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PhD position in optical properties of nanoparticles

The Energy and Particle Technology Laboratory (EPTL) at Carleton University, Ottawa, Canada is accepting applicants for a PhD position on optical properties of nanoparticles. The successful applicant will perform detailed simulations and experiments on optical properties of flame made nanoparticles. This project focuses on understanding how light absorption and scattering are related to nanoparticle morphology and composition. This is a fully funded position for up to four years conditional to the performance of the candidate starting from January 1st, 2020.

EPTL conducts research on nanoparticle engineering with applications in energy storage, advanced material synthesis, emission sensing and quantification of their impact on the environment. We develop process design tools for scalable gas phase synthesis of nanoparticles with tailored functional properties and study how particle characteristics including their size distribution, morphology and chemical composition are linked to their properties of interest such as optical, sensing and energy storage characteristics.

Essential Requirements

Candidates must have completed a masters degree (exceptional bachelor graduates are also considered) in Material, Mechanical, Chemical, Physics or in a closely related field. The candidate should have demonstrated experience in the following areas:

- Programming with C++, Python, MATLAB and Fortran;
- Data visualization and analysis;
- Work independently, self-motivated, with a strong work ethic and collaborative skills; and
- Applicants must be proficient in both written and oral English and possess excellent communication and interpersonal skills.

How to Apply

Applications should include a CV and a cover letter clearly outlining how past research and experience provide the essential qualifications to undertake the project. Additionally, contact info for three references should be available upon request. Please Direct Application to: Professor Reza Kholghy (Director of EPTL): reza.kholghy@carleton.ca

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