

**Imperial College London**  
**Department of Civil and Environmental Engineering**  
**EPSRC CDT in Sustainable Civil Engineering**

**PhD Studentship:**

**New low-carbon cements for sustainable infrastructure development  
manufactured from olivine**

**Supervisor:** [Professor Chris Cheeseman](#)

**Industry:** [University of Canterbury](#)

This project will provide an exciting opportunity to be part of the new Centre for Infrastructure Materials based in the Civil and Environmental Engineering Department at Imperial College London. It is also in collaboration with the University of Canterbury in New Zealand. Ongoing research in New Zealand is developing a process to produce magnesium oxide and silica from the mineral olivine. This process allows low-energy production of magnesium oxide and therefore has the potential to produce low-carbon cements. The work at Imperial will focus on developing new binder systems by optimising combinations of magnesium oxide and silica combined with other components. Research will involve optimising the production, performance and modelling the reactions and microstructure of the new materials developed. Sustainable low-carbon cementitious binder materials for use in the built environment and other applications are critical to deliver future sustainable infrastructure and this project provides an opportunity to work with leading scientists and engineers in this important research area. The new Centre for Infrastructure Materials at Imperial will provide exceptional facilities to complete the research and there will be opportunities to work in New Zealand as a key part of the research team. The project is suitable for candidates with a background in civil engineering or materials science, but we would also like to encourage applications from candidates with first degrees in other related physical sciences and engineering disciplines.

**Eligibility and Funding**

Funding is available for applicants with settled UK status (see <https://www.epsrc.ac.uk/skills/students/help/eligibility/> for eligibility). The studentship offers a stipend of approximately £16,000 per annum (tax free) and covers fees at the UK/EU student rate for a period of four years.

**Contact**

For informal enquires and to request more information, contact Professor Chris Cheeseman (<http://www.imperial.ac.uk/people/c.cheeseman>)

This PhD studentship is co-funded by the EPSRC CDT in Sustainable Civil Engineering at Imperial College London:

(<http://www3.imperial.ac.uk/sustainablecivilengineering>)

**Deadline**

Review of application is now in progress and will continue until suitable candidate is identified. The starting date for this PhD Studentship is 1<sup>st</sup> of October, 2018.