Gabriel H. Brown

gabriel.h.brown@gmail.com // (727)771-3949

Education

2020-present	PhD in Theoretical and Applied Mechanics University of Illinois at Urbana-Champaign; Champaign, IL; United States of America
2016–2020	BS in Mechanical Engineering University of Notre Dame; Notre Dame, IN; United States of America GPA: 3.84/4.00

Research Experience

2019, August – 2020, May	Undergraduate Research – Modeling Reactions and Diffusion at Plasma-Liquid Interface Go Lab, Department of Aerospace and Mechanical Engineering University of Notre Dame
2019, May – 2019, August	Research Intern – Enhancement of Atmospheric Pressure Plasma Plasma Applications Section, Plasma Physics Division United States Naval Research Laboratory
2018, August – 2019, May	Undergraduate Research – Mechanically Actuated Plasma Source Go Lab, Department of Aerospace and Mechanical Engineering University of Notre Dame
2017, August – 2018, August	Undergraduate Research – Plasma Catalysis, Plasma Catalyst Synergy Go Lab, Department of Aerospace and Mechanical Engineering University of Notre Dame
2017, May – 2017, August	Research Assistant – Beam Target Fabrication Nuclear Science Laboratory, Department of Physics University of Notre Dame

Leadership, Teaching, and Advising

2018 – 2020	Ambassador, Aersopace and Mechanical Engineering Department University of Notre Dame
2019 – 2020	Mentor, Engineering Mentorship Program University of Notre Dame
2018-2020 (yearly)	Presenter and Demonstrator, Science Alive! South Bend

Honors and Awards

2019, November – present	Member, Tau Beta Pi
2018, November – present	Member, Pi Tau Sigma
2018, April – 2019, April	Vincent P. Slatt Research Fellow, ND Energy, University of Notre Dame
2016 – 2020	Dean's List, College of Engineering
2016	Eagle Scout

Skills and Strengths

Scientific computation and simulation, Python, MATLAB, Fortran, COMSOL
Imaging and spectroscopy, electronic circuits machining and fabrication
Scientific writing and presentation, LaTeX

Publications

1. F. A. Herrera, **G. H. Brown**, P. Barboun, N. Turan, P. Mehta, W. F. Schneider, J. C. Hicks, and D. B. Go, "The impact of transition metal catalysts on macroscopic dielectric barrier discharge (DBD) characteristics in an ammonia synthesis plasma catalysis reactor," *Journal of Physics D: Applied Physics*, vol. 52, no. 22, p. 224002, 2019.

2. D. P. Burdette, M. Brodeur, T. Ahn, J. Allen, D. W. Bardayan, F. D. Becchetti, D. Blankstein, **G. Brown**, B. Frentz, M. R. Hall, S. King, J. J. Kolata, J. Long, K. T. Macon, A. Nelson, P. D. Omalley, C. Seymour, M. Skulski, S. Y. Strauss, and A. A. Valverde, "Resolving the discrepancy in the half-life of ^{20}F," *Physical Review C*, vol. 99, no. 1, Apr. 2019.

3. A. A. Valverde, M. Brodeur, T. Ahn, J. Allen, D. W. Bardayan, F. D. Becchetti, D. Blankstein, **G. Brown**, D. P. Burdette, B. Frentz, G. Gilardy, M. R. Hall, S. King, J. J. Kolata, J. Long, K. T. Macon, A. Nelson, P. D. Omalley, M. Skulski, S. Y. Strauss, and B. V. Kolk, "Precision half-life measurement of ^{11}C: The most precise mirror transition $\mathscr{F}t$ value," *Physical Review C*, vol. 97, no. 3, 2018.

Presentations

1. G.H. Brown, "Development and Characterization of Plasma Catalytic Reactors", Undergraduate Research and Experiential Learning Showcase, Notre Dame, IN, United States of America, 2018. (poster)

2. G.H. Brown, "Development and Characterization of Plasma Catalytic Reactors", Summer Undergraduate Research Symposium, Notre Dame, IN, United States of America, 2018. (poster)

3. G.H. Brown, "Macroscopic Electrical Characterization of a Plasma Catalytic Reactor", NDnano Student Presentations, Notre Dame, IN, United States of America, 2018. (talk)