RESEARCH FELLOW: SYNTHETIC ORGANIC CHEMIST / POLYMER SCIENTIST

Position No: 0018061
Organisation Unit: Bio21 Institute
Budget Division: Bio 21 Institute
Classification: Research Fellow Grade 1 Level A
Superannuation: Employer superannuation contributions of 9%
Employment Type: Full-time (fixed term) for 12 months
Other Benefits: Salary packaging and staff training and development opportunities.
Current Occupant: Vacant
Advice to applicants: Apply online at http://jobs.unimelb.edu.au using the above position number or title as keyword.
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or
Professor Andrew B. Holmes
Tel: + 61 3 8344 2344, Fax: + 61 3 8344 2384
E-mail: aholmes@unimelb.edu.au
Closing Date: 31 October 2007
1 Position Summary
The appointee will join a team of researchers funded by the Victorian State Government with the research objective to develop and study functional polymers for photovoltaic device (VICOSC). The research will be conducted in the Bio21 Institute at the University of Melbourne and will involve collaborations with scientists at CSIRO Molecular & Health Technologies, Clayton, Monash University and industrial partners. The successful applicant will also be involved in supervision of undergraduate and postgraduate research projects and will interact with industry and research partners. The appointee will report to Prof. Andrew Holmes and Dr David Jones.

2 Selection Criteria
2.1 Essential
• PhD in Chemistry or a related field
• Postdoctoral experience in organic synthesis or polymer synthesis;
• Experience in supramolecular chemistry;
• Excellent written and oral communication skills
• A publication record in peer reviewed scientific journals;
• Good organisational and time management skills;
• Good problem solving abilities;
• The ability to work independently and as a member of a team.

2.2 Desirable
• Experience in polymer synthesis and cyclic voltammetry would be an advantage;
• Potential to write and outline research proposals (for example, on organic photovoltaics);
• Experience in the fabrication of photovoltaic devices.
• Evidence of the ability to work in a multidisciplinary team.
• Familiarity with synthesis in supercritical fluids.

3. Special Requirements
The position requires knowledge of the requirements and responsibilities under the Occupational Health and Safety Act as they apply to the position, and the incumbent will contribute to safe working conditions in the School of Chemistry by following all safety procedures and practices as required.
4. **Key Responsibilities**

- Synthesis of polymeric materials for organic photovoltaic applications;
- Characterization of thin film materials by AFM, SEM and TEM for developed within the consortium;
- Provide practical expertise and guidance in the area of synthesis and characterisation of organic polymeric materials in collaboration with other members of the research group;
- Co-supervise postgraduate and undergraduate researchers in the Laboratory;
- Oversee postgraduate and undergraduate researchers in the Laboratory and agree to be assigned a role of second supervisor to PhD students;
- Assume responsibility for the maintenance and correct use of the specialist equipment in the Laboratory;
- Deliver presentations and problem sessions to group meetings;
- Check risk assessments of other co-workers – countersign and approve risk assessments that will be carried out by other PhD, postdoctoral workers and undergraduates in their execution of daily experiments. The risk assessment protocol is a necessary condition of safe working with the School of Chemistry and in Bio21 Institute and the procedure is carefully explained to each co-worker. Only postdoc and academic staff members may countersign such assessments;
- Collection of solvents, liquid nitrogen, dry ice and chemicals from the stores;
- Supervision of weekly Friday afternoon clean-ups of the Laboratory;
- Conduct original research in the areas of functional polymers for photovoltaic devices;
- Liaison with industrial partners and collaborators from CSIRO Molecular and Health Technologies, Monash University and other research partners;
- Writing of reports and journal articles on experiments performed and present findings to students and colleagues.
- Other tasks and duties as required.

**Occupational Health and Safety (OHS) and Environmental Health and Safety (EHS) Responsibilities**

All staff are responsible for the following safe work procedures and instructions:
Employees are to:

- cooperate with the University in relation to activities taken by the University to comply with OHS and EHS legislation.
- comply with the OHS and EHS manuals
- adopt work practices that support OHS and EHS programs
- take reasonable care for their own health and safety and the health and safety of other people who may be affected by their conduct in the workplace
- seek guidance for all new or modified work procedures
- ensure that any hazardous conditions, near misses and injuries are reported immediately to the supervisor
- participate in meetings, training and other environment, health and safety activities
- not wilfully place at risk the health or safety of any person in the workplace
- not wilfully or recklessly interfere with or misuse anything provided in the interest of environment health and safety or welfare

In addition, Academic Staff are responsible for ensuring that an equivalent standard of OHS and EHS is afforded to their students as is afforded to University staff generally. Academic staff are deemed to have principal supervisory duty for undergraduate and postgraduate student activities.

5. Other Information

5.1 Bio21 Institute

The Bio21 Molecular Science and Biotechnology Institute (Bio21 Institute) is a multidisciplinary research centre officially opened in June 2005.

The Bio21 Institute, including its Research Transfer / Business Incubator Facility, is the major new physical development within the Bio21 Project of which the University is a Founding Partner. The Institute is being developed as a multidisciplinary biotechnology research and development centre of excellence with a commitment to industry interaction and commercialisation of research.

The major focus of the Institute is research programs and the provision of platform technologies in frontier areas of health-related biotechnology where
there are opportunities to develop critical mass, international competitiveness and commercial outcomes.

Principle objectives of the Bio21 Institute are:

- Research and development innovation in biotechnology through multidisciplinary programs;
- Provision of major state-of-the-art platform technologies to the University and wider Bio21 biotechnology community;
- Commercialisation of Intellectual Property;
- Business incubation and technology transfer through the development of a financially sustainable research transfer facility and associated business incubator;
- Industry-targeted postgraduate training, technology transfer programs and internships;
- Industry partnerships including participation as anchor tenants in the research transfer facility;
- Strategic alliances and networks with other major biotechnology precincts in Australia;
- Strategic alliances with international research organisations and biotechnology precincts.

Many of the scientists located in the new Bio21 Institute come from the University of Melbourne’s biomedical sciences and chemistry departments, along with researchers from Genetics, Medicine, Pathology, Physics, Engineering and the School of Veterinary Science. The total number of research staff, students and industry participants is in excess of 450. For further information on the Bio21 Institute refer to our website <http://www.bio21.unimelb.edu.au/>

5.2 The School of Chemistry

The School of Chemistry has 24 teaching/research staff, 30 professional staff and around 30 research only staff. It is one of the largest budgeting departments in the University. The School teaches 1600 first year students, 260 second year students and 100 third year students. The Honours class (4th year) is about 40 students and 105 MSc and PhD students are enrolled in research degrees and carry out research projects in one of the many advanced laboratories. The research in the School is supported by skilled technical staff who operate, maintain and develop complex instrumentation and equipment. Further information about the School is available at http://www.chemistry.unimelb.edu.au

5.3 The Faculty of Science

The Faculty of Science was established in 1887, although the first record of graduates in Science at the University dates back to 1863. It is one of the University’s largest faculties with some 7,000 undergraduate and postgraduate
students, with an annual budget in the order of $95m.

The Faculty of Science has a deserved reputation for the delivery of high quality teaching and research programs across a breadth of disciplines. The subjects and courses offered are integral to the quality of a significant number of the educational programs in other faculties. The Faculty has a long-standing and distinguished record of providing postgraduate education at the Masters and Doctoral levels and it has established strong international research and research education linkages within the USA, Europe and throughout the Asian region.

The Faculty is made up of four Schools and five Departments as follows: Schools of Botany, Chemistry, Earth Sciences and Physics; and the Departments of Genetics, Information Systems, Mathematics and Statistics, Optometry and Vision Sciences and Zoology. The Faculty is a partner in the newly established Bio21 Institute.

The Faculty, through its Departments and Centres, is active in professional development, continuing education nationally and internationally, and in links to schools and the community. The Faculty is currently a partner in 20 externally funded research centres. There are five Federation Fellows, two Laureate Professors, 33 Professors and 7 Professorial Fellows in the Faculty.

Information on the Faculty of Science can be found at: http://www.science.unimelb.edu.au/departments

5.4 The University of Melbourne

The University of Melbourne is a leading international university with a tradition of excellence in teaching and research. Melbourne’s outstanding performance in international rankings puts it at the forefront of higher education in the Asia-Pacific region and the world. The University of Melbourne is consistently ranked by the THES among the world’s top 25 universities.

Established in 1853, shortly after the founding of Melbourne, the University is located just a few minutes from the centre of this global city. The main Parkville campus is recognised as the hub of Australia’s premier knowledge precinct comprising eight hospitals, many leading research institutes and a wide range of knowledge-based industries.

The University employs people of outstanding calibre and offers a unique environment where staff are valued and rewarded. Further information about working at The University of Melbourne is available at www.hr.unimelb.edu.au/careers.

5.5 Growing Esteem and the Melbourne Model

The Growing Esteem strategy, adopted by the University in December 2005,
lays out a ten-year plan to fulfil Melbourne's aspiration to be a public-spirited and internationally-engaged institution, highly regarded for making distinctive contributions to society in research and research training, learning and teaching, and knowledge transfer. See [http://growingesteem.unimelb.edu.au/](http://growingesteem.unimelb.edu.au/)

From 2008, as the cornerstone of Growing Esteem, the University will introduce landmark educational reforms known collectively as the Melbourne Model. These reforms are designed to create an outstanding and distinctive Melbourne Experience for all students. The Model is based on six broad undergraduate programs followed by a graduate professional degree, research higher degree or entry directly into employment. The emphasis on academic breadth as well as disciplinary depth in the new degrees ensures that graduates will have the capacity to succeed in a world where knowledge boundaries are shifting and reforming to create new frontiers and challenges. In moving to the new model, the University is also as aligning itself with the best of emerging European and Asian practice and well-established North American traditions.

5.6 Equity and Diversity

Another key priority for the University is access and equity. The University of Melbourne is strongly committed to an admissions policy that takes the best students, regardless of financial and other disadvantage. An Access, Equity and Diversity Policy Statement, included in the University Plan, reflects this priority.

The University is committed to equal opportunity in education, employment and welfare for staff and students. Students are selected on merit and staff are selected and promoted on merit.

5.7 Governance

The Vice Chancellor is the Chief Executive Officer of the University and responsible to Council for the good management of the University.

Comprehensive information about the University of Melbourne and its governance structure is available at [www.unimelb.edu.au](http://www.unimelb.edu.au)

This position description is approved by:

Occupant: .......................................................... Date: ............

Supervisor: .......................................................... Date: ............

Head of Organisation Unit: .............................................. Date: ............