Design of Fluorophores for Biological Imaging

PROJECT DESCRIPTION

During the internship the student will utilize state-of-the-art computational chemistry tools to explore photophysical processes in molecules. Specific applications could include one-photon and two-photon absorption in fluorescent proteins, resonance Raman spectroscopy to probe initial excited state dynamics, fluorescent nucleobase analogs, and benchmarking of electronic structure methods for challenging structures; recently published papers in these areas are listed below.

References:


FACULTY-DEPARTMENT

Science - Chemistry

DESIRED FIELD OF (STUDENT) STUDY

Student shoud have completed an Introductory Quantum Chemistry and/or Quantum Mechanics Course. Familiarity with at least one computational quantum chemistry program, e.g., Gaussian09, GAMESS-US, is preferred but not required as in-house training will be provided. Student should be comfortable with the use of computers (knowledge of Linux would be beneficial although not required) and some coding and/or scripting experience would also be preferred.

Contact: Brendan Cavanagh, Internship Coordinator (Inbound)
University of Alberta International
intern@ualberta.ca
<table>
<thead>
<tr>
<th><strong>INTERNSHIP LOCATION</strong></th>
<th>University of Alberta Main Campus - Edmonton</th>
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<tbody>
<tr>
<td><strong>NUMBER OF INTERNSHIP POSITIONS</strong></td>
<td>1</td>
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<tr>
<td><strong>INTERNSHIP START DATE</strong></td>
<td>July 3</td>
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<td><strong>INTERNSHIP END DATE</strong></td>
<td>September 30</td>
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<td><strong>ARE THE DATES FLEXIBLE?</strong></td>
<td>Yes, I am flexible regarding the internship dates. Selected students can contact me to request a date change.</td>
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