



Application for Permanent Employment Certification
Form ETA-9089 – Appendix A: Foreign Worker Information
U.S. Department of Labor

FOREIGN WORKER INFORMATION

A. Foreign Worker Contact Information

1. Foreign Worker's Last (family) Name *		
Zhao		
2. Foreign Worker's First (given) Name *		
Xiliang		
3. Foreign Worker's Middle Name(s) *		
4. Address 1 (current) *		
1 Hermann museum the Circle Drive		
5. Address 2 (apartment/suite/floor and number) §		
E2096		
6. City *	7. State *	8. Postal Code *
Houston	Texas	77004
9. Country *	10. Province §	
United state		
11. Date of Birth (mm/dd/yyyy) *	12. Class of Admission *	13. Alien Registration Number (A#) (if applicable) *
11/27/1995	F1	
14. Country of Birth *		
China		
15. Country of Citizenship or Nationality *		
Chinese		

B. Foreign Worker Education §

a. Educational Attainment Information 1

1. Education: U.S. Diploma/Degree attained relevant to the job opportunity	
<input type="checkbox"/> None <input type="checkbox"/> High School/GED <input type="checkbox"/> Associate <input type="checkbox"/> Bachelor's <input checked="" type="checkbox"/> Master's <input type="checkbox"/> Doctorate (PhD) <input type="checkbox"/> Other Degree (JD, MD, etc.)	
1a. If "Other Degree" in question 1, specify the diploma/degree attained	
1b. Specify major(s) and/or field(s) of study (may list more than one related major and more than one field)	
Material Science and Engineering; ,Electrical Electronic; Lithium Battery; Sodium Battery; Zinc Battery; Electrolyte	
1c. Name of Institution that issued the degree/diploma	
South China Normal University (Master), Wuhan University of Technology(bachelor's degree)	
1d. Name of Country of institution identified in question 1c	1e. Month/year attained (mm/yyyy)
China	06/2022

b. Educational Attainment Information 2

1. Education: U.S. Diploma/Degree attained relevant to the job opportunity	
<input type="checkbox"/> None <input type="checkbox"/> High School/GED <input type="checkbox"/> Associate <input type="checkbox"/> Bachelor's <input type="checkbox"/> Master's <input type="checkbox"/> Doctorate (PhD) <input type="checkbox"/> Other Degree (JD, MD, etc.)	
1a. If "Other Degree" in question 1, specify the diploma/degree attained	
1b. Specify major(s) and/or field(s) of study (may list more than one related major and more than one field)	
1c. Name of Institution that issued the degree/diploma	
1d. Name of Country of Institution identified in question 1c	1e. Month/year attained (mm/yyyy)

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B. Foreign Worker Education (continued)

c. Educational Attainment Information 3

1. Education: U.S. Diploma/Degree attained relevant to the job opportunity <input type="checkbox"/> None <input type="checkbox"/> High School/GED <input type="checkbox"/> Associate <input type="checkbox"/> Bachelor's <input type="checkbox"/> Master's <input type="checkbox"/> Doctorate (PhD) <input type="checkbox"/> Other Degree (JD, MD, etc.)	
1a. If "Other Degree" in question 1, specify the diploma/degree attained	
1b. Specify major(s) and/or field(s) of study (may list more than one related major and more than one field)	
1c. Name of Institution that issued the degree/diploma	
1d. Name of Country of Institution identified in question 1c	1e. Month/year attained (mm/yyyy)

d. Educational Attainment Information 4

1. Education: U.S. Diploma/Degree attained relevant to the job opportunity <input type="checkbox"/> None <input type="checkbox"/> High School/GED <input type="checkbox"/> Associate's <input type="checkbox"/> Bachelor's <input type="checkbox"/> Master's <input type="checkbox"/> Doctorate (PhD) <input type="checkbox"/> Other Degree (JD, MD, etc.)	
1a. If "Other Degree" in question 1, specify the diploma/degree attained	
1b. Specify major(s) and/or field(s) of study (may list more than one related major and more than one field)	
1c. Name of Institution that issued the degree/diploma	
1d. Name of Country of Institution identified in question 1c	1e. Month/year attained (mm/yyyy)

e. Educational Attainment Information 5

1. Education: U.S. Diploma/Degree attained relevant to the job opportunity <input type="checkbox"/> None <input type="checkbox"/> High School/GED <input type="checkbox"/> Associate's <input type="checkbox"/> Bachelor's <input type="checkbox"/> Master's <input type="checkbox"/> Doctorate (PhD) <input type="checkbox"/> Other Degree (JD, MD, etc.)	
1a. If "Other Degree" in question 1, specify the diploma/degree attained	
1b. Specify major(s) and/or field(s) of study (may list more than one related major and more than one field)	
1c. Name of Institution that issued the degree/diploma	
1d. Name of Country of Institution identified in question 1c	1e. Month/year attained (mm/yyyy)

C. Foreign Worker Training Qualifications §

a. Training, Certification(s), and/or License(s) Information 1

1. Name of Institution/School/Training provider
1a. Name of training, coursework, experience received

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1b. Training/Certifications/licenses attained (if applicable)		
1c. Start date of training (mm/yyyy)	1d. End date of training (mm/yyyy)	1e. Month/year awarded (mm/yyyy)

b. Training, Certification(s), and/or License(s) Information 2

1. Name of Institution/School/Training provider		
1a. Name of training, coursework, experience received		
1b. Training/Certifications/Licenses attained (if applicable)		
1c. Start date of training (mm/yyyy)	1d. End date of training (mm/yyyy)	1e. Month/year awarded (mm/yyyy)

c. Training, Certification(s), and/or License(s) Information 3

1. Name of Institution/School/Training provider		
1a. Name of training, coursework, experience received		
1b. Training/certifications/licenses attained (if applicable)		
1c. Start date of training (mm/yyyy)	1d. End date of training (mm/yyyy)	1e. Month/year awarded (mm/yyyy)

D. Foreign Worker Skills, Abilities and Proficiencies §

a. Skills, Abilities, and Proficiencies 1

1. Name of Employer/Institution/School/Training Provider	
1a. Country	1b. State, Territory, or Province
1c. Description of specific skills, abilities, and/or proficiencies the foreign worker possesses or attained, which help establish whether the foreign worker meets the requirements identified for the job opportunity (up to 1,500 characters)	

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1. Name of Employer/Institution/School/Training Provider	
1a. Country	1b. State, Territory, or Province
1c. Description of specific skills, abilities, and/or proficiencies the foreign worker possesses or attained, which help establish whether the foreign worker meets the requirements identified for the job opportunity (<i>up to 1,500 characters</i>)	

1. Employer Name University of Houston			
1a. Address 1 4302 University Dr			
1b. Address 2			
1c. City or Town Houston			1d. Postal Code 77004
1e. Country United States		1f. State, Territory, or Province Texas	
1g. Job Title Research Assistant			
1h. Start Date (mm/yyyy) 09/2023	1i. End Date (mm/yyyy)	1j. Present <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1k. Hours Worked Per Week 20

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11. Job Duties: Specify details of the job (work tasks performed, use of tools/equipment, supervision, etc.) (*up to 3,500 characters*)

As a Research Assistant, my primary responsibilities involve:

Literature Review and Electrolyte Design: I conduct comprehensive literature reviews to synthesize the latest advancements in battery technology. Based on this analysis, I design and formulate various electrolyte compositions, aiming to optimize performance and efficiency for specific battery applications.

Advanced Electrode Fabrication and Electrochemical/Optical Characterization: My work includes fabricating optically responsive copper and gold electrodes using advanced vacuum thermal evaporation techniques. I then utilize an optical microscope to irradiate the electrode surfaces with various monochromatic light sources and lasers. Simultaneously, I perform electrochemical deposition and stripping on assembled electrochemical cells using a Potentiostat / Galvanostat. A critical aspect of my research involves analyzing the changes in optical signals during these electrochemical reactions to gain insights into the process.

Interfacial Chemical Composition and Structural Analysis: I employ a variety of advanced analytical techniques, including X-ray Diffraction (XRD), X-ray Photoelectron Spectroscopy (XPS), Raman Spectroscopy, Fourier Transform Infrared (FTIR) Spectroscopy, Scanning Electron Microscopy-Energy Dispersive Spectroscopy (SEM-EDS), and Transmission Electron Microscopy (TEM), to conduct in-depth analysis and research on the chemical composition and structure of battery interfaces (e.g., electrode-electrolyte interfaces).

Theoretical Calculations and Simulations: I utilize Gaussian and other Density Functional Theory (DFT) computational software to optimize small molecule structures, thereby obtaining precise molecular electron distribution information. Furthermore, I employ molecular dynamics simulation software such as GROMACS to provide theoretical calculation results for the solvation shell of central ions, hydrogen bonding networks, and dipole distribution within electrolyte systems, which enhances our understanding of electrolyte microscopic behavior.

For Public Burden Statement, see the Instructions for Form ETA-9089.