

# The 2<sup>nd</sup> SA-BrightnESS<sup>2</sup> Workshop

## \* Virtual Mini-Symposia Format (Zoom or MS Teams)

## \* August to September 2020

## • 1.5 – 2 hours

### Introduction

The European Spallation Source (ESS), <https://europeanspallationsource.se/>, under construction in Lund, Sweden, is a partnership of countries committed to the goal of building and operating the world leading facility for research using neutrons. The capabilities of the ESS facilities will both greatly exceed and complement those of today's leading neutron sources in amongst others flux and resolution. This enables new opportunities for researchers across the spectrum of scientific discovery, including materials and life sciences, energy, health, environmental technology, cultural heritage and fundamental physics. BrightnESS<sup>2</sup> (<https://brightness.esss.se/>) is an integrated program in support of long-term sustainability of the ESS, its community, and the network of neutron sources in Europe and beyond. To emphasize the importance of access to global infrastructure and global networking that the BrightnESS<sup>2</sup> program provides, the South African consortium under the leadership of the Department of Science and Innovation is exploring options to participate in this program. The collaboration will provide SA researchers access to research infrastructure capabilities not available in the country, but needed to conduct competitive research using neutron science and scattering techniques.

### SA-BrightnESS<sup>2</sup> Workshops

The 1<sup>st</sup> SA-BrightnESS<sup>2</sup> workshop was held in Cape Town in 2019 organized by the DSI, NRF/iThemba LABS (<https://tlabs.ac.za/>), Necsa (<http://www.necsa.co.za/>) and with researchers who are interested in exploring the possibility and opportunities of using the ESS facilities under construction. During the 1<sup>st</sup> SA-BrightnESS<sup>2</sup> workshop, Thrust areas and Coordinators were identified.

The 2<sup>nd</sup> SA-BrightnESS<sup>2</sup> workshop will be held in the format of Virtual Mini-Symposia due to the COVID-19 pandemic restrictions. The mini-symposia will serve to be informative to expert and non-expert users to facilitate active participation. A number of virtual mini-symposia are scheduled for the period August to September 2020, focussed on prominent application themes of neutron scattering techniques. The themes will be run by Thrust Coordinators from academia and industry. The mini-symposia themes cover:

- Catalysis /synthesis: Coordinated by Prof Nico Fischer (UCT)
- Crystallography - Inorganic Chemistry: Coordinated by Prof Dave Billing (Wits)
- Crystallography - Organic Chemistry: Coordinated by Prof Catharine Esterhuysen (SUN)
- Energy Storage & Conversion Materials: Coordinated by Prof Kenneth Ozoemena (Wits)
- Geosciences: Coordinated by Prof Albertus Smith (UJ)
- Life Sciences and Biology: Coordinated by Prof Maria Papathanasopoulos (Wits)
- Magnetism: Coordinated by Prof André Strydom (UJ)
- Nanomaterials: Coordinated by Prof Malik Maaza (iThemba LABS) and Prof Ray Suprakas (CSIR)
- Neutrons for Engineers: Coordinated by Dr Mark Newby (Eskom) and Prof Danie Hattingh (NMU)
- Palaeontology & Heritage Conservation: Coordinated by Dr Amélie Beaudet (Wits)

### Invitation to the 2<sup>nd</sup> SA-BrightnESS<sup>2</sup> Workshop

#### The 2<sup>nd</sup> Virtual Mini-symposium (Zoom Platform) “Neutrons for Chemistry”: Crystallography - Organic Chemistry 25<sup>th</sup> August 2020 (Tuesday); 10:00 – 12:00

Dear fellow researchers and industry counterparts, the first mini-symposium on 05<sup>th</sup> August was well attended and attracted a lot of interaction. As a continuation of the mini-symposia series on neutron scattering techniques your participation with the next event is invited. The Crystallography - Organic Chemistry Thrust Mini-symposium, being coordinated by Prof Catharine Esterhuysen from Stellenbosch University, will take place **from 10:00 to 12:00 on the 25<sup>th</sup> August 2020 via Zoom to be accessed via the link (<https://zoom.us/j/92475908339>)**. This virtual workshop will encompass presentations by experienced users of neutron facilities, as well as short presentations by a variety of researchers to explore the possibilities of how SA scientists could benefit from access to neutron beam-time facilities at Necsa and iThemba LABS, as well as ESS (European Spallation Source) internationally. The mini-symposia will serve to be informative to expert and non-expert users to facilitate active participation.

#### Program for “Neutrons for Chemistry”: Crystallography - Organic Chemistry Coordinated by Prof Catharine Esterhuysen

TIME	TOPIC	SPEAKER
10:00 – 10:30	Neutron scattering in industry	Esna du Plessis (SASOL)
10:30 – 10:45	Chemistry and material science using neutrons	Monika Hartl (ESS)
10:45 – 10:55	Neutron powder diffraction facility at SAFARI-1	Andrew Venter (Necsa)
10:55 – 11:20	Perspectives on how access to neutron techniques at SAFARI-1 and iThemba LABS, as well as ESS could benefit research	Various speakers
11:20 – 12:00	Discussion and feedback	Catharine Esterhuysen (SU)

#### On behalf of SA-BrightnESS<sup>2</sup> team:

Andrew Venter : [andrew.venter@necsa.co.za](mailto:andrew.venter@necsa.co.za)  
 Peane Maleka : [pmaleka@tlabs.ac.za](mailto:pmaleka@tlabs.ac.za)  
 Robert Nshimirimana : [robert.nshimirimana@necsa.co.za](mailto:robert.nshimirimana@necsa.co.za)

