Canada Learning Initiative in China
CLIC
Canada Liaisons Internationales Chine

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Research Internship Information Collection for Credit Evaluation

Note: Please submit research internship information to the CLIC office (shabkirk@ualberta.ca) by August 31st.

Research Internship Name: Study of Li-Air Battery with High Performance

Chinese Host University and Department: Shandong University - SDU & Rice Joint Center for Carbon Nanomaterials, School of Materials Science and Engineering

Eligibility Requirements: Students are better over Senior students or postgraduates. Students should have related background on materials science and engineering or chemistry. Students should have learned at least one of the related courses, eg. Fundamentals of Materials Science and Engineering, Electrochemistry, Physical chemistry, Inorganic chemistry, et.al.

Research Internship Description: Our center is an international joint center between Shandong University (China) and Rice University (USA), in which we focuses on the research topics about the fabrication and application of carbon nanomaterials. During this research internship, the students will participate all the research activities independently, including: read references; design and set up experiments; characterize the samples via SEM, XRD, potentiostat, and other related testing; assemble lithium air batteries and test their electrochemical performance; give a presentation on group meeting; finish the research report. The internship duration is from one month to three months (at least one month).

※Students are eligible to select "China Studies" courses during the internship period. "China Studies" is a comprehensive and interdisciplinary study area which combines sinology with contemporary China studies to form a new disciplinary. The courses are dedicated to educate those who aspire to become the professionals with broad knowledge and deep understanding of China.

Research Internship Objectives: A description of the learning outcomes that are expected. After the internship, students will learn basic knowledge on lithium air battery including concepts, principles, fabrication of cathode materials (eg. Graphene, Graphene based composites, catalysts and so on), protection of Li metal anode in air condition, assembling of the devices and their applications. Students will also obtain the background of energy storage materials and electrochemistry. What's more, students will grasp the skills and operate the instruments about the characterization approaches and techniques, such as SEM, XRD, Raman, et. al.

Student Roles and Responsibilities: Work as a research assistant. Students will help supervisors on lab safety training and lab work to project undergraduates. Students will help PhD students on doing the related projects including doing experiments and testing samples.

Hours per week: 40

Grading: Working time, lab performance, group talks, and team work and independent performance on assigned tasks.

Number of Internship Positions: 2

Research Internship Location: Qianfo Campus, Shandong University

Research Internship Dates: March 1st to May 31, 2019.

Are the dates flexible: Yes

Supervisor(s) Name(s) and Contact Information: Prof. Lijie Ci, lci@sdu.edu.cn

Administrative Contact Information: Ms. Ma Mengran, mamengran@sdu.edu.cn

Research Internship Code: SDU-CLIC003

Website address:http://www.cmse.sdu.edu.cn/info/1159/7238.htm

Host university application: no

Research Internship Credit: 6

Tuition fee: according to the criteria of Chinese Government Scholarship

Dormitory accommodation available: yes, on-campus International Student Dormitory is guaranteed.

Accommodations fee: about 1200yuan/month

Additional fees: (field trips, etc.)
Aiming to maximize the students' learning outcomes and deepen their understanding of Chinese society, besides the professional teaching and research activities, the field trips are included in the program to visit some of the famous tourist attractions of Jinan city and Shandong Province, the homeland of Confucius and other great philosophers of Chinese history. Hiking, visit to natural springs, ancient temples as well as potential visit to a technology center is included.