------|---------|
| Dr Jaap de Zeeuw | Experience the power of Restek's free EZGC software tools: Method translation and chromatogram optimization without using a GC. | 1 April 2019 | Leco    |

#### **F) FUTURE EVENTS:**

The ChromSAAMS 2020 Conference which was scheduled for 13 to 16 September 2020 in Stellenbosch has been postponed to 2021 due to the Covid-19 situation. Additional planned events in Gauteng are also on hold.

#### **G) CONCLUDING COMMENTS:**

It is very encouraging to note the ongoing interest and involvement of scientists and postgraduate students in ChromSA. The sustained activities and impact of this division is only possible due to the dedicated hard work of the ChromSA national and regional committee members, who voluntarily give of their valuable time and energy. I would therefore like to sincerely thank all committee members for their contributions. The ongoing invaluable support of ChromSA's sponsors is also highly appreciated. The numerous webinars they have presented during the lockdown period has been of great benefit to chromatographers and has helped to keep the division "alive" during this difficult time. Finally, I would like to thank all the ChromSA members who contribute to the vibrancy of the division and for their participation in our events, making them valuable networking opportunities.

We look forward to seeing you all again in the near future!

**Prof Patricia Forbes**  
Chairperson, ChromSA

### **ENVIROMENTAL CHEMISTRY**

The Department of Environmental, Water & Earth Sciences, Faculty of Science, Tshwane University of Technology, hosted Prof Kalantzi Olga-Ioanna from the University of the Aegean Mytilene Greece, for a one-week Erasmus Plus Staff Mobility Programme in 2019. The Erasmus Plus Staff Mobility was awarded to the University of the Aegean, Mytilene Greece and the Tshwane University of Technology from 2017-2020. The award has now extended until 2021, because of COVID-19 outbreak.

#### **Expected outcomes and impact (e.g. on the professional development of the teaching staff member and on the competences of students at both institutions):**

The mobility is to strengthen cooperation links in order to increase mobility between institutions especially for students, as well as partnership on research projects since both Prof Kalantzi Olga-Ioanna and Prof OJ Okonkwo share similar research interests. Since the beginning of this collaboration, the postgraduate students from the University of the Aegean and Tshwane University of Technology have benefited from joint publications and scientific article editing from the teaching staff members. Furthermore, the mobility will further enrich the staff member's individual teaching experiences;

strengthen their contacts and further co-operation. More publications will arise from this effort in 2019-2020, as well as some joint PhD supervisions.

## Activities

Postgraduate students:

Prof Kalantzi Olga-Ioanna gave talks to postgraduate students and doctoral research fellows on how to write effective scientific papers at a two-day workshop, at TUT. On the third day of the workshop, Prof Kalantzi Olga-Ioanna, conducted training on endnotes as well as search engines for scientific articles. The fourth and fifth days of the workshop included assignment presentations and general discussions on the outcome of the workshop. In addition to the aforementioned workshop activities, Prof Kalantzi Olga-Ioanna gave a presentation of the University of the Aegean's academic and research profile and activities in order to further stimulate student mobility and acquaint staff of the University of the Aegean's courses and best practices. Some group photos taken during Prof Kalantzi Olga-Ioanna's visit are below.



Department of Environmental, Water & Earth Sciences group photo with Prof Kalantzi Olga-Ioanna (seated between Dr Lizzy Monyatsi (right –HoD) and Ms Sarah Galebies (left -Research Administrator)



Environmental-Analytical Research in chemistry (EARCh) team at TUT group photo with Prof Kalantzi Olga-Ioanna (second from left standing).

**Prof OJ Okonkwo**  
**Chair Environmental Chemistry**

### PHYSICAL CHEMISTRY

Unfortunately, the Physical Chemistry Division has been inactive for a number of years. Plans, however, are afoot to revitalize this important Division of the Institute. We invite all members who would be willing to serve on the committee for this Division to contact the SACI Administrator, Mrs Laila Smith.



**ElectrochemSA divisional report 2019-2020**

Nothing to report

**Prof. Omotayo A. Arotiba MRSC**  
**Chairperson ElectrochemSA**

## INORGANIC CHEMISTRY

There is nothing substantial to report from the Inorganic Division. The only activity of the Inorganic Division is organising the Inorganic Conference series. Prof. Dave Billing is chair of the forthcoming Inorganic Conference and Carman Symposium. This was due to take place in 2020, but owing to covid-19 is postponed to 2021.

**Prof TJ Egan**  
**Chairperson Inorganic Chemistry**

## INDUSTRIAL CHEMISTRY

Nothing to report

**Dr M Booth**  
**Chairperson Industrial Chemistry**

## MOLECULAR MODELLING

The annual meeting of the Molecular Modelling Special Interest Group (SIG) and Molecular Modelling division of SACI was held at the annual CHPC meeting on 5 December 2019 (09:00 -16:30) in King Shaka meeting room of the Birchwood Hotel and OR Tambo Conference Centre, Boksburg.

The following issues were addressed:

1. Prof. Jeanet Conradie of UFS, Prof. Marilé Landman of UP and Dr. Anton Lopis of the CHPC were thanked for their willingness to assist in compiling the program for the one-day seminar, where various researchers and postgraduate students presented their research. This seminar was a continuation of the drive initiated in 2016 to give more students the opportunity to present the work they do in molecular modelling at the annual CHPC conference. This meeting was the last session of the seminar.
2. Software requirements/inventory of software available on CHPC to members of the Molecular Modelling Division was discussed.
3. An open invitation was extended to members to follow the protocol for new software to be made available on the CHPC.
4. The need for software and Linux training was raised and discussed. It was decided that a survey to determine the training needs will be compiled. Additionally, a request was made for volunteers to help with the training. This will also form part of the survey. Additionally, the survey will be used to determine the composition of members of the SIG and membership to SACI.
5. The CHPC was thanked for the workshops before and after the conference, as well as during 2019. These workshops were on the use of (access to) the CHPC and Schrodinger software available on

CHPC. The members were also informed about the CHPC summer school and winter school, where basic and advanced training in Linux, is presented every year.

- The members were reminded that support for using the CHPC is available via the Helpdesk and CHPC Wiki. If they do not get the help they needed or do not find an answer in the Wiki, Dr Aton Lopis or Dr Krishna Govender at CHPC could be contacted.
- Dr Aton Lopis and Dr Krishna Govender were thanked for all their help in 2019.
- Members were requested to acknowledge CHPC in outputs and send copies of outputs to Dr Anton Lopis or Dr Krishna Govender at CHPC.

**Prof CGCE van Sittert**  
**Chairperson Molecular Modelling**

### ORGANIC CHEMISTRY

Nothing to report

**Dr C Veale**  
**Organic Chemistry Division**



Supporting all Mass Spectrometry activities in South Africa  
A Division of the South African Chemical Institute  
[www.saams.up.ac.za](http://www.saams.up.ac.za)



#### **1. Committee**

Three committee meetings were held during this period:

27 August 2019  
5 December 2019  
4 February 2020

The following members were elected to serve on the SAAMS National Committee for two years from July 2019:

|                              |                                       |
|------------------------------|---------------------------------------|
| Brendon Naicker *            | (Chairperson)                         |
| Maré Linsky                  | (Vice-chairperson & Minute Secretary) |
| Ljiljana Marjanovic          | (Immediate-past Chairperson)          |
| Schalk de Kock               | (Treasurer)                           |
| Egmont Rohwer                | (International Representative)        |
| Mike Britton                 | (Liaison with SACI)                   |
| Maxime Chalmers van den Berg | (Vendor Industry Representative)      |
| Duncan Cromarty              | (Metabolomics Representative)         |
| Désirée Prevoo-Franzen       | (Industry Representative)             |
| Ireshyn Govender             | (Industry Representative)             |
| Madelien Wooding             | (Academic Representative)             |

### Regional representatives:

|                   |                     |
|-------------------|---------------------|
| Johan Jordaan     | North-West Province |
| Marietjie Stander | Western Cape        |
| Gabre Kemp        | Free State          |
| Graeme Bradley    | Eastern Cape        |
| Edwin Madala      | Limpopo             |

\* Brendon Naicker resigned from the committee in March 2020 to take up a job opportunity in the UK. Maré Linsky took over the role as Chair, while Ljiljana Marjanovic agreed to fill the position of Vice-chair for the remainder of the term of office. Madelien Wooding has taken over the role of Minute secretary.

## **2. Membership**

SAAMS has a membership of 432 members (as of July 2020) including students, analysts, researchers and instrument supplier representatives. Apart from chemical laboratories and institutions, members come from other disciplines such as veterinary, microbiology, pharmaceutical, food and drugs, geology, agricultural, medical etc.

## **3. Finances**

Following the closure of the SAAMS financial year on 30 April 2020, the bank statements, all associated paperwork and transaction authorizations were forwarded to Mr John Mosdell, SAAMS' new financial auditor. Unfortunately, due to a prolonged illness, Mr De Kock (SAAMS' previous auditor of 20 years) was unable to perform the 2018/2019 audit, and Mr Mosdell audited SAAMS' financial statements for the last two years. These audited statements were provided to SACI at the end of June 2020.

The most significant income received during the last financial year was interest on the investments.

Expenses during the period included the cost of function venues, meetings and meals, bank charges, awards to young scientists, etc. Due to a reduction in sponsorships, the most significant expense was cost associated with functions.

## **4. Functions and activities**

### SAAMS / SASS mini-symposium, 22 August 2019



This event was organized jointly by SAAMS and SASS as an opportunity to celebrate the winner of 2018's Mass Spectrometrist / Spectroscopist Student event. At the event held on the 22<sup>nd</sup> of August 2019 at the South African Grain Laboratories (SAGL) Conference Centre, the winner - Qedile Zwane from the University of Johannesburg presented a talk on his thesis entitled:

Photoreduction of Chromium (VI) using multi-phase Bismuth Vanadate (BiVO<sub>4</sub>) Photocatalyst. After his presentation, he officially received his prize.

Qudile's presentation was followed by another student presentation from Machel Leuschner from the University of Pretoria on her recently completed PhD-thesis on Bioanalysis of the Geneva phenotyping cocktail in whole blood collected with volumetric absorptive micro-sampling by LC-MS/MS.

#### Annual General Meeting, 23 October 2019



SAAMS' Annual General Meeting (AGM) for 2019 took place on 23 October 2019 at the South African Grain Laboratories Conference Centre. The AGM was hosted in conjunction with a lecture by Dr Fidele Tugizimana, from the University of Johannesburg on "Mass spectrometry in Metabolomics: a story of co-evolution?" In his presentation Dr Tugizimana gave a comprehensive overview of the development and various current applications in the field.

During the AGM section of the meeting, the Chairman's report was discussed, specifically providing updates on SAAMS membership, finances, SAAMS' auditor, social media and reviewing events held during the past year. The new SAAMS national committee and regional representatives for the 2019-2021 term were also formally announced at the AGM.



#### SAAMS / SASS Young Mass Spectrometrist / Spectroscopist Student Symposium

The Northern region's symposium was jointly organised by both SAAMS and SASS. The event was again hosted at PerkinElmer's auditorium in Midrand on 29 November 2019. Four postgraduate students from various tertiary institutions presented their research which utilized spectroscopy and/or mass spectrometry techniques. SAAMS sponsored the prize for the Regional winner, Lorely Cairns. Unfortunately, the Southern region's event again had to be cancelled due to limited interest.

#### Organic solvent vapours addition during electrospray ionisation and desorption electrospray ionisation, 12 December 2019

Prof André Venter from Western Michigan University in the USA presented A Mass Spectrometry Fundamentals Lecture on: Organic solvent vapours addition during electrospray

ionisation and desorption electrospray ionisation, at the CSIR on the 12<sup>th</sup> of December 2019. The presentation focussed on the addition of polar organic solvent vapours in the atmosphere surrounding the electrospray plume to change protein charge states, i.e. to reduce cationization by ions, while also improving signal intensities. Important application areas include fields such as proteomics, as well as the pharmaceutical industry, with the rise in the development of biotherapeutics.

#### SAAMS Beginning of the year event

The committee was in the process of organising a beginning of the year event in March/April of 2020 with presentations from Prof Duncan Cromarty and Madelien Wooding, both from UP. Due to the onset of the Covid-19 crisis these plans unfortunately had to be halted.

#### **5. Website and Social media**

SAAMS are currently maintaining a website as well as a SAAMS LinkedIn account as a means of social media communication with its members.

#### **6. General**

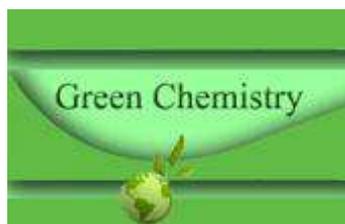
#### **ChromSAAMS 2020:**



This bi-annual conference has provisionally been postponed to 2021 due to the international Covid-19 crisis. A suitable date to host the conference in Stellenbosch in 2021 will be chosen as soon as the Covid-19 situation has stabilised and the safety of delegates can be guaranteed.

The SAAMS committee looks forward to organizing more mass spectrometry related activities once the Covid-19 crisis is over and will in the meantime continue to support applicable web-based events as far as possible.

**Maré Linsky**  
**SAAMS Chairperson**



Nothing to report

**Prof Rosalyn Klein**  
**Chairperson Green Chemistry**



### **Committee**

Chairperson: Dr Liezel van der Merwe (UP)

Immediate Past Chairperson/Website: Dr. Kobus Wagener (Necsa)

Treasurer: Dr Isbé van der Westhuizen (UP)

Secretary: Dr Liezel van der Merwe (UP)

Communication and membership: Mr. Benni Vilakazi (Necsa)

Instrument supplier representative: Vacant

Regional Representatives: Prof. Chris Woolard, Mr Ross Burnham, Dr. Andrew Pienaar

### **Events 2019-2020**

Two hands-on training events covering aspects related to basic instrumental theory and practical application knowledge in the fields of Thermal Analysis and Rheology were held in collaboration with SASOR (Southern African Society of Rheology). These events took place on 16 August 2019 at the CSIR National Centre for Nano-structured Materials in Pretoria and on 28 October 2019 at the CPUT District 6 Campus in Cape Town.

### **Knowledge dissemination**

E-mail communication were sent to members and interested parties to ensure that local events such as local and international conferences, webinars and training sessions were communicated. Our website has been updated regularly.

### **International Ties**

We have membership as an affiliated society of ICTAC (International Confederation of Thermal Analysis and Calorimetry). Unfortunately, the 17<sup>th</sup> ICTAC conference, which were scheduled to take place in, Krakow, Poland from 30 August 2020 had to be postponed due to the COVID-19 pandemic.

### **Membership**

There are currently 65 members of SACI who are members of ThermSA. In addition there are 4 members who are not SACI members.

### **Dr Liezel van der Merwe**

Chairperson: ThermSA

## **SACI STUDENT REPORT**

It is my pleasure to pen the first of my annual reports as the new national student representative of the South African Chemical Institute. We ended 2019 on a hopeful note after being successfully represented for the first time at the 2019 SACI Council meeting by my predecessor, Kudzai Mugadza. Since then 2020 has given us an unexpected hurdle in the form of the COVID-19 pandemic and students have, understandably, turned their focus to the impact of the pandemic on their studies and their capability to complete their studies while performing research under complicated restrictions.

Currently, we are well beyond the 100 day mark of the national lockdown. The health and economic effects have been enormous and our condolences go out to all of our members who have lost loved ones

during this time. As the student division of SACI we have not been exempt from these effects. All social and academic events have been placed on hold or cancelled and this has affected our ability to retain student members. As chemists, we understand that the road to a safe vaccine may be a long one and for this reason it is essential that SACI must adapt to the circumstances in order to successfully provide support to our student members. Our approach is therefore to increase SACI's digital presence both through our newly-established social media platforms as well as future online events. Our focus will be turning to online webinars and student symposia which would allow us to host speakers from leading institutions globally as well as include student members from all provinces. We invite all members to like and follow our pages on Facebook and Instagram for instant updates on SACI matters. Important SACI communiqués and snippets from the SACI newsletter are placed on our social media platforms to address the concern of students not being adequately informed regarding SACI activities, as discussed at the 2018 SACI convention. 2019 also saw the appointment of institutional SACI student representatives and this method is still proving effective at providing a point of contact for student issues at each institution, despite the constant changing of the representatives due to the rapid turnover of the average student population.

While we are finding our feet in the digital world and re-evaluating our approaches we urge our student members to not give up on their memberships. Exciting new ideas are pending and we will be trying our best to increase student member participation. Until then we would like to extend our thanks for the continued trust and support of our student members.

Keep safe and well

**Megan Matthews**  
**National SACI Student Representative**

## FINANCIAL REPORT - PERIOD 1 MAY 2019 TO 30 APRIL 2020

|  | 2018-2019        | 2019-2020        | Y/Y-1       | 2019-2020        | 2019-2020       |
|--|------------------|------------------|-------------|------------------|-----------------|
| Income   | Actual           | Actual           | %           | Budget           | Actual/Budget % |
| Membership Fees                                | R 568,541        | R 550,048        | -3.3%       | R 630,000        | -12.7%          |
| PrChemSA annual and once off registration Fees | R 31,360         | R 38,870         | 23.9%       | R 33,000         | 17.8%           |
| Journal Income                                 | R 3,674          | R 530            | -85.6%      | R -              | No Budget       |
| IUPAC income                                   | R 19,790         | R 12,480         | -36.9%      | R 21,000         | -40.6%          |
| Unallocated Income                             | R 29,085         | R 45,285         | 55.7%       | R -              | No Budget       |
| Merchandise/Ties and Scarfs                    | R 600            | R 61,030         | 10072%      | R 40,000         | 52.6%           |
| Admin donation from conferences                | R 25,000         | R 30,000         | 20.0%       | R 10,000         | 200.0%          |
| Advertising Income                             | R 9,000          | R 3,800          | -57.8%      | R 10,000         | -62.0%          |
| Critical Skills Evaluation                     | R -              | R 5,200          |             | R -              | No Budget       |
| Interest on Marketlink account                 | R 5,513          | R 7,644          | 38.6%       | R 6,000          | 27.4%           |
| <b>Total Income</b>                            | <b>R 692,563</b> | <b>R 754,887</b> | <b>9.0%</b> | <b>R 750,000</b> | <b>0.7%</b>     |

| Expenditure                                     | Actual           | Actual           | %            | Budget           | Actual/Budget % |
|---|------------------|------------------|--------------|------------------|-----------------|
| Journal Expenses                                | R 59,123         | R 80,262         | 35.8%        | R 62,000         | 29.5%           |
| Bank Charges                                    | R 11,849         | R 13,421         | 13.3%        | R 12,500         | 7.4%            |
| Computer/Software/Pastel/Internet               | R 21,638         | R 24,539         | 13.4%        | R 23,000         | 6.7%            |
| SAJC online submissions                         | R 17,590         | R 15,048         | -14.4%       | R 18,500         | -18.7%          |
| Courier and Postage                             | R 2,578          | R 1,548          | -40.0%       | R 2,000          | -22.6%          |
| Entertainment Expenses (Council/Exco Functions) | R 9,962          | R 10,527         | 5.7%         | R 10,500         | 0.3%            |
| General Expenses                                | R 4,505          | R 6,513          | 44.6%        | R 5,000          | 30.3%           |
| Printing, Stationery and Photocopying           | R 6,500          | R 4,754          | -26.9%       | R 6,800          | -30.1%          |
| Salaries and Wages                              | R 392,457        | R 412,108        | 5.0%         | R 425,000        | -3.0%           |
| Telephone and Fax                               | R 3,999          | R 3,950          | -1.2%        | R 4,200          | -6.0%           |
| Zoom Conference call                            | R 2,846          | R 2,878          | 1.1%         | R 3,000          | -4.1%           |
| Travel and Accommodation                        | R 29,558         | R 34,923         | 18.2%        | R 20,000         | 74.6%           |
| Subscriptions (IUPAC/FASC/EBSCO/NSTF/SAQA)      | R 27,547         | R 18,642         | -32.3%       | R 29,000         | -35.7%          |
| Auditors  | R 12,850         | R 12,720         | -1.0%        | R 13,500         | -5.8%           |
| Medal Prize Money and Minting of Medals         | R 23,050         | R 25,670         | 11.4%        | R 25,000         | 2.7%            |
| Medal Functions/Donations                       | R 8,689          | R -              | 100.0%       | R -              | No Budget       |
| Rental  | R 18,000         | R 18,000         | 0.0%         | R 18,000         | 0.0%            |
| Merchandise                                     | R 27,600         | R 30,245         | 9.6%         | R -              | No Budget       |
| PrChemSA Administration                         | R 13,520         | R 7,280          | -46.2%       | R 15,000         | -51.5%          |
| Telkom Wifi                                     | R 4,247          | R 3,739          | -12.0%       | R 4,500          | -16.9%          |
| Certificates                                    | R 8,984          | R 5,973          | -33.5%       | R 10,000         | -40.3%          |
| IYPT activities                                 |                  | R 45,200         |              | R 100,000        | -54.8%          |
| Critical skills evaluation Prof Breet           | R 700            | R 1,400          | 100.0%       | R -              | No Budget       |
| <b>Total Expenditure</b>                        | <b>R 707,790</b> | <b>R 779,339</b> | <b>10.1%</b> | <b>R 807,500</b> | <b>-3.5%</b>    |

| Item              | Actual           | Actual           | %            | Budget           | Actual/Budget % |
|-------------------|------------------|------------------|--------------|------------------|-----------------|
| Total Income      | R 692,563        | R 754,887        | 9.0%         | R 750,000        | 0.7%            |
| Total Expenditure | R 707,790        | R 779,339        | 10.1%        | R 807,500        | -3.5%           |
| <b>Balance</b>    | <b>-R 15,227</b> | <b>-R 24,452</b> | <b>60.6%</b> | <b>-R 57,500</b> | <b>-57.5%</b>   |

| SACI Admin Account                |  |  |                  |                  |
|-----------------------------------|--|--|------------------|------------------|
| Wits Admin account                |  |  | -R 31,165        | -R 31,165        |
| Standard Bank Market Link Account |  |  | R 2,259          | R 2,259          |
| Standard Bank Cheque account      |  |  | R 358,730        | R 358,730        |
| <b>Total</b>                      |  |  | <b>R 329,823</b> | <b>R 329,823</b> |

| Central Fund Account         | Opening Balance    | %             | Closing Balance    | Difference        |
|------------------------------|--------------------|---------------|--------------------|-------------------|
| Ninety One Equity Fund H     | R 489,359          | -6.4%         | R 458,208          | -R 31,152         |
| Old Mutual                   | R 407,191          | -25.4%        | R 303,896          | -R 103,295        |
| SIM General Equity Fund      | R 431,819          | -10.7%        | R 385,554          | -R 46,265         |
| Stanlib Property Income Fund | R 427,177          | -45.7%        | R 231,765          | -R 195,412        |
| <b>Total</b>                 | <b>R 1,755,546</b> | <b>-21.4%</b> | <b>R 1,379,422</b> | <b>-R 376,124</b> |

|  |  |  |                   |                   |
|--|--|--|-------------------|-------------------|
| <b>Total Interest or loss on investments</b> |  |  | <b>-R 376,124</b> | <b>-R 376,124</b> |
|--|--|--|-------------------|-------------------|

| Seed Monies and Loans |  | Total            | Total            |
|-----------------------|--|------------------|------------------|
| ChromSAAMS            |  | R 50,000         | R 50,000         |
| ICCE 2020             |  | R 200,000        | R 200,000        |
| Central               |  | R 18,012         | R 18,012         |
| <b>Total</b>          |  | <b>R 268,012</b> | <b>R 268,012</b> |

| Profit Derived from Conferences | 2017 - 2018 | 2018-2019 |  | 2019-2020 | Difference |
|---------------------------------|-------------|-----------|--|-----------|------------|
| <b>Total</b>                    | R 27,382    | R 107,800 |  | R 146,646 | R 38,846   |

| Divisional Accounts not managed by SACI | Opening Balance |  | Closing Balance | Difference |
|---|-----------------|--|-----------------|------------|
| ChromSA                                 | R 477,637       |  | R 434,136       | -R 43,501  |
| Western Cape                            | R 4,900         |  | R 4,900         | R -        |
| SAAMS                                   | R 372,691       |  | R 295,342       | -R 77,349  |

| Divisions' Market Link Accounts managed by SACI | Opening Balance    |  | Closing Balance    | Difference      |
|---|--------------------|--|--------------------|-----------------|
| Inorganic Chemistry                             | R 187,035          |  | R 195,663          | R 8,628         |
| Computational Chemistry                         | R 5,490            |  | R 5,606            | R 116           |
| Chemical Education                              | R 1,156            |  | R 1,226            | R 70            |
| Eastern Cape                                    | R 107,802          |  | R 78,650           | -R 29,152       |
| Analytical Chemistry                            | R 246,407          |  | R 258,098          | R 11,692        |
| Organic Chemistry                               | R 183,790          |  | R 258,627          | R 74,838        |
| Kwazulu Natal                                   | R 133,181          |  | R 106,434          | -R 26,748       |
| Electrochemistry                                | R 124,628          |  | R 156,525          | R 31,897        |
| North   | R 32,317           |  | R 18,040           | -R 14,277       |
| Central   | R 117              |  | R 111              | -R 5            |
| Green Chemistry                                 | R 50,215           |  | R 55,668           | R 5,453         |
| ThermSA   | R 64,945           |  | R 57,668           | -R 7,277        |
| KZN Womans Functions                            | R 23,832           |  | R 23,120           | -R 712          |
| Western Cape                                    | R 117,449          |  | R 100,069          | -R 17,380       |
| <b>Total</b>                                    | <b>R 1,278,363</b> |  | <b>R 1,315,507</b> | <b>R 37,144</b> |

The full, audited, SACI accounts are available on request. The tables attached provide a summary of the Institute's financials for 01 May 2019 to 30 April 2020.

The SACI Admin accounts (Wits Admin, Standard Bank Market Link, Standard Bank Cheque) are used for day-to-day operations. SACI looks after, but has no direct control over, the Divisional Accounts. These accounts are fully audited by certified public accountants RSNT, as an independent reviewer of the financial operations, hence, the difference in figures.

SACI also holds monies in investment funds, set up in 2014, as aggressive investments, i.e. for long term (3-5 years), compared to the short term, minimum return, Market Link Account; these investment funds are managed by a Standard Bank broker.

The SACI day-to day operations had a good financial year. Total income was 0.7% (R5K) above the budget and 9.0% (R62K) higher than the previous year. This was mainly due to PrChemSA memberships and Merchandise sales. Unallocated Funds are membership payments unallocated to specific members during payment, as at 30 April 2020. Although the Membership budget was increased by 5.4%, numbers decreased (normal trend after a SACI Convention).

Expenditure was well controlled, 3.5% (28K) under budget, 10.1% (73K) higher than the previous financial year. The most significant increases were for Journal Expenses, up 35.8% (21K) and 29.5% (R22K) above budget, and Travel/Accommodation, up 74.6% (R15K) above the budget, for the EXCO and Council meeting costs in August 2019.

The investments in the Central Fund showed significant losses. South African market conditions worsened, and fluctuated from February 2020, due to the COVID-19 Pandemic across the World. The Ninety-One (formerly Investec) Fund lost 6.4% (R31K), Old Mutual Fund 25.4% (R103K), SIM (Sanlam) Fund 10.7% (R46K) and the Stanlib Property Fund 45.7% (R195K). A proposal was presented to EXCO in March 2020, to move the 2 worst performing funds into International Global Funds, to be managed by the SACI Treasurer, but, unfortunately, the Rand weakened, before Council could be approached for approval. A proposal to move the Old Mutual and Stanlib Property Funds to SA based Global Investment products is to be presented for approval to EXCO and Council. The Ninety-One and Sanlam Funds will be closely monitored against the Top 100 performing Funds in South Africa.

Profit received from Conferences was R146 646, including finalised income from the SACI Convention in 2018.

The budget for 2020/2021 is conservative, based on Government CPI forecasts, following the COVID-19 Pandemic. Income from membership fees is expected to rise only 4% (unallocated income has been included in the membership income). Merchandise sales will be a minimum compared to the 2019 IYPT sales. As the conference schedule has been moved out by 1-2 years, there will be no income received from the Divisions in the 2020/2021 financial year. Hence, the overall budget for income is low at R 757 510, 0.3% increase.

Expenditure is expected to decrease, due to on line ZOOM and Microsoft Team meetings, hence, less travel and accommodation costs. The additional budget for IYPT in 2019 is no longer required. An additional budget has been allocated to Journal Expenses, based on the actual costs last year. Cost of Merchandise is expected to be lower as IYPT 2019 additional costs are no longer valid. Hence overall expenditure is expected to decrease by 6.7% to R727 500, resulting in a profit of R33K in 2020/2021 financial year, i.e. the SACI financial position remains good.

A key note word of thanks is given to the SACI Secretariat for ensuring that the day to day accounts are kept in good order.

**SOUTH AFRICAN CHEMICAL INSTITUTE PROPOSED BUDGET FOR THE PERIOD 1 MAY 2019 TO 30 APRIL 2020**

|  | 2019-2020        | 2020-2021        | %Increase Actual<br>2019/2020 vs. Proposed<br>2020/2021 |
|--|------------------|------------------|---|
| <b>Income</b>                                  | <b>Actual</b>    | <b>Budget</b>    |   |
| Membership Fees                                | R 550,048        | R 619,150        | 12.6%   |
| PrChemSA annual and once off registration Fees | R 38,870         | R 40,420         | 4.0%  |
| Journal Income                                 | R 530            | R 550            | 3.9%  |
| IUPAC income                                   | R 12,480         | R 12,980         | 4.0%  |
| Unallocated Income                             | R 45,285         | R 47,100         | 4.0%  |
| Merchandise/Ties and Scarfs                    | R 61,030         | R 20,000         | -67.2%  |
| Admin donation from conferences                | R 30,000         | R -              | -100.0%   |
| Advertising Income                             | R 3,800          | R 3,950          | 3.9%  |
| Critical Skills Evaluation                     | R 5,200          | R 5,410          | 4.0%  |
| Interest on Marketlink account                 | R 7,644          | R 7,950          | 4.0%  |
| <b>Total Income</b>                            | <b>R 754,887</b> | <b>R 757,510</b> | <b>0.3%</b>   |

| <b>Expenditure</b>                              | <b>Actual</b>    | <b>Actual</b>    | <b>Budget</b> |
|---|------------------|------------------|---------------|
| Journal Expenses                                | R 80,262         | R 88,290         | 10.0%         |
| Bank Charges                                    | R 13,421         | R 14,000         | 4.3%          |
| Computer/Software/Pastel/Internet               | R 24,539         | R 25,520         | 4.0%          |
| SAJC online submissions                         | R 15,048         | R 15,650         | 4.0%          |
| Courier and Postage                             | R 1,548          | R 1,610          | 4.0%          |
| Entertainment Expenses (Council/Exco Functions) | R 10,527         | R 10,530         | 0.0%          |
| General Expenses                                | R 6,513          | R 6,770          | 4.0%          |
| Printing, Stationery and Photocopying           | R 4,754          | R 4,940          | 3.9%          |
| Salaries and Wages                              | R 412,108        | R 436,830        | 6.0%          |
| Telephone and Fax                               | R 3,950          | R 4,110          | 4.1%          |
| Zoom Conference call                            | R 2,878          | R -              | -100.0%       |
| Travel and Accommodation                        | R 34,923         | R 10,000         | -71.4%        |
| Presidents Travel                               | R -              | R -              | -             |
| Subscriptions (IUPAC/FASC/EBSCO/NSTF/SAQA)      | R 18,642         | R 19,390         | 4.0%          |
| Auditors  | R 12,720         | R 13,230         | 4.0%          |
| Medal Prize Money and Minting of Medals         | R 25,670         | R 26,700         | 4.0%          |
| Medal Functions/Donations                       | R -              | R -              | -             |
| Rental  | R 18,000         | R 18,720         | 4.0%          |
| Merchandise                                     | R 30,245         | R 15,000         | -50.4%        |
| PrChemSA Administration                         | R 7,280          | R 7,570          | 4.0%          |
| Telkom Wifi                                     | R 3,739          | R 3,890          | 4.0%          |
| Certificates                                    | R 5,973          | R 3,210          | -46.3%        |
| IYPT activities                                 | R 45,200         | R -              | -100.0%       |
| Critical skills evaluation Prof Breet           | R 1,400          | R 1,540          | 10.0%         |
| <b>Total Expenditure</b>                        | <b>R 779,339</b> | <b>R 727,500</b> | <b>-6.7%</b>  |

| <b>Item</b>       | <b>Actual</b>    | <b>Actual</b>   | <b>Budget</b>  |
|-------------------|------------------|-----------------|----------------|
| Total Income      | R 754,887        | R 757,510       | 0.3%           |
| Total Expenditure | R 779,339        | R 727,500       | -6.7%          |
| <b>Balance</b>    | <b>-R 24,452</b> | <b>R 30,010</b> | <b>-222.7%</b> |

**Mrs Suzanne Finney**  
Executive Treasurer

## PRESIDENTS OF THE INSTITUTE

|           |                   |           |                |
|-----------|-------------------|-----------|----------------|
| 1916-1917 | J S Jamieson      | 1958-1959 | H A E McKenzie |
| 1917-1918 | R B Denison       | 1959-1960 | G W Perold     |
| 1918-1919 | J A Wilkinson     | 1960-1961 | F L Warren     |
| 1919-1920 | J McCrae          | 1961-1962 | W S Rapson     |
| 1920-1921 | J Lewis           | 1962-1963 | F L Clark      |
| 1921-1922 | G H Stanley       | 1963-1964 | E F C H Rohwer |
| 1922-1923 | J Gray            | 1964-1965 | L J le Roux    |
| 1923-1924 | H H Green         | 1965-1966 | R E Robinson   |
| 1924-1925 | J Moir            | 1966-1967 | V Pretorius    |
| 1925-1926 | H H Dodds         | 1967-1968 | M Lamchen      |
| 1926-1927 | J A Wilkinson     | 1968-1969 | M Mrost        |
| 1927-1928 | B de C Marchand   | 1969-1970 | P C Carman     |
| 1928-1929 | C C Frye          | 1970-1971 | P R C Cooke    |
| 1929-1930 | M Rindl           | 1971-1972 | J F Preston    |
| 1930-1931 | F W Fox           | 1972-1973 | F E Malherbe   |
| 1931-1932 | A Harding Kloot   | 1973-1974 | C F Garbers    |
| 1932-1933 | H R Raikes        | 1974-1975 | N Stutterheim  |
| 1933-1934 | B van der Riet    | 1975-1976 | S Goodman      |
| 1934-1935 | J B Robertson     | 1976-1978 | V C O Schuler  |
| 1935-1936 | St C O Sinclair   | 1978-1979 | D E A Rivett   |
| 1936-1937 | J A McLachlan     | 1979-1980 | A Goosen       |
| 1937-1938 | T D Hall          | 1980-1981 | R R Arndt      |
| 1938-1939 | F J de Villiers   | 1981-1982 | R O Perry      |
| 1939-1940 | H J van Eck       | 1982-1984 | C J H Schutte  |
| 1940-1941 | F G Braithwaite   | 1984-1986 | P Bloom        |
| 1941-1942 | J P van Zyl       | 1986-1988 | J R Bull       |
| 1942-1943 | W F Barker        | 1988-1990 | J D Bradley    |
| 1943-1944 | P Kamerman        | 1990-1992 | A M Heyns      |
| 1944-1945 | J E Worsdale      | 1992-1994 | M D Booth      |
| 1945-1946 | T J Wilken Jordan | 1994-1996 | T M Letcher    |
| 1946-1947 | E Taberner        | 1996-1998 | E L J Breet    |
| 1947-1948 | H L de Waal       | 1998-2000 | C J Rademeyer  |
| 1948-1949 | W H Dyson         | 2000-2001 | B Rae          |
| 1949-1950 | H J Koch          | 2001-2003 | G E Jackson    |
| 1950-1951 | P v d R Copeman   | 2003-2005 | E Meintjies    |
| 1951-1952 | L F Addis Smith   | 2005-2007 | T A Ford       |
| 1952-1953 | A J Petrick       | 2007-2009 | N J Coville    |
| 1953-1954 | L D C Bok         | 2009-2011 | I R Green      |
| 1954-1955 | S S Israelstam    | 2011-2013 | J Darkwa       |
| 1955-1956 | F W Hayes         | 2013-2015 | S Lotz         |
| 1956-1957 | F Hawke           | 2015-2017 | B Martincigh   |
| 1957-1958 | A L Abbot         | 2017-2019 | V Nyamori      |
|           |                   | 2020-2021 | P Mallon       |

## RECIPIENTS OF THE GOLD MEDAL OF THE INSTITUTE

|      |                       |      |                  |
|------|-----------------------|------|------------------|
| 1970 | L H Ahrens            | 1995 | S E Drewes       |
| 1971 | P C Carman            | 1996 | D Ferreira       |
| 1972 | S G Shuttleworth      | 1997 | N J Coville      |
| 1973 | W S Rapson            | 1998 | W McGill         |
| 1974 | P E Rousseau          | 1999 | T M Letcher      |
| 1975 | V Pretorius           | 2000 | M E Brown        |
| 1976 | C van der Merwe Brink | 2001 | J P Michael      |
| 1977 | D G Roux              | 2002 | H G Raubenheimer |
| 1978 | G J Stander           | 2003 | L Nassimbeni     |
| 1979 | R E Robinson          | 2004 | B Burger         |
| 1980 | C F Garbers           | 2005 | No Award         |
| 1981 | P R Enslin            | 2006 | T A Ford         |
| 1982 | GW Perold             | 2007 | P Kaye           |
| 1983 | J C A Boeyens         | 2008 | No Award         |
| 1984 | J R Bull              | 2009 | M R Caira        |
| 1985 | A M Stephen           | 2010 | No Award         |
| 1986 | M Peisach             | 2011 | C J H Schutte    |
| 1987 | P S Steyn             | 2012 | T Nyokong        |
| 1988 | C W Holzapfel         | 2013 | B Klumperman     |
| 1989 | No Award              | 2014 | L J Barbour      |
| 1990 | J G H du Preez        | 2015 | H Marques        |
| 1991 | No Award              | 2016 | TJ Egan          |
| 1992 | A Goosen              | 2017 | H Pasch          |
| 1993 | R J Haines            | 2018 | K Chibale        |
| 1994 | A M Heyns             | 2019 | K Koch           |

## RECIPIENTS OF THE RAIKES MEDAL

|      |                |      |                   |
|------|----------------|------|-------------------|
| 1961 | P C Haaroff    | 1990 | C A Strydom       |
| 1962 | A J de Koning  | 1991 | M D Adams         |
| 1963 | No Award       | 1992 | J H Potgieter     |
| 1964 | No Award       | 1993 | G H Verdoorn      |
| 1965 | No Award       | 1994 | N V Jarvis        |
| 1966 | S E Drewes     | 1995 | M Raynor          |
| 1967 | W Robb         | 1996 | No Award          |
| 1968 | C H J Shutte   | 1997 | No Award          |
| 1969 | R A Basson     | 1998 | No Award          |
| 1970 | No Award       | 1999 | K J Naidoo        |
| 1971 | No Award       | 2000 | M H S Gradwell    |
| 1972 | D P Botes      | 2001 | M J Mphahlele     |
| 1973 | R J Haines     | 2002 | R I Stefan        |
| 1974 | P S Steyn      | 2003 | No Award          |
| 1975 | No Award       | 2004 | W A L van Otterlo |
| 1976 | R D Hancock    | 2005 | No Award          |
| 1977 | G V Fazakerley | 2006 | No Award          |
| 1978 | R van Eldik    | 2007 | J R Zeevaart      |
| 1979 | K De Haas      | 2008 | O Q Munro         |
| 1980 | G J Mc Dougall | 2009 | R Meijboom        |
| 1981 | T V Ashworth   | 2010 | M Fernandes       |
| 1982 | R L Paul       | 2011 | G Smith           |
| 1983 | No Award       | 2012 | H Tutu            |
| 1984 | No Award       | 2013 | E Strauss         |
| 1985 | No Award       | 2014 | A Lemmerer        |
| 1986 | M O Albers     | 2015 | AJ de Villiers    |
| 1987 | No Award       | 2016 | ZR Tshentu        |
| 1988 | No Award       | 2017 | DI Bezuidenhout   |
| 1989 | H M Marques    | 2018 | No Award          |
|      |                | 2019 | No Award          |

## RECIPIENTS OF THE AECI MEDAL

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

## RECIPIENTS OF THE MERCK MEDAL

|      |                        |      |               |
|------|------------------------|------|---------------|
| 2000 | J F van Staden         | 2010 | N J Coville   |
| 2001 | G H P Roos             | 2011 | R H Simoyi    |
| 2002 | N J Coville            | 2012 | D A Katskov   |
| 2003 | J C A Boeyens          | 2013 | D D N'Da      |
| 2004 | I Cukrowski            | 2014 | J Conradie    |
| 2005 | B Staskun              | 2015 | NJ Coville    |
| 2006 | H M Marques            | 2016 | BS Martincigh |
| 2007 | J J Pienaar            | 2017 | BS Martincigh |
| 2008 | P P Coetzee            | 2018 | PG Ndungu     |
| 2009 | C W van der Westhuizen | 2019 | LM Madikizela |

## RECIPIENTS OF THE HENDRIK VAN ECK MEDAL

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

## RECIPIENTS OF THE INDUSTRIAL CHEMISTRY MEDAL

|      |               |      |            |
|------|---------------|------|------------|
| 1961 | G E Mapstone  | 2003 | No Award   |
| 1962 | No Award      | 2004 | K McIntosh |
| 1963 | No Award      | 2005 | No Award   |
| 1994 | A Geertsema   | 2006 | No Award   |
| 1995 | F Fisher      | 2007 | No Award   |
| 1996 | No Award      | 2008 | No Award   |
| 1997 | No Award      | 2009 | No Award   |
| 1998 | No Award      | 2010 | No Award   |
| 1999 | No Award      | 2011 | J Dixon    |
| 2000 | N Ravenscroft | 2012 | No Award   |
| 2001 | T Grimmbacher | 2013 | No Award   |
| 2002 | No Award      |      |            |

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

|      |                                    |      |               |
|------|------------------------------------|------|---------------|
| 1977 | J M Pratt                          | 1996 | G J Stander   |
| 1978 | I R Leith                          | 1997 | J H Potgieter |
| 1979 | H J Hattingh                       | 1998 | No Award      |
| 1980 | P Theron                           | 1999 | P Apps        |
| 1981 | J Zlotnick                         | 2000 | N J Coville   |
| 1982 | G L Moore                          | 2001 | E W Neuse     |
| 1983 | M F Dutton                         | 2002 | No Award      |
| 1984 | No Award                           | 2003 | S S Potgieter |
| 1985 | R Osborne                          | 2004 | No Award      |
| 1986 | G L Moore                          | 2005 | P W Lotz      |
| 1987 | M A B Pougnet and<br>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<br>E A Jones | 2010 | No Award      |
| 1992 | D Gravett and L Salter             | 2011 | No Award      |
| 1993 | No Award                           | 2012 | No Award      |
| 1994 | No Award                           | 2013 | No Award      |
| 1995 | M J Laing                          |      |               |

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

- 1994 J J Nair, O Q Munro, P G Mountford, M H S Gradwell  
1995 B G Taverner, J L Scott, S L Roberts, P Mason  
1997 J A Ferreira, J du Toit, V Sewram, D Bessarabov, A Horne  
1998 M A Hearshaw, W A L van Otterlo, J J C Erasmus, H A Mahomed, J J C Grove  
1999 H van Rensburg, M A Fernandes, G Cripps  
2000 S Otto, A Rousseau  
2001 K Kaschula, W van Rensburg, K Blann  
2002 H de Bod, M Onani, C B Perry, D Webber  
2003 L Mpholle, K Barnes, C Gray  
2004 A Landman, E E Mmutlane, T le Roex, M Shezi  
2005 C Pelly, N Govender  
2006 A Lemmerer, J N Zimba, M Lawton  
2007 G Morgans  
2008 S D Mhlanga, K de Villiers, S Hadebe, M Shaw  
2009 S Pelly, C B Barnett, G A Boyle, T I Nkambule  
2010 D Bezuidenhout, E Nxumalo  
2011 W Motswainyana, O Onajole, D Cruishcank, A Shaikjee, R Wamsley  
2012 T Chetty, CF Zipp D, Kuter  
2013 D Ondigo, M Maubane, N Njuguna, H Wahl  
2014 A S Ogunlaja, MM Johnson, KJ Wicht, C Obuah

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

- 2015 BP Camden Grover, WF Petersen, MN Pillay  
2016 MW Dlamini, I Rogers, K Gopaul  
2017 G Kleinhans, EM Njogu, CI Nkanga, TN Phaahlamohlaka, J Okombo  
2018 E Mombeshora, S Ncube, S Sayed, A van der Westhuyzen  
2019 H Montaseri, M Seopela, T Amollo, U Muza, L Greyling

## RECIPIENTS OF THE JAMES MOIR MEDAL

- 1999 J P K Reynhardt, A J de Villiers, R Best, K Thornell, S V Goodall, K Blann, U Naidoo, N I Harmse, D P de Carcenac, R Cock, J C Nel
- 2000 N Grootboom, E Lamprecht, Amaluleke, D Rautenbach, G L Natrass, A M Castille, W Gerber
- 2001 J van Rensburg, T Le Roex, X K Peter, J Taljaard, K Lobb, G Venter, A van Aswegen
- 2002 L Greyvenstein, D Patten, Y Baijnath, T Raasch, K Stern, M du Toit, S Botha, O Horwood
- 2003 V Buchanan, E T Borkum, E Erasmus, P Reddy, P Franklyn
- 2004 W Barnard, R Gessner, A Gordon, Z Hall, G Lloyd, L Rota
- 2005 D I Bezuidenhout, C Booyjzsen, J Coetzee, R Janse van Vuuren, Y Koen, C A Laing, E Marais, S Mohamed, M S Mokhadinyana, N Moodley, J Paraskevopoulos, T S Pentz
- 2006 T Paquet, I Rootman, N Rose, P D R Kptze, S Travis, N Miti, D Duma, V A Patterson, M van Rhyn
- 2007 L Loots, M Adendorf, S Botha, MW Smith, P Skillington, N E Hendricks, T Hughes, B Waldron, M N Kay, D J Brankin
- 2008 SA Herbert, KE Mason-Jones, N Silwana, C Reynolds, JI du Toit, A Manival, A Cullen, TR Madihlaba, B Truscott.
- 2009 E Hanekom, W Xu, S M Jing, C F Zipp, Y Nortje, K J Gillham, B Dzepina, P Nyamukamba, A C Conibear, A Ilchev, P I Tshoke, K Potgieter B Simpson
- 2010 C Eley, A Falch, I Grobler, K Hadje Georgiou, N Jijana, P Khalili, R Koen, L Komarsamy, H Maritz, W Petersen, A Pholosi, CA Renison, BK Sebogisi, P Sobantu, S Thompson
- 2011 M Lephoto, H Mungondori, R Pretorius, C Rassie, S Robinson, T Pieterse, A Sayed, K Wicht, M Ungerer
- 2012 L van der Westhuizen, L van der Wat, BB Davies, B Camden-Smith, J Coetzee, MB Ismail, T Gunther, JM Taylor, TN Phaahlamohlaka, I Clifford
- 2013 N Steyn, N Mvumvu, SF Douman, R Hartzenberg, L Dralle, EH Kamanga, FM Amombo Noa, AJK Kupeta, M Mohale
- 2014 E Mamedov, S Raghunath, I Strydom, PL Pohl, M Dunn, T Saywood, NA Dare, JBML Smit, S Chohan
- 2015 HH Shiri, R Chitongo, OA Makgae, S De Kock, R Mente, S Magqazolo, RM Taylor, J Ferreira, M Visser, DE Chetty, S Pakade
- 2016 D Botes Myalo, B Steytler, KB Govender, J Leygonie, A Vicatos, J Lombard, L Swartzberg, AL Battison, K Nyamayaro, M Chizema
- 2017 V Tokoyi, NR Molupe, B Dzingwe, D Rademeyer, VD Ramasamy, S Lovisa W Duminy, J Botha, SE Orango Adewinogo, B Shaku, OMC Matlhaku, V Vermaak, GS Motloun, BL Davids, NI Richardson, T Cooper
- 2018 SL Bewana, L Parrott, S Jama, Z Nqakala, T Sithuba, A Welsh, JJ Moser, JL Slabbert, F Jagot, AL Henning, VL Porter, T Naidoo, U Ndagano
- 2019 TP Mabate, Z Madikizela, BA Fortuin, SB Tshifaro, L Garnie, A Khasipo, DB Malihase, N Mqoni, WJ Rudolph, S Abdullah, R Mphephu, JL Thibaud, Y Sukku, N Mpiti, M Seloi

## RECIPIENTS OF THE CHEMICAL EDUCATION MEDAL

1993 M J Laing  
1994 J Elsworth  
1995 M Selvaratnam  
1996 JD Bradley  
1997 GC Gerrans  
1998 No Award  
1999 S J Nel  
2000 P Huddle  
2001 No Award  
2002 MS Rollnick  
2003 No Award  
2004 B Davidowitz  
2005 No Award  
2006 G O M Onwu  
2007 M White  
2008 M Potgieter  
2009 GV Green  
2010 E Steenberg  
2011 P Loyson  
2012 J D Sewry  
2013 No Award  
2014 P Forbes  
2015 E Mavhunga  
2016 H Drummond  
2017 LA Pilcher  
2018 K Mathabathe  
2019 MH Du Toit

**RECIPIENTS OF THE SASOL**  
**INNOVATOR OF THE YEAR AWARD**

|      |               |
|------|---------------|
| 2002 | No Award      |
| 2003 | No 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      |
| 2012 | No Award      |
| 2013 | L J Barbour   |
| 2014 | O Munro       |
| 2015 | LB Klumperman |
| 2016 | No Award      |
| 2017 | No Award      |
| 2018 | No Award      |
| 2019 | No Award      |