

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

20th August 2020 to 18th August 2021



**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	Prof 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 P Mallon
SACNASP	Prof E Breet
NSTF	Prof H Drummond

### Chairpersons of Sections

Eastern Cape	Dr R Krause
SACI North	Prof C Nkambule
SACI Central	Dr M Smith
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)	Mrs B Hickman Mosdell
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	Prof D Haynes
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



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Executive Secretary



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Executive Treasurer



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Co-opted Member



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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:

20<sup>th</sup> August 2020 (AGM)

Executive Committee meetings were held on:

20<sup>th</sup> August 2020(AGM), 19<sup>th</sup> November 2020, 4<sup>th</sup> March 2021, 20<sup>th</sup> May 2021, 27<sup>th</sup> July 2021  
and 16<sup>th</sup> August 2021

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## **PRESIDENT'S REPORT**

In my previous report to Council in August 2020, I noted that 2020 was a year that would not soon be forgotten. At that stage, the disruptions associated with the COVID-19 pandemic were unprecedented for most of our members! It was noted in that report that the pandemic had a dramatic impact on the activities of the Institute. At that time, many of us had hoped that by the time of the next Council Meeting some degree of normality would have returned. However, it has become clear that dealing with the COVID-19 pandemic is not going to be like a sprint or even a marathon, but rather more of an ultra-marathon. Regretfully as was the case in 2020, the SACI Council Meeting and AGM will once again have to be in the online space.

The measures implemented to mitigate the spread of COVID-19 have also meant that no face-to-face SACI events could take place during the reporting period and we have once again had to have a second round of cancellation of events and importantly conferences including the ChromoSAAMS and Inorganic conferences. This is regretful since the SACI conferences and events are the most visible of the SACI activities and provide an opportunity for networking and interaction with colleague and the development on new contacts. These are also the opportunity to recruit new members to SACI and typically, our membership receives a boost during and immediately after major conferences and events. Regretfully as you will see from the Executive Secretary's report, the reduction of SACI events as a result of COVID-19 has no doubt negatively impacted on the Institutes membership. On the positive side the move to fully online events has also meant that we can potentially have wider participation and most notable was the National Young Chemists symposium, which was a great success, and will no doubt become a firm feature in the SACI National Programme in future years. Some of our sections have also be innovative and held online events to honour and celebrate the various 2020 SACI awardees. It is my sincere hope that we will be able to return to our face-to-face events in 2022 and most importantly, we can hold our 44<sup>th</sup> National Convention in Stellenbosch towards the end of 2022. The local organising committee under the leadership of Catherine Esterhuysen have already started to plan for this convention and hopefully the return to face-to-face events. The committee is, however, also planning for every eventuality including the possibility of holding a hybrid meeting if the circumstances do not allow for a fully face-to-face event. This is also the case for many international conferences going forward. It is yet to be seen what the full, long-term impact of the COVID 19 pandemic will be on various conference series and in many cases, the hybrid meeting seems to be the way forward. Nevertheless, I believe in the inherent value of face-to-face events and the networking opportunities these present both in the formal and informal settings these events create. We would like to ask that all of our Divisions give their full support to the 44<sup>th</sup> National Convention and hopefully this event will present the opportunity for our members to reconnect and also enjoy the experience of the Cape Winelands at the same time at the end of 2022!

During the course of this year, I am very glad to report that we have final resolution of the SAQA-SACNASP professional registration issue. SACI has signed a formal memorandum of agreement with SACNASP which will allow for the migration of our PrChemSA members to SACNASP registration. This is an ongoing process, but the migration should be complete by the end of this year. The completion of this process now allows us to proceed with adoption of the proposed new constitution, which was delayed until the professional registration matter was resolved.

The reduced activities of the Institute and drop in paid membership has certainly strained the SACI finances. This has been somewhat compounded by the losses incurred as a result of the cancellation of some conference as SACI will have to share in the associated financial losses.

Interestingly, SACI is not the only chemical society worldwide to suffer from a drop in paid membership and income as a result of the current pandemic. Some of our sister societies such as those in Canada and Australia have also reported a dramatic drop in membership and income as a result of the reduced activities. As an Institute we are fortunate that some careful and frugal financial planning over many years as well as our relatively low base costs (with only one paid employee) has given us a buffer to survive these challenging time. We are fortunate that our investments to some extent have given us a buffer to cover the reduced income. A decision was taken during last year to review our investment portfolio. On the recommendation of the review panel consisting of Suzanne Finney as Executive Treasure and Helder Marques as a co-opted EXCO member, the investment portfolio was changed. We have seen the positive outcomes of this change despite the fluctuation in the financial markets related to the ongoing events and challenges to the South African economy. The degree of financial security provided by our investments are reassuring, but it is clear that in the medium and long term we will need to reinvigorate the income streams of the Institute to survive financially. Hopefully this will happen when we can return to our normal activities but as we go forward, it will be important for SACI to focus on increasing our membership which is of course closely associated with the benefits of this membership. The EXCO has reached the final stages of developing a 5 year plan to look at the various aspect of the Institute including activities and 'value added member benefits' and hopefully the final draft of this plan will be distributed to Council to comment and then implement in the coming year.

The South African Journal of Chemistry continues to grow and flourish under the leadership of Patricia Forbes as Editor-in-Chief. It is very gratifying to see the ever increasing impact factor of the journal and this remain one of the flagship assets of the Institutes as one of the oldest continually published journals of any chemical society.

Finally, I want to thank each of the members of Council for your efforts to keep the activities of the Institute on track despite the challenges of the last year. I also want to thank Laila as the secretariat for all her efforts to keep things on track. The term of office of the current EXCO comes to an end with this council meeting and I want to also specifically thank the other members of EXCO for all their hard work on behalf of SACI. It has been a pleasure and a privilege to have the opportunity to serve as the President of the Institute and despite the many challenges of the last two years, I am confident that our Institute will continue to grow and serve the chemistry community of South Africa and beyond!



**Prof Peter Mallon**  
**President of SACI 2019-2021**

## **AWARDS 2020**

### **2021 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 Charles de Koning**

**University of the Witwatersrand**

#### **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 2020, covering papers published in the period 2014 to 2019, was amongst the most cited (without self-citation) SA authored paper in the field of Chemistry, as adjudicated by two former S. Afr. J. Chem. editors.

**Eric M. Njogu, Bernard Omondi and Vincent O. Nyamori\***

**S. Afr. J. Chem., 2016, 69, 51–66,**

**Synthesis, Physical and Antimicrobial Studies of Ferrocenyl-*N*-  
(pyridinylmethylene)anilines and Ferrocenyl-*N*-(pyridinylmethyl)anilines**

#### **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.

**Mr Adam Shnier – University of the Witwatersrand**

**Ms Jean Lombard – Stellenbosch University**

**Dr Ayomide H. Labulo – University of KwaZulu-Natal**

#### **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.

**Dr Margaret Blackie**

**Stellenbosch University**

### **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.

**Prof. Tricia Naicker**

**University of KwaZulu-Natal**

### **THE JAMES MOIR MEDALS**

Medals shall be awarded 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>Mr I.J. Minnie</b>	<b>University of Witwatersrand</b>
<b>Ms A. Kritzinger</b>	<b>University of Pretoria</b>
<b>Ms S.A. Fraser</b>	<b>University of Kwazulu-Natal</b>
<b>Ms L. Amod</b>	<b>University of Cape Town</b>
<b>Ms P Maseko</b>	<b>North West University</b>
<b>Ms B. Khuzwayo</b>	<b>Durban University of Technology</b>
<b>Mr G. Ramaremissa</b>	<b>University of Limpopo</b>
<b>Ms L. Mbonzhe</b>	<b>University of Venda</b>
<b>Mr M. Maritz</b>	<b>Nelson Mandela University</b>

## MEMBERSHIP REPORT

SACI Membership - 30 April 2021  
CURRENT MEMBERSHIP FIGURES

### Breakdown of Full Membership

	Apr-17	Apr-18	Apr-19	Apr-20	Nov-20	Apr-21	Total paying	829			
Corporate Members	362	22	384	4	388	-18	370	-122	248	154	402
RPL Member		3	3	-3	0	3	3	-1	2	2	4
Retired Members	14	0	14	1	15	-3	12	0	12	-1	11
Associate Members Old	94	-47	47	-14	33	-11	22	-9	13	5	18
Associate Members New		27	27	20	47	-1	46	-24	22	22	44
Married Associates	2	0	2	0	2	-1	1	0	1	0	1
Students(Paying)	255	49	304	44	348	-86	262	-107	155	116	271
Patron Members	3	0	3	-1	2	-1	1	0	1	0	1
Company members	7	-1	6	0	6	-2	4	-1	3	1	4
Post Doc	44	19	63	-1	62	-2	60	-16	44	29	73
<b>Non-Paying</b>											
Honorary Members	19	-2	17	0	17	0	17	0	17	0	17
Life Members(50YR Members)	98	2	100	4	104	-1	103	3	106	0	106
Students Honours(non Paying)	71	-65	6	9	15	35	50	-2	48	17	65
Teachers	36	0	36	-1	35	1	36	0	36	5	41
Under Graduate Students	27	1	28	7	35	34	69	1	70	2	72
Student representatives	11	0	11	0	11	0	11	0	11	0	11
<b>PrChemSA Total approved (94)</b>	<b>41</b>	<b>44</b>	<b>85</b>	<b>-4</b>	<b>81</b>	<b>-22</b>	<b>59</b>	<b>-18</b>	<b>41</b>	<b>14</b>	<b>55</b>
<b>Fellows Total approved (40)</b>	<b>21</b>	<b>3</b>	<b>24</b>	<b>2</b>	<b>26</b>	<b>5</b>	<b>31</b>	<b>9</b>	<b>40</b>	<b>0</b>	<b>40</b>

### Patron Member

Bruker South Africa (Pty) Ltd

### Company Members

Separation Scientific SA (Pty) Ltd

Consol Glass Pty Ltd

Wildlife Pharmaceuticals (Pty) Ltd

Perkin Elmer

Divisions	Sections	Employment Sector	Academia	Industry	Public sector	790
Analytical Chemistry Division	532	Western Cape	182			233
Chemical Education Division	158	Kwazulu Natal	158			12
Chromatography Division	166	North	213			
ThermSA	67	Central	463			
Environmental Division	315	Eastern Cape	102			
Industrial Chemistry Division	278	International Members	57			
Inorganic Chemistry Division	256					
Organic Chemistry Division	364					
Electrochemistry Division	112					
Green Chemistry Division	202					
Physical Chemistry Division	213					
Molecular Modeling Division	54					
Mass Spectrometry Division	134					

### 1.1 Division and Section Membership 2021

Division	2020	2021
Analytical Chemistry Division	535	532
Chemical Education Division	149	158
Chromatography Division	177	166
ThermSA	73	67
Environmental Division	298	315
Industrial Chemistry Division	288	278
Inorganic Chemistry Division	285	256
Organic Chemistry Division	413	364
Electrochemistry Division	97	112

Green Chemistry Division	201	202
Physical Chemistry Division	216	213
Molecular Modelling Division	29	54
Mass Spectrometry Division	156	134
<b>Section</b>	<b>2020</b>	<b>2021</b>
Western Cape	179	182
Kwazulu Natal	150	158
North	245	213
Central	507	463
Eastern Cape	79	102
International Members	66	57

The numbers in Divisions and Sections have remained more or less the same. There are noteworthy increases in Molecular Modelling and EC Section.

Prof Delia Haynes and Suzanne Finney have been endorsed by EXCO to lead the Physical Chemistry Division and the Industrial Chemistry Division, respectively.

### 1.2 Life Members 2021

Life members will be announced at the AGM once approved by Council. A report will be tabled at Council.

### 1.3 Nominations for Fellow of SACI (FSACI) 2021

Fellows will be announced at the AGM once approved by Council. A report will be tabled at Council.

### 1.4 Membership information 2021/2022

#### Types of membership:

1. Member (R940.00)
2. Associate Member (R940.00)
3. Retired Member (R240.00)
4. Patron Member (R17 200.00)
5. Company Member (R8 570.00)
6. Student Member - Undergraduate Chemistry Student (Free membership)
7. Student Member - Honours/BTech (Free membership)
8. Student Member - MSc/PhD/MTech/DTech (R175.00)
9. Post-Doctoral Member (R240.00)

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.

### 1.5 PrChemSA 2021

	2017	2018	2019	2020	2021
<b>PrChemSA</b>	41	85	81	59	<b>55</b>
<b>Fellows of SACI</b>	21	24	26	31	<b>40</b>

#### 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**

Carrying on from 2020, it was clear that the 2021 conference season was going to be very difficult because of Covid-19-related lockdowns and travel restrictions. Due to the decision to move the 2020 calendar up by one year (decision made at a June 2020 EXCO special meeting) there were thus no SACI-affiliated conferences during the rest of 2020. Unfortunately, both the **19<sup>th</sup> Inorganic/Carmen Chemistry Conference** (end of 2021) and the **ChromSA/SAAMS Conference** (Sept/Oct 2021) were cancelled by their organizing committees, with the former looking at possibly being part of the 44<sup>th</sup> SACI National Convention to be hosted in the Western Cape in December 2022. The organization of this National Convention is well on its way under the guidance of Prof Catharine Esterhuysen from Stellenbosch University. It can also be reported that the **31<sup>st</sup> Catalysis Society of South Africa (CATSA) International Conference** is on track to be held from 7-10 November, 2021, albeit via a virtual platform. The theme of the conference is “Catalysis for a sustainable society”.

In terms of international affiliations, it should be noted that the inaugural **Commonwealth Chemistry Congress (CCC)** took place online from 18-20 May 2021 under the auspices of the Federation of Commonwealth Chemical Sciences Societies, of which SACI is a member. As mentioned previously, the **ABC Chemistry Conference**, hosted by FASC (of which SACI is a member), initially scheduled to be held in Marrakech, Morocco in December 2021, will now take place later from 13-16 December 2022, and the **26<sup>th</sup> IUPAC International Conference on Chemistry Education (ICCE, Cape Town)**, which was due to be held in July 2020, has been moved to July 2022.

It is sincerely hoped that 2022 will bring some “normality” to the SACI conference programme although in the short term it is expected that our country’s vaccination levels will play an important role in terms of South Africa being able to host international delegates or arrange medium to large meetings of local scientists.

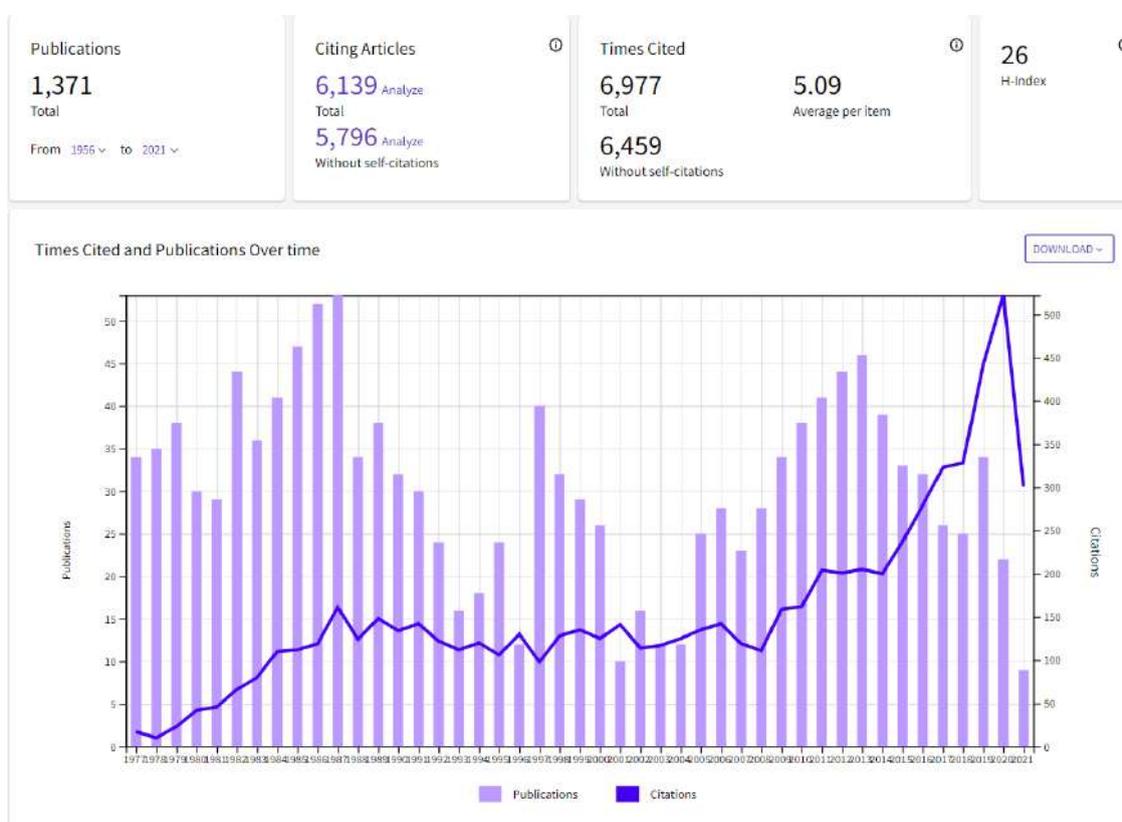
Date	Convention*	Inorganic/Carman*	Org/Frank Warren*	Analitika/ChromSA / SAAMS	Others
2019			15th Frank Warren, KwaZulu-Natal 7-11 July		30th CATSA annual conference, 5th International Symposium on Electrochemistry 11-14 August
2020					
2021					31st CATSA annual conference (7-10 Nov)
2022	44th SACI Convention, Western Cape, Dec (inc. 19th Inorganic/Carman Chemistry Conf, South Gauteng)				32nd CATSA annual conference; ABC Chem Conf., Marrakech, Morocco, 13-16 Dec; 26th ICCE (Chem. Ed.) July
2023			16th Frank Warren, North Gauteng	Analitika; September/October	33rd CATSA annual conference
2024		20th Inorganic/Carman Chemistry Conf, KwaZulu-Natal			34th CATSA annual conference
2025	45th SACI Convention, South Gauteng			ChromSA/SAAMS; Sept/October	35th CATSA annual conference
2026			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 back to 1920 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/>. The International Advisory board was updated in 2020: Prod Rudi van Eldik retired and Prof Tom Welton agreed to join the Board, which will be revised again in 2022 if required.

Statistics relating to the journal are presented in Figure 1 (downloaded from the Web of Science August 2021). The number of citations has increased remarkably since 2008. The impact factor of the journal is 1.2 (SCI Journal) and the Scopus CiteScore has increased from 1.21 in 2018, to 2.2 in 2019 and to 2.8 in 2020, which is very encouraging. Special acknowledgement should go to our dedicated editorial team as listed in the Table 1.



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

**Table 1: The 2021 SAJC editorial team**

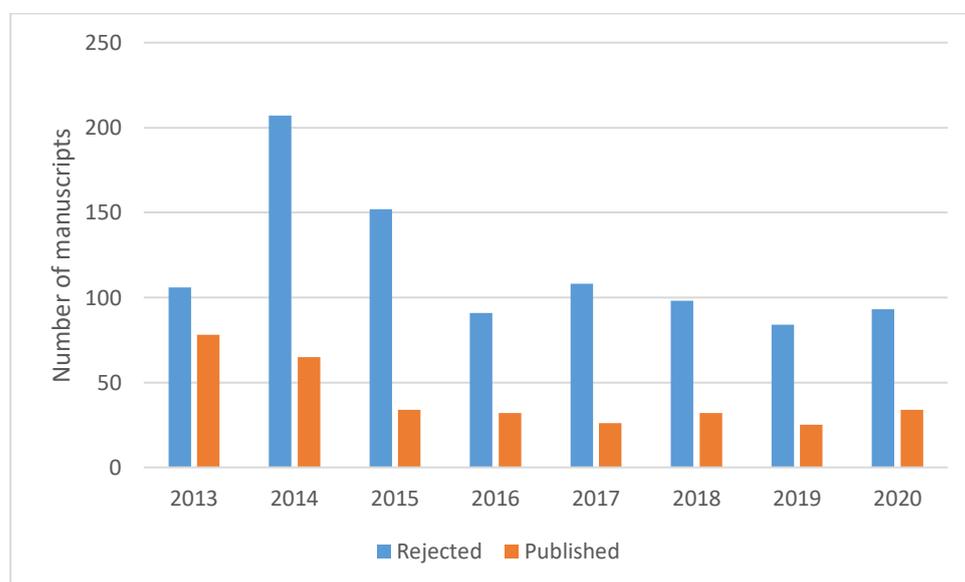
<b>Physical Chemistry</b> Prof Bice Martincigh Prof Jeanet Conradie Prof Elizabeth Erasmus	<b>Organic Chemistry</b> Prof Gert Kruger Dr Leigh-Anne Fraser Prof Tricia Naicker
<b>Educational Chemistry</b> Prof Bette Davidowitz	
<b>Analytical Chemistry</b> Dr Lawrence Madikizela Dr Marc Humphries Prof Priscilla Baker Prof Vernon Somerset Prof Luke Chimuka	<b>Assistant Editors</b> Dr Siyabonga Maphumulo Dr Thashree Marimuthu Dr Sifiso Nsibande
<b>Inorganic Chemistry</b> Dr. Glenn Maguire Dr Sam Mahomed	<b>Editors-in-Chief</b> Prof Patricia Forbes Prof Cornie van Sittert
<b>Computational Chemistry</b> Prof Gert Kruger Dr Thishana Singh	<b>Publishers</b> Mr Nico Dippenaar (outgoing) Mr Mike Schramm
<b>Materials Science and Nanotechnology</b> Dr Lucky Sikhwivhilu Prof Patrick Ndungu Prof Nosipho Moloto	<b>System Support and Developer</b> Mr Colin Schwagele

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”. After serving as Editor-in-Chief for three years, Prof Forbes will be stepping down at the end of 2021. Prof van Sittert will take over the management of the front end of the process and a current subject editor will take over as Editor-in-Chief of the end process.

The 1371 publication records in SAJC 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 2020 to present, the relative contribution by country is rather different: South Africa (32%, 38% for 2019), Iran (10%, 18% for 2019), Nigeria (10%, 11% for 2019), India (10%, 9% for 2019) and Germany (6%, 0% in 2019). There was also one publication from authors from each of the following countries: Algeria, Brazil, Estonia, Ethiopia and Indonesia, whilst there were no publications from the USA (9% in 2019).

Figure 2 shows the number of papers rejected and published from 2013 to 2020 based on the year in which the manuscripts were submitted as per the online management system reports (note that the 2019 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 and the impact factor of the journal. To date, 94 of 135 submissions made in 2020 were rejected/withdrawn whilst 34 have been published/approved and 7 are still in progress. A total of 50 papers have been submitted in 2021 to date and 28 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. A decrease in the number of submissions due to the impact of the Covid-19 pandemic on research productivity has not been evident to date, although this may have contributed to the quality of submissions and thus the higher rejection rate in 2020.

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), 2019 was 34 papers (273 pages), and 2020 was 22 papers (162 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. There were additional papers approved in 2020 that have not been published to date (and thus are not included here), as they are being held back for the Special Issue on computational chemistry.



**Figure 2: Number of papers rejected and published from 2013 to 2020 based on year of submission (note: the 2020 published papers include 4 which have approved status and 11 which are at proofs stage)**

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", which is in the process of being finalised. This caused the elevated submissions in Computational Chemistry (Table 2).

**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	2021 to date
Total Submissions	140	243	189	158	108	130	109	135	69
Analytical	22	45	61	53	37	34	36	38	23
Computational	15	12	14	12	9	6	15	26	6
Education	5	7	3	5	0	3	5	2	2
Inorganic	25	26	20	17	13	13	8	13	6
Nano	12	21	10	16	12	23	9	8	7
Organic	34	103	53	37	28	24	24	26	12
Physical	27	28	29	18	9	27	12	22	13

The average number of days for acceptance or rejection varies from year to year and from manuscript to manuscript, but is an area which requires improvement. The biggest challenge is finding quality, willing reviewers who are also prompt in their responses, as this is a limiting factor in the review process. An email has been distributed to SACI members to ask for reviewer volunteers. An excellent response has been received, which should go a long way to alleviate this challenge. 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 with the current Covid-19 situation.

In line with international journal publication trends, a mandatory "conflict of interest" check has been included in the manuscript submission process. We have found a plugin option to link to reviewers' ORCID accounts as a means of acknowledging their input. This will require modification of the SAJC web platform which will cost R9775.00, thus we await feedback from SACI Exco as to whether we should proceed with this initiative.

A new publisher/typesetter was contracted due to the pending retirement of the previous service provider. The changeover has incurred some technical challenges with associated delays to publication, but these should be resolved once the Special Issue has been published and we can move over in full to the new publisher.

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

Annual costs were R20 335.45 to Sabinet for hosting the journal and R35 810.40 for creating proofs in 2020 (R202 per page for 22 papers). We also paid R16 493.20 for hosting and maintenance of the online management system website.

Total costs for the year was thus R72 639.05

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

## **SACI NEWSLETTER**

The Newsletter is published regularly 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, Federation of Commonwealth Chemical Sciences Societies, 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. For the first time in the 102 year history of IUPAC the 51<sup>st</sup> General Assembly and Council meeting which should have been held in Montreal Canada is being held on a virtual platform. Interestingly, in order to hold (and importantly vote) using online platforms required that the IUPAC constitution had to be amended to allow for this. The previous constitution explicitly stated that the delegations from the National Adhering Organisations (NOA's) had to be physical present at the General Assembly in order to cast their votes. In order to make the necessary constitutional changes an extraordinary Council meeting was held in May and as expected the needed changes were unanimously approved by the voting delegated. As is inevitably the case when meetings are being held online for international bodies, many of us involved in the various IUPAC divisions, committee and General Assemble activities have spent many a late night or early mornings in online meetings!

26th IUPAC Conference on Chemical Education (ICCE) to be hosted in South Africa originally in 2020 will now take place in July 2022. Hopefully by then international travel will be possible. After the great success of the IUPAC Global Women's Breakfast in 2019 and in 2020, the Global event took place in once again this year. It was great to see that once again South Africa took part in this global initiative to acknowledge the contribution of women to chemistry. This is becoming an increasingly popular annual event as can be seen from the map below map showing the location of the various participants in 2021!

Currently South Africa only has three formal representatives on the IUPAC Divisions and Committees.

These are Alan Hutton President of Division VIII (Chemical Nomenclature and Structure Representation), Marietjie Potgieter (a Titular Member of the Committee on Chemistry Education and the incoming Chair of the Committee) and myself as National Representative in Division IV (Polymer Division). It is our sincere hope that we will increase the South African representation within the various IUPAC structures in the coming years. The IUPAC national committee would once again like to encourage South African chemists to get involved in the various IUPAC Divisions and Committees!

Typically this involves some hard work and commitment, but it can also be very rewarding to serve in this international chemistry body!



Map of the IUPAC Global Women's Breakfast participants 2021!

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



- **Preamble**

The South African Council for Natural Scientific Professions (SACNASP) was established in terms of Section 2 of the Natural Scientific Professions Act (NSP), No 27 of 2003, as amended. It is a statutory body with the primary role of registering natural scientific professionals and regulating the natural scientific profession.

- **Mandate**

SACNASP as a regulator must take action if it has reasonable grounds to suspect that a registered person has committed an act which may render him or her guilty of improper conduct, or if a complaint of improper conduct has been brought against a registered person. SACNASP needs to investigate any substantiated transgression of the SACNASP Code of Conduct, with which all registered scientists have to comply in accordance with the NSP Act.

- **Concluded Hearings**

Of the investigations conducted during the previous financial year, five were referred to a disciplinary tribunal. The outcomes of three of the hearings held thus far are dealt with in SACNASP Newsletter 07/2021.

- **Why Register?**

The Voluntary Associations (VA's) of SACNASP are urged to promote registration with SACNASP among their members in order to (1) legally comply with the NSP Act (27 of 2003), (2) be recognized as professional scientists, (3) gain public confidence as a scientist, (4) improve marketability as employers increasingly require registration, (5) be trusted for ethical values by a code of conduct, (6) give input to government at ministerial level, (7) get access to networking

through webinars and website networking portals, (8) obtain potential favourable rates for professional indemnity insurance, (9) view career advertisements by employers on website and social media, (10) participate in VA events and networking among peers in a specific field of practice, (11) receive guidance for career path development through a candidate mentoring programme, and (12) undergo continuing professional development and lifelong learning through CPD.

- **Registration Statistics**

There are currently 816 Chemical Scientists registered with SACNASP, with 363 in the Professional, 205 in the Certificated and 248 in the Candidate category.

- **Migration of SACI's Professional Chemists**

At a recent meeting (2021-06-11) based on a proposed Memorandum of Agreement (MoA) between SACI and SACNASP, SAQA designation PrChemSA will cease to exist, and members of SACI holding the title of Professional Chemist will be allowed to migrate to registration by SACNASP as Professional Natural Scientist (Pr.Sci.Nat.). The transition will have no cost involved for applications submitted online by 30 September 2021, and successful applications should be concluded by 30 November 2021.

- **Candidate Mentoring Programme**

SACNASP recently initiated a programme to provide funding to its Voluntary Associations (VA's) in support of mentoring an upcoming scientist from Candidate to Professional level by a suitable mentor. VA's had to formally apply for such funding, *inter alia* by submitting a budget and details of the proposed mentorship. Mrs. Suzanne Finney took the initiative in submitting an application on behalf of SACI.

- **National Science Week 2021**

SACNASP participated in #NSW2021, which took place 1-7 August 2021 by virtue of online events, virtual exhibitions and tours, webinars and documentaries.

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

## **NSTF**

The National Science and Technology Forum (NSTF) celebrated 25 years of existence in 2020. This stakeholder body draws together more than 100 organisations, councils and institutions involved in science, engineering, technology (SET) and innovation in South Africa. Its core vision is a transformed society where SET contributes to improving lives, the demographic profile of SET professionals is reflective of that of SA's population, and where the education system functions properly, especially in SET subjects.

NSTF continued to hold discussion forums online, including topics such as: Plant health, Risks and benefits of 5G communication, South Africa's preparedness for outbreaks of human and animal disease.

The NSTF-South32 Awards took place, as did the NSTF AGM, on Zoom on Friday 13 November 2020.

**Prof H Drummond**  
**Reporting Officer**

## **SECTION AND DIVISION REPORTS**

### **EASTERN CAPE**

#### **SACI National Council**

Section Report for Eastern Cape

Covering the dates Nov 2019 to August 2021

This report was submitted late, my apology.

The report covers the 2 years from the end of 2019, since I was away during the Council meeting of 2020 and did not submit a report.

This was also a tough 2-year period, marked by a string of covid-related cancellations.

The Eastern Cape Section of SACI held a very successful Postgraduate Seminar at the end of October 2019, with over 100 attendees at the NMU campus.

We took the opportunity to host a short committee meeting between events, since we had not been able to do so during the year as planned.

A few details of the PG Event are listed below, however, apart from that event and the short Exco meeting, no other SACI events have taken place in the Eastern Cape as a Region.

#### **EC Sub-Region Exec Meeting**

##### **25 October 2019**

This took place at NMU and was attended by representatives from NMU (Dr Neliswa Mama, Prof Buyiswa Hlangothi), from UFH (Prof Johannes Mbese, with input from Christina Toma from the Potsdam campus), WSU (Prof Potlaki Tseki), and RU (Prof Rui Krause).

There was no representative from Industry, and Prof Hlangothi undertook to forward details for a representative from Innovention.

The plans put in place for 2020 included a repeat of the successful "Industry Day" held at

Rhodes in April 2019”, but spread over two separate events, one a “Career Day” focussing on local needs for students, and an Innovation Day regionally, to be rotated among the institutions in the region and held in May, after the Career Day.

We also planned an event for Honours students, as we felt they were not well accommodated in the Postgrad Seminars, even though they competed under the “Junior Postgrads”. This was not well planned, but was sketched out to occur in September 2020, before the Honours students started to reach exam time, but after they had had some time in a research projects. We also felt that the winners of the Honours presentations at each University should still be allowed to compete at the annual PG event as one of the Junior category from each university.

We had also discussed the idea to host a series of Bilateral talks between universities, targeted especially at Postdocs. This was to add some additional events to the calendar, but also, to fill the need to find easier ways for universities to get together more often (at the moment this is limited to two events per year, due to the great distances between institutions - especially between WSU and NMU = 500 km).

We briefly discussed the issues of lack of participation by Industries in the Region. There is often good participation at individual events, but not, sadly in a regional setting. Partly this is due to the problems of distance.

We agreed to start reaching out to industries, and stated that our first Industry Day in 2019 had been very successful, and that positive feedback had been received from both students and industry participants.

Finally, we discussed strategies to increase membership, and agreed to start with Honours and postgrad students. I am happy to report that the membership drive in early 2020 meant an additional 36 members, bringing the total number of members in the EC above 100 for the first time in a very long while.

### **Planned events for 2020-2021**

The Region therefore started the year in 2020 with the following great plans to revive activities in the struggling region:

<b>Date</b>	<b>Event</b>	<b>Comments</b>
April 2020	Career day	To be held individually at each university, but postponed and then cancelled for 2020
May 2020	Innovation and Industry Day	Postponed and then cancelled for 2020
July 2020	Inter-university Postdoc Seminars	Not planned
Sept 2020	Honours Seminar	No further plans completed. Even didn't take place. (UFH to host)
October 2020	Postgraduate Seminar	Event didn't take place (WSU to host)

We did a lot of work to bring new members into the region, focussing especially in the Postgrad students. This work has started to pay off, showing an increase in membership from about 60 members in 2018 to over 100 members this year for the first time.

### **SACI Postgraduate Seminars**

Hosted at Nelson Mandela University

Date: 25th October 2019

Venue: Conference Centre Theatre, North Campus

Program Director: Dr Neliswa Mama

This was a great event, attended by over 100 participants from all four universities in the region. Due to the distances between campuses, the event had to be delayed until 1 pm, but we managed to get through a tight programme of speakers in two sections: the Junior Researcher category was open to BTech students, Honours students and first-year Masters students. This was won by Agnes Khasipo, a very nervous first speaker from NMU, for an excellent talk based on her research into “The continuous flow synthesis of glimepiride”. The runner up was Hope Bika (University of Fort Hare) for a talk entitled: “Levels of polychlorinated naphthalenes and some physicochemical properties in sediments from Buffalo River Estuary”.

The Senior section was open to PhD students or final year Masters students.

This was won by S. Centane of Rhodes University for work in the “Electrochemical detection of a cancer biomarker on a cobalt porphyrin binuclear framework and graphene quantum dot modified electrode”. The runner up was Sendi Gandidzanwa from Nelson Mandela University, with a talk entitled “The design and development of palladium-based nanoradiopharmaceuticals for cancer therapy”.

We also handed out James Moir Medals to all the deserving recipients and enjoyed some wonderful refreshments, kindly sponsored by NMU, SACI (EC), ASPEN PHARAMCARE, Anatech (EC) and Perkin Elmer (EC).

### **Planned Industry Day April 2020**

A SACI Industry and Innovation Day was planned for Thursday April 16th or Friday 17th. Initially, this was planned at WSU, but later moved to Rhodes. In March, concerns over the virus forced us to delay the event until June, and then following the lockdown announcements and closures of universities we cancelled the event.

The aims of the event were to highlight career opportunities for graduates in chemistry, facilitate collaboration between industrial partners and academics, facilitate discussions around commercialisation of research, and provide an opportunity to showcase chemical and related industry in the Eastern Cape.

We had planned a series of lectures, demonstrations, group discussions, mock interviews, and an innovation round robin hosted jointly with NIPMO and our local IP Offices.

### **Other cancelled events**

All other planned events were initially cancelled, and then later, as academics became increasingly burdened by online classes, and aspects of the at-home learning etc., I was hesitant to add other events to their plate.

In addition, I was on leave from August last year, and did not appoint someone to take over

my SACI role, so some of the planning fell to Prof Klein, who was the Green Chemistry Divisional Chair. This was an oversight on my part, especially since she was a newly appointed head of Department in 2020.

Nonetheless, planned, but cancelled events, included an annual Chemistry Show, our participation in the National Arts Festival, our participation in the Annual Science Festival, and the National Science Week in August.

Rui Krause

Members of the EC Exco:

NMU = Prof Buyiswa Hlangothi,

UFH = Prof Johannes Mbese and Christina Toma

WSU = Prof Potlaki Tseki

RU = Prof Rui Krause.

Postgrad Rep = Jesse Stander

**Prof R Krause**

**Chairperson Eastern Cape Section**

### **SACI CENTRAL**

**The following report was prepared for the 564<sup>th</sup> meeting of the SACI Council that will be held at 11:00 on Thursday, 18 August 2021 via a Teams online meeting.**

**Reporting Period: 03 December 2021 – 13 August 2021  
Prepared by Mark Smith (Chairperson – SACI Central Division)**

#### **1. New SACI Central Division Committee**

The committee was elected at an annual general meeting held on 3 December 2020 via MS Teams. The committee members were then elected to their portfolios at the first meeting that was held on 28 January 2021. The composition of the new committee is as follows:

Dr Mark Smith	Chairperson
Dr Caren Billing	Vice-chairperson
Dr Phumlani Msomi	Secretary
Dr John Moma	Treasurer/fund raising
Dr Sadhna Mathura	Women's representative
Ms Bianca Davids	Student representative
Ms Alida-Louise Henning	Industry/RSC rep
Dr Manoko Maubane-Nkadimeng	Events coordinator
Dr Patrick Moisini	Additional member

#### **2. Meetings**

The committee has met twice since its election to office. Attendance and participation of committee members was good with only one apology at the second meeting. The meetings held were as follows:

28 January 2021

The purpose of this meeting was:

- To confirm portfolios and elect a chairperson
- To share ideas and plans for 2021 – 2022

10 August 2021

The purpose of this meeting was:

- To discuss the joint SACI / RSC lunch and to decide how awards will be handed out.
- To plan the Young Chemists Symposium for 2021
- To discuss ways of improving links between industry and universities
- To receive feedback on womans' representation

### **3. Finances**

The Central Division currently does not have active finances and plans to start fundraising will be discussed at the next meeting.

### **4. Young Chemists Symposium 2021**

The young chemist's symposium 2021 will be held via an online platform in the week of 29 November 2021 – 3 December 2021. The symposium will be hosted by Wits University and is being organized by an organizing committee chaired by Dr Manoko Maubane-Nkadimeng. The format will be similar to the very successful national symposium held earlier this year.

The 2022 Young Chemists Symposium will be hosted by Unisa and in 2023 it will be hosted by North West University. The committee stressed that the annual symposium should be hosted on a rotational basis by all the universities in the division in order to maintain interest and participation by all universities.

### **5. SACI / RSC Lunch (an awards ceremony)**

The annual SACI awards are traditionally handed out at the joint SACI / RSC lunch. This year, due to the unpredictability of Covid waves, as well as the imcomplete vaccine rollout programme, the feeling of the committee was that it would be imprudent to have a physical meeting in 2021, and expected that even if the lunch was held, attendance would be very low.

It was decided that as a replacement for the lunch, an online public talk would be held, followed by the virtual handing out of awards. A potential speaker was identified and will be contacted in this regard. The date of the presentation will be determined at the next meeting.

It is also expected that we will resume with the physical lunch / awards ceremonies in 2022 once the vaccine programme is at an advanced stage and Covid numbers are lower.

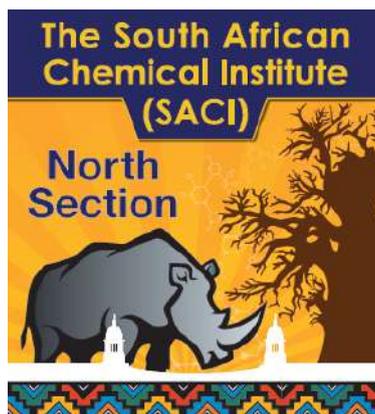
### **6. Improving the links between industry and universities**

One of the ideas that the committee intends to implement from 2022 is the launch of a new public lecture series, where quarterly online presentations will be given by members of industry. Staff and students at Chemistry Departments at all universities in the division will be invited to the public lectures. Currently students are generally only exposed to lectures by academic staff and this exposure to industry will go a long way to closing the gap between industry and universities, as well as educating universities on desired graduate attributes required by the chemical industry in general.

## 7. Conclusion

The committee members are very enthusiastic and have exciting new ideas and plans for the remainder of 2021 and 2022. Although the year started slowly, activities have picked up pace rapidly and a very fruitful remainder of 2021 and 2022 is expected to follow.

**Dr M Smith**  
**Chairperson Central Section**



### **SACI North Section Committee Members**

<b>EMBER</b>	<b>PORTFOLIO</b>	<b>INSTITUTION</b>
DE LANGE J (Dr)	Student Matters	University of Pretoria (UP)
MAMPA RM (Prof)	Scientific Events	University of Limpopo (UL)
MAPHORU MV (Dr)	Marketing & Outreach	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 (Dr)	Membership	Sefako Makgatho Health Sciences University (SMU)
NGOMANE N (Dr)	Scientific Events	University of Mpumalanga (UMP)
NKAMBULE CM (Prof)	Chairperson	Tshwane University of Technology (TUT)
SONOPO MS (Dr)	Secretary	South African Nuclear Energy Corporation (NECSA)

### **SACI North Section Student Representative Committee**

Council for Scientific and Industrial Research (CSIR)	<i>Vacant</i>
Sefako Makgatho Health Sciences University (SMU)	<i>Vacant</i>
South African Nuclear Energy Corporation (NECSA)	<i>Vacant</i>

Tshwane University of Technology (TUT)	<i>Vacant</i>
University of Limpopo (UL)	<i>Vacant</i>
University of Mpumalanga (UMP)	<i>Vacant</i>
University of Pretoria (UP)	<i>Vacant</i>
University of Venda (UNIVEN)	<i>Vacant</i>

### 1. Committee Meetings

The section held four (4) meetings, all virtual due to the COVID-19 lockdowns, since the last SACI AGM on 20 August 2020; here are the key points and decisions:

- I. **13 October 2020.** A steering committee of the Organic Chemistry Division (OCD) has been created. The co-opted members from the different sections of SACI are:
- Dr Clinton Veale, UKZN, Chairperson (Chair of the preceding FWC, 2019)
  - Prof Comfort Nkambule, TUT, Incoming Chair of the OCD (Chair of FWC 2023)
  - Dr Natasha October, UP
  - Dr Susanna Bonnet, UFS
  - Dr Wade Pietersen, UCT
  - Dr Matshawandile Tukulula, UKZN
  - The Eastern Cape Section currently has no representative
- Dr Maphoru volunteered to revamp and manage the SACI-NS Facebook page; the number of events and publicity has since grown significantly.
  - Fund raising: the committee to finalize the selection of shirts and bags; Creative Vision Designers (CVD) were the preferred service providers due to their excellent relationship and track record dating back to the development of the SACI-NS logo and the 2018 National Convention.
  - 2020 YCS postponed to 2021; Dr de Lange to revive the student representative committee.
  - Members reported on dissatisfaction with the South African Journal of Chemistry (queries taking too long to get feedback or resolution); an author withdrew a submission after three (3) months of not receiving feedback from the journal.
- II. **04 December 2020.** Feedback from the South African Journal of Chemistry's Editor-in-Chief:
- The major problem is insufficient reviewers, and timely response from reviewers/sub-editors. Local scientists are encouraged to volunteer as external reviewers for the journal.
  - SACI-North Section to start conducting the annual general meeting (AGM) open to all members starting in 2021, in-line with the practice in other sections. This will give all members of the section the opportunity to actively propose and participate in the events within the section.
  - Proposed that SACI-NS hold the seminar series (virtual platforms) starting in 2021. These seminars should give presentation preference to the scientists from within SACI-NS.
  - Fund raising project (t-shirts and grocery bags) was finalized; treasurer given the go ahead with procurement from CVD.
  - Dr Maphoru requested members to continue spreading the word about the SACI-NS Facebook page and to encourage wide participation, so it is not just one (1) institution dominating the activity

- III. **26 February 2021.** Congratulations were extended to the 2020 James Moir Medal winners:
- Mr G. Ramaremsa (UL)
  - Ms A. Kritzinger (UP)
  - Ms L. Mbonzhe (Univen)
  - The Organic Chemistry Division (OCD) has proposed hosting a seminar series (virtual platforms) for organic chemistry PhD students in 2021. Institutions requested to forward nominations to Dr C Veale (Chairperson of OCD)
  - The OCD is also planning to organise a virtual seminar series for senior researchers, preferably the international researchers who are leaders in the field
  - Prof Mampa visited The Ranch Hotel to inspect the suitability to host the 2023 FWC.
    - The venue is under renovation to accommodate about 500 people
    - Hotel management feel it is too early to make plans/reservations and cannot provide a quote; COVID-19 restrictions are still too unpredictable
  - Confirmation that the 2021 YCS will definitely be a virtual event
  - Researchers at most institutions experiencing problems with procurement processes for research consumables
  - Lecturers are frustrated by online teaching, especially the failure to curb apparent rampant cheating on the online assessments.
- IV. **28 May 2021.** The fund-raising project is now implemented; t-shirts and grocery bags have been delivered and distributed to member institutions. SACI-NS committee members will also have to buy the merchandise, just like everybody else.
- Resolved that UP to host virtual 2021 YCS on the 08 October 2021
  - The proposed venue for 2023 FWC (The Ranch Hotel) enquired about firmness of proposed booking, but the LOC cannot yet provide such a commitment. Prof Nkambule undertook to share notes with other national groups planning conferences soon, e.g. CATSA and the 44<sup>th</sup> SACI National Convention (Western Cape Section)
  - Resolved that the chairperson should follow-up with the Editor-in-Chief of the South African Journal of Chemistry on how our members can assist with improving the process of publishing in our institute's flagship title.
  - Congratulations were extended to TUT on the appointment of their former Head of Department (Prof NS Mokgalaka) as the Executive Dean of the Faculty of Science, Engineering and Agriculture at UNIVEN

## 2. Financial Statements

- On 28 May 2021 the balance on the account of SACI North Section was R11 371. To raise funds for the Section 100-T-shirts and 100 grocery bags were purchased from Creative Vision Graphic Design (CVD) to be sold at each institution (picture attached)



### 3. Symposia and Conferences

- The 2020 YCS to be hosted by UP was postponed due to the COVID-19 lockdown and alert level restrictions. A virtual YCS is planned to be hosted by UP in October 08, 2021
- Postgraduate students from the SACI-NS have participated in two (2) virtual YCS this year hosted by the SACI Central (November 17, 2020) and Western Cape (July 8-9, 2021) Sections
- The planning for the 2023 FWC is ongoing; the LOC has not yet been fully constituted, but Prof CM Nkambule is the interim Chairperson of the LOC. A possible venue for the event has been identified (The Ranch Hotel in Polokwane, Limpopo), but the possibility of a virtual conference will also be explored. The decision will be made in conjunction with the Organic Chemistry Division who are the custodians of the FWC.

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

#### **KWAZULU-NATAL**

The year 2020 and part of 2021 have been challenging to all of us due to the COVID-19 pandemic that has hit the whole world. Many of us in the chemistry world were hit hard by the situation and could barely conduct our normal activities. Some of the activities on our yearly calendar that could not take place were the SACI KZN Hons/BTech Symposium normally held in the month of October featuring students from our four tertiary institutions, namely, DUT, UniZulu, MUT, UKZN Westville and UKZN Pietermaritzburg. Also not held was our annual Magic Show since public gatherings of a certain size were not allowed at the time, we normally have the show. Our ever so present three magicians (Profs Nyamori, Martincigh and Owaga) really miss doing the show and are hopeful that we will have one in November 2021.

However, the South African Chemical Institute, KwaZulu-Natal Section did manage to hold some activities over the reporting period as reported below.

#### **MERCK MEDAL LECTURE**

Before our first-ever virtual AGM on 15<sup>th</sup> December 2020, we had the Merck Medal Lecture given by Prof Vincent O Nyamori as the 2020 recipient of the MERCK Award for their paper,

“Eric M. Njogu, Bernard Omondi and Vincent O. Nyamori\*, South African Journal of Chemistry, 2016, 69, 51–66. Prof Nyamori’s talk was titled “Synthesis, physical and antimicrobial studies of ferrocenyl-N-(pyridinylmethylene) anilines and ferrocenyl-N-(pyridinylmethyl)anilines”. His talk received an audience from all Sections of SACI in SA as well as an audience from Europe and America.

### **2020 SACI KZN AGM**

The Annual General Meeting of the KZN Section was held on Tuesday, 15<sup>th</sup> December 2020 from 12h30 virtually via Zoom. 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. The KZN awardees for 2020 included:

Prof. Vincent O Nyamori - **Fellow status of the Institute**

Prof. Tricia Naicker - **The Raikes Medal**

Prof. Vincent O Nyamori – **The Merck Medal**

Dr Ayomide H. Labulo - **The SACI Postgraduate Medal**

Ms Stephanie Fraizer of UKZN and Bongeka Khuzwayo of DUT – **The James Moir Medal.**

### **LECTURE IN CELEBRATION OF GEORGE CARR’S 80<sup>TH</sup> BIRTHDAY**



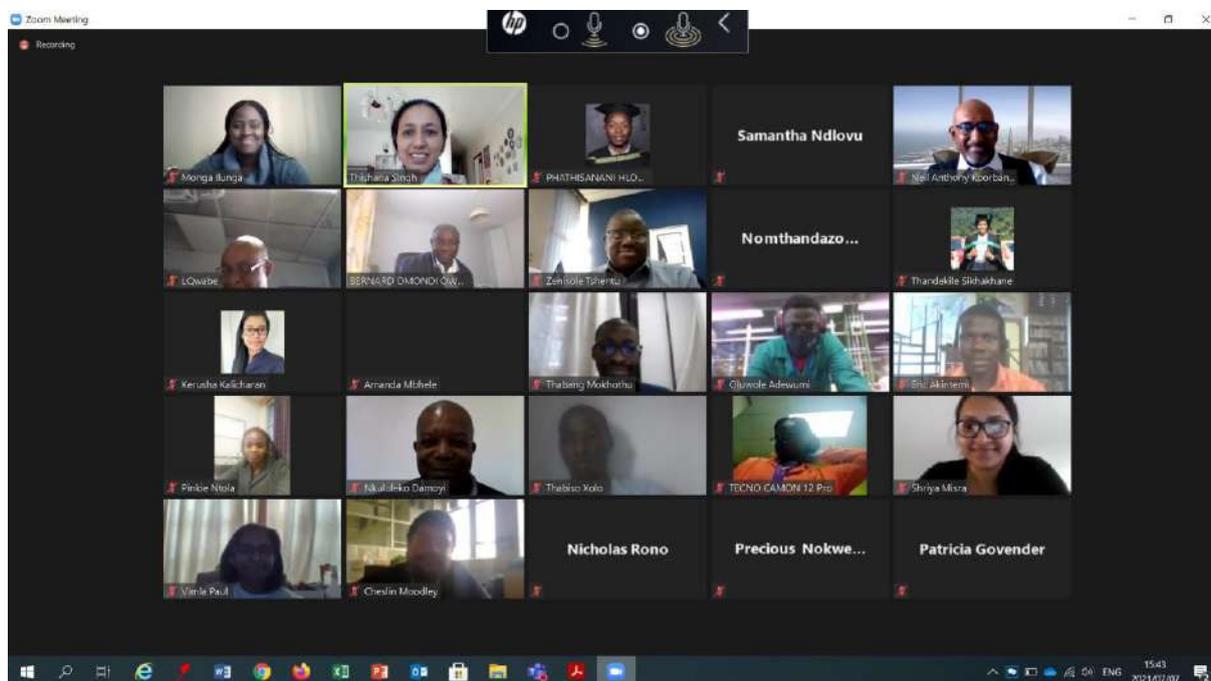
George has been a stalwart of the Natal, and later KwaZulu-Natal Section co-ordination committee for very many years - his service spans an unbroken period dating back to the mid-1970s. During that time he has been chairman (twice), treasurer (twice) and secretary. As an industrial chemist, he has been 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.

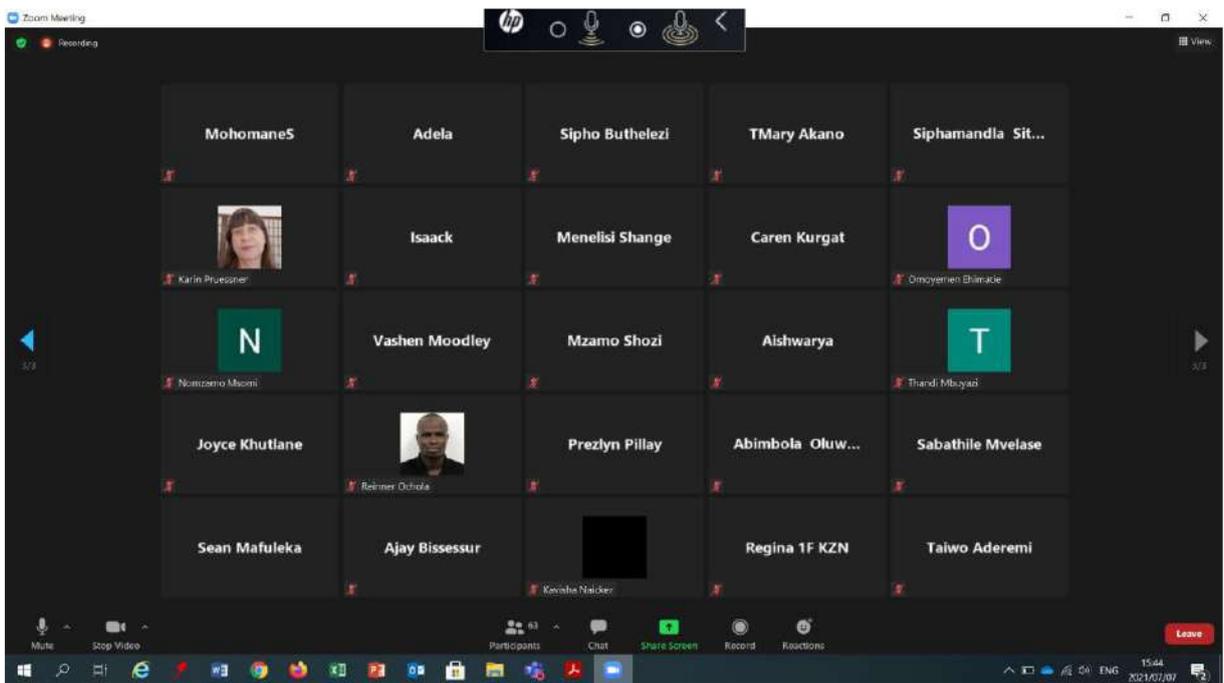
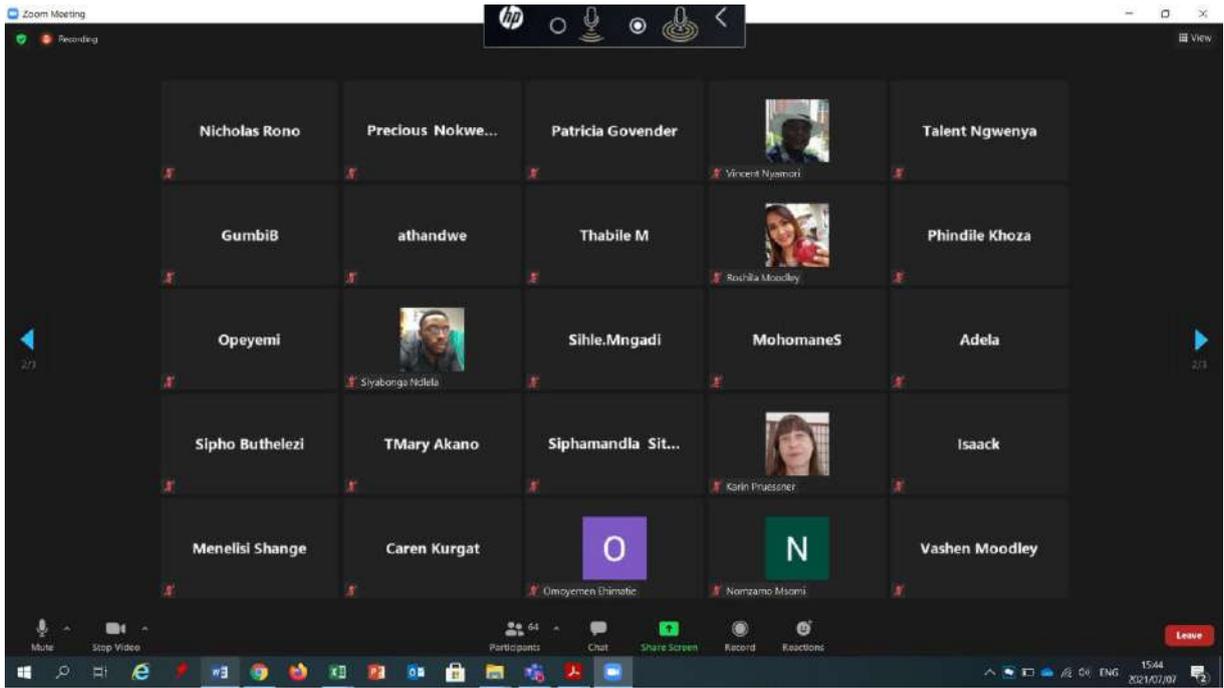
In celebrating his birthday, Nicholas Lancaster, Field Applications Specialist, PerkinElmer South Africa, delivered a lecture entitled “Advances in portable GCMS – a sample of PerkinElmer applications developed on the TORION portable GCMS”. The celebration was well attended by many KZN SACI and RSC members as well as George’s immediate family members. The ceremony was chaired by Prof. Vincent O Nyamori, while Prof. Bernard Owaga gave the opening remarks. Prof. Tony Ford gave a fitting tribute to and a summary of George’s

career followed by a response by George himself and closing remarks by Prof. Bice Martincigh. The event was held virtually on 19<sup>th</sup> May 2021.

## SACI POSTGRADUATE COLLOQUIUM

The annual SACI Postgraduate Research Colloquium was originally to be hosted by the University of Zululand but due to COVID-19 an in-person function was not possible. The event was moved to an online platform, coordinated by SACI student representatives from Mongesuthu University of Technology and University of KwaZulu-Natal. The Colloquium was held on Zoom on the 7<sup>th</sup> of July from 9h30 to 16h30. Prof. Ross Robinson (Dean and Head of School of Chemistry and Physics, UKZN) welcomed all the participants. The guest speaker was Prof. Zenixole Tshentu from Nelson Mandela University and the current Executive Secretary of SACI. His talk entitled ‘The role of chemistry in sustainable development’ was solid and gave valuable insights to sustainable chemistry. The program consisted of two sessions: the morning session for PhD orals and flash poster presentations, and the afternoon session for the MSc oral and flash poster presentations. The traditional poster session (for both PhD and MSc) was held via Twitter and was run in parallel to the Zoom sessions. Students from Durban University of Technology, University of Zululand and UKZN (Pietermaritzburg and Westville Campuses) showcased their research. At one point during the morning session there were as many as 173 participants online. All the presentations were judged and the two best presentations for each category were awarded prize money to the value of R1000 which was kindly sponsored by RSC North. The Twitter posters were jointly sponsored by RSC North and SACI KZN.





## Screen shots of participants in the PG Colloquium

The winners for the various prizes were as follows:

### PhD Oral

Adeleke Adesola Abimbola  
Samantha Ndlovu

### PhD Flash Poster

Revana Chanerika  
Nonjabulo Ngidi

### MSc Oral

Monga Ilunga  
Adela Madaree

### MSc Flash Poster

Kerusha Kalicharan  
Amanda Mbhele

### Twitter Poster

Mthokozisi Mnguni  
Shriya Misra

**Shriya Misra @shriya\_misra · Jul 7** #SACIKZN



**UNIVERSITY OF LIMPOPO**  
SCHOOL OF CHEMISTRY

### COUMARIN-TRIAZOLE-DIHYDROCHALCONE HYBRIDS SYNTHESIS AND THEIR ANTIBACTERIAL ACTIVITIES.



National Research Foundation

**INTRODUCTION**

The development of resistance of pathogens to current pharmaceutical drugs requires the continuous development of new and improved drugs to combat antibiotic resistance.

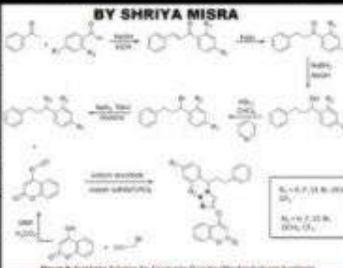
The aim of this study was to identify a hit coumarin-triazole-dihydrochalcone compound that could be developed further into an antibiotic, to add to the repertoire of existing antibiotics, creating alternative options when currently used antibiotics are no longer effective.

**SOLUTION – Molecular Hybridization**

- Two or more pharmacophores of bioactive scaffold, are coupled to afford a single hybrid molecule.
- These novel candidates may result in
  - Improved affinity and efficacy
  - Broader spectrum of activity
  - Lower toxicity
  - Multiple mechanisms of action



**BY SHRIYA MISRA**



**Anti-Bacterial Testing of Coumarin-Triazole Hybrid**

Compound	Ag	AgH2O2	AgNO3	AgCl	AgBr	AgI
Coumarin	5	2	5	100	5	5
Triazole	5	5	10	20	20	20
Dihydrochalcone	5	5	10	5	5	5
Ag	20	20	20	20	20	20
AgH2O2	20	20	20	20	20	20
AgNO3	20	20	20	20	20	20
AgCl	20	20	20	20	20	20
AgBr	20	20	20	20	20	20
AgI	20	20	20	20	20	20

Note: Minimum concentration (μM) of each compound of equal volume that shows activity against each bacterial strain.

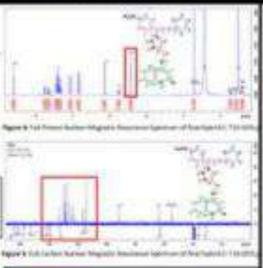


Figure 3: FTIR and NMR Spectra of Coumarin-Triazole-Dihydrochalcone Hybrids

Figure 4: FTIR and NMR Spectra of Coumarin-Triazole-Dihydrochalcone Hybrids

**CONCLUSION:**

Molecular hybridization of the coumarin and triazole moieties was successfully synthesized in moderate to good yields, 40-60%.

The coumarin-triazole-dihydrochalcone hybrids show good activity against E. coli and S. aureus in general.

Most final molecules showed good inhibition (IC50 below 100 μM) against six bacterial strains.

The lead compounds were found to be 4CJ and 4DCH, as they both show good activity against E. coli and S. aureus.

**ACKNOWLEDGEMENTS**

Prof. Neil Koochandy, Dr. M. Red. Srinivasan, Dr. Thiruvananthapuram, Dr. Chandra Kompa, SRI Tondiar

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17



Mthokozisi Mnguni @MthokozisiMng14 · Jul 7  
Mthokozisi Mnguni#28 #SACIKZN

...

**porosity**

Mthokozisi Mnguni, Vincent O Nyamori, Sive J. Madingozi  
School of Chemistry and Physics, University of KwaZulu-Natal, Westville  
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**Introduction**

Sub-100 nm hollow carbon nanospheres (HCNSs) with a controlled cavity, shell thickness, and porosity are of great interest for various applications, such as carbons for acid-phase extraction. Notwithstanding, these remain an enormous challenge to achieve through traditional Stober method due to agglomeration of  $\text{SiO}_2$  templates in bulk ethanol and water. A WVD microemulsion allows for the compartmentalization of the Stober process into discrete reverse emulsions, which enables tiny uniform  $\text{SiO}_2$  nanospheres, and further generation of sub-100 nm HCNSs (see Fig. 1).

Fig. 1. Schematic diagram of a WVD microemulsion (obtained from Aduki et al., 2012)

**Experimental**

**HCNS synthesis:**

1. Anneal functionalized  $\text{SiO}_2$  with AEPs
2. Polycondensation of RF on  $\text{SiO}_2$ , 24 h
3. Centrifuge, wash and dry

**Resorcinol-formaldehyde (RF) resin:**

1. Dissolution of  $\text{SiO}_2$  in 2M NaOH, 24 h
2. Centrifuge, wash and dry

**Carbonization:** Carbonization at 600 and 800 °C, 2 h, under  $\text{N}_2$

Fig. 2. TEM and SEM images of (a) and (c) HCNS-600, (b) and (d) HCNS-800

Fig. 3. CO<sub>2</sub> uptake isotherms and pore size distribution

Table 2.  $\text{N}_2$  and  $\text{CO}_2$  uptake properties of HCNSs produced at carbonization temperatures of 600 and 800 °C

Material	BET					Mesopore amount/g	External Surface amount/g
	T <sub>c</sub> (°C)	Surface area (EA) m <sup>2</sup> /g	V <sub>total</sub> (cm <sup>3</sup> /g)	V <sub>meso</sub> (cm <sup>3</sup> /g)	V <sub>ext</sub> (cm <sup>3</sup> /g)		
HCNS-600	70.62	525	1.556	0.129	1.447	285	338
HCNS-800	78.50	768	2.413	0.172	2.241	440	528
HCNS-30.0 nm	78.56	1456	0.580	0.526	0.445	1111	545

**Results and Discussion**

Table 1. Internal diameter and shell thickness of HCNSs produced at carbonization temperatures of 600 and 800 °C, and of HCNS-30.0 nm

Material	Carbon shell		Total diameter/nm
	Internal diameter/nm	Thickness/nm	
HCNS-600	30.7 ± 2.9	9.8 ± 1.5	58.3 ± 5.9
HCNS-800	40.0 ± 2.7	5.5 ± 1.3	52.4 ± 5.3
HCNS-30.0 nm	17.5 ± 1.9	6.7 ± 1.3	30.8 ± 4.5

- The study demonstrated the successful synthesis of sub-100 nm HCNSs, which exhibit high surface areas and pore volumes.
- The high surface area and porosity is attributed to the thin carbon shell and internal cavity which can diffuse small size molecules, respectively.
- Increasing carbonization temperature produces HCNSs with thicker carbon shells, wider internal cavities, and a high surface area and porosity.
- These textural properties suggest that HCNSs could be a suitable support for solid phase extraction of organic contaminants.

**Conclusion and Future work**

- The study demonstrated that HCNSs have maximum surface area and porosity at 800 °C, and that surface area increases with narrow diameter.
- The HCNSs will be utilized as supports in the solid phase extraction of emerging contaminants in water.

**Acknowledgements**

5 5 28

**The two winning twitter posters**

We are all looking forward to the upcoming events.

**Report Compiled by:**

**Dr Thishana Singh and  
Prof Bernard O Owaga  
Chairperson KZN Section**

## WESTERN CAPE

Since March 2020, our lives have changed, and the social activities were forced to be redressed to accommodate social distancing or the occasional stricter lockdowns. SACI WC, especially the younger generation, reacted well to these new social constraints, and online platforms were utilised to arrange the traditionally face-to-face events.

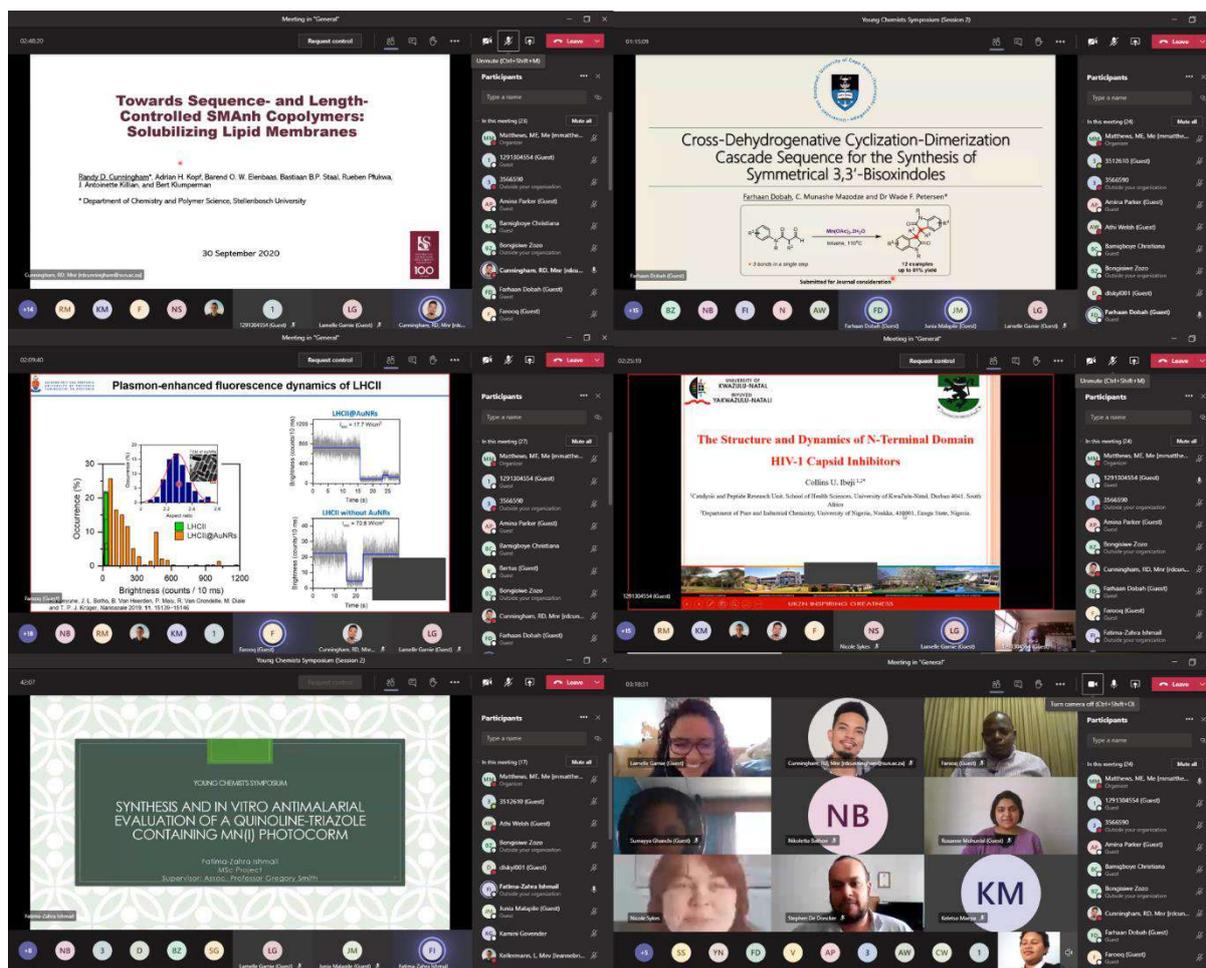
### **30 September – 1 October 2020**

#### **Young Chemists' Symposium 2020 at the Western Cape** (by Megan Matthews)

The annual Young Chemists Symposium (YCS), an event focused on promoting student research and networking, was held on 30 September – 1 October 2020. Due to COVID-19 restrictions on public gatherings, the symposium took place in the format of a webinar series. The symposium was open to all students and post-doctoral researchers for presentations as well as academics for attendance and approximately 37 people were in attendance over the course of the two days. The symposium included presentations by students and post-doctoral fellows, shorter flash-talks as well as an online poster competition which took place on our social media platforms. The event was sponsored by the Western Cape sections of the South African Chemical Institute (SACI) and the Royal Society of Chemistry (RSC).

The organising committee consisted of Junia Malapile (CPUT), Larnelle Garnie (UCT) and Megan Matthews (SU). The programme comprised two half-day sessions from 9:30 to 13:00. On the first day, short presentations were delivered by the sponsors (SACI and RSC) followed by the keynote address by Dr Bathabile Ramalapa, an expert in nanomedicine from the CSIR. She delivered an insightful talk about the importance of the role of chemists in creating a sustainable future for the rest of the world. Subsequently, the oral presentations took place, with 20 minute presentations from students and post-doctoral researchers from UP, UCT, SU and UKZN. (As a result of our public online advertising platforms applications were also received from UKZN and UP.) The winners for the oral presentation category were Farooq Kyeyune in first place and Keletso Maepa and Randy Cunningham in joint second place. The second day consisted of 5 flash talks. The winners for the flash talk category were Farhaan Dobah with first prize and Stephen de Doncker with second prize. The poster competition took place online via Twitter and Instagram, running from the start of the first session to the start of the second session. Out of 5 poster applicants, Kamini Govender from UKZN received the majority of the votes. After the flash talks, the prizes for each category were presented. The winner and runner-up of a presentation category each received a Takealot voucher.

The first online YCS was a successful event using MS Teams as a webinar platform. Our attendees enjoyed our programme and the committee feels that this event was critical in creating a sense of student involvement which ensures that members of both the RSC and SACI stay active during the demanding times.



Screenshots of the YCS 2020 Western Cape section

**25 November 2020**

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

The 78<sup>th</sup> SACI AGM of the Western Cape section was held on the 25<sup>th</sup> of November 2020 via the Zoom platform. The AGM was attended by about 35 academic, professional and student members.

The meeting started with accepting the minutes of the 77<sup>th</sup> AGM, followed by the financial report and a summary of the yearly activities that was given by the chairperson. The mandate of the current Western Cape committee was extended for the 2020-2021 cycle (Nikoletta Bathori, Willem van Otterlo, Edith Antunes, Margaret Blackie, Robbie Luckay, Peter Mallon, Gareth Arnott, Delia Haynes, Ivan Green, Clive Oliver, Denzil Beukes, Megan Matthews, Larnelle Garnie, Ramokone Junia Malapile and Franklin Quelain De Bruin).

In the second part of the meeting, the 2020 SACI awardees of the Western Cape section were congratulated. The WC section has two new SACI Fellows, Prof. Bette Davidowitz from the University of Cape Town and Prof. Selwyn Mapolie from Stellenbosch University. Only Prof Davidowitz was able to attend the meeting, and she delivered an entertaining summary of her academic life, entitled ‘Snapshots from my career in chemistry’. She expressed her gratitude to her family members and colleagues, who guided and supported her through her academic life. Bette realized early in her career that teaching is her passion and naturally, she became the course convener of the extended degree program at UCT. Bette developed an interest in chemical education and built collaborations with leading scholars of the field. She has

contributed to many areas of chemical education, such as the development of Pedagogical Content Knowledge or Chemical Concepts Inventory, and she is a founding member of the 'Writing in the curriculum' project. Bette has officially retired, but this only means that she can spend more time on projects related to education. Currently, she is lecturing in the course 'Writing and Communication for Astrophysics and Space Science' and organizing the prestigious 26<sup>th</sup> IUPAC International Conference in Chemistry Education, to be held in Cape Town in 2022.



**The new SACI Fellows from the Western Cape Section: Prof. Bette Davidowitz (UCT) and Prof. Selwyn Mapolie (SU)**

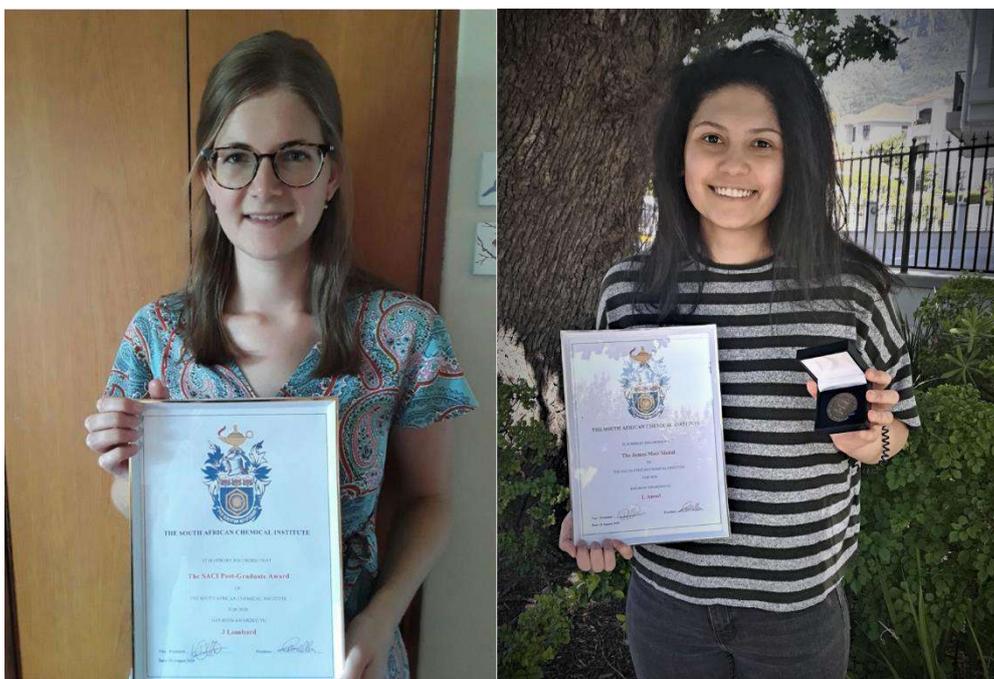
The 2020 Chemical Education Medal was awarded to Dr Margaret Blackie from Stellenbosch University. Dr Blackie expressed her thanks to her nominator and the SACI committee. Since the start of her career in academia, Dr Blackie has been interested in both chemistry and chemical education research. She carefully balances her interest between these two areas with great success. She is involved in a large international project where chemistry and chemical engineering students are followed over their undergraduate studies in selected international tertiary institutions. The findings of this study will be communicated soon in a series of publications and Dr Blackie will present an invited talk at the upcoming SACI National Convention.



#### **Dr Margaret Blackie (SU), the awardee of the SACI Chemical Education Medal in 2020**

One of the SACI post-graduate awards was presented to Ms Jean Lombard from Stellenbosch University. Ms Lombard was not able to attend the AGM and Prof. Delia Haynes was asked to introduce her in a few words. Ms Lombard is a PhD student of Prof. Haynes and Dr Tanya Le Roex and the three of them have been working together since 2015. Jean received the 2015 James Moir Medal for her outstanding performance during her honours studies and graduated cum laude for all her degrees. Her scientific interest lies in supramolecular chemistry and her results have been published in leading journals in the field. Prof. Haynes emphasized Jean's excellent academic qualities and her much loved and respected personality.

Ms Leah Amod received the James Moir Medal 2020 for being the top academic achiever in the University of Cape Town's chemistry honours class. Ms Amod started her studies with unconditional love towards Genetics and she selected Chemistry as her second major. However, her interest in chemistry was rekindled when she studied thermodynamics, and by the end of her second year, she developed a keen interest in chemistry. She is continuing with her studies at the Master's level under Prof. Timothy Egan's supervision, and her work combines computational chemistry and drug discovery.



**Ms Jean Lombard (SU), recipient of the SACI post-graduate award 2020 and Ms Leah Amod (UCT), awardee of the James Moir Medal 2020**

Three SACI members from the Western Cape section were elected as Life Members to acknowledge their long and continuous support of the Institute.

Dr Kenneth J. Buchanan joined SACI in 1971, at the age of 21, when he was an honours student at the University of Port Elizabeth. Dr Buchanan obtained a master's degree in physical-organic chemistry and a PhD degree in materials science, from the same institution. After taking up a post-doctoral fellowship at the University of Toronto, Dr Buchanan was appointed as a lecturer at Rhodes University. During this time, he served on local sections, national conventions and on the council of SACI. He is passionate about exposing students to real-life industrial problems and organized regular industry visits by students. His close collaboration with industry resulted in his recruitment by AECI R&D, and subsequently he moved to SASOL-Polymers where he spent the rest of his career. Dr Buchanan thanked many people in academia and in industry who guided him throughout his professional life, but his most passionate appreciation was addressed to his wife, Marilyn.

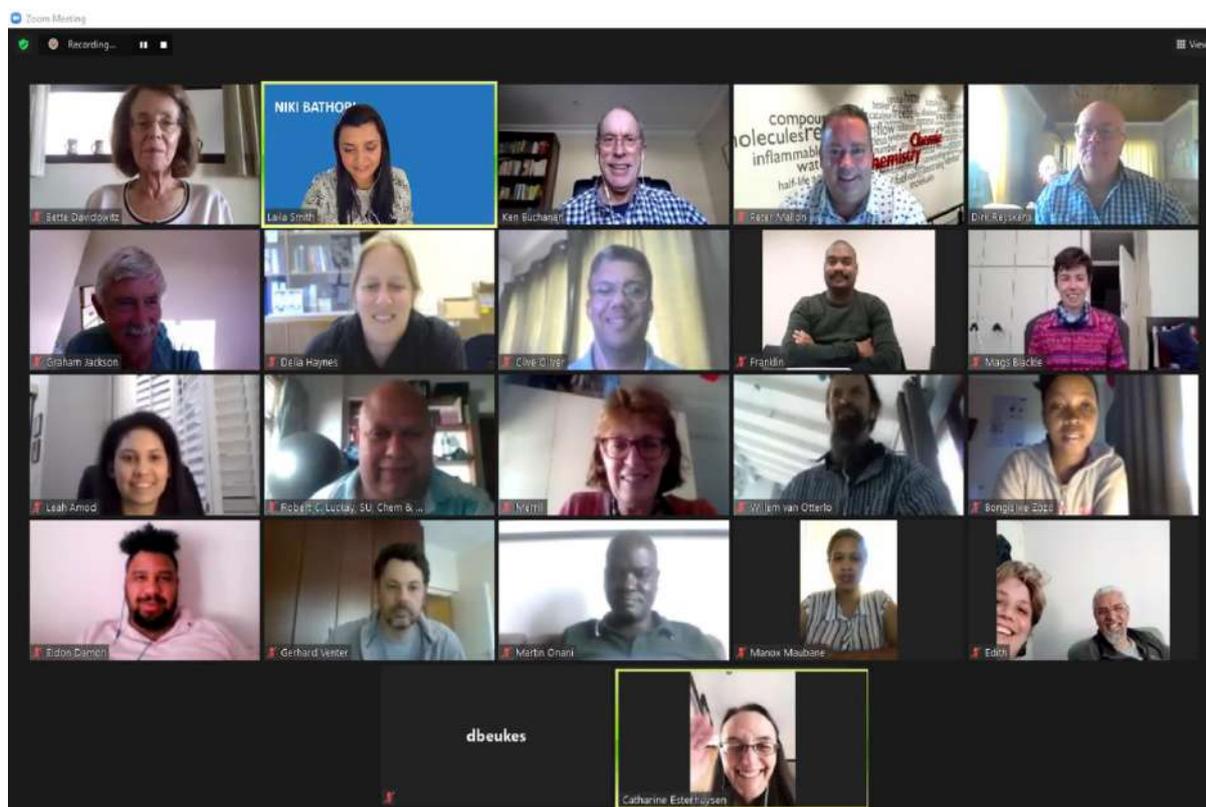
Mr Dirk J.H.P. Reyskens obtained his diploma in Belgium, and after arriving in South Africa, he joined the National Institute of Metallurgy in Johannesburg. Soon afterwards he was offered a position at the National Chemical Products R&D department where his work focused on chromatography method development. In 1980, he joined SACI since the symposia offered by SACI were extremely useful for his professional development. Later on, Mr Reyskens became the sales manager of Shimadzu SA Ltd and developed a close relationship with the chemistry departments of universities in the Eastern and Western Cape. During this time, he played an instrumental role in creating the annual Shimadzu Chromatography Award. After leaving his commercial career, Mr Reyskens worked at the Plascon Research Centre at Stellenbosch University for ten years. He spent the last part of his career at the Catalysis Institute at the University of Cape Town, as a laboratory manager. Mr Reyskens is an active member of his local community and is involved in many social activities in the Northern Suburbs of Cape Town.

Prof. Graham Jackson joined SACI in 1974 when he was a PhD student at the University of Cape Town. After taking up a post-doctoral fellowship at the University of St Andrews, Prof. Jackson returned to South Africa and worked at MINTEK, and later at AECI. Soon afterwards he was offered an academic position at the University of Zululand. A few years later, he was appointed at his alma mater, the University of Cape Town. Prof. Jackson was an active member of the committee of the Western Cape Section, eventually becoming the chairperson of the section and between 2001 and 2003, the President of the South African Chemical Institute. Prof. Jackson highlighted the importance of having a well-balanced membership of the Institute and achieving this requires recruiting members from both the academic environment and industry. Prof. Jackson also commended the involvement of the current student membership of SACI and expressed his happiness about the series of activities organized by them. Prof. Jackson is now living the life of a retired academic and enjoys focusing on research in the field of computational chemistry.

We again congratulated all the awardees, and the first-ever online AGM of the Western Cape section ended at about 18h00.



**New Life Members of SACI from the Western Cape section: Dr Kenneth J Buchanan, Mr Dirk JHP Reyskens and Prof. Graham Jackson**



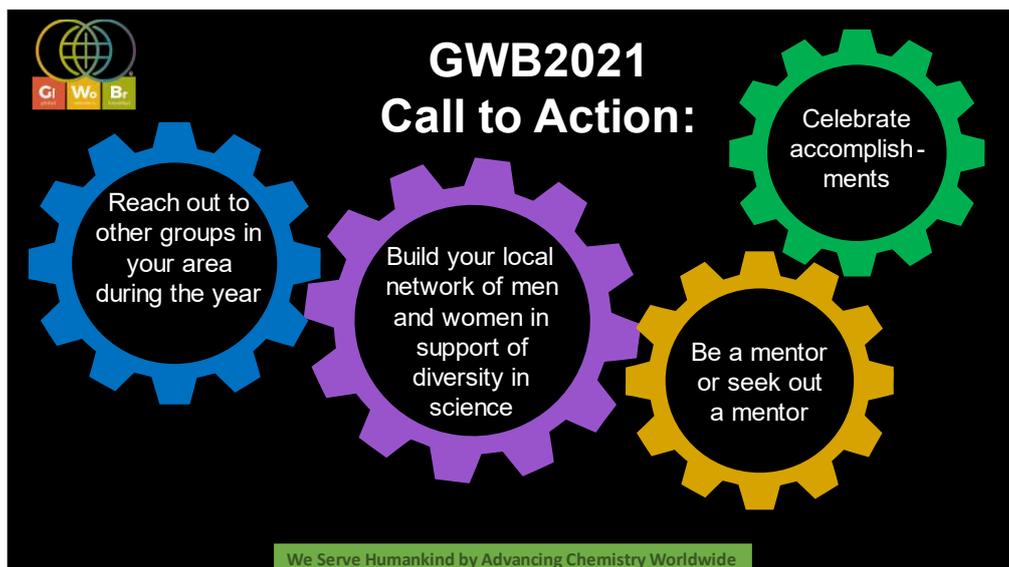
Snapshot of the attendees of the 78<sup>th</sup> SACI WC AGM

**09 February 2021**

**Global Women's Breakfast 2021** (by Niki Bathori)

Two regional sections of the South African Chemical Institute—Central and Western Cape—organised a joint event for the fourth IUPAC Global Women's Breakfast. On 9 February, 95 women of chemical sciences from South Africa registered for the online meeting themed 'Empowering Diversity in Science'.

The meeting was opened at 9:30 by Dr Sadhna Mathura, the SACI Women's representative of the Central Section. Sadhna is a bioinorganic chemist from the University of the Witwatersrand and a formal IUPAC Periodic Table of Younger Chemist Awardee. She has introduced the organising committee of the event that compiled from Prof. Nikoletta Bathori (Cape Peninsula University of Technology, chairperson of SACI Western Cape), Mrs Laila Smith (SACI administrator), Ms Megan Matthews (Stellenbosch University, national student representative of SACI) and Ms Bianca Davids (University of the Witwatersrand, student representative of SACI Central). Sadhna presented the proposed program, and Niki gave a short summary of IUPAC, the mother organisation of the GWB and the focus point of the 2021 event.



### *GWB2021 focus points*

The audience was welcomed via a video message by Prof. Zeblon Vilakazi, the Vice-Chancellor of the Wits University. Prof. Vilakazi emphasised the importance of supporting women in STEM, a historically male-dominated area, and creating the critical mass of the scientific workforce that is broadly representative of gender.

The guest speaker was Prof. Frances Separovic, Redmond Barry Distinguished Professor, a biophysical chemist at the University of Melbourne, specialising in biological solid-state NMR. She is also the deputy director of Bio21, an Australian research institute focusing on molecular science and biotechnology. Frances, a Croatian born chemist, was the first person in her family to complete primary school, let alone university. She then completed her PhD part-time whilst being a single mother and working full time at the CSIRO, a governmental research institute in Australia. Frances then became the first woman professor of Chemistry at the University of Melbourne in 2005, and she is the first woman elected as a chemist to the Australian Academy of Science (2012). IUPAC recognised her in 2017 as one of the Distinguished Women in Chemistry/Chemical Engineering. In 2018, she was inducted into the Victorian Honour Roll of Women, and in 2019, she was recognised as an Officer of the Order of Australia on the Queen's Birthday Honours list. Frances is enthusiastic about promoting women and girls in science, and she is involved in an intensive leadership programme in Antarctica with a group of women in STEM under the Homeward Bound voyage initiative. In her talk, Francis highlighted some important stages of her personal life and emphasised the importance of being curious constantly and open to new challenges. Her talk was followed by many questions about decision making, coordinating personal life with carrier goals, or dealing with high-stress situations or occasional setbacks.



*Prof. Frances Separovic (guest speaker)*

The following item on the program was an icebreaker run by Bianca, who also gave a presentation about the International Younger Chemists Network (IYCN), an associated member organisation of IUPAC for chemists under 35 years. Bianca also introduced the African Younger Chemist Network (AYCN), established in 2020, and invited all younger chemists who would like to contribute to these initiatives.



### *Icebreaker*

The next activity was a panel discussion between Prof. Bice Martincigh (University of KwaZulu-Natal), Prof. Patricia Forbes (University of Pretoria), Mrs Suzanne Finney (Impala Platinum Ltd), and Dr Rehana Malgas-Enus (Stellenbosch University). Megan acted as the facilitator of the panel discussion, which focused on Diversity and Inclusion in STEM. The starting point of the discussion was the rather shocking fact that women in South Africa contributing only 13 % to the STEM workforce. The discussion was built around the following topics: confidence-building of girls from a young age and how to encourage them to choose careers in STEM, what the chemical industry/ SA universities can do to accommodate women in the workplace, how to balance assertiveness and likeability at the workplace, the importance of outreach initiatives in the empowerment of women students coming from challenging circumstances, and how important to become a role model for the younger generation once one achieves personal success.



*Panellists: Dr Rehana Malgas-Enus, Ms Megan Matthews, Mrs Suzanne Finney, Prof. Patricia Forbes, Prof. Bice Martincigh*



*Attendees*

Sadhna, Bianca, Megan and Niki thanked all the panel members and the attendees for the fruitful and thought-provoking discussions. The GWB initiative continues in 2022, so please join us on 16 February 2022 for the next celebration of women in science.

18 April 2021

A break in the clouds (by Niki Bathori)

The picturesque garden of the Allee Bleue estate was the perfect venue for a socially distanced but high-spirited picnic. The event was a replacement activity of the annual dinner that had to be cancelled because of the restrictive regulations resulting from the COVID-19 pandemic. Thirty SACI WC members, their relatives, and a dog got together for a lazy afternoon to grab picnic baskets, a glass of wine and were immersed in discussions about surviving strategies during the pandemic. We were happy to meet in person with some of the 2020 SACI Life Members, Prof. Graham Jackson and Mr Dirk Reyskens, and Dr Margaret Blackie, the SACI Chemical Education Medal awardee of 2020. For the photographic proof of the relaxed day, we thank Dirk! A very special thank goes to Prof. Catharine Esterhuysen, the chair of the ISXB4 conference, who donated part of the profit to support the event. This was the first picnic organised for the WC members, but not the last!



Proof of happiness

**8-9 July 2020**

**YCS2021 - An Online Success** (by Bianca Davids)

As a result of the COVID-19 pandemic, chemists have had to embrace technology in a time where traditional conferences have been impossible. The Young Chemists' Symposium 2021 (YCS2021) was no different and was held from the 8th-9th July via MS Teams. The two-day event was open to all students and academic staff for attendance and saw approximately 160 people in attendance, with 64 postgraduate students (MSc and PhD) presented their work over three categories: oral presentations, flash talks, and poster presentations. Generous prizes were sponsored by the Royal Society of Chemistry (RSC) North Division, South Africa and SACI Western Cape, along with Herman Pistorius of Supercues.

Students from all universities across South Africa showcased their work, a first for the YCS, which has been restricted to individual YCS events for each SACI regional section separately. The organising committee consisted of Bianca Davids (WITS), Franklin de Bruin (UWC), Junia Malapile (CPUT alumna) and Larnelle Garnie (UCT), with Megan Matthews (SU) in a supportive role.

The program ran over two days, from 9:00 to 15:00. On the first day, short talks were given by the representatives of the sponsors, Professor Peter Mallon and Dr John Woodland, on behalf of SACI and RSC, respectively. This was followed by our guest speaker Dr Lethogonolo Mabena from TUT, who provided insight into the importance of green chemistry in line with this year's theme: Sustainable Chemistry. This year's theme highlighted the significant impact that traditional chemistry has had on the environment and encouraged us to think beyond the bench. Thereafter, a series of sessions were held consisting of oral presentations and flash talks by Master's and PhD students from WITS, UJ, UP, TUT, UKZN, UWC, UCT, SU, NWU, VUT and NMU. These two categories were adjudicated by three judges, Songeziwe Ntsimango (WITS), Dr Keagan Pokpas (UWC) and Chelsea Williams (SU). The winner and runner up of the PhD oral presentation category were Olubukade John Adesanmi (UKZN) and Samantha Ndlovu (UKZN), respectively. In the Master's category of the oral presentations, Jonathan Kiaka (VUT) and Nompilo Ntombela (NMU) were the winner and runner-up. For the flash talks, in the PhD category, Nompumelelo Mathebula (WITS) and Cornelius J Lombard (NWU) were the winner and runner-up, respectively, while in the Master's category, the winner and runner-up were Mzuvukile Singata (NMU) and Ané Kritzinger (UP). Participants were given the opportunity to vote for their favourite presenters via an online form, and the winner for the oral presentation crowd favourite was Lindokuhle Precious Magagula (WITS), while Nompumelelo Mathebula (WITS) was named crowd favourite in the flash talks.



*Some of our guests and speakers including Dr Mabena (bottom right corner), Prof Peter Mallon (bottom left corner) and Dr John Woodland (top left corner)*



*Some of the presenters in the flash talk and oral presentation categories as well as a few attendees*



*A handful of the winners*



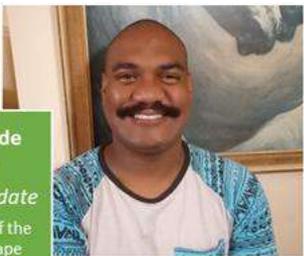
*The judges for YCS2021, Chelsea Williams, Dr Songeziwe Ntsimango and Dr Keagan Pokpas*



**Bianca Davids**  
PhD Candidate  
University of the Witwatersrand



**Junia Malapile**  
Masters' Graduate  
Cape Peninsula University of Technology



**Franklin de Bruin**  
PhD Candidate  
University of the Western Cape



**Larnelle Garnie**  
PhD Candidate  
University of Cape Town



**Megan Matthews**  
PhD Candidate  
Stellenbosch University

*Organisers of the YCS2021*

**Top Latest People Photos Videos**

**Bathabile Makhathini** · 07 Jul  
Strategies towards synthesis of  $\gamma$ -butenolide, piceatannol lactone (natural product)  
Bathabile Makhathini  
MSc Organic Chemistry, University of the Free State  
@Chemists21 #OrganicChemistry #UFS #YCS2021

**autie.khanz** @Khanza... · 07 Jul  
Chemotherapy can kill the normal cells. With targeted therapy, the normal cells can survive the targeted therapy which has less side effect. @Chemists21 Thanks for giving us a platform to share our work! #YCS2021 #YCS #RSC #wits #SACI

**Nandisive Mateyise** @NandisiveM · Jul 6  
So excited to be a part of @Chemists21's #YCS2021 symposium #RSC #SACI

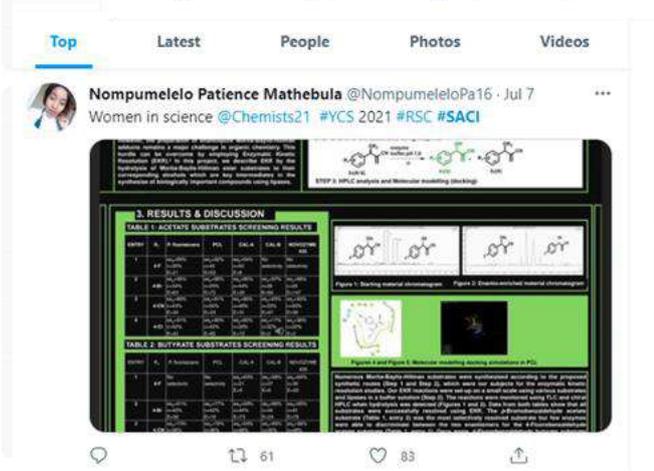
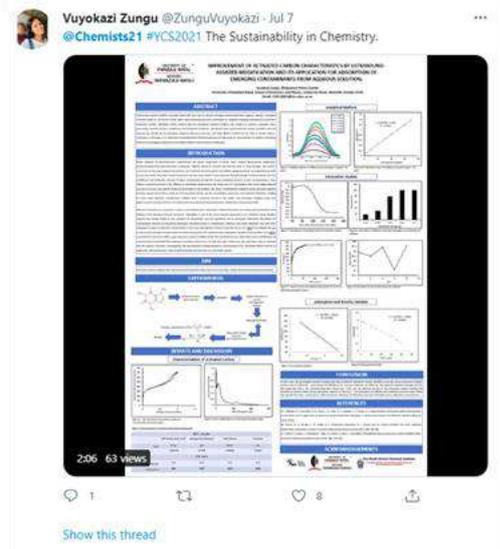
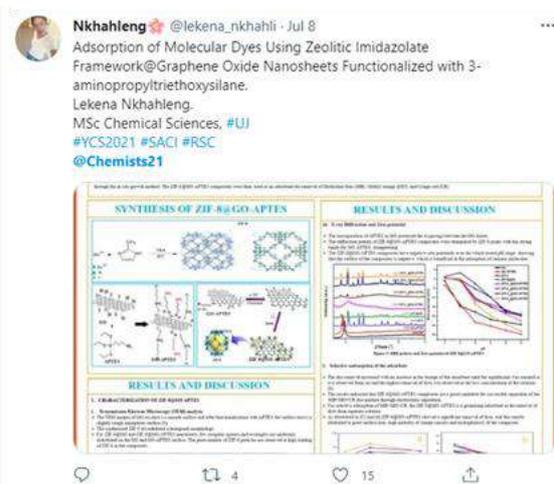
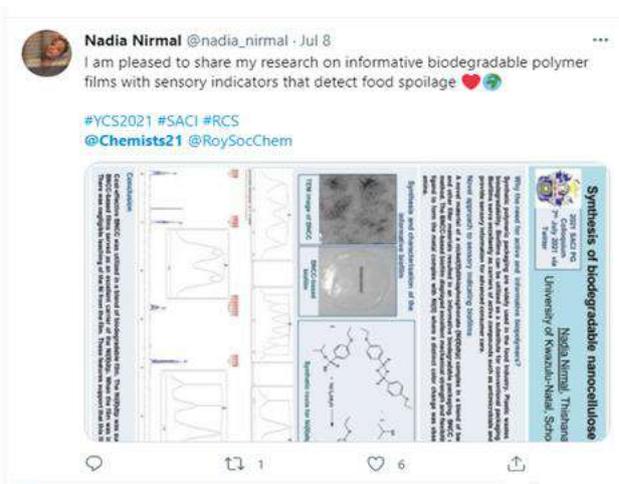
**Mmabatho** @KamogobMedica2 · Jul 8  
Part 1 of my video explaining the motivation behind the project and the poster. #Chemists21 #SACI2021

**autie.khanz** @KhanzaMiss · Jul 7  
CARBON DOTS-IRGD PEPTIDE FOR TUMOR-TARGETED FLUORESCENCE BIO-IMAGING AND DRUG DELIVERY. Please watch the short video of this work. Much appreciated @Chemists21 for this opportunity #YCS2021

**Sisaa\_a1** @Sisaa\_a1 · Jul 7  
Sustainability in Chemistry, UJ MSc candidate. Poster Presentation @Chemists21 @RoySocChem #YCS2021 #SALI #KSL

**Lenard Carroll** @LenardCarroll3 · Jul 7  
Lenard Carroll's poster video part 3 @Chemists21

*Some of the creative twitter posters and videos*



*Some of the creative twitter posters and videos*

Not only do we as chemists have to plan our research in a more sustainable manner, but we also need to think of how “green” a traditional conference is. Typically, a poster session would see a number of trees being sacrificed in the name of chemistry (and to have those posters being rolled up in the corner of an office never to be seen again afterwards). However, the YCS2021 poster session allowed for an interactive way for students to save some paper and show off their creativity via voice-over presentations and videos posted on Twitter. The winner and runner-up of this category were selected by the participants of the YCS2021 and were Kamogelo Modisane (WITS) and Khanani Machumele (WITS), respectively. The winner and runner-up of each category were gifted monetary prizes.

Overall, the YCS was enjoyed by the attendees and was successfully held via MS Teams. It was an event that contributed to interaction amongst students and an event that garnered interest in the younger members of RSC and SACI. The YCS hopes to grow in the future and provide a platform for young chemists all over South Africa to showcase their unique talents and the immense creativity that has been fostered as a result of the pandemic.

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

## **ANALYTICAL CHEMISTRY**

Nothing to report

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

## **CHEMICAL EDUCATION**

Dr Margaret Blackie, Senior Lecturer in the Department of Chemistry and Polymer Science Stellenbosch University, was the recipient of the SACI Chemical Education Medal in 2020. During the past decade she has published five research papers and one book chapter in science education. Her work makes a strong philosophical contribution to the discipline. She makes an argument for tertiary education to be truly transformative for both teacher and student. In her recent work on the challenges presented by the complexity of language in chemistry education she explores Legitimation Code Theory as a resource to analyse and address these challenges so that meaningful learning can occur.

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 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**  
**Chairperson Chemical Education**



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

## ANNUAL REPORT ON THE ACTIVITIES OF THE CHROMATOGRAPHY DIVISION

FOR THE PERIOD MAY 2020 TO APRIL 2021

### 1 COMMITTEE and MEMBERSHIP:

Three committee meetings were held during the above period.

The national committee members are:

- 1.1 Prof Patricia Forbes (Chairperson)
- 1.2 Wiana Louw (Immediate Past Chairperson)
- 1.3 Belinda Hickman Mosdell (Vice Chairperson and Treasurer)
- 1.4 Dr Yvette Naudé (Honorary Secretary and Membership)
- 1.5 Mamsy Motlanthe (Minutes secretary)
- 1.6 Madelien Wooding and Sifiso Nsibande (Student liaison)
- 1.7 Additional members: Vuyo Silwana, Charl Yeates, Marion Rippon and Margaux Lim Ah Tock.
- 1.8 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, Wessel Kriek, Brenda Marx, Marietjie Stander, Karl Storbeck, Hannes van der Merwe, Mare Vlok, and Merrill Wicht.
- 1.9 Dr Lawrence Madikizela was the ChromSA representative for KwaZulu Natal until the end of 2020 when he relocated to Gauteng.
- 1.10 Dr Nikita Tavangwa is the representative in Limpopo.

Prof Forbes represented ChromSA at the SACI Council meeting and AGM on 20 August 2020.

There are currently over 560 members on the ChromSA mailing list.

### 2 ANNUAL GENERAL MEETING:

No AGM was held in 2020 due to the global Covid-19 pandemic. The 2020 annual report and audited financial statements were circulated electronically to members for their information and acceptance.

### 3 CHROMATOGRAPHER OF THE YEAR AWARD:

The 2019 ChromSA Chromatographer of the Year award lecture by Prof Patricia Forbes was eventually moved to an online event due to lockdown restrictions. Due to the delay in presentation of the award and the pandemic situation it was decided not to put out a call for the Chromatographer of the Year in 2020, but this will resume in 2021.

### 4 FINANCES:

The funds held by the National ChromSA division are >R420 000, whilst ChromSA Western Cape has funds of >R440 000 (pending finalization of ChromSAAMS expenditure).

### 5 EVENTS ORGANISED:

Two online events were organized for our members during the period under review, as detailed below. As these events were held online, it enabled ChromSA members from anywhere in the country to attend, which was an advantage over the traditional face-to-face meetings. ChromSA has also actively promoted numerous online chromatography-related events organized by suppliers, which has allowed members to keep up to date with developments in this field during the lockdown period.

Speaker	Title	Date
Prof Patricia Forbes	A decade of denuders: How chromatography can assist in reducing human health impacts of pollution	10 March 2021
Dr Peter Apps	Saved by the smell: Using chemical signals to protect predators and livestock	13 May 2021

The Western Cape committee mainly focused on the organization of the ChromSAAMS 2020 Conference.

### 6 FUTURE EVENTS:

The ChromSAAMS 2020 Conference, which was originally scheduled for 13 to 16 September 2020 in Stellenbosch, was initially postponed to 2021 due to the Covid-19 situation. During the period under review, it was decided that another postponement was not suitable, and the event was cancelled. This has incurred some unrecoverable costs (approximately R80k), and ChromSA has agreed to contribute R20k towards this, which will be deducted from the seed funding which had been provided to the organizing committee by ChromSA.

A national online ChromSA student event is planned for October 2021.

## **7 CONCLUDING COMMENTS:**

I am stepping down as Chairperson of ChromSA as of July 2021 but will still serve as Immediate Past Chairperson. Belinda Hickman-Mosdell, who has served as Treasurer on our committee for a number of years, will be the new Chairperson. We have also welcomed four new members onto the national committee, which will promote fresh ideas and enthusiasm. We have set up a new website which has a modern, professional feel [www.chromsa.com](http://www.chromsa.com)

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 numerous webinars suppliers 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 hope that face-to-face activities will resume again in the not too distant future.

**Prof Patricia Forbes**  
**Chairperson ChromSA**

## **ENVIROMENTAL CHEMISTRY**

### **Water Research Commission (WRC).**

In 2020, the WRC and Tshwane University of Technology (TUT) signed an agreement to conduct research on “*A nation-wide monitoring exercise for sources, occurrence and levels of per- and polyfluoroalkyl substances (PFASs) in South African source and drinking waters.*” under the leadership of Prof OJ Okonkwo. The project runs from 2020-2023.

The inaugural meeting was held late in 2020 and the second Reference Group meeting will be held on 26<sup>th</sup> August 2021.

### **SETAC Africa 10 Biennial Conference (20 - 22 September 2021)**

This virtual conference will bring together environmental professionals and students engaged in environmental science from around the globe but with special interest in Africa's environmental challenges. The meeting itself will focus on live discussion sessions and topical socials and networking events.

### **Postgraduate students' participation**

The abstracts of the following postgraduate students have been accepted for SETAC Africa 10<sup>th</sup> biennial virtual Conference:

- ✓ Miss MF Morethe;
- ✓ Miss K Mashiloane and
- ✓ Mr Z Maliga

**Prof OJ Okonkwo**  
**Chairperson Environmental Chemistry**

## PHYSICAL CHEMISTRY

Nothing to report

**Prof Delia Haynes**  
**Chairperson Carman (Physical Chemistry)**



Nothing to report

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

## INORGANIC CHEMISTRY

Nothing to report

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

## INDUSTRIAL CHEMISTRY

Nothing to report

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

## MOLECULAR MODELLING

Nothing to report

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

## ORGANIC CHEMISTRY

The primary news to report has been the restructuring of the division leadership, and the introduction of a committee structure, representative of the SACI regions, which is detailed

below, for consideration by SACI

**Context:**

At the 2018 SACI convention, it was decided that the chair of the upcoming Frank Warren organic chemistry conference, would be the *de facto* chair of the SACI organic division. Given that the Frank Warren is the flagship event in the division, this proposal held a lot of sway.

However, while an excellent mechanism to continuously ensure fresh people and ideas are involved in the division, with the added benefit of equitably sharing the load amongst the regions of SACI, this structure has several inherent limitations. These include a lack of continuity between committees, and disjointed communication with SACI. Furthermore, given the substantial responsibility involved in arranging the Frank Warren, it would be difficult to expect the same person to be actively involved in arranging additional divisional activities.

Following a series of discussions between the previous Frank Warren chair (Clinton Veale), the current Frank Warren chair (Comfort Nkambule) and the SACI vice president (Willem van Otterlo), the idea of setting up a SACI organic division committee was proposed. The intention would be to provide continuity for organic chemistry representation at SACI level, as well as a platform for greater national integration and engagement of the local organic chemistry community outside of the Frank Warren conference.

**Committee structure**

Following expanded discussions with several co-opted individuals, the committee structure was proposed to comprise of 7 members. These are: Divisional chair, the current Frank Warren committee chair, and 1 representative from each of the regional sections. Finally, one of the sectional representatives will assume the role of committee treasurer.

The term of the division chair would still be linked to the Frank warren conference cycle, where following the completion of the conference, the organic division chair would automatically step aside, with the Frank warren chair assuming the role of division chair. This would, therefore, leave an opening for the new Frank Warren chair to join the divisional committee.

With the goal of blending continuity, experience and the continuous injection of new ideas, regional representation on the organic committee would be for a minimum of 2 years, up to a maximum of 5 consecutive years. Unlimited additional terms can be sought, provided that the individual terms do not exceed 5 consecutive years.

Following the expiration of a term or withdrawal of a sectional representative, the organic division will ask the respective sectional chair to request nominations and/ or volunteers for the vacant position. The final decision of who occupies the sectional representation position will be made by the regional section.

## Current committee

Given that this is the first iteration of this proposed structure, the first committee was coopted by Clinton Veale

**Chair** – Clinton Veale

**Frank Warren Chair** – Comfort Nkambule

**KZN Section** – Matshawe Tukulula

**North Section** – Natasha October

**Central Section** – Susanna Bonnet

**Western Cape Section** – Wade Petersen

**Eastern Cape Section** – TBC

**Dr C Veale**

**Chairperson Organic Chemistry**



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)



## Report for the period August 2020 to July 2021

### 1. Committee

Three committee meetings were held during this period:

22 October 2020

12 May 2021

29 June 2021

#### SAAMS National Committee – 2019/2021:

Chairperson:	Maré Linsky
Immediate past chairperson:	Ljiljana Marjanovic
Treasurer:	Schalk de Kock
Other committee members:	Egmont Rohwer (International representative) Ireshyn Govender (Website and Communication) Madelien Wooding (Minutes secretary) Duncan Cromarty Désirée Prevoo-Franzsen
Vendor industry representative:	Maxime Chalmers van den Berg
Liaison with SACI (Co-opted):	Mike Britton

#### Co-opted member:

Mike Britton	Liaison with SACI
--------------	-------------------

Regional representatives:

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

**Newly elected committee for the period August 2021 to July 2023:**

Chairperson:	Maré Linsky
Immediate past chairperson:	Ljiljana Marjanovic
Treasurer:	Schalk de Kock *
Other committee members:	Egmont Rohwer (International representative) Ireshyn Govender (Website and Communication) Madelien Wooding (Minutes secretary) Duncan Cromarty Désirée Prevoo-Franzsen * Previn Naicker (new member) Cornelius Rimayi (new member)
Vendor industry representative:	Maxime Chalmers van den Berg
Liaison with SACI (Co-opted):	Mike Britton

\* Schalk indicated that this will be his last term to serve as treasurer. Désirée will be shadowing him for the next two years to take over from him.

**2. Membership**

SAAMS has a membership of 438 members (as of June 2021) 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 drug, geology, agricultural, medical etc.

**3. Finances**

SAAMS financial statements for the 2020/2021 period is currently being audited by Mr John Mosdell, SAAMS' current financial auditor. SAAMS bank statements at financial year end (30 April 2021) as well as the Audit report for the 2019/2020 financial period were supplied to SACI on the 19<sup>th</sup> of May 2021.

SAAMS Financial position on 30 April 2021:

- Savings account: R33 375.27
- Unit Trust: R276 656.29

The only income received during the last financial year was interest on the unit trust investment.

Expenses during the period included the cost of bank charges, website hosting fees and auditor fees. Due to the lack of income from conferences, the SAAMS finances have been steadily declining over the last 3 years.

#### 4. **Functions and activities**

Unfortunately, due to Covid lockdown measures, SAAMS only managed to host one virtual event combined with the AGM.

##### **Annual General Meeting, 7 July 2021**



SAAMS' Annual General Meeting (AGM) for 2021 took place on 7 July 2021. This was hosted as a virtual meeting via MS Teams with the assistance of the SACI office. The AGM was hosted in conjunction with a lecture by Prof Duncan Cromarty, from the University of Pretoria on "Some of the many facets of LC-MS/MS in the pharmacology environment". During his lecture, Prof. Cromarty provided a fascinating overview of his research covering topics as broad as vulture deaths due to certain NSAIDs, to investigations into burn wound healing employing a variety of proteomic, metabolomic, and lipidomic approaches.

During the AGM section of the meeting, feedback was provided to members on SAAMS membership, the new committee for the next period was introduced, a brief overview of SAAMS finances was provided and updates were given on events planned (e.g. cancellation of ChromSAAMS 2021).

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

SAAMS are currently maintaining a website. A LinkedIn account is currently dormant due to emigration of previous committee members in this portfolio. The new committee are currently attempting to recover this account.

#### 6. **General**

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

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



Although the committee of the Green Chemistry Division have not been active over the past year, the growth of Green Chemistry across the South African Chemistry community has continued in leaps and bounds. Signs of growth in Green Chemistry include an increase in the number of applications for NRF funding in the field, inclusion of Green Chemistry in the curricula of several Universities, and the inclusion of an issue on Valorisation of Biomass in the African context in Current Research in Green and Sustainable Chemistry.

Industrial initiatives in Green Chemistry are well established in companies like Sasol and BASF, and “green” chemicals (both those from renewable sources and those which have high safety rating) are available from Merck. In addition to the introduction of several green initiatives in Multinational companies operating in South Africa, the National Cleaner Production Centre at the CSIR (NCPC-SA) has just concluded a three-year project with UNIDO. Part of their activities have included assisting industry in becoming more resource efficient, particularly with reference to energy and water efficiency, and they have worked to raise awareness of the principles of Green Chemistry in industry in South Africa. The pulp and paper industry, and sugar industry have both been very active in research toward using lignocellulose as a feedstock for the chemical industry, providing funding for independent labs and a home for those who are pursuing research in platform molecules.

Academic ventures in Green Chemistry have been strengthened in the last year, with most green chemistry related research being centred around the University of the Witwatersrand, University of kwaZulu-Natal, and Rhodes University, although there is some activity in almost every chemistry department in South Africa. The main areas of research include the broad inclusion of renewable resources (such as biomass conversion by Vincent Nyamori and Werner van Zyl at UKZN, xylochemistry by Charles de Koning and Kennedy Ngwira at Wits), the incorporation of biocatalysis (Moirra Bode and Amanda Rousseau at Wits) and metal based catalysts (probably the most well established area of interest to the Green Chemistry community, including teams at NWU, UFS, Stellenbosch, and UCT).

The greening of chemical synthesis by adaptation of methodology has become a thriving area of investigation. Multicomponent reactions have been used by Willem van Otterlo (Stellenbosch), Moira Bode (Wits), Rosalyn Klein (Rhodes) as a means of improving overall reaction efficiency. Flow chemistry has been used by Darren Riley (UP) and Paul Watts (NMU) to accomplish the same end. In addition, researchers such as Vineet Jeena and Isaiah Ramaite have incorporated a range of approaches to implement the twelve principles of Green Chemistry.

All of these initiatives have been driven by a concern for the impact of chemical activities on the environment. This concern has begun to filter into our curricula at University level, and we have begun to see the inclusion of additional topics at every level, either as elective topics or as alternative perspectives across the curriculum. The result is a growing cohort of young academics who have incorporated the principles of green chemistry as a central organizing

approach to their research. This gives hope that a new committee will arise in the next year to drive the further development of Green Chemistry at SACI, and by doing so improve the confidence of the public in our activities.

In closing, Green Chemistry is the mandate of all chemists, and we can all take responsibility for the impact of what we do. I would like to call upon all academics involved in chemistry research to look critically at the chemistry their post-grads are doing in their research labs and ask the question for each and every reaction – how green is the reaction solvent? How green is the work-up solvent? Am I just using the same solvents as used before in the literature or am I actively trying to make improvements in my solvent choices? Awareness is key, and if students develop good habits early on then it sticks!

**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: Dr. Chris Woolard, Mr Ross Burnham, Dr. Andrew Pienaar

### **Events 2020-2021**

No events were held during this period.

### **Knowledge dissemination**

E-mail communications 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 renewed our membership as an affiliated society of ICTAC (International Confederation of Thermal Analysis and Calorimetry). The 17<sup>th</sup> International Congress on Thermal Analysis and Calorimetry (ICTAC17) including the 8<sup>th</sup> Joint Czech-Hungarian-Polish-Slovakian Thermoanalytical Conference (V4 8) and 14<sup>th</sup> Conference on Calorimetry and Thermal Analysis of the Polish Society of Calorimetry and Thermal Analysis (CCTA 14) – ICTAC2020, which were scheduled to take place in Krakow, Poland from 30 August 2020 was postponed due to the COVID-19 pandemic. This conference is rescheduled to take place as an online conference from 29 August to 3 September 2021.

## **Membership**

There are currently 67 members of SACI who are members of ThermSA. In addition, there are 5 members who are not SACI members.

**Dr Liezel van der Merwe**  
**Chairperson ThermSA**

## **SACI STUDENT REPORT**

Many have said that 2021 has been more of the same, yet the context in which this report is written differs vastly from that of last year's. At this stage of 2021 we are on the verge of regaining some of our previous way of life, with the number of vaccinated individuals increasing daily. There is hope that we will all gather together again soon. While waiting for that day to arrive we have adapted to different communication strategies including virtual gatherings and social media interactions. This has allowed the student division of SACI to remain active despite various levels of restrictions for different provinces.

On the 8<sup>th</sup> and 9<sup>th</sup> of July 2021 the SACI student division held its first national Young Chemists Symposium with the theme of sustainability in chemistry. The symposium was hosted virtually on MS Teams. The event was greatly successful with 200 attendees from various institutions including UJ, UP, WITS, TUT, UKZN, NMU, NWU, UWC, UCT, SU and CPUT. The presentations included both oral presentations and flash talks with a total of 36 presentations. A poster competition was held on Twitter and included 30 contributors with each poster including a short video summary of the research. The Twitter engagement was highly favourable and many of the attendees participated in the event. The guest speaker, Dr Letlhogonolo Mabena from TUT, presented a talk focusing on the theme of sustainable chemistry and her research in this field. We would like to thank the RSC Northern Section, SACI Western Cape as well as Mr Herman Pistorius for their generous sponsorships towards the YCS 2021. We also thank the YCS 2021 planning committee (Larnelle Garnie, Bianca Davids, Junia Malapile and Frankling de Bruin) for their excellent work. The programme was designed in a way which facilitated interaction between presenters and attendees and promoted engagement between young chemists from all over South Africa. Prior to the event the committee also compiled a booklet of abstracts of all presentations at the YCS 2021 which was sent out to all participants and attendees. The purpose of the abstract book was to enable contact between research groups for possible collaborations since no networking activities could take place as would be the case at an in-person event.

The level of interest expressed in the YCS webinar series made it clear that students and young chemists are eager to participate in the SACI community. For this reason, it is essential that we cater to the needs of our student members especially considering the drastic decrease in the numbers of registered student members as of July 2021. This is only possible if adequate structures are in place to facilitate events and communications in the various sections. It is inevitable that student members and representatives will change regularly as student turnover in our academic institutions occurs constantly, however, we require stability within the sections for information to be passed on to new representatives efficiently. This is currently not the case in many sections. We gladly note the revival of the SACI Central committee and the effect of

the new structure was immediately felt by the involvement of SACI Central in the YCS 2021. The majority of YCS attendees were from SACI Central and KwaZulu-Natal sections where the SACI committees are well established. The Northern and Eastern Cape sections have little to no representation and their student involvement in events is an ongoing concern. Wherever the structures are inadequate the membership suffers, and we hope that this issue can be promptly addressed during the remainder of 2021.

Alas the work is never complete! Much remains to be done within the student division but my time with this committee has come to an end. I would like to extend my thanks to Prof Peter Mallon and the entire SACI executive committee for their support and encouragement over the past two years. The executive committee works tirelessly for the interest of the membership and their acknowledgement of the importance of the student division has made young chemists feel recognised by our senior chemists. I have learned many valuable lessons during my time as student representative which I will carry with me always.

I wish the new executive committee and our members all the best.

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

## FINANCIAL REPORT - PERIOD 1 MAY 2020 TO 30 APRIL 2021

A full audited report is available on request.

	2019-2020	2020-2021	Y/Y-1	2020-2021	2020-2021
<b>Income</b>	<b>Actual, R</b>	<b>Actual, R</b>	<b>%</b>	<b>Budget, R</b>	<b>Actual/Budget %</b>
Admin donation from conferences	30 000.00	-	-100.00		
Advertising Income	3 800.00	21 250.00	459.21	3 950.00	537.97
Critical Skills Evaluation	5 200.00	2 750.00	-47.12	5 410.00	50.83
Interest on Marketlink account	7 644.25	12.19	-99.84	7 950.00	0.15
IUPAC income	12 480.00	13 440.00	7.69	12 980.00	103.54
Journal Income	529.59	-	-100.00	550.00	0.00
Membership Fees	550 048.00	445 914.80	-18.93	619 150.00	72.02
Merchandise/Ties and Scarfs	61 030.00	2 340.00	-96.17	20 000.00	11.70
PrChemSA annual and once off registration Fees	38 870.00	14 270.00	-63.29	40 420.00	35.30
Unallocated Income	45 285.13	4 541.44	-89.97	47 100.00	9.64
<b>Total Income</b>	<b>754 886.97</b>	<b>504 518.43</b>	<b>-33.17</b>	<b>757 510.00</b>	<b>66.60</b>
	2019-2020	2020-2021	Y/Y-1	2020-2021	2020-2021
<b>Expenditure</b>	<b>Actual, R</b>	<b>Actual, R</b>	<b>%</b>	<b>Budget, R</b>	<b>Actual/Budget %</b>
Auditors	12 720.00	11 850.00	-6.84	13 230.00	89.57
Bank Charges	13 421.00	8 721.10	-35.02	14 000.00	62.29
Certificates (Membership)	5 972.50	6 820.00	14.19	3 210.00	212.46
Computer/Software/Pastel/Internet	24 539.22	32 540.83	32.61	25 520.00	127.51
Courier and Postage	1 547.68	2 452.00	58.43	1 610.00	152.30
Critical skills evaluation Prof Breet	1 400.00	700.00	-50.00	1 540.00	45.45
Entertainment Expenses (Council/Exco Functions)	10 526.83	-	-100.00	10 530.00	0.00
General Expenses	6 512.72	6 236.35	-4.24	6 770.00	92.12
IYPT activities	45 200.00	-	-100.00		
Journal Expenses	80 261.56	56 145.85	-30.05	88 290.00	63.59
Medal Prize Money and Minting of Medals	25 670.31	21 473.37	-16.35	26 700.00	80.42
Merchandise	30 245.00	-	-100.00	15 000.00	0.00
PrChemSA/PrSciNat Administration	7 280.00	-	-100.00	7 570.00	0.00
Printing, Stationery and Photocopying	4 754.26	7 849.93	65.11	4 940.00	158.91
Rental	18 000.00	18 000.00	0.00	18 720.00	96.15
SAJC online submissions	15 048.00	16 493.20	9.60	15 650.00	105.39
Salaries and Wages	412 107.88	431 328.58	4.66	436 830.00	98.74
Subscriptions (IUPAC/FASC/EBSCO/NSTF/SAQA)	18 642.00	12 057.22	-35.32	19 390.00	62.18
Telephone and Fax	3 949.95	4 472.73	13.24	4 110.00	108.83
Telkom Wifi	3 739.11	5 777.70	54.52	3 890.00	148.53
Travel and Accommodation	34 923.23	1 915.42	-94.52	10 000.00	19.15
Zoom Conference call	2 878.08	-	-100.00		
<b>Total Expenditure</b>	<b>779 339.33</b>	<b>644 834.28</b>	<b>-17.26</b>	<b>727 500.00</b>	<b>88.64</b>
	2019-2020	2020-2021	Y/Y-1	2020-2021	2020-2021
<b>Item</b>	<b>Actual, R</b>	<b>Actual, R</b>	<b>%</b>	<b>Budget, R</b>	<b>Actual/Budget %</b>
Total Income	754 886.97	504 518.43	-33.17	757 510.00	66.60
Total Expenditure	779 339.33	644 834.28	-17.26	727 500.00	88.64
<b>Balance</b>	<b>- 24 452.36</b>	<b>- 140 315.85</b>	<b>473.83</b>	<b>30 010.00</b>	<b>-467.56</b>
<b>SACI Admin Account</b>	<b>Opening Balance, R - 01 May 2020</b>			<b>Closing Balance, R</b>	<b>Gain/Loss, R</b>
Wits Admin account		31 165.31		212.93	- 30 952.38
Standard Bank Market Link Account		2 285.99		1 871.43	- 414.56
Standard Bank Cheque account		358 729.49		247 491.31	- 111 238.18
<b>Total</b>		<b>392 180.79</b>		<b>249 575.67</b>	<b>- 142 605.12</b>

Investment Accounts	Opening Balance, R - 01 May 2020	Closing Balance, R	Gain/Loss, R
Coronation Global Optimum Growth Fund		276 691.12	- 3 308.88
Fairtree SA Equity Prescient Fund		306 102.75	26 102.75
Ninety One Equity Fund H	458 207.84	610 024.61	151 816.77
SIM General Equity Fund	385 553.77	531 277.57	145 723.80
Old Mutual	303 896.04	-	
Stanlib Property Income Fund	231 764.80	-	
<b>Total</b>	<b>1 379 422.45</b>	<b>1 724 096.05</b>	<b>344 673.60</b>
<b>Seed Monies and Loans</b>			
			<b>Total, R</b>
Central			18 080.81
ChromSAAMS			50 000.00
ICCE 2020			200 000.00
<b>Total</b>			<b>268 080.81</b>
<b>Profit Derived from Conferences, R</b>			
	<b>2019-2020</b>	<b>2020-2021</b>	<b>Gain/Loss, R</b>
Total	146 645.92	-	- 146 645.92
<b>Divisional Accounts not managed by SACI</b>			
	<b>Opening Balance, R - 01 May 2020</b>	<b>Closing Balance, R</b>	<b>Gain/Loss, R</b>
ChromSA	434 136.30	419 586.09	- 14 550.21
SAAMS	295 342.30	310 031.56	14 689.26
Western Cape	4 900.00	4 900.00	-
<b>Divisions' Market Link Accounts managed by SACI</b>			
	<b>Opening Balance, R - 01 May 2020</b>	<b>Closing Balance, R</b>	<b>Gain/Loss, R</b>
Analytical Chemistry	258 098.35	261 682.46	3 584.11
Central	111.47	111.47	-
Chemical Education	1 226.43	1 232.21	5.78
Computational Chemistry	5 606.22	5 657.92	51.70
Eastern Cape	78 650.34	78 236.64	- 413.70
Electrochemistry	156 524.69	158 134.87	1 610.18
Green Chemistry	55 668.11	57 160.87	1 492.76
Inorganic Chemistry	195 662.89	200 225.51	4 562.62
Kwazulu Natal	106 433.82	108 356.02	1 922.20
KZN Womans Functions	23 120.21	23 370.78	250.57
North	18 040.23	11 390.95	- 6 649.28
Organic Chemistry	258 627.23	262 398.00	3 770.77
ThermSA	57 666.43	52 852.61	- 4 813.82
Western Cape	100 068.52	100 033.37	- 35.15
RSC Sponsorship FASC Meeting		200 279.54	200 279.54
<b>Total</b>	<b>1 315 504.94</b>	<b>1 521 123.22</b>	<b>205 618.28</b>

## INCOME

- Total Income R504 518 < Budget
- Membership Fees are a significant portion of the Budget, and the budget did not take into account 3 year memberships already paid up front; the benefit of the 3-yearly membership was shown in the financial report ending 30 Apr 2019, and can be seen in the bank balance at the bottom of the above table, which is healthy at R249 576
- Merchandise Sales < Budget due to lack of purchases during COVID by members
- PrChemSA Annual Subs/Registrations and Critical Skills Evaluations < Budget due to the falling away of the SAQA qualifications via SACI, and the negotiations via SACNASP for the PrSciNat (Chemical Sciences) qualification, which will be registered directly through SACNASP in 2021-2022 financial year

- Unaccounted Income showed significant improvement, due to increased emphasis on follow up with members by the Secretariat on the untraceable payments into the SACI bank account by members
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### **EXPENDITURE**

- Total Expenditure R644 834 < Budget, mainly due to tighter control, and on-line meetings, hence, no travel and entertainment expenses

Overall Expenditure > Income, mainly due to no income from conferences during COVID, and membership budget not aligned with 3 yearly membership

### **INVESTMENT ACCOUNTS**

- Following approval by Council and the EXEC last year the Old Mutual and Stanlib Property Investment Accounts were sold at a loss and new accounts were invested with Fairtree Prescient and Coronation Growth in September 2020. Fairtree Prescient Fund is a local equity portfolio, which has shown growth, and was one of the top performing local equity account in 2020. The Coronation Growth Fund is both local and international; the R strengthened against the US\$ and is expected to gain in the next few years (Analysts expect the R to weaken).
- The Ninety One and Sanlam Funds show a growth following the losses last at the end of March and April 2020, due to the JSE stock market losses due to COVID.
  - There is confidence in the 4 current investment funds to grow in the next year, and it is recommended that SACI retains these funds.
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### **SEED MONIES & LOANS**

- SACI Central loan Account a concern as no money available in the Central Gauteng Division's Account – loan outstanding for several years
- ChromSAAMS conference cancelled and EXEC agreed, in line with loan procedures, that SACI will honour the 20% funding of the loss by ChomSAAMS, hence, a repayment of the loan of R30 000 in 2021-2022
- Loan for ICCE 2020 R200 000 carried over – new conference schedule date TBC
- No funds from Conferences in 2020-2021, as conferences moved out due to COVID
- 

### **DIVISIONAL ACCOUNTS**

- All but SACI Central accounts are positive, with gains overall in 2020-2021

## **SACI BUDGET 01 MAY 2021 to 30 APRIL 2022**

A 4.0% increase for 2021/2022 financial year, from actuals 2020/2022, unless otherwise noted

### **NOTES:**

1. No budget 2021-2022 - PrChemSA with SAQA no longer valid - no critical skills evaluation or registration fees
2. Increase in interest - Cash to be managed from Market Link Account c.f. Cheque account, were interest higher, by Secretariat
3. Decrease in budget - 2020-2021 budget did not factor in 3-year memberships
4. New line item - SACNASP MOU & award for SACI to mentor young Chemists
5. No budget, absorbed into membership - Improved traceability of funds received last year
6. Increased budget- includes updates required for POPII compliance
7. Decreased budget- change in publisher at reduced costs, but additional cost for Special Addition, and new journal platform
8. Increased budget - additional medals, rather than just certificates
9. Increased budget - Increase in stock before winter 2022 sweatshirts & beanies – income will be realised 2022-2023
10. Budget increased for 2021-2022 only - SAQA invoices x2 not yet received for 2019-2020, 2020-2021
11. Secretariat salary paid by Wits - SACI pays Wits - Wits posted a 3% increase on staff salaries, to be back dated to 01 Jan 2021, hence increase in budget
12. Loss due to reduced income from membership - balance shown in finances year end Jun 2019 when 3-year memberships paid - cash in hand in the bank. Additional Funds available in investments if required accounts & Seed Monies/Loans

Income	2020-2021		2021-2022	% Increase (Budget 2021- 2022/Budget 2020-2021)	% Increase (Budget 2021 - 2022/ Actual 2020 2021)
	Actual, R	Budget, R	Budget, R		
Admin donation from conferences	-				
Advertising Income	21 250.00	3 950.00	22 100.00	459.49	4.00
Critical Skills Evaluation <sup>1</sup>	2 750.00	5 410.00			
Interest on Marketlink account <sup>2</sup>	12.19	7 950.00	8 000.00	0.63	65528
IUPAC income	13 440.00	12 980.00	13 977.00	7.68	4.00
Journal Income	-	550.00			
Membership Fees <sup>3</sup>	445 914.80	619 150.00	481 655.00	-22.21	8.02
Merchandise/Ties and Scarfs	2 340.00	20 000.00	2 434.00	-87.83	4.02
PrChemSA annual and once off registration Fees <sup>1</sup>	14 270.00	40 420.00	- 3 750.00	-109.28	-126.28
SACNASP Mentorship program <sup>4</sup>	-		30 000.00		
Unallocated Income <sup>5</sup>	4 541.44	47 100.00			
<b>Total Income</b>	<b>504 518.43</b>	<b>757 510.00</b>	<b>554 416.00</b>	<b>-26.81</b>	<b>9.89</b>
Expenditure	2020-2021		2021-2022	% Increase (Budget 2021- 2022/Budget 2020-2021)	% Increase (Budget 2021 - 2022/ Actual 2020 2021)
	Actual, R	Budget, R	Budget, R		
Auditors	11 850.00	13 230.00	12 324.00	-6.85	4.00
Bank Charges	8 721.10	14 000.00	8 602.00	-38.56	-1.37
Certificates (Membership)	6 820.00	3 210.00	7 093.00	120.97	4.00
Computer/Software/Pastel/Internet <sup>6</sup>	32 540.83	25 520.00	36 372.00	42.52	11.77
Courier and Postage	2 452.00	1 610.00	2 550.00	58.39	4.00
Critical skills evaluation Prof Breet <sup>1</sup>	700.00	1 540.00			
Entertainment Expenses (Council/Exco Functions)	-	10 530.00			
General Expenses	6 236.35	6 770.00	6 486.00	-4.19	4.00
Journal Expenses <sup>7</sup>	56 145.85	88 290.00	67 866.00	-23.13	20.87
Medal Prize Money and Minting of Medals <sup>8</sup>	21 473.37	26 700.00	23 621.00	-11.53	10.00
Merchandise <sup>9</sup>	-	15 000.00	41 587.00	177.25	
PrChemSA Administration <sup>1</sup>	-	7 570.00			
Printing, Stationery and Photocopying	7 849.93	4 940.00	8 164.00	65.26	4.00
Rental	18 000.00	18 720.00	18 720.00	0.00	4.00
SAJC online submissions	16 493.20	15 650.00	17 153.00	9.60	4.00
Salaries and Wages <sup>10</sup>	431 328.58	436 830.00	582 930.56	33.45	35.15
SACNASP Mentorship costs (training material/short courses) <sup>4</sup>	-		20 000.00		
Subscriptions (IUPAC/FASC/EBSCO/NSTF/SAQA) <sup>11</sup>	12 057.22	19 390.00	32 540.00	67.82	169.88
Telephone and Fax	4 472.73	4 110.00	4 652.00	13.19	4.01
Telkom Wifi	5 777.70	3 890.00	6 008.00	54.45	3.99
Travel and Accommodation	1 915.42	10 000.00	1 992.00	-80.08	4.00
<b>Total Expenditure</b>	<b>644 834.28</b>	<b>727 500.00</b>	<b>898 660.56</b>	<b>23.53</b>	<b>39.36</b>
Item	2020-2021		2021-2022	% Increase (Budget 2021- 2022/Budget 2020-2021)	% Increase (Budget 2021 - 2022/ Actual 2020 2021)
	Actual, R	Budget, R	Budget, R		
Total Income	504 518.43	757 510.00	554 416.00	-26.81	9.89
Total Expenditure	644 834.28	727 500.00	898 660.56	23.53	39.36
<b>Balance <sup>12</sup></b>	<b>- 140 315.85</b>	<b>30 010.00</b>	<b>- 344 244.56</b>	<b>-1247.10</b>	<b>145.34</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 Jorden	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
		2020	CB de Koning

## 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
		2020	T Naicker

## RECIPIENTS OF THE AECI MEDAL

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

## **RECIPIENTS OF THE MERCK MEDAL**

2000	J F van Staden	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
		2020	VO <u>Nyamori</u>

## **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 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 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  
2020 A Shnier, J Lombard, AH Labulo

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

- 1999 J P K Reynhardt, A J de Villiers, R Best, K Thornell, S V Goodall, K Blann, U Naidoo, N I Harmse, D P de Carcenac, R Cock, J C Nel
- 2000 N Grootboom, E Lamprecht, Amaluleke, D Rautenbach, G L Nattrass, A M Castille, W Gerber
- 2001 J van Rensburg, T Le Roex, X K Peter, J Taljaard, K Lobb, G Venter, A van Aswegen
- 2002 L Greyvenstein, D Patten, Y Baijnath, T Raasch, K Stern, M du Toit, S Botha, O Horwood
- 2003 V Buchanan, E T Borkum, E Erasmus, P Reddy, P Franklyn
- 2004 W Barnard, R Gessner, A Gordon, Z Hall, G Lloyd, L Rota
- 2005 D I Bezuidenhout, C Booyjzsen, J Coetzee, R Janse van Vuuren, Y Koen, C A Laing, E Marais, S Mohamed, M S Mokhadinyana, N Moodley, J Paraskevopoulos, T S Pentz
- 2006 T Paquet, I Rootman, N Rose, P D R Kptze, S Travis, N Miti, D Duma, V A Patterson, M van Rhyn
- 2007 L Loots, M Adendorf, S Botha, MW Smith, P Skillington, N E Hendricks, T Hughes, B Waldron, M N Kay, D J Brankin
- 2008 SA Herbert, KE Mason-Jones, N Silwana, C Reynolds, JI du Toit, A Manival, A Cullen, TR Madihlaba, B Truscott.
- 2009 E Hanekom, W Xu, S M Jing, C F Zipp, Y Nortje, K J Gillham, B Dzepina, P Nyamukamba, A C Conibear, A Ilchev, P I Tshoke, K Potgieter B Simpson
- 2010 C Eley, A Falch, I Grobler, K Hadje Georgiou, N Jijana, P Khalili, R Koen, L Komarsamy, H Maritz, W Petersen, A Pholosi, CA Renison, BK Sebogisi, P Sobantu, S Thompson
- 2011 M Lephoto, H Mungondori, R Pretorius, C Rassie, S Robinson, T Pieterse, A Sayed, K Wicht, M Ungerer
- 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 Motlounge, 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
- 2020 IJ Minnie, A Kritzinger, SA Fraser, L Amod, P Maseko, Khuzwayo, G Ramaremissa, L Mbonzhe, M Maritz

### **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  
2020 M Blackie

**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
2020	No Award