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## SACI NEWS

2012 is an important year for SACI. This will be our 100<sup>th</sup> anniversary the Society came into existence in 1912! SACI is the oldest Chemistry Society on the continent. In 2012 a number of events will be held throughout the country to celebrate this milestone. More information will become available as the year progresses. Any members with ideas on how we should mark the occasion – let Laila know. There are major changes occurring worldwide in Chemistry and we in SACI and in SA need to keep abreast of these changes and adapt to the world in which we live. As part of our deliberations into the future of chemistry in the next one hundred years we will need to take account of what can be called chemophobia. For those who read the Newsletters articles in the ACS C and EN magazine you might have seen comments on two items sold to, I assume (hope!), non-chemists: ‘**dehydrated water**’ and a **chemistry kit** called Chemistry 60 which says ‘60 fun activities **without chemicals**’. Whew! What next. Also included in this newsletter: recognition of the wonderful achievements by Gus Gerrans (teaching award in the US) and Suprakas Ray (top 100 cited chemists in the world in the past decade; 50th position).

Neil Coville

## News from the President

I am always very encouraged when speaking to young chemists about their perception of the importance that chemistry plays in their daily lives. Furthermore, although and despite the negative associations made by the public at large, they realize that any country without a chemical industry or considerable expertise in chemical processing and engineering will simply not be progressive and support Africa as a developing continent.

Not only is this encouraging but it also places them on historical record of a commitment that new graduates wish to play in the future technological role that South Africa will have to initiate on the African continent. It is common knowledge that finite resources viz., coal, oil and drinking water govern the type of massive research needed to sustain an ever increasing supply chain to the masses of people and their expected increasing consumption scenario.

We as chemists, have a responsibility to ensure that future generations will be catered for in terms of their living conditions and enjoyment of a healthy and prosperous life style and to do this we need to be on top of technological development, innovation and future planning scenarios.

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## News from the President

Consequently, it is essential that in South Africa we are able to deliver good quality graduates from Universities, Universities of Technology and Training Colleges. This again requires good quality staff coupled to good potential students. Underpinning all of this is an infrastructure which needs to be in place to address the specific needs of the outcomes of the institutions.

Whilst it is an accepted practice those students who graduate with, for instance, an MSc at University A proceeds to do a PhD at University B for a host of reasons. However, what I find unacceptable today is that students who wish to continue their studies at a certain institution (where they did their undergraduate degree) are unable to do so due to a lack of infrastructure to support them. This necessitates them having to find an alternative institution which adds huge amounts to the cost and thus dissuades potential post graduate students and consequently we may very well be wasting good talent. One realises that equipping tertiary institutions with a reasonable spread of essential equipment is not an overnight exercise and is a joint responsibility between the Institution and Government. However, given the past history of our tertiary institutions, the less affluent Institutions have had to contend with bad debt and in order to survive had to address this financially throttling scenario over many years before embarking on a developmental strategy.

Ideally, all tertiary Institutions with a minimum student count of between 15000-20000, should have similar infrastructures of staff and equipment to perform reasonably acceptable research of an international standard and should have a programme which caters for students with a proven potential. Staff needs to be motivated to take their lecturing and research very seriously and thus a fair lecture load and degree of committee work is needed to be equitably distributed within each department to promote this notion. Sufficient financial resources need to be made available to facilitate the focus areas of research at Institutions. And so one can go on. However the point is that we need to generate graduates who, through their acceptance of the scenario sketched above, will make it their goal to address the issues of the future of South Africa and in so doing the entire African continent.

We at SACI have the responsibility to be an active and integral partner in strategic planning for the future technological developments in South Africa and consequently we need to interact with as many organisations as possible to support such initiatives. One of our key roles would be to serve as advisers to any government bodies involved in developing new policies and strategies. We should thus ensure that the first point of contact in this regard is with our students who represent captive audiences at lectures and then quite naturally audiences at conferences, symposia and public lectures.

Council thus urges all Divisions and Sections, who to date have most admirably taken on this initiative very positively, to ensure that whenever meetings, conferences, public lectures or any other events are being organised, environmental issues be accorded some exposure to drive home the perilous position planet earth is in which needs to be addressed in good time by all of us.

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## News from the President

We hope that our new Section viz., Green Chemistry will receive the support it deserves and look forward to the programme it has planned for the future.

Upon my retirement as President (August) and from the University of the Western Cape in July of this year, I have indicated to Council that that I shall write up some historical episodes which have shaped SACI over the past 25 years in order to celebrate the 100 year Centenary of SACI in 2012 and to have this in a booklet form and PDF file. The period spanned is planned for the years 1987-2012. As you may imagine this is not a task for the faint hearted and thus I invite all SACI Past Presidents and past as well as present Council Members and indeed all SACI Members who wish to send me any details of events, occasions or major decisions taken that have impacted the development of SACI in this period for inclusion in the 25 year historical journey of SACI. I make no pronouncements to be a writer nor that I am able to remember as much as my colleagues and the archives relate just so much. Thus personal views and contributions I believe would have a greater impact on the younger generations who read this than what was decided at Council meetings...there will indeed be sufficient of that.

Ivan R Green  
President of SACI ([igreen@uwc.ac.za](mailto:igreen@uwc.ac.za))

## Special IYC edition of the South African Journal of Chemistry - Reminder

As part of the International Year of Chemistry the South African Journal of Chemistry is inviting all South African chemists to publish a paper in our journal. We would add a comment: "Submitted to SAfrJChem by invitation to celebrate 2011 - the InternationalYear of Chemistry"

Details of the submission procedure can be found on our web site [http://www.journals.co.za/sajchem/chem\\_aut.html](http://www.journals.co.za/sajchem/chem_aut.html). All submissions will of course be subjected to the normal review process but please indicate in the submission that it is part of the year 2011 invitation so that we can expedite the matter. Graham Jackson, Editor-in-Chief, S. Afr J. Chem.

Professor Graham E. Jackson, Department of Chemistry, University of Cape Town, TEL: 0216502531. Fax: 0216505195. [Graham.Jackson@uct.ac.za](mailto:Graham.Jackson@uct.ac.za)

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## SACI - 100th Anniversary in 2012

Prof Ivan Green is to write an updated history of SACI covering the last 25 years. The information prior to this has been written up previously.

Also: The SACI Executive Committee will be coordinating activities to celebrate this event during the coming year. The different branches will host at least one event each in 2012 to commemorate this remarkable achievement.

## SACI Awards - deadline extension

Please note that SACI nominations for the various awards were due on March 31. The nominations will be sent to the various panels for evaluation at the end of April. As a result the deadline has been extended to April 29<sup>th</sup>. A listing of the awards is given below. For more details go to the SACI website:

<http://www.saci.co.za/>

### **THE GOLD MEDAL**

The medal shall be known as the **Gold Medal of the South African Chemical Institute**. The medal is gold-plated, and bears the Institute's name and crest on the obverse, and the name of the medal, together with the name of the recipient and the date on the reverse. The award shall be made to a person whose scientific contributions in the field of chemistry or chemical technology are adjudged to be of outstanding merit. The medal shall be accompanied by a monetary award to the value of R5000, together with a suitably inscribed scroll.

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

The medal shall be known as the **Hendrik van Eck Medal of the South African Chemical Institute**. The medal is gold-plated, and bears the Institute's name and crest on the obverse, and the name of the medal, together with the name of the recipient and the date on the reverse. The award shall be made to a member of the Institute who has made exceptional contributions in the business or industrial sectors and/or to the community as a whole in South Africa. The medal shall be accompanied by a monetary award to the value of R5000, together with a suitably inscribed scroll.

### **THE RAIKES MEDAL**

The medal shall be known as **The Raikes Medal of the South African Chemical Institute**. The medal is gold-plated, and bears a likeness of Humphrey Rivaz Raikes with his name on the obverse, and the Institute's name and crest, and the name of the recipient and the date on the reverse. The award shall be made to a person, under the age of 40 on 31 December proceeding the year of the award, whose original chemical research shows outstanding promise, as judged by the person's publications in reputable journals. It is further stipulated that the research shall have been performed in South Africa. The medal shall be accompanied by a monetary award to the value of R2500, together with a suitably inscribed scroll.

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## SACI Awards - deadline extension

### **THE CHEMICAL EDUCATION MEDAL**

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

### **THE INDUSTRIAL CHEMISTRY MEDAL**

The medal shall be known as the **The Industrial Chemistry Medal of the South African Chemical Institute**. The medal is struck in silver and bears the Institute's name and crest on the obverse, and the name of the medal, together with the name of the recipient and the date on the reverse. The award shall be made to a person who has conducted novel research, or enhanced existing chemical research, in a particular field in an industrial laboratory, which is adjudged to be of outstanding merit, taking into account benefits to his/her company and the chemical community at large. The medal shall be accompanied by a suitably inscribed scroll.

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

The medal shall be known as **The Sasol Chemistry Innovator of the Year Medal**. The medal is gold-plated, and bears the SASOL logo together with the inscription "Chemistry Innovator of (the year)" on the obverse and the Institute's name and crest and the name of the recipient on the reverse. The award shall be made to a person whose scientific contributions in the field of chemistry or chemical technology during the year preceding the award are adjudged to be outstandingly innovative. The award shall comprise, in addition to the medal, a monetary award that will enable the candidate to attend an appropriate conference anywhere in the world. The monetary award shall cover the air ticket, accommodation and conference fees. The medal shall also be accompanied by a suitably inscribed scroll. The recipient of the award shall be known as the "SASOL Chemistry Innovator of the Year". Past medalists are ineligible for nomination for a second award of the medal. Any member of the Institute may submit nominations for the award. The person submitting the nomination shall supply the following information:

### **THE SASOL POST-GRADUATE MEDALS**

The medals shall be known as the **Sasol Post-Graduate Medals of the South African Chemical Institute**. The medals are struck in silver, and bear the SASOL logo on the obverse, and the Institute's name and crest, together with the name of the recipient and the date on the reverse. The medals shall be awarded to students engaged in research towards a MSc or PhD degree at a South African University, or a MTech or DTech degree at a South African University of Technology. The number of medals awarded shall not exceed five per annum, and the awards are limited to one per institution. The recipients of the award shall be known as The Sasol Post-Graduate Medalists. Past Sasol Post-Graduate Medalists are not eligible for nomination for a second award of the medal. The medal shall be accompanied by a monetary award to the value of R2000, together with a suitably inscribed scroll.

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## SAQA Issues

Progress is being made on the finalization of the policy and criteria for the recognition of professional bodies and the registration of professional designations.

The draft policy, which was developed with the support of the Professional Bodies Reference Group, and also considered the numerous public comments received at the end of 2010, was submitted to the State Law Advisers on 8 February 2011. We have been informed that the legal opinion from the State Law Advisers should be finalized by 17 March. This advice will be discussed with the Professional Bodies Reference Group and thereafter submitted to the SAQA Board for its approval in June 2011 if there are no delays.

Following approval it is our intention to organize regional events at which the policy will be discussed. This will be followed by selected pilots to ensure that the implementation of the policy takes place in a coordinated manner. More information on the regional events and pilots will be sent to you in due course. Please also visit the SAQA website on a regular basis over the next few months to check for any announcements.

## Recognition of SA chemists: Prof Gus Gerrans

### 2011 University of Virginia Distinguished Teaching Award

Prof Gerrans was an active member of SACI before his retirement from the University of the Witwatersrand. Retirement in SA did not mean retirement in other countries. And so Prof Gerrans moved to the USA to continue his teaching career.

His teaching prowess has again been recognized and he has been awarded the 2011 University of Virginia Distinguished Teaching Award - a very prestigious award.

## Top 100 Chemists, 2000-2010: Prof Suprakas Ray

**High-Impact Chemists.** Dr. Suprakas Sinha Ray, Director, National Center of Nano Structured Materials, CSIR, Pretoria, South Africa has been listed as one of Top 100 Chemists during 2000-2010 by Thomson Reuters. He ranks 50<sup>th</sup> on the list as High Impact Chemists in the world.

Position	Papers	Citations	Impact
50	50	3,411	68.22

Of particular importance:

- i) He has only published 50 papers to achieve this status (the lowest in the top 100 list)
- ii) He is the only SA chemist on the list
- iii) Many on the list are Nobel Prize winners.

This is a truly remarkable achievement.

For further information go to: [http://www.sciencewatch.com/dr/sci/misc/Top100Chemists2000-10/?sms\\_ss=facebook&at\\_xt=4d64837d0363dc0d%2C0](http://www.sciencewatch.com/dr/sci/misc/Top100Chemists2000-10/?sms_ss=facebook&at_xt=4d64837d0363dc0d%2C0)

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## IYC Activities

Check the SACI webpage for activities both in SA and on the International scene. Much information is also contained in other articles in this newsletter.



International Year of  
**CHEMISTRY**  
2011

### ACS Launches Inaugural Edition of the International Year of Chemistry (IYC) Virtual Journal

On February 1, 2011, the ACS launched the inaugural edition of its IYC Virtual Journal, a dynamic online snapshot of the countless ways in which chemistry improves everyday life for people around the world. It includes a special video welcome from Nancy B. Jackson, Ph.D., who serves as ACS President during the IYC. Every month through this landmark year, the IYC Virtual Journal will showcase how chemists and other scientists work to protect the environment; develop lifesaving new medicines; create cleaner, greener and more sustainable sources of energy; and design new materials for cars, buildings, electronics, medical

## Chemical and Engineering news articles on the conference

See Rudy Baum's editorial in C and EN Feb 14 2011 p3. for his comments on his visit to SA to attend the Convention. Also see his blog on the article he wrote on his visit to SA.

## Conference List

**1) Second TCS International Conference incl. The East and Southern Africa Environmental Chemistry Conference and the Ninth Theoretical Chemistry Workshop in Africa**, Dar es Salaam, Tanzania, 5-7 Oct 2011 For information: Dr CA Mgina at [mgina@chem.udsm.ac.tz](mailto:mgina@chem.udsm.ac.tz); [cmngina@yahoo.com](mailto:cmngina@yahoo.com);

**2) On Metals and Materials Processing in a Clean Environment.** Between 4-7 December 2011. Call for papers have now been issued. An International Symposium is being organized to honor the very distinguished work and lifetime achievements of Prof. Derek Fray of University of Cambridge, UK. This symposium will be held in Cancun, Mexico, from 4-7 of December 2011. [www.flogen.com/FraySymposium/download/](http://www.flogen.com/FraySymposium/download/) ; <http://www.flogen.com/FraySymposium>.

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## Conference List

**3) Congress GCI 2011 "A Greener Chemistry for Industry"** organised by the University of Lille 1 and the Ecole Nationale Supérieure de Chimie de Lille, with the sponsorship of the "Chevreul Institute" and the "Cluster MAUD". The congress will take place at Polytech'Lille, in **Villeneuve d'Ascq, France, on December 12 to 14 2011.**

**4) 11<sup>th</sup> Annual UNESCO/IUPAC Workshop and Conference on Functional Polymeric Materials & Composites**, Stellenbosch, South Africa, 26 April 2011 (Workshop), 27 – 29 April 2011 (Conference)  
<http://academic.sun.ac.za/unesco/Conferences/Homepage.htm>; Tel: +27(21) 808-3174,  
Fax: +27(21) 808-4967, E-mail: [aef2@sun.ac.za](mailto:aef2@sun.ac.za) / [aneli@mtn.blackberry.com](mailto:aneli@mtn.blackberry.com), Cell: 083 2800 146. Web address: <http://www.sun.ac.za.unesco>

**5) XIX EuCOMC, 19<sup>th</sup> EuCheMS International Conference on Organometallic Chemistry** Toulouse, France. July 3-7, 2011 Contact and information ; [eucomc2011@inp-toulouse.fr](mailto:eucomc2011@inp-toulouse.fr),  
<http://www.eucomc2011.org/>

**6) 14ACC congress.** The Chemical Society of Thailand (CST) and the 14<sup>th</sup> Asian Chemical Congress (14ACC) committee will organize the 14ACC congress in Bangkok, Thailand, 5-8 September 2011 at Queen Sirikit National Convention Center under the theme "Contemporary Chemistry for Sustainability and Economic Sufficiency". This is an IYC event. [www.14acc.org](http://www.14acc.org)

**7) 1<sup>st</sup> EuCheMS Inorganic Chemistry Conference (EICC1)**, 11 - 14 April 2011  
University of Manchester, UK. [www.rsc.org/EICC1](http://www.rsc.org/EICC1)

**8) International Conference on Frontiers of Polymers and Advanced Materials (11<sup>th</sup> ICFPAM).** 22 to 27 May 2011, Conference Centre of the University of Pretoria, South Africa. email: [conference@icfpam.co.za](mailto:conference@icfpam.co.za)

**9) OPCW Conference** (Organization for the Prohibitions of Chemical Weapons). Associate Programme 2011: 21 July 2011 - 27 September 2011; The Hague and elsewhere. Contact:  
<http://www.opcw.org/events-calendar/>; [icb@opcw.org](mailto:icb@opcw.org)

**10) International Battery Association (IBA) Meeting;** Cape Town, South Africa from 12 – 15 April 2011. For information: Kelly Matthews Email: [kmatthew@csir.co.za](mailto:kmatthew@csir.co.za)  
Tel: +27 41 508 3270; <http://www.iba2011.co.za>

**11) The 4<sup>th</sup> NanoAfrica Conference.** CSIR International Convention Centre, Pretoria, South Africa, date changed: <http://www.nanoafrica.co.za> or [www.csiricca.co.za](http://www.csiricca.co.za)

**12) ADVANCED CARBON NANOSTRUCTURES. 10<sup>th</sup> Biennial International Workshop "Fullerenes and Atomic Clusters" & the Fourth International Symposium "Detonation Nanodiamonds: Technology, Properties and Applications".** St Petersburg, Russia • July 04–08, 2011.  
<http://www.ioffe.ru/ACN2011/>

**13) 19<sup>th</sup> ANNUAL INTERNATIONAL CONFERENCE ON COMPOSITES or NANO ENGINEERING,** July 24-30, 2011 in Shanghai, China. [www.icce-nano.org](http://www.icce-nano.org)

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## Workshop

Chemical Engineering for *Chemists*

BRIDGING THE COMMUNICATION GAP BETWEEN CHEMICAL ENGINEERS AND CHEMISTS  
10-12 May 2011

To register online visit [www.witsenterprise.co.za](http://www.witsenterprise.co.za) Enquiries: Mary Ngcobo, Tel: +27 11 717 9027 email: [Mary.Ngcobo@wits.ac.za](mailto:Mary.Ngcobo@wits.ac.za). Technical Enquiries: Dr. Bilal Patel, Tel: +27 11 717 7504, email: [Bilal.Patel@wits.ac.za](mailto:Bilal.Patel@wits.ac.za)

## Employment Opportunities: BASF

As the leading company in the chemical industry, we open potential for future success together with our partners. For this reason, we foster and develop partnerships that are marked by trust and mutual respect. Our intelligent solutions help build a successful and sustainable future, and we value and depend on the strengths of our staff to achieve this.

For its **catalyst manufacturing facility** in Port Elizabeth, BASF is looking to fill 2 positions:

### (Jr.) Process Engineer

**Summary of Position:** Take the technical responsibility for a defined portfolio of products, collecting data, identifying potential for improvement, improving productivity and minimizing scrap rate and other losses for these products.

#### Requirements:

- Degree (BSc) in Mechanical or Chemical Engineering. Alternatively, a BSc (Honours) in Chemistry combined with at least two years working experience in a similar function in the Automotive or the Chemical industry.
- Experience in a process engineering role in a chemical or automotive manufacturing environment will be advantageous.
- Leadership skills.
- Expert Computer skills essential (Office, Excel, Access)
- Knowledge of SQL and In Touch SCADA software is advantageous.
- Trouble shooting and problem solving skills.
- Working knowledge of Project Management.
- Own transportation required.

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## Employment Opportunities: BASF

### (Jr.) Quality Engineer

**Summary of Position:** Taking the quality responsibility for a defined portfolio of products, including customer requirements and specifications, APQP process, customer complaints, quality improvements and problem solving.

**Requirements:**

- Preferably BSc, in Chemistry or Chemical Engineering (or related technical area). Alternatively: Tertiary qualification in Science/Engineering and BTech in Quality.
- Additional qualifications in quality related courses and problem solving techniques will be advantageous.
- Experience in a related function in the Chemical or the Automotive Industry will be advantageous.
- Leadership skills.
- Expert Computer skills essential (Office, Excel, Access)
- Knowledge of Quality system administration software (QSi), LIMS and ERP software (SAP) is advantageous.
- Trouble shooting and problem solving skills.
- Working knowledge of Project Management.
- Own transportation required.

**We look forward to receiving your application!**

Applications accompanied by  
a copy of your Curriculum  
Vitae must be sent to  
Mrs. Rudman:  
([molly.rudman@basf.com](mailto:molly.rudman@basf.com))  
Fax: (041) 401 1053).  
Closing date: 15 April 2010

## TWAS Fellowships

TWAS Fellowships Office; Contact details: ICTP campus, Strada Costiera 11, 34151 Trieste, Italy,  
Tel.: +39 040 2240 314, Fax: +39 040 2240 689, Email: [fellowships@twas.org](mailto:fellowships@twas.org)

The TWAS South-South Fellowships Programme provides over 300 fellowships each year tenable in developing countries such as Brazil, China, India, Kenya, Malaysia, Mexico, Pakistan and Thailand for scientists from developing countries. Fellowships, for various lengths of time, are available for postgraduate, postdoctoral and advanced research. Brief details of each programme are provided below. For additional information, including eligibility criteria and application forms, please visit: [www.twas.org](http://www.twas.org) > Programmes > Exchange.

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## TWAS Fellowships

### **Fellowships for Postgraduate Training**

#### **TWAS-CNPq Fellowships for Postgraduate Research in Brazil**

The National Council for Scientific and Technological Development (CNPq) and TWAS offer fellowships for scientists from developing countries (other than Brazil) who wish to pursue all or part (SANDWICH or FULL-TIME) of their research leading towards a PhD in the natural sciences.

Duration: up to 4 years Deadline for applications: 30 June each year Age limit: 35

#### **TWAS-CAS Fellowships for Postgraduate Research in China**

The Chinese Academy of Sciences (CAS) and TWAS offer fellowships for students from developing countries (other than China) who wish to undertake the final year of their PhD research in the natural sciences.

Duration: 1 year Deadline for applications: 31 August each year Age limit: 35

#### **TWAS-CSIR Fellowships for Postgraduate Studies in India**

The Council of Scientific and Industrial Research (CSIR) and TWAS offer fellowships for scientists from developing countries (other than India) who wish to obtain a PhD in newly emerging areas in science and technology. SANDWICH and FULL-TIME fellowships available.

Duration: up to 4 years Deadline for applications: 31 August each year Age limit: 35

#### **TWAS-DBT Biotechnology Fellowships for Postgraduate Studies in India**

The Department of Biotechnology, Government of India (DBT) and TWAS offer fellowships for scientists from developing countries (other than India) who wish to obtain a PhD in biotechnology. SANDWICH and FULL-TIME fellowships available.

Duration: up to 5 years Deadline for applications: 31 August each year Age limit: 30

#### **TWAS-S.N. Bose Fellowships for Postgraduate Studies in India**

The S.N. Bose National Centre for Basic Sciences (S.N. Bose) and TWAS offer fellowships for scientists from developing countries (other than India) who wish to obtain a PhD in the physical sciences. SANDWICH and FULL-TIME fellowships available.

Duration: up to 4-5 years Deadline for applications: 31 August each year Age limit: 35

#### **TWAS-IACS Fellowships for Postgraduate Research in India**

The Indian Association for the Cultivation of Science (IACS) and TWAS offer fellowships for scientists from developing countries (other than India) who wish to obtain a PhD in a field of natural sciences.

Duration: up to 4 years Deadline for applications: 30 June each year Age limit: 30

#### **TWAS-icipe Fellowships for Postgraduate Research in Kenya**

The International Centre of Insect Physiology and Ecology (icipe) and TWAS offer fellowships for scientists from developing countries (other than Kenya) who wish to obtain a PhD in the natural sciences, especially focusing on integrated control methodologies for crop and livestock insect pests and other related arthropods, and insect vectors of tropical diseases.

Duration: up to 3 years Deadline for applications: 15 September each year Age limit: 35  
the academy of sciences for the developing world

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## TWAS Fellowships

### **TWAS-USM Fellowships for Postgraduate Research in Malaysia**

The Universiti Sains Malaysia (USM) and TWAS offer fellowships for scientists from developing countries (other than Malaysia) who wish to obtain a PhD in the natural sciences.

Duration: up to 3 years. Deadline for applications: 15 September each year Age limit: 35  
the academy of sciences for the developing world

### **TWAS-CONACYT Fellowships for Postgraduate Research in Mexico**

The National Council on Science and Technology (CONACYT) and TWAS offer fellowships for scientists from developing countries (other than Mexico) who wish to obtain a PhD in the natural sciences.

Duration: up to 4 years Deadline for applications: 30 June each year Age limit: 30

### **TWAS-CEMB Fellowships for Postgraduate Research in Pakistan**

The Centre of Excellence in Molecular Biology (CEMB) and TWAS offer fellowships for scientists from developing countries (other than Pakistan) who wish to obtain a PhD in molecular biology and molecular genetics. SANDWICH and FULL-TIME fellowships available.

Duration: up to 4 years Deadline for applications: 30 June each year Age limit: 35

### **TWAS-ICCBS Fellowships for Postgraduate Research in Pakistan**

The International Center for Chemical and Biological Sciences (ICCBS) and TWAS offer fellowships for scientists from developing countries (other than Pakistan) who wish to obtain a PhD in chemical or biological sciences. SANDWICH and FULL-TIME fellowships available.

Duration: up to 4 years Deadline for applications: 30 June each year Age limit: 35

### **Fellowships for Postdoctoral Research**

#### **TWAS-CNPq Fellowships for Postdoctoral Research in Brazil**

CNPq and TWAS offer fellowships to scientists from developing countries (other than Brazil) who wish to pursue postdoctoral research in natural sciences.

Duration: 6 to 12 months Deadline for applications: 30 June each year Age limit: 45

#### **TWAS-CAS Fellowships for Postdoctoral Research in China**

CAS and TWAS offer fellowships to scientists from developing countries (other than China) who wish to pursue postdoctoral research in natural sciences.

Duration: 6 to 12 months Deadline for applications: 31 August each year Age limit: 40

#### **TWAS-CSIR Fellowships for Postdoctoral Research in India**

CSIR and TWAS offer fellowships to scientists from developing countries (other than India) who wish to pursue postdoctoral research in newly emerging areas in science and technology.

Duration: 6 to 12 months Deadline for applications: 31 August each year Age limit: 45

#### **TWAS-DBT Biotechnology Fellowships for Postdoctoral Research in India**

DBT and TWAS offer fellowships to scientists from developing countries (other than India) who wish to pursue postdoctoral research in biotechnology.

Duration: 12 to 18 months Deadline for applications: 31 August each year Age limit: 40

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Tel: 011 717 6741  
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[www.saci.co.za](http://www.saci.co.za)

## TWAS Fellowships

### **TWAS-S.N. Bose Fellowships for Postdoctoral Research in India**

S.N. Bose and TWAS offer fellowships to scientists from developing countries (other than India) who wish to pursue postdoctoral research in the physical sciences.

Duration: 6 to 12 months Deadline for applications: 31 August each year Age limit: 45

### **TWAS-IACS Fellowships for Postdoctoral Research in India**

IACS and TWAS offer fellowships to scientists from developing countries (other than India) who wish to pursue postdoctoral research in the natural sciences.

Duration: 6 to 12 months Deadline for applications: 30 June each year Age limit: 40

### **TWAS-icipe Fellowships for Postdoctoral Research in Kenya**

The International Centre of Insect Physiology and Ecology (icipe) and TWAS offer fellowships for scientists from developing countries (other than Kenya) who wish to pursue postdoctoral research in the natural sciences, especially focusing on integrated control methodologies for crop and livestock insect pests and other related arthropods, and insect vectors of tropical diseases.

Duration: 6 to 12 months Deadline for applications: 15 September each year

No age limit, but application must be made within 5 years (or less) of obtaining PhD.  
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### **TWAS-USM Fellowships for Postdoctoral Research in Malaysia**

USM and TWAS offer fellowships to scientists from developing countries (other than Malaysia) who wish to pursue postdoctoral research in the natural sciences.

Duration: 1 to 3 years Deadline for applications: 15 September each year

No age limit, but application must be made within 5 years (or less) of obtaining PhD.

### **TWAS-CONACYT Fellowships for Postdoctoral Research in Mexico**

The National Council on Science and Technology (CONACYT) and TWAS offer fellowships to scientists from developing countries (other than Mexico) who wish to pursue postdoctoral research in the natural sciences.

Duration: 6 to 12 months Deadline for applications: 30 June each year Age limit: 40

### **TWAS-CEMB Fellowships for Postdoctoral Research in Pakistan**

CEMB and TWAS offer fellowships to scientists from developing countries (other than Pakistan) who wish to pursue postdoctoral research in molecular biology and molecular genetics.

Duration: 6 to 12 months Deadline for applications: 30 June each year Age limit: 45

### **TWAS-ICCBS Fellowships for Postdoctoral Research in Pakistan**

ICCBS and TWAS offer fellowships to scientists from developing countries (other than Pakistan) who wish to pursue postdoctoral research in chemical or biological sciences.

Duration: 6 to 12 months Deadline for applications: 30 June each year Age limit: 45

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## TWAS Fellowships

### **TWAS-BIOTEC Fellowships for Postdoctoral Research in Thailand**

BIOTEC and TWAS offer fellowships to scientists from developing countries (other than Thailand) who wish to pursue postdoctoral research in biotechnology.

Duration: 12 to 24 months Deadline for applications: 15 September each year

No age limit, but application must be made within 5 years (or less) of obtaining PhD.

### **Fellowships for Advanced Research**

#### **TWAS Fellowships for Research and Advanced Training**

TWAS provides travel support for scientists from developing countries to carry out research at a research institution in a developing country (other than the home country).

Duration: 3-12 months Deadline for applications: 1 October each year No age limit

#### **TWAS-CAS Fellowships for Visiting Scholars in China**

CAS and TWAS offer fellowships to scientists from developing countries (other than China) who wish to pursue advanced research in the natural sciences.

Duration: 1-3 months Deadline for applications: 31 August each year Age limit: 55

#### **TWAS-icipe Fellowships for Visiting Scholars in Kenya**

The International Centre for Insect Physiology and Ecology (icipe) and TWAS offer fellowships for scientists from developing countries (other than Kenya) who wish to pursue advanced research in the natural sciences, especially focusing on integrated control methodologies for crop and livestock insect pests and other related arthropods, and insect vectors of tropical diseases.

Duration: 1-3 months Deadline for applications: 15 September each year Age limit: 55

#### **TWAS-USM Fellowships for Visiting Researchers in Malaysia**

USM and TWAS offer fellowships to scientists from developing countries (other than Malaysia) who wish to pursue advanced research in the natural sciences.

Duration: 1-3 months Deadline for applications: 15 September each year Age limit: 55