

## Cold Atoms

The Ultra Cold Atoms Research Group was set up during 2008 as a new group within the School of Physics and Astronomy. The group is part of the Midlands Ultra Cold Atoms Research Centre ([MUARC \(http://mpa.ac.uk/muarc/\)](http://mpa.ac.uk/muarc/)) together with the University of Nottingham.



### General Interests

The Midlands Ultracold Atom Research Centre exploits the unique properties of ultracold atom gases to drive the advancement of knowledge in [quantum technologies \(http://mpa.ac.uk/muarc/research.html\)](http://mpa.ac.uk/muarc/research.html).

The research at the University of Birmingham has a particular focus on optical lattice systems, which provide new interdisciplinary insights into important condensed matter phenomena like superconductivity and quantum phase transitions.

[MUARC \(http://mpa.ac.uk/muarc/\)](http://mpa.ac.uk/muarc/) explores the possibilities of quantum simulation with ultracold atom systems and promotes further developments towards quantum information or the controlled creation and destruction of molecules in quantum chemistry. An applied theme will be the development of quantum sensors for measurements of highest precision.

For more information please visit <http://mpa.ac.uk/muarc/>

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### Quantum Technology at the University of Birmingham:

