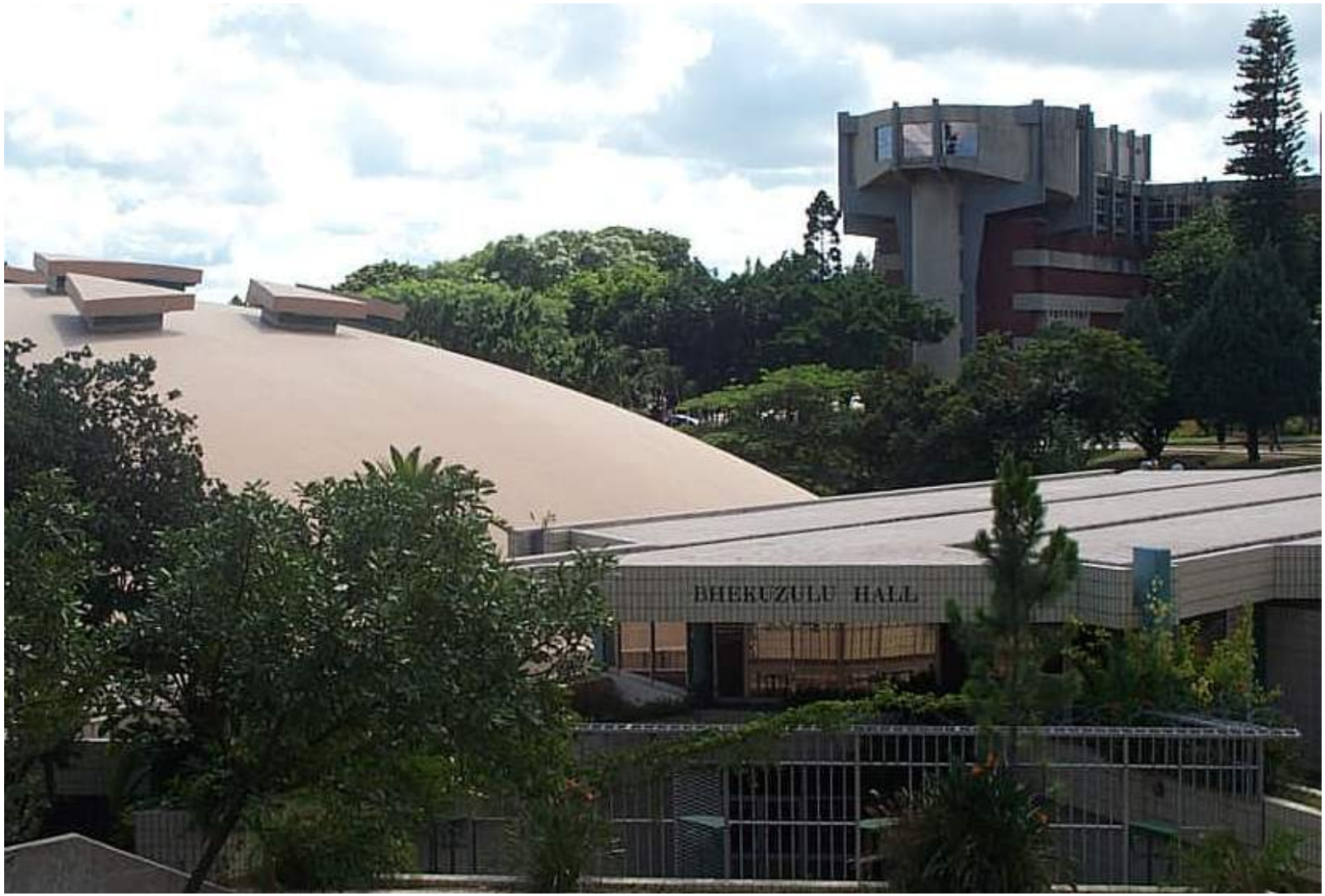

MPUMALANGA
SWAZI-
LAND
FREE
STATE
Newcastle
Ulundi
ZU
Empangeni
KWAZULU NATAL
ZU
Richards
Bay
Mtunzini
ZU
DURBAN METRO
AREA
EASTERN
CAPE


BHEKUZULU HALL

The Science

Relevant

Transferable

Contemporary

Royal_Society_Funding_Scheme_July_2007.ppt

Royal Society Funding Scheme

ROYAL SOCIETY FUNDING SCHEME

- International Incoming Short Visits
- International Outgoing Short Visits
- South Africa-UK Science Networks
- International Joint Project

Further information

International Outgoing and Incoming Short Visits

Objectives

- To support new and ongoing international collaborations by providing grants to cover mobility costs.
- To initiate one-to-one collaborations
- To explore opportunities to build lasting networks
- To gain access to complementary equipment, data observations and ideas

Basic Eligibility, Duration and Level of Funding

- Must be of postdoctoral research scientists
- Research must be in natural sciences, medicine & eng.
- Cannot fund social sciences or clinical medical research
- Visits between 1 & 12 weeks
- Grant covers subsistence & local travel costs
- For Sub-Saharan Africa grant covers international airfare
- 4 closing dates per year

South Africa-UK Science Networks (Phase II)

Objectives

- To initiate and encourage “bottom-up” networking between excellent UK and South African Postdoctoral Scientists
- To develop new and enduring partnerships in any field of S&T, that would ultimately result in bids for project funding through national structures.

Modes of Networking

- One-to-one meetings (lasting between 5 days to 3 months)
- Thematic workshops (lasting up to 5 days)
- Exploratory Visits (up to 5 scientists visiting

International Joint Project

Objective

- To enable international collaboration by providing a mobility grant for researchers to cover travel, subsistence and research expenses (collaboration should be based on a single project funding including two teams or individuals: one based in the UK and the other one based outside the UK)

Funding

- Up to £6,000 per year (includes consumable costs), over a 2 year period

Closing Date

4 closing dates per year

3M Team Africa

3M Center, Building 251-03A-07
St. Paul, MN 55144-1000 USA
651 737-9353

Dr Neerish Revaprasadu
Department of Chemistry
Private Bag X1001
KwaDlangezwa
3880
South Africa

June 27, 2005

Dear Dr. Neerish Revaprasadu,

Congratulations! This letter is to confirm that your research titled "Synthesis and Characterization of Semiconductor Nanoparticles and Nanocomposites" has been approved for a $15,000 grant. The money is a basic research grant sponsored by 3M Company administered by 3M Team Africa. The grant is to be used for advancing scientific knowledge with no specific commercial objectives. The grant is to be used for any of the following specific purposes only:

1. To conduct research
2. To cover expenses for graduate student scholarships
3. To publish papers
4. To purchase research equipment

The Team felt that your research merits further funding based on the progress that was achieved from the original grant dispersed in 2003 and the close communication that was maintained with 3M Team Africa. We hope that the current funding level will enable you to make further strides in your research.

We require a timely progress update every 3 months and receiving a research summary at the end of the year which will be May 31st 2006. 3M Team Africa has assigned Dr. Thomas Wood (Corporate Materials Laboratory; phone 651-736-0820; e-mail: tewood2@mmm.com) to be the contact person to interact with you with respect to the progress of the research activities.

We sincerely hope that this grant will foster a continued beneficial relationship between 3M and University of Zululand.

Best regards,

Dr. Feben T. Gobena
Team Africa Chair Person

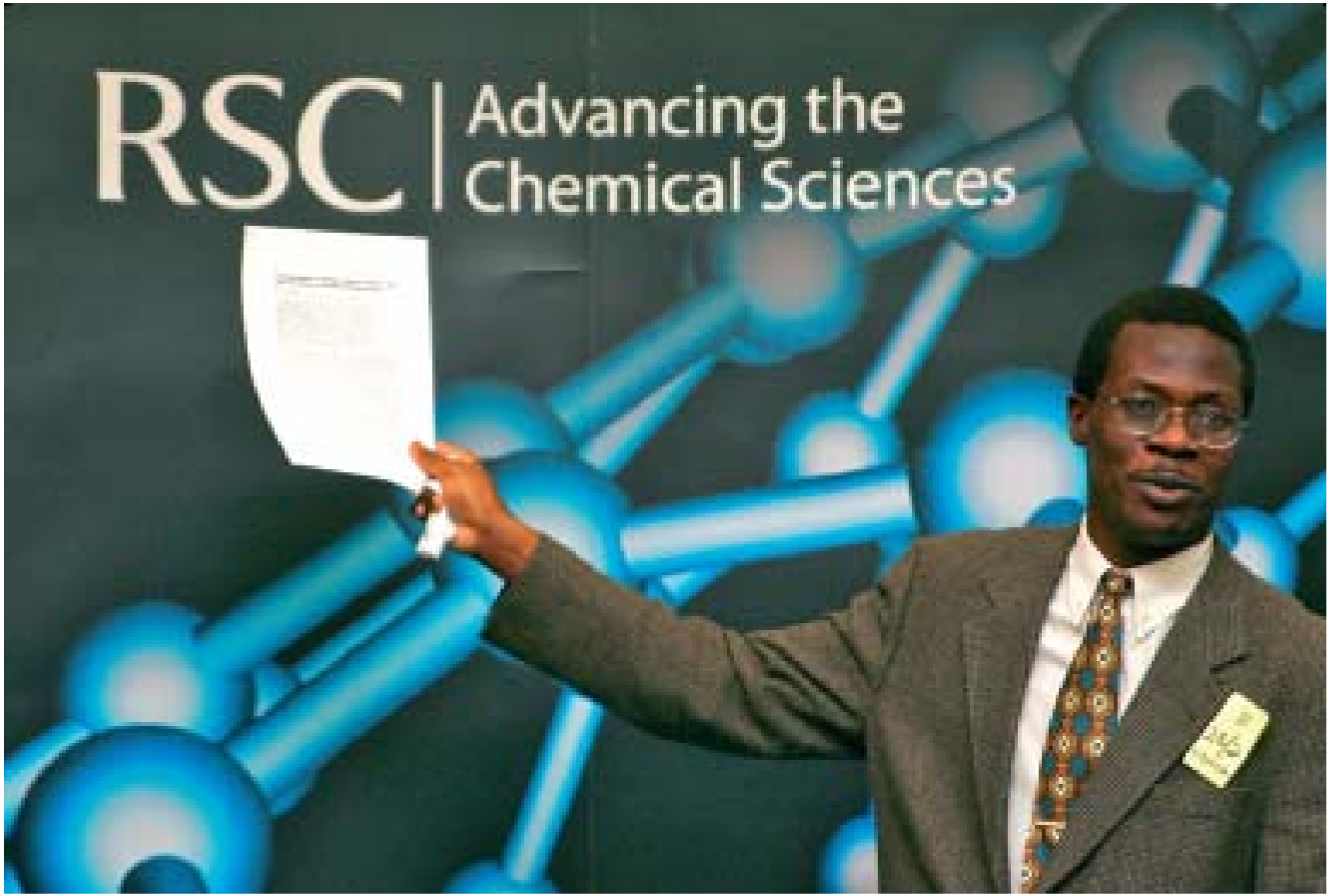

D8 ADVANCE
D8
UNIVERSITY
OF
ZULULAND

Manchester

Stellenbosch

UZULU

Collaboration Agreed



RSC member Dr Robert Mokaya at the House of Commons launch of the RSC's *Archive for Africa*. Originally from Kenya, Dr Mokaya is a lecturer at Nottingham University. The Archive will help strengthen links between scientists in the UK and their colleagues in Africa.

IRSC regional sales manager for Africa, Lesley Maw. Her email is mawl@rsc.org and direct line phone is +44 1223 432300. Of course, they are also welcome to send me a message.

Contact organisations

Susan Veldsman

COSALC/SASLI

SASLI Project coordinator

PO Box 11589

Centurion 0046

South Africa

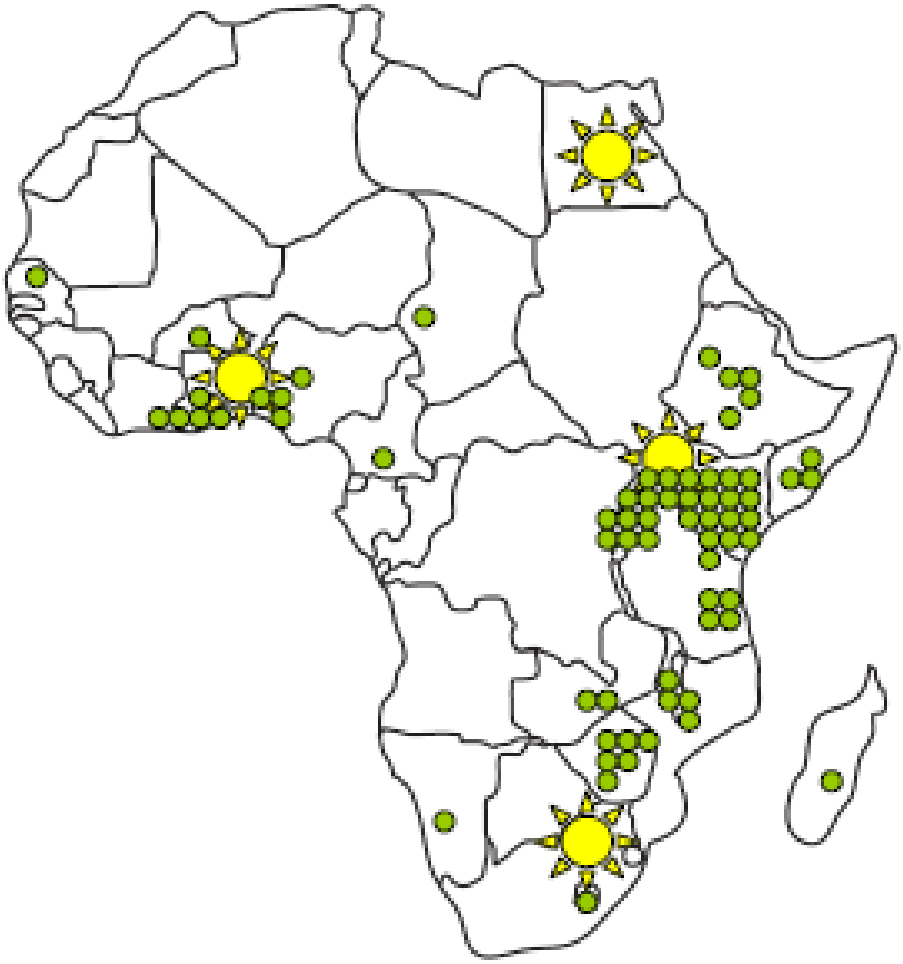
E: sasli@cosalc.ac.za

T: +27 (0) 12 663 8559

F: +27 (0) 12 663 8559

Vasti Daniels (Ms)
Customer Service

Swets Information Services
PO Box 7066, Centurion, 0046, South Africa
Unit 14 Lords Office Estates
276 West Avenue
Centurion 0046
South Africa
T: +27 (0)12 663-1924
F: +27 (0)12 663-2285
E: vdaniels@sa.swets.com
W: www.swets.com



RSC | Advancing the Chemical Sciences

In South Africa

- Agreements e.g.SACI
- Work with FASC
- RSC Local Sections N and S
- Africa Session IUPAC 2009

A Pan Africa Chemistry Network

Building on its current work in Africa, including the tremendous response to the launch of the Archive for Africa in February 2006, the Royal Society of Chemistry (RSC) seeks to increase its support for chemical scientists in the Continent. There are compelling and urgent reasons for this:

- Many of Africa's most pressing problems have science-related solutions. Giving local scientists the support they need to develop skills and form networks beyond national boundaries is vital to finding sustainable solutions.

- More than 65 universities in Africa have accessed the online Archive for Africa since February, demonstrating a strong demand for research data among African chemists. This interest must be nurtured and supported.

- Consistent with the G8 objectives and Millennium Development Goals, which underscore the important role that science plays in social and economic development, a higher level of chemical science-literacy will fuel economic growth and employment in Africa.

COLLABORATIONS

Empowering Green Chemists in Ethiopia

Collaborations between scientists in economically developed countries and their African colleagues can be inspiring and productive.

Nigist Asfaw,[1]* Peter Licence,[2] Temechegn Engida,[3] Martyn Poliakoff[2]*

Green Chemistry involves the design and use of less hazardous chemicals and processes (*1*, *2*). Since the early 1990s, it has become increasingly accepted as a promising route to more sustainable production of the chemicals that underpin modern society. Much of the research focuses on the search for renewable feedstocks and more environmentally acceptable solvents to replace petroleum-based products. Thus, Green Chemistry is particularly relevant to the needs of African countries such as Ethiopia, which face an increasing demand for chemicals, little or no indigenous oil, and rapidly expanding populations. However, 4 years ago, the subject was unknown in Ethiopia. Since then, a collaboration that began as a chance meeting has substantially increased awareness. Many Ethiopian chemists now recognize Green Chemistry, and growing interactions are enabling these scientists to organize a conference on the topic for chemists across Africa.

How Can Africa Compete?

In some areas of science, Africa can attract international collaboration on the strength of its natural resources, such as the unique geology of the Rift Valley or the fossils of early hominids in Ethiopia. Very occasionally, an African country has succeeded in building a world-class scientific facility, such as the Southern African Large Telescope (SALT) (see figure, right). More commonly, however, scientists in Africa find themselves in the position of chemists in Ethiopia—a group of enthusiastic and talented researchers striving to establish themselves in a world-wide arena. Scientists across the world have been helping their African counterparts for many years, often with great success. However, it remains crucial that African scientists develop research directions that will attract the interest of other scientists and that they remain competitive in the face of international laboratories with much better resources.

Green Chemistry provides a unique opportunity for African chemists because it combines the search for new science with the development of sustainable chemical technologies appropriate to the needs of the community. Therefore, the resources of Africa—intense sunlight, unique plant species, and enthusiastic young people—provide its chemists with scientific opportunities that are less readily available in many other countries.

The opportunities are clear, but how does one begin to advertise them in a country where they are unknown? Raising awareness of Green Chemistry has been easier than we expected. With modest funding and overseas support, a determined group of Ethiopian scientists has established an international presence within only 4 years. Perhaps this model can be replicated elsewhere.

Expertise in astronomy. SALT is a flagship for scientific and technological education and development in Africa (*16*).

Ethiopian Green Chemistry: Case Study

Green Chemistry in Ethiopia began with a meeting between Nigist Asfaw (N.A.), a chemistry lecturer at Addis Ababa University, and Martyn Poliakoff (M.P.), a research professor in chemistry at Nottingham, while M.P. was on holiday in Ethiopia. When the meeting took place, N.A. was about to start her independent career and was looking for an appropriate research theme; M.P. is an enthusiastic proponent of Green Chemistry (*3*). N.A. made a brief visit to Nottingham later in 2003 and obtained U.K. funding for a 3-month stay in 2004. During this stay, N.A. met many U.K. chemists and became a member of the Royal Society of Chemistry (RSC). She also became intrigued by Green Chemistry.

While in Nottingham, N.A. and Pete Licence (P.L.), then a postdoc with M.P., led an investigation on the extraction of essential oils from Ethiopian plants with the use of a wide range of milder extraction techniques, including ultrasound, microwaves, and alternative solvents. The subject of their investigation, *Artemisia Afra*, has for many generations been a key ingredient in a wide variety of traditional medicines used to treat minor ailments ranging from coughs to heart murmurs. N.A. and P.L. found that the oils extracted with the use of milder methods differed considerably in composition from those obtained through traditional hydrodistillation. N.A. brought these results to a major Green Chemistry conference in Germany in October 2004, where she joined the European Union COST Action D29 in Green and Sustainable Chemistry (*4*); this made her only the fourth African to participate in any COST activity. The full paper (*5*) based on her Nottingham work was quickly adopted as teaching material by the New University of Lisbon.

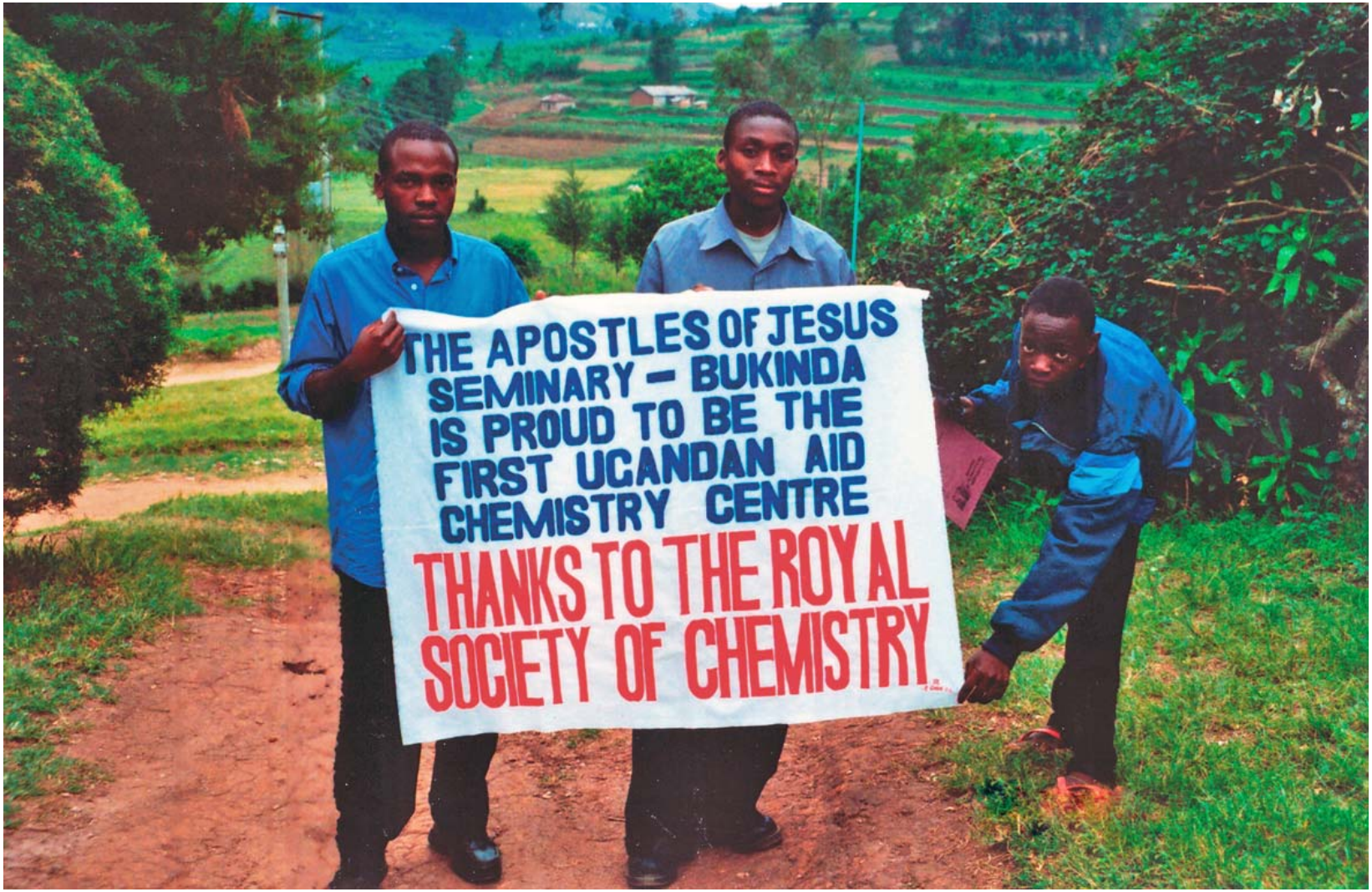
Now working in a new field, N.A. needed the equipment to do these extractions in Ethiopia. By chance, M.P. had noticed a paper in his own field by Endalkachew Sahle-Demessie, an Ethiopian chemist working in the United States. M.P. put him in touch with N.A. and he generously donated a microwave reactor for her to use in Addis Ababa.

Before leaving Nottingham, N.A. decided to run a workshop to begin spreading the message of Green Chemistry in Ethiopia. She invited P.L. to Addis Ababa, and he raised independent funding to cover the cost of the trip and to support the workshop in January 2005. It was a great success, with sessions for academics, industry, and university and high school students (*6*). The topic really caught people's imagination. The most exciting outcome was the discovery that there were indigenous chemical processes in Ethiopia that satisfied many of

[1]Department of Chemistry, Addis Ababa University, Ethiopia. [2]The School of Chemistry, The University of Nottingham, Nottingham, NG7 2RD, UK. [3]The Federation of African Societies of Chemistry, Addis Ababa University, Ethiopia.

*Authors for correspondence. E-mail: nigista@chem.aau.edu.et (N.A.); martyn.poliakoff@nottingham.ac.uk (M.P.)

Published by AAAS



Pat Johnson (now Koolman) Education Travel Grant working in Schools

Emasondsondo Physics Bus project

The Chemistry Road Show bus would be similar in scope to a physics bus already in use

SCI-BONO Discovery Centre

David Kramer

Overview of the NLC - NLC_NRF workshop.ppt

Overview of the NLC

11 July 2007

CSIR: NLC / NRF workshop

NLC Boardroom

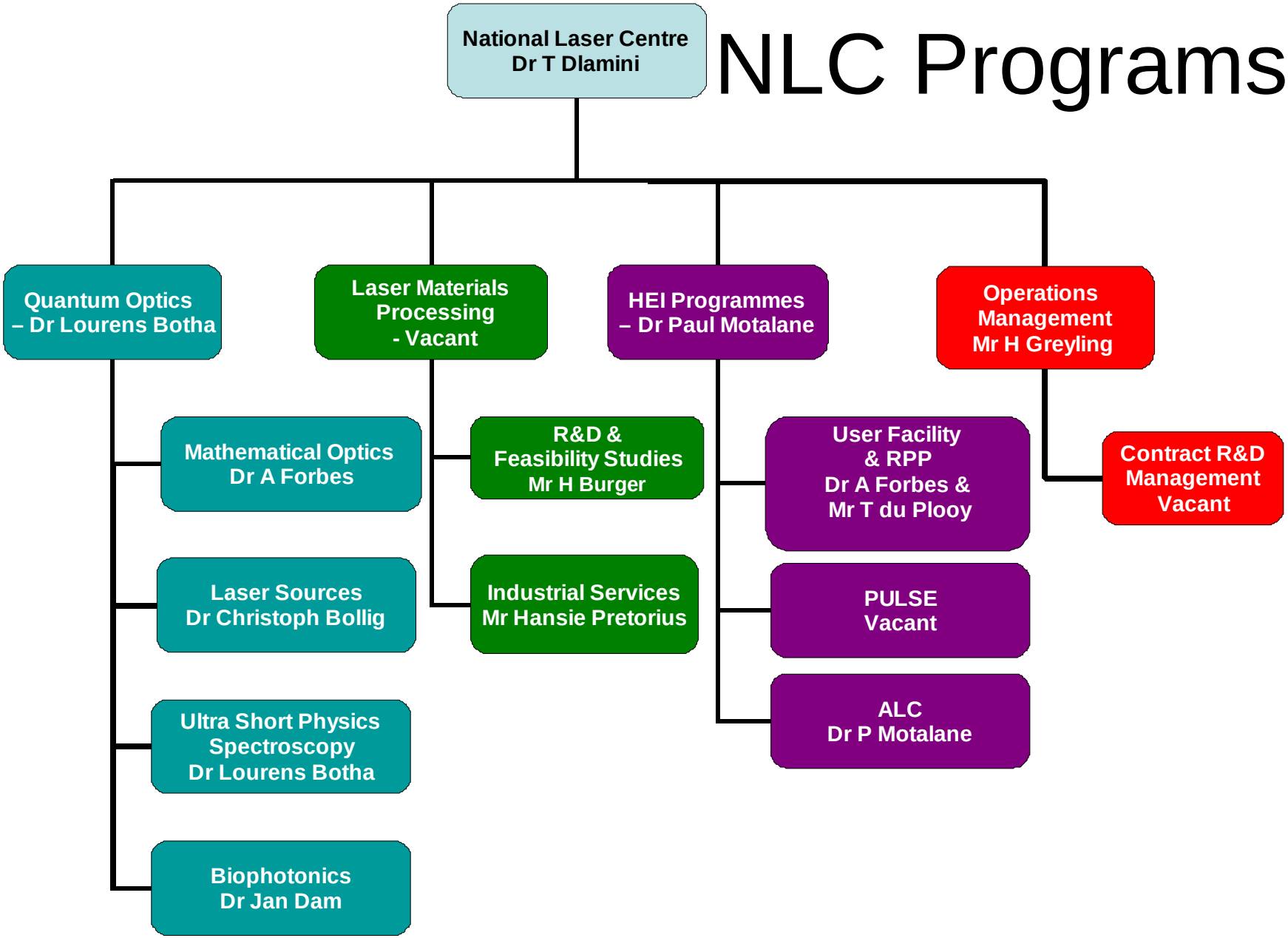
Outline

- NLC programs
  - Budget
  - Structure
- ALC structure and programs

NLC Programs

- Focus
  - Research and development of laser technology and applications
  - Human capital development & enabling laser research in SA
- One of three National Research Centres in the CSIR
    - MERAKA
    - SAC
- Total staff complement : 62
- Income: R41.6 m

NLC Programs



ALC

- Virtual network of laser research institutes on the African continent.
- Membership:
  - Only research institutes and universities can become members
  - Currently has 27 members
  - More than 12 African countries represented
- Section 21 company
  - Legal status
  - Board of Directors (SA, Senegal, Egypt, Ghana, Algeria, Lesotho, Nigeria, Kenya, Cameroon)


14 11:21

Nanosciences African Network
NANOAFNET

Malik Maaza is a senior scientist and leader of the Nano Laboratories of the Materials Research Group at iThemba LABS-National Research Foundation of South Africa. He holds a PhD in matter-wave neutron optics from the University of Paris VI. He has experience in nanoscience and nanophotonics research and has been a visiting scientist in France, Austria, Russia, Italy, Germany, and Japan. He initiated the South African Nanotechnology Initiative and is the founding chairman of the Nanosciences African Network. A representative of the Lasers, Atoms, and Molecules African Network in South Africa, he co-established the South African National Laser Centre and the African Laser Centre. He is involved in numerous international cooperation programs in nanosciences, photonics, and smart novel materials for energy efficiency. His main interests are related to fundamental investigations and technological applications in the field of nanophotonics and multifunctional novel materials. Previous interests include investigation of surface-interface phenomena and low-dimensional systems using optical-based spectroscopy and large facilities such as synchrotrons and neutron research reactors. Dr. Maaza has produced numerous formal scientific publications.

Dr. Malik Maaza
Materials Research Group
iThemba LABS-National Research Foundation
Somerset west, Cape Province, South Africa
E-mail: Maaza@tlabs.ac.za

Aboubaker Chédikh Beye is a professor at the Université Cheikh Anta Diop de Dakar in Senegal, associate dean for education and research, director of the Groupe de Laboratoires de Physique des Solides et Sciences des Matériaux, and leader of the Laser Processing and Spectroscopy of Materials Group. He obtained his PhD in solid-state physics from Montpellier University (France) and his Doctorat d'Etat-ès-Science (Professor Abilitation) from Nice University (France). After several years as an associate researcher, he participated in the AIST/MITI/Japan Visiting Scientist Program at Electrotechnical Laboratory, Tsukuba, before becoming a visiting senior researcher at Hitachi Central Research Laboratory. He was founding chairman or board member of the African Material Research Society, the African Laser Centre, and NANOAFNET and is a member of the USA–Africa Coordinating Team for Collaborative Activities in Material Science. His recent interdisciplinary research interests include nanosciences and hybrid organic-inorganic materials to create nanomaterials and structures for photonics and spintronics.

Prof. Aboubaker Chédikh Beye
Physics Department
Faculty of Science and Technology
University Cheikh Anta Diop de Dakar
Senegal
E-mail: Acbeye@refer.sn

The Abdus Salam
International Centre for Theoretical Physics

African Regional College on Science at the Nanoscale

19 - 30 November 2007

Cape Town, South Africa

A regional school on science and technology at the nanoscale will be held at the iThemba LABS, Cape Town, South Africa from 19 to 30 November 2007. The School will be jointly sponsored by the Abdus Salam International Centre for Theoretical Physics (ICTP), the International Center for Materials Research (ICMR), Santa Barbara, the US-Africa Materials Institute (USAMI), Princeton, the African Laser Centre (ALC), Pretoria, iThemba LABS – National Research Foundation, and the Nanosciences African Network (NANOAFNET).

In recent years it has become possible to manipulate matter at an atomistic scale. The research into ways to perform such manipulations and to carry out measurements, as well as the attempts to understand the basic physics underlying the observed phenomena, has rapidly grown into a very active interdisciplinary scientific domain. Today, research on nanoscale phenomena is strongly supported in most developed countries due to the important benefits expected from the introduction of nanoscale devices in technological areas such as electronics, micromechanics and biomedicine. However, progress in these areas is necessarily linked to advances in the comprehension of the fundamental physical processes taking place at the nanoscale, as well as to cross-disciplinary efforts aimed at unifying languages and concepts from chemistry, materials science and condensed matter physics and various fields of engineering. In this respect, nanoscale phenomena represent an ideal bench for the development of new concepts and new trends in basic science.

The field of nanoscience is evolving so rapidly, that the gap between achievements in basic research and technological applications has shrunk considerably. It is, therefore, very desirable to bring researchers from developing countries in contact with this domain of science and stimulate them to be an active part of this field. Making this kind of contact possible is the main target of the College. Furthermore, research in nanoscience is not too expensive, and its dependence on the skills of people, and not necessarily on large infrastructures, makes this field particularly suitable for trying to reduce the technological gap between underdeveloped and developed countries.

Among the topics of the College are:

Nanotubes and their Applications — **Nanobiology**
Scanning Probe and Atomic Force Microscopy — **Functional Materials**
Organic and Inorganic Light Emitting Devices — **Nanophotonics**
Both experimental and theoretical aspects as well as computer simulations will be covered.

PARTICIPATION

The College is aimed for students and young researchers from Africa. However, scientists and students from all countries which are members of the United Nations, UNESCO or IAEA may attend the College. As it will be conducted in English, participants should have an adequate working knowledge of this language.

Although the main purpose of the College is to help research workers from developing countries, a limited number of students and post-doctoral scientists from developed countries are also welcome to attend.

As a rule, travel and subsistence expenses of the participants should be borne by the home institution. Every effort should be made by candidates to secure support for their fare (or at least half-fare). However, limited funds are available for some participants. Such support is available only for those who attend the entire duration of the College. Given the regional character of the initiative, applications coming from African countries will be privileged. There is no registration fee.

For applicants from the SADC region (Southern African Development Community: Tanzania, Zambia, Malawi, Mozambique, Zimbabwe, Swaziland, Lesotho, Botswana, South Africa, Namibia, Angola, D.R. Congo, Mauritius as well as Rwanda and Burundi). Applicants should consult the webpage: http://www.africa-nanocollege.tlabs.ac.za and submit the application to the secretariat: Nassai Hazelnook: Head of the Library & Information Services, iThemba LABS, PO Box 722, Somerset West 7129 South Africa, Tel: +27 021 843 1259, Fax: +27 021 843 3525, E-mail: nanocollege@tlabs.ac.za

For applicants from all other countries: The Application Form can be downloaded from the activity's Web page below, which will be constantly updated. The form should be completed and returned hard copy (not via e-mail) as indicated. The secretary is: Ms. Milena Perogat, The Abdus Salam International Centre for Theoretical Physics, Strada Costiera 11, 34014 Trieste, Italy
(tel. +39-040-2240541 - fax +39-040-224163 - e-mail: smr1874@ictp.it)
ICTP Home Page: http://www.ictp.it/

The deadline for receipt of applications is: 31 July 2007.

http://cdsagenda5.ictp.trieste.it/full_display.php?smr=0&ida=a0627

DIRECTORS

A.C. Beye *(Cheikh Anta Diop University, Dakar, Senegal and African Laser Center, Pretoria)*
R. Gebauer *(ICTP, Trieste, Italy)*
M. Maaza *(iThemba LABS, Cape Town, S. Africa)*
G. Scoles *(Princeton University, USA, and SISSA/ELETTRA, Trieste, Italy)*

LECTURERS

***H. Amrag**, Dr. Aboubaker Belkaïd, Tlemcen*
A. Cheetham, Univ. of Calif., S. Barbara*
L. de Cola, Universität Münster*
***J.M. Fernandes**, Columbia Univ., N. York*
***U. Landman**, Georgia Inst. Techn., Atlanta*
N. Marzari, MIT, Boston*
***S. Meenah**, University of Cape Coast*
***C. Michelett**i, SISSA, Trieste*
***R. Nemutudi**, iThemba LABS, Cape Town*
***A. Nitzan**, Tel-Aviv University*
***P. Ormos**, Biological Res. Centre, Szeged*
***M. Prato**, University of Trieste*
***S. Ruggi**, SISSA, Trieste*
***W.-D. Schneider**, EPFL, Lausanne*
E. Sekkat, Al Akhawayn Univ., Ifrane*
***U. Sivan**, Technion, Haifa*
***E. Tosatti**, SISSA, Trieste*

* = to be confirmed

DEADLINE
for requesting participation

31 July 2007