

HySA Systems Competence Centre, SAIAMC
University of the Western Cape
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PDRF in HT-PEMFC stack development

Background

The HySA Systems Integration & Technology Validation Competence Centre, HySA Systems, co-hosted by the University of the Western Cape (UWC) and the South African Institute for Advanced Materials Chemistry (SAIAMC), and directed by Dr Cordellia Sita, is one of three National Competence Centres that were initiated by the Department of Science and Technology's National Hydrogen and Fuel Cell Technologies (HFCT) Flagship Project, also known as Hydrogen South Africa or HySA.

HySA Systems, a Systems Integration and Technology Validation Competence Centre on HFCT was established in 2007 at the SAIAMC at the University of the Western Cape. The main objective with HySA Systems is to (i) develop HFC components, systems and prototypes, (ii) perform technology validation and system integration in two key HySA programmes: (1) Combined Heat and Power (CHP), and (2) Hydrogen Fuelled Vehicles (HFV).

HySA Systems is an industry, technology and product development oriented Competence Centre, which has demonstrated on many occasions its ability to develop, build, commission and validate prototype systems.

Scope of Work

The Postdoctoral Fellow for HT-PEMFC stack development will be involved in the entire process of preparation of a new stack construction, stack sub component and materials selection as well as stack characterization. Initially the scope of the work will focus on validation and characterization of the available at HySA Systems HT-PEMFC stack.

Tasks

The specific tasks will include all activities of development of the HT-PEMFC stack for CHP application, it includes stack components and stack modelling, designing, assistance with manufacturing, in-depth characterization of stack components before integration into the stack, stack assembly, pre-characterization and complete fuel cell stack validation using commercial stack testing stations. The final task might include integration of the newly developed stack into a CHP system construction available at HySA Systems.

Responsibilities

The postdoctoral fellow will normally be working in a team consisting of Technicians, Engineers, and Scientists. The fellow will work under the leadership of the HySA Systems Director (Dr Cordellia Sita) and the Project Manager – Dr Sivakumar Pasupathi. The fellow will work closely with international experts in the field, and will also be expected to co-supervise MSc/PhD students at HySA Systems. The successful candidate will be strongly encouraged to (i) publish patents and papers in high impact factor journals and disseminate her/his results at national/international conferences, events, workshops etc. and (ii) develop, commission and validate novel state-of-the-art hydrogen & fuel cell Products (from concept, drawings, construction and prototyping).



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Workplace

She/he will primarily be based at the world-class and well-equipped HySA Systems R&D Laboratories (located next to the new Life Science Building at UWC). Her/his direct managers will be Dr. Sivakumar Pasupathi and Dr Cordellia Sita.

Contract Period

In return HySA Systems will offer an exceptional internationally competitive salary (tax FREE) together with a strong motivation for UWC to employ the Fuel Cell Scientists or Engineers on a long-term contract. A minimum contract period of 1 year is recommended for this position which is available immediately.

How to Apply: Please email your full CV (inc. a list of publications) together with a covering letter (inc. list of achievements, success etc.) to Dr Cordellia Sita at csita@uwc.ac.za.



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