



Postdoctoral fellow position at Victoria University of Wellington, New Zealand.

Electromagnetic scattering by particles of arbitrary size and shape with application to microplastics

A postdoctoral fellow position is available in the Raman laboratory at Victoria University of Wellington, in the heart of New Zealand's beautiful capital city for a research project entitled "Electromagnetic scattering by particles of arbitrary size and shape with application to microplastics".

Duration: 2 years fixed-term (full-time).

Research:

The research project, under the supervision of Prof. Eric Le Ru, will relate to calculation methods for the optical properties of non-spherical nanoparticles. It will involve both theoretical work, which will use advanced mathematical tools and techniques, and computational/numerical work, which will require a good programming knowledge. A PhD student will work alongside the postdoctoral fellow on some aspects of the project. The aim is to apply the newly developed methods to the calculation of the optical properties of airborne microplastics and to understand how they might affect global climate. This follows up on our recent work in this area: [Nature 598, p.462 \(2021\)](#).

Location: The job is based in Wellington, New Zealand, in the Raman lab (<http://www.victoria.ac.nz/scps/research/research-groups/raman-lab/>), one of the world leaders in the areas of surface enhanced Raman scattering (SERS) plasmonics, nano-optics, and electromagnetic scattering. It also provides many opportunities for emerging young researchers through the strong links with the MacDiarmid institute (see www.macdiarmid.ac.nz and <http://mesa.ac.nz/>).

Experience and skills: PhD in physics or related disciplines with a strong background in electromagnetic scattering including computational methods. Previous experience with the T-matrix method, surface-integral equation methods, numerical codes in

electromagnetic scattering will be viewed favourably. Evidence of past publications and excellent command of English (written and spoken) are essential.

Salary: Approx 83,000NZD per annum.

Start Date: Flexible between May and November 2023.

Visa: Note that non-citizen or permanent residents of New Zealand or Australia will need to apply for a visa to work in New Zealand.

Enquiries should be directed to Eric Le Ru. Email: eric.leru@vuw.ac.nz. We will then let you know when the position is officially advertised (a formal application for the job via the university vacancy website will then be required)

