STRENGTHS

Problem-Solving
Enhanced research outputs by crafting unique solutions that often streamlined our laboratory's workflow.

Technical Communication
Built strong communication channels that foster interdisciplinary collaboration across various research teams.

Community Engagement
Actively reached out to undergraduate students through mentorship programs, creating paths for future scientists.

Leadership
As president of the chemistry society, effectively organized multiple seminars demonstrating value to peers.

Mentorship
Instrumental in shaping the professional growth of junior researchers, guiding them towards publication opportunities.

SKILLS

Multiscale modeling

Spectroscopy simulations

Machine learning

Python programming

Catalyst design | Proposal writing

Data analysis | Scientific publishing

Mentoring | Collaboration

Chemistry fundamentals

Computational methodologies

Interdisciplinary teamwork

Ngoc Ballard

Assistant Computational Chemist

(217) 555-0123 ngoc.ballard@email.com
linkedin.com/in/ngocballard 123 Maple St, Springfield, IL 62701

SUMMARY

Dedicated computational chemist with over five years in catalysis research, specializing in electrocatalysis and heterogeneous systems. Demonstrated expertise includes developing multiscale modeling techniques, conducting spectroscopy simulations, and implementing machine learning methods for catalyst design. Proven collaborator, successfully mentoring junior researchers while contributing to grant proposals that secure funding. Excited to bridge experimental insights with computational advancements to further innovative research.

EXPERIENCE

Postdoctoral Researcher

University Research Lab June 2022 - Present Chicago, IL

Overseeing computational projects focused on electrocatalysis, enhancing understanding through advanced modeling strategies.

- Led studies in catalytic process optimization, influencing energy sustainability efforts.
- Developed algorithms for multiscale modeling, improving investigations into electrocatalytic mechanisms.
- Conducted high-level spectroscopy simulations using XANES and EXAFS, supporting collaborative experiments.
- Integrated computational findings with lab work, promoting interdisciplinary collaboration.
- Mentored students in data acquisition and analysis techniques, enriching educational experiences.
- Secured multiple grants through effective proposal writing, advancing key research initiatives.

Research Scientist

Innovative Science Institute August 2018 - May 2022 Chicago, IL

Drove impactful research within heterogeneous catalysis realms, showcasing achievements through AI integrations.

- Explored microkinetic modeling approaches, establishing a foundational impact on reactor design protocols.
- Implemented Python-driven machine learning methodologies improving predictive analyses for catalysts.
- Published comprehensive research in top-tier journals, articulating complex scientific principles effectively.
- Played a pivotal role in securing national funding by deftly participating in detailed proposal development.
- Collaborated closely with experimental teams to refine strategy based on computational results.
- Streamlined research workflows, automating repetitive tasks through tailored model developments.

LEADERSHIP & AWARDS

- Best Paper Award, International Conference on Catalysis, 2023
- Dean's List, University of Illinois, 2019

EDUCATION

Ph.D. in Chemical Engineering

University of Illinois GPA: 3.8 2021 Champaign, IL

Coursework: *Thermodynamics, Reaction Engineering, Computational Chemistry, Advanced Spectroscopy*

Funding applications

Experimental validation

LANGUAGES

English — Native

Vietnamese — Proficient

MY CAREER

- Postdoctoral Researcher at University Research Lab (4.1 Years)
- Research Scientist at Innovative Science Institute (3.8 Years)

CERTIFICATIONS

- Certified Python Programmer 2023
- Machine Learning for Scientists 2025

TECHNICAL SKILLS

- **Modeling Software:** COMSOL, MATLAB, ANSYS
- **Programming Languages:** Python, R, C++
- **Simulation Tools:** Gaussian, VASP, Quantum Espresso
- **Spectroscopy Techniques:** XANES, EXAFS, Mössbauer
- **Machine Learning Frameworks:** TensorFlow, PyTorch, scikit-learn
- **Statistical Analysis:** R, SPSS, MATLAB
- **Optimization Algorithms:** Genetic Algorithms, Particle Swarm, Simulated Annealing
- **Project Management Tools:** Trello, Asana, JIRA
- **Version Control Systems:** Git, SVN, Mercurial
- **Visualization Software:** Matplotlib, Seaborn, Tableau

PROFESSIONAL AFFILIATIONS

- President, Graduate Chemistry Society, University of Illinois, 2020-2021
- Volunteer Mentor, STEM Outreach Program, 2019-2021

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST