



UNIVERSITY
OF WYOMING

THE TOP 5 IN 5

BUILDING THE
ENERGY AND PETROLEUM PROFESSIONALS OF THE FUTURE





INTRODUCTION

The University of Wyoming Department of Energy and Petroleum Engineering graduates the future workforce for the oil, gas, and energy industry and performs groundbreaking research—which makes it vital for the economic future of our state and the world.

Why do rankings matter? Being a top-ranked program is not only prestigious but also helps departments grow. Students—including international students—often apply for admissions based on national and global rankings. This is because rankings are based on student numbers, research strength, and available resources, and so top-ranked programs receive more competitive funding and recruit the best student, faculty and facilities.

The UW Department of Energy and Petroleum Engineering is ranked among the top 10 for undergraduate studies among the 23 petroleum engineering programs in the nation by the Petroleum Engineering Department Heads Association. The top three departments in the nation—in terms of number of students and number of degrees awarded—are the UT Austin, Texas A&M, and Penn State.

This past year, undergraduate plus graduate student enrollment in these departments is 450 for UT Austin, 435 for Texas A&M, and 200+ for Penn State, while UW's enrollment is 109. UT Austin awarded 100 degrees, Texas A&M awarded 144, and Penn State awarded 59, while UW awarded 19. Note that, in general, enrollment in these programs fluctuate with the price of energy, oil, and gas.

THE *Top 5 in 5*

The goal of UW's Top 5 in 5 initiative is for the Department of Energy and Petroleum Engineering to reach a top 5 ranking in the next 5 years. Although rankings can be subjective, this tangible target has real impact—it attracts top students and the best faculty who perform world-changing research in a superior environment. To accomplish this ambitious goal, we are all hands on deck, an integrated effort by our department, UW, and others across the nation.

To further focus efforts, we have identified the following fundraising opportunities:

- undergraduate scholarships that support Energy and Petroleum Engineering students all 4 years,
- fellowships for Ph.D. students that cover tuition, stipend, travel, and other needs for all 4 years,
- salary and benefits for research faculty and postdoctoral fellows on 3-year contracts, including a lab technician or manager,
- summer salary for faculty,
- support for the department's Registered Student Organizations,
- support for faculty whose research is based on experimental studies, which goes for equipment maintenance, upgrades, new labs, and new equipment,
- support for faculty whose research would bring about efficiencies in Energy and Petroleum related activities of interest to the industry and benefit the environment,
- operational support of the department, and
- possibly space to support the growth of the department



HOW TO *Measure Success*

Three key indicators will be used to measure performance, growth, and impact.

- **Students and Faculty** – Success in this category is measured by the number of undergraduate and graduate students and faculty, as well as the ratio of students to faculty. Our goal is to reach the minimum number of students per year to serve our Wyoming industry, which is projected to be around 50 new admissions per year or a total of 300 undergraduates. The department currently has 12 faculty members, and so the student to faculty ratio would be 25, which is a norm in a healthy department. Currently, there are 60 students, and so this ratio is significantly higher. The number of graduate students depends on the funding available for faculty as well as their individual capacity. On average, each faculty member should have 5 Ph.D. students. However, some advise more than 10 graduate students, due to their postdocs, external co-advisors, and other resources. Currently, there are 60 Ph.D. students.
- **Research** – Success in research is measured by the number of publications, amount of funding, number of graduate students, and faculty fellowship awards. The department is doing well in number of publications, but we need to raise our funding level and secure many more faculty awards. We are targeting three journal publications per Ph.D. student per year and six new professorships.
- **Departmental Resources** – Success is measured by having the equipment and labs necessary for faculty and Ph.D. research. We need to upgrade and maintain the current equipment and to expand labs to conduct research in new areas of need for the industry. We currently have great lab facilities, but we are not using them to their fullest potential, as we need more Ph.D. students.



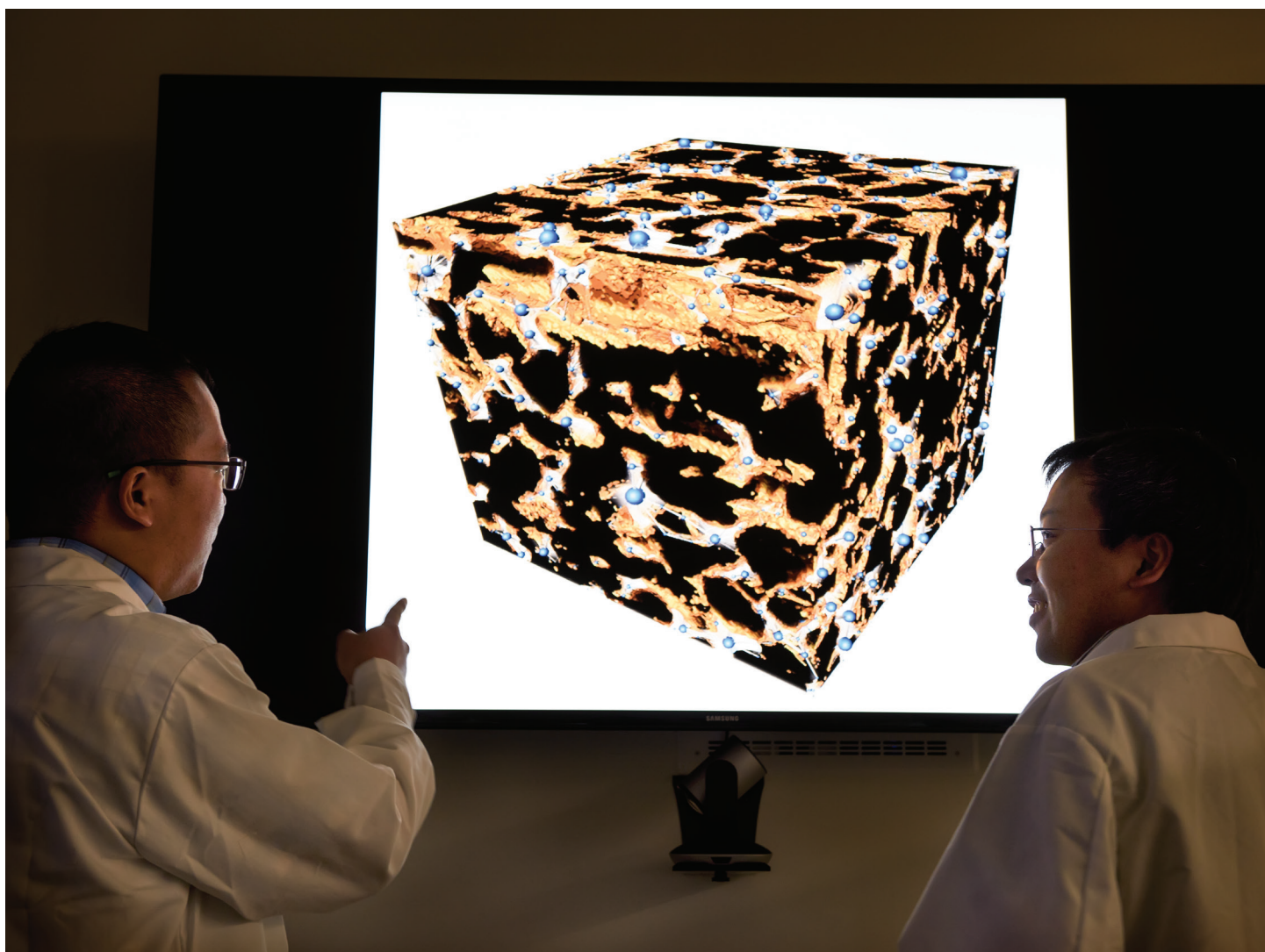
The ultimate measure of our success is creating Wyoming's future workforce and by conducting research that develops future technologies, thus ensuring the future of this great state and the world around us.

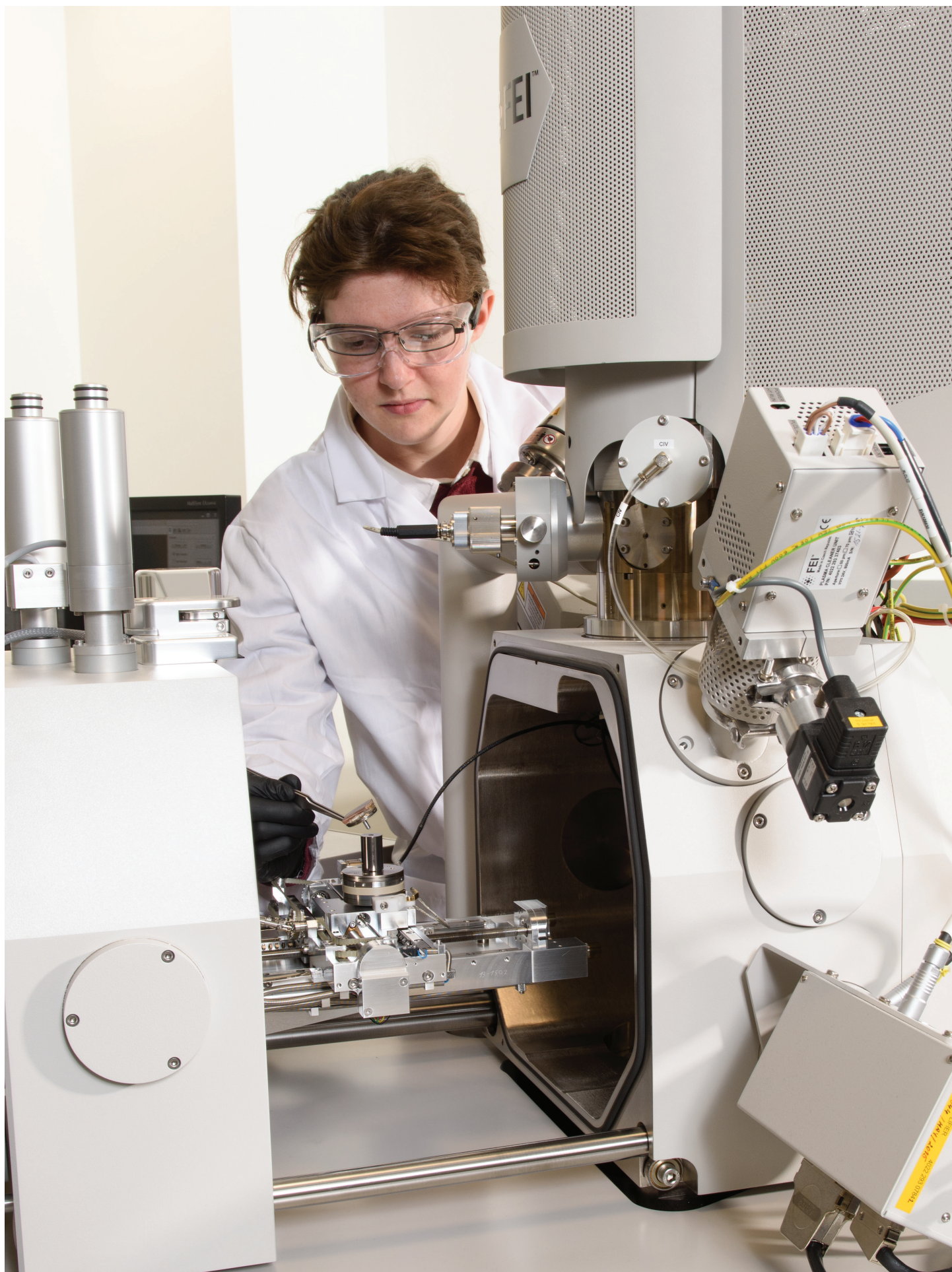
OPPORTUNITY *for Support*

With the above fundraising opportunities in mind, here are the areas of need within the department for the Top 5 in 5 Campaign, which total almost \$31 million.

- Undergraduate scholarships - \$2 million
- Ph.D. fellowships - \$20 million
- Faculty and postdocs - \$2.88 million
- Faculty summer salary - \$2.8 million
- RSO support - \$125,000
- Faculty's experimental labs- \$2.4 million
- Operational support - \$750,000

We would like to invite you to join these efforts—our success is your success! If you have any questions or would like to visit further about this proposal, please contact Dr. Vamegh Rasouli, LeNorman Endowed Leadership Chair in Petroleum Engineering at (701) 335-3601 or vrasouli@uwyo.edu.







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