Jacob Thaemlitz

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EDUCATION

Texas A&M University, Mays Business School College Station, TX
Master of Business Administration August 2027

University of Houston Houston, TX
Bachelor of Science in Chemical Engineering December 2025
Honors**:** University of Houston Academic Excellence Scholarship, Dean's List Spring 2024 & Fall 2024

EXPERIENCE

Newpark Fluids Systems Katy, TX
Summer Intern/Laboratory Technician May 2025 – July 2026

- Built a structured experimental database adopted companywide to organize lubricant compatibility, performance, and economic data, reducing product selection time by hours and supporting a co-authored AADE technical publication presented at the 2026 Fluids Technical Conference.
- Developed a cost-efficient lubricant formulation to replace a top product facing margin erosion from rising raw-material costs, advancing the new formulation to field-trial readiness.
- Restored critical testing capability by diagnosing and repairing key lab equipment, reducing downtime and ensuring reliable performance evaluations.
- Standardized testing workflows by refining sample-preparation and evaluation procedures across multiple fluid-performance and materials-characterization tests, improving consistency and reproducibility across all laboratory operations.

University of Houston Houston, TX
Senior Capstone Design Project January 2025 – May 2025

- Designed a 250 MMSCFD blue hydrogen plant in Aspen Plus, developing full process flows, material and energy balances, and equipment specifications.
- Sized all major unit operations based on feed requirements, reaction stoichiometry, and process constraints.
- Evaluated carbon-capture technologies and selected the optimal method using economic and performance criteria.
- Performed economic analysis of capital costs, utilities, and carbon-credit resale strategies to maximize profitability.
- Completed safety analyses addressing unit hazards and potential community and environmental impacts.
- Synthesized analysis into a comprehensive design report and presented final recommendations to faculty, translating complex findings into actionable design solutions.

Rice University – Materials Science & NanoEngineering Houston, TX
Summer Intern, Ajayan Research Group June 2018 – August 2018 & June 2019 – August 2019

- Supported DIW-based 3D-printing research aimed at improving the mechanical performance of printed cement structures.
- Developed and refined a structural support gel formulation that enhanced stability and printability of cement during deposition.
- Adjusted cement compositions and tuned ink rheology through iterative testing to ensure structural integrity in printed builds.
- Formulated nanoscale additive–carbon slurries for 3D-printed battery electrodes to increase energy-storage capacity.
- Contributed experimental work that supported subsequent peer-reviewed publications and a patent by the research group.

SKILLS & INTERESTS

Technical Skills: Aspen Plus, Microsoft Excel, MATLAB, AutoCAD, Hyrel 3D, CorelDRAW, VCarve Pro.
Activities: American Association of Drilling Engineers, Society of Petroleum Engineers, American Chemical Society, American Institute of Chemical Engineers.
Interests: Product development research and manufacturing scaling from laboratory to full-scale industrial processes.