

## RESEARCH FELLOW

### ULTRACOLD ATOM ELECTRON SOURCE

**Position:** Applications are invited for a Research Fellow, [position 0016856](#) (fixed-term). The successful candidate will work in a team with A/Prof Robert Scholten and Prof Keith Nugent, on a five-year funded research project based on generating electrons from laser cooled and trapped atoms. The atoms will be photoionised to form an ultracold plasma, from which an electron bunch will be extracted. We will investigate the dynamics of ultracold plasma and factors affecting the emittance and brightness of the electron beam, and also quantum effects with cold Rydberg atoms, and fundamental atomic physics. Inverse Compton scattering of femtosecond laser pulses from the electron bunches will be used to generate X-rays.

We are looking for a highly motivated and independent researcher who can pursue a dynamic research program involving experimental atom optics and optical physics, in collaboration with the chief investigators and a strong team of postgraduate students.

**Applicants** must have a PhD in physics, with an experimental background in laser cooling and trapping of atoms and atom optics, with expertise in lasers, optical systems, laboratory electronics and ultrahigh vacuum. The Fellow will be expected to participate in all areas of research and in postgraduate student supervision. A capacity for independent research is essential, with a sound record of publication, commensurate with experience and opportunities. The Fellow must have demonstrated the ability to work both independently and closely with others, the ability to work to a schedule and meet pre-agreed deadlines, towards a common team goal. You must also have excellent communication skills, both written and oral, in the English language. A professional approach, including effective time management skills, collaborative working hours, positive and constructive attitude, and goal-oriented outlook are expected.

**Benefits:** Salary \$61,009 - \$65,489 p.a. plus employer superannuation contributions (9%), and salary packaging and staff training and development opportunities.

**Duration:** Fixed-term (3 years) full-time, available immediately.

**Contact:** A/Prof. Robert Scholten [scholten@unimelb.edu.au](mailto:scholten@unimelb.edu.au).

**Applications:** Applications should be made through the University of Melbourne website, <http://jobs.unimelb.edu.au>. Applicants must address the selection criteria available via the website or at [0016856 position description](#), provide detailed curriculum vitae, and include the names, phone, facsimile numbers and email addresses of three referees, by the closing date.

**Applications close:** 29 October 2007