

爾灣加州大學
材料科學與工程研究所
組建新項目研究團隊 誠徵
博士/博士後/助研實習/訪問學者
(2022-2023 冬季/春季/夏季)

研究項目簡介

在 UCI 的計算材料小組，我們通過開發和應用計算材料科學的方法，包括基於第一原理的模擬，從根本上理解原子的運動和結構排列如何影響材料在合成和器件操作過程中的電子特性。量子力學、分子熱力學和機器學習。我們目前的研究重點是固態量子缺陷、表面化學反應以及使用機器學習方法開發的方法。我們從我們的團隊中尋找對研究領域有學習熱情和好奇心的人。

At the Computational Materials Group at UCI, we bring fundamental understanding of how the movement and structural arrangement of atoms impact the electronic properties of materials during their synthesis and device operation, by developing and applying methods for computational materials science, including first principles simulations based on quantum mechanics, molecular thermodynamics, and machine learning. Our research currently focuses on solid-state quantum defects, chemical reactions on surfaces, and methods development with machine learning approaches. We seek individuals with passion for learning and curiosity for [research areas from our group](#).

研究項目實驗室團隊導師 Elizabeth Lee 博士簡介：

李博士獲得博士學位。在麻省理工學院 (MIT) 獲得化學工程博士學位，研究分子半導體中的納米級能量傳輸現象，例如膠體量子點和共軛聚合物。她擁有約翰霍普金斯大學化學工程和化學雙學士學位。她在芝加哥大學普利茲克分子工程學院完成了博士後工作，在那裡她開發了具有神經網絡的第一性原理計算框架，以研究量子材料和金屬表面的化學鍵合動力學和平衡。

Dr. Lee received her Ph.D. in Chemical Engineering at the Massachusetts Institute of Technology (MIT), studying nanoscale energy transport phenomena in molecular semiconductors, such as colloidal quantum dots and conjugated polymers. She has dual Bachelor's degrees in Chemical Engineering and Chemistry from Johns Hopkins University. She completed her postdoctoral work in the Pritzker School of Molecular Engineering at the University of Chicago, where she developed first-principles computational frameworks with neural networks to investigate chemical bonding dynamics and equilibria in quantum materials and metal surfaces.

自 2022 年 10 月起，她目前擔任加州大學 (UCI) 工程學院材料科學與工程系 Samueli 教師發展講座助理教授。李博士的研究興趣包括用於量子技術和能源應用的材料，以同時針對基礎使用計算和理論方法理解和新材料設計。她的獎項包括 DOE 領導計算挑戰獎 (ALCC)、NSF 研究生研究獎學金、美國化學工程師學會 (AIChE) 電子和光子學材料獎以及芝加哥大學指導獎

She is currently a Samueli Faculty Development Chair Assistant Professor in the Department of Materials Science and Engineering at the University of California (UCI) School of Engineering since October 2022. Dr. Lee's research interests include materials for quantum technology and energy applications to target both fundamental understanding and novel materials design using computational and theoretical approaches. Her awards include DOE Leadership Computing Challenge Award (ALCC), NSF Graduate Research Fellowship, American Institute of Chemical Engineers (AIChE) Electronics and Photonics Materials Award, and the University of Chicago Mentoring Award.

誠聘英才：

攻讀 博士/碩士 或 博士後研究

如果您有興趣，請將您的簡歷發送至 elizabeth.lee@uci.edu。博士後候選人還請附上履歷表和三個學術有關推薦人的聯繫信息。

If you are interested, please send your CV to elizabeth.lee@uci.edu. Postdoctoral candidates please also attach a cover letter and the contact information for three academic references.

助研實習：2023 Spring/Summer/Fall

請將您的簡歷發送至 elizabeth.lee@uci.edu。具有工程學（例如，材料科學、化學和電氣）、物理學和化學學位的候選人是首選。理想的博士後候選人應具有以下一個或多個領域的經驗：電子結構理論和計算（例如密度泛函理論）、分子模擬、數學建模、機器學習和編程。

Please send your CV to elizabeth.lee@uci.edu. Candidates with degrees in engineering (e.g., materials science, chemical, and electrical), physics, and chemistry are preferred. The ideal postdoc candidates should have experience in one or more of the following areas: electronic structure theory and calculations (e.g., density functional theory), molecular simulations, mathematical modeling, machine learning, and programming.

訪問學者：

我們也歡迎訪問學生/學者/教授，我們更願意接待已經在相關領域有一些研究經驗的訪問者。訪問者費用自付。

We also welcome visiting students/scholars/professors and we prefer to host visitors who already have some research experience in related fields. Visitors are expected to cover their cost by external funding.

李博士預定於 12 月 11 至 12 月 24 日期間 赴臺灣與候選人會面，詳情請發電郵聯係。

Dr. Lee will be visiting Taiwan from December 11 to December 24 for interviewing candidates. Please send email to Dr. Lee for more information.