

Two Postdoc/Research Fellow positions on
Electrochemical Energy Storage
Sun Yat-Sen University

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Posted Apr. 15, 2020, set to expire Aug. 15, 2020

Job Title	Two Postdoc/Research Fellow positions on Electrochemical Energy Storage
Department	Materials Science & Engineering http://mse.sysu.edu.cn/
Institution	Sun Yat-Sen University Guangzhou, , China
Date Posted	Apr. 15, 2020
Application Deadline	Open until filled
Position Start Date	Aug. 1, 2020
Job Categories	Post-Doc
Academic Field(s)	Materials Sciences/Polymer Sciences
Job Website	http://www.sysu.edu.cn/2012/en/jobs/jobs05/index.htm
Apply Online Here	http://mse.sysu.edu.cn/node/1853
Apply By Email	

Job Description

Two Postdoc/Research Fellow positions are available in the Shi Lab (<https://publons.com/researcher/1227310/kaiyuan-shi>) at the School of Materials Science & Engineering, Sun Yat-Sen University. The Shi Lab engages in an interdisciplinary approach to tackle fundamental challenges related to electrochemical energy storage. We aim to develop a new paradigm of electrochemical systems, encompassed over the areas including materials synthesis, electrode fabrication, interfacial characterization and principles investigation.

Position 1 (Topic: Garnet-type Electrolytes for Solid-state Li-ion Batteries):

Develop and synthesize new electrolyte materials based on garnet-type ceramics;

Develop new strategies to reduce the interfacial resistance between the electrode and electrolyte;

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Responsible for the coin cell and pouch cell assembly as well as the electrochemical measurements of solid-state Li-ion batteries based on various electrolyte materials;
Perform X-ray tomography analysis on the interfacial characteristics of solid-state batteries;
Study the interrelationship of crystal structure, morphology, and electrochemical performance;
Scientific reporting and discussion, publication in peer-reviewed journals.

Position 2 (Topic: Zn-based Anode in Rechargeable Zn-ion Batteries):

Investigate the degradation mechanism of Zn anodes in Zn-ion batteries;
Mitigate Zn corrosion, dendrite growth and H₂ generation of Zn-anodes in aqueous electrolytes;
Develop new approaches to synthesize Zn-based composites with functional materials such as CNT, activated carbon and metal nanoparticles, etc;
Perform electrophoretic deposition and electrolytic deposition to fabricate Zn-based electrodes,
Characterize new organic electrolyte additives in Zn-ion batteries;
Scientific reporting and discussion, publication in peer-reviewed journals.

Assessment Criteria:

Ph.D. in Materials Science, Electrochemistry or Inorganic Chemistry related fields;
Training and expertise in processing and characterization of electrodes and devices for Li-ion batteries, supercapacitors or aqueous batteries;
Experience in Electrochemical (galvanostatic, CV, impedance measurements, etc.), and microscopy (SEM/TEM) techniques;
Expertise on surface analysis techniques and/or use of solid electrolyte interphase (SEI)-forming additives;
Experience in crystallography studies and 3D image processing would be an asset.

Location: Guangzhou East Campus, Sun Yat-sen University, Guangzhou, Guangdong Province, China
Base Salary: 200,000~360,000 (pre-tax) RMB/year (Equivalent to 28,000~50,000 USD), depending on the qualifications and experience.

Bonus pay: The research group will reward the researchers with bonuses based on his/her contributions and achievements within the employment.

More Information: <http://www.sysu.edu.cn/2012/en/jobs/jobs05/index.htm>

Benefit:

1. The university can provide an apartment (40-90 m²) on the campus during the contract with subsidies.
2. For those with children, is eligible to enroll to the kindergarten or primary school associated to SYSU for free.
3. SYSU provides a health/dental insurance package for all the employees.
4. The applicant who secured his/her Ph.D. from Top 200 University within the last three years could

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get 300,000 RMB/2years (~42,000 USD in total) as government rewards from Guangdong Province.

Working Hours: 40 hours/week, full time, no teaching duties

Contract duration: 2~3 years contract for the Postdoc/Research Fellow; can be extended; have possibilities to be promoted to a tenure-track position when the contract expired

Period of validity: The recruitment is valid until fulfilled.

Notes: The applicants for the level of Distinguished Researcher/Distinguished Associate Researcher positions are expected to have at least 1-year postdoctoral experience in prestigious universities or research institutes.

Contact: Dr. Kaiyuan Shi, E-mail: shiky7@mail.sysu.edu.cn. Please attach with your CV and indicate which position you're applying to.

Sun Yat-sen University, founded by Dr. Sun Yat-sen and with an educational tradition spanning over 100 years. The University is located in Guangdong Province, an area close to Hong Kong and Macao. With five campuses in the three cities of Guangzhou, Zhuhai and Shenzhen, and ten affiliated hospitals, the University is striving to become a world-class university and global center of learning and research studies. Sun Yat-sen University has been ranked in the Top 10 in China, and Top 200 around the world(According to Wikipedia).

More Information: <http://www.sysu.edu.cn/2012/en/index.htm>

Sun Yat-sen University is deeply committed to improving diversity in Engineering. Women and under-represented minorities are strongly encouraged to apply.

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact Kaiyuan SHI
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