



Upcoming Webinar

Direct Air Capture of Carbon Dioxide: Chemistry & Engineering Combine for Climate Stabilization



Join EARTH on May 19 (3 pm ET, Zoom) for a talk with **Dr. Christopher W. Jones** of the Georgia Institute of Technology on the science and engineering behind **direct air capture of carbon dioxide (CO₂)**. The webinar will cover why large-scale carbon removal is needed, the challenges of capturing CO₂ from ambient air, and how advanced materials and integrated process design are enabling scalable, lower-cost solutions.

[Register](#)

Don't have time to attend? Our [webinars](#) are recorded and available on demand.

Member Achievements



Professor Ana Rita C. Morais, of the Department of Chemical and Petroleum Engineering at the **University of Kansas**, has been awarded a prestigious **NSF CAREER Award**, marking a major milestone in her early faculty career. This highly competitive honor recognizes exceptional promise as both a researcher and educator and supports faculty who are poised to become leaders in their fields.



Jennifer Schaefer, Sheehan Family Collegiate Professor in Chemical and Biomolecular Engineering at the University of Notre Dame, has received the **2026 College of Engineering Outstanding Research Mentoring Award**. Based on undergraduate nominations, the award recognizes her exceptional hands-on mentoring and long-term support of student researchers. Students praised her accessibility, thoughtful guidance, and encouragement toward advanced research and Ph.D. pathways.



Congratulations to Dr. Abdulrhman Arishi on successfully passing his Ph.D. comprehensive examination in the Department of Chemical and Petroleum Engineering at the University of Kansas on April 23. His thesis, titled *“Separation of Hydrofluorocarbon Mixtures Using Extractive Distillation with an Ionic Liquid Entrainer,”* was completed under the advisement of Professor Mark Shiflett. Following graduation, Dr. Arishi will join the Department of Chemical Engineering at Jazan University in Saudi Arabia as an assistant professor.



Congratulations to Lillie Chudacoff on passing her comprehensive exams and advancing to Ph.D. candidacy at the **University of Iowa!** Lillie is a member of **Professor Bess Vlasisavljevich’s research group**.



Congratulations to Athrry Yaddehige on successfully passing her Ph.D. candidacy exam at the University of Iowa! Athrry is a member of **Professor Bess Vlasisavljevich’s research group**. In addition, she was awarded the **Chemistry Graduate Student Association Award** for the **Best Physical Chemistry & Environmental Chemistry 2nd Year Seminar** at the University of Iowa.



Congratulations to Evanna Dominic on earning her Bachelor of Science in Chemical Engineering from the University of Kansas on May 17. During her time at KU, Evanna worked in Professor Mark Shiflett’s lab, where she contributed to research on extractive distillation using ionic liquids (ILs) for the separation of refrigerant mixtures. Following graduation, Evanna will begin her career as a process engineer with Evonik.



Congratulations to Sarah Walsh on earning her Bachelor of Science in Chemical Engineering from the University of Kansas on May 17.

During her time at KU, Sarah worked in Professor Mark Shiflett's lab, where she contributed to research on membrane-based separation of refrigerant mixtures. Following graduation, Sarah will begin her career at Honeywell Federal Manufacturing & Technologies.



Congratulations to Ryan Dahl on earning his Bachelor of Science in Chemical Engineering from the University of Kansas on May 17.

During his time at KU, Ryan conducted research in Professor Mark Shiflett's lab, contributing to studies on refrigerant flammability measurements. Following graduation, Ryan will begin a process engineering role with BP in Chicago, where he will join the Renewable Energies team.

Funding Opportunities

The [NSF Growing Convergence Research \(GCR\)](#) program supports bold, early-stage teams addressing complex scientific or societal challenges through deep integration across disciplines. GCR projects are problem-driven from inception and focus on developing new frameworks, methods, and collaborative approaches that transcend traditional fields. Awards offer up to five years of support in two phases, with up to \$1.2M for Years 1–2 and eligibility for up to \$2.4M in continued funding. Full proposals are **due February 8, 2027**.

The NSF [Division of Chemistry: Disciplinary Research Programs \(CHE-DRP\)](#) supports fundamental, discovery-driven research across six core chemistry areas, including catalysis, synthesis, measurement and imaging, environmental chemistry, and macromolecular science. The program funds individual investigators and small teams advancing foundational chemical knowledge, with approximately **245 awards** totaling about **\$105M** made annually. **For 2026**, proposal windows run **September 1–30** for **CAT**, **CMFP**, and **SYN** programs, and **October 1–November 2** for **CMI**, **ECS**, and **MSN** programs.

Innovation Ecosystem

Welcome to Our New Industry Partner!



EARTH is pleased to welcome **Ahold Delhaize USA (ADUSA)** as a new Industry Member. Operating more than 2,000 local brand stores, ADUSA is one of the largest food and consumables retailers in the United States. The company brings strong leadership in sustainability and food retail operations, along with a growing interest in advancing low-GWP

refrigeration technologies such as transcritical CO₂ systems. We look forward to collaborating with ADUSA to accelerate impactful, scalable solutions across the refrigeration value chain.

Education and Workforce Development

Building Pathways from Skills to Careers

Momentum is growing across EARTH's Engineering Workforce Development (EWD) efforts. Enrollment is now open for the Technician-to-Engineer (T2E) program, an online pathway launching in Fall 2026 that builds on HVAC technician training and real-world industry experience.

We are also strengthening [career connections](#) through Handshake, where EARTH EWD is now linking students, career services, and industry partners in one shared network. Students, employers, and partners are encouraged to connect with us there.

Know someone making an impact through outreach, workforce development, or community engagement? We would love to share their story with the EARTH community.

Questions, comments, or interest in EARTH EWD initiatives may be directed to **Jennifer Sprague**, EARTH EWD Director, at j.sprague@ku.edu.

The Adventures of EARTH Man



One year ago, EARTH Man launched with a mission to make sustainable cooling, engineering, and STEM learning more engaging and accessible for students, families, and communities. Since then, the comic has helped spark curiosity about refrigerants, energy systems, sustainability, and the future workforce powering tomorrow's technologies. As EARTH Man celebrates its first anniversary, the adventure continues — inspiring the next generation of problem-solvers, innovators, and EARTH heroes. Explore this month's [comic!](#)

Announcements and Reminders

Please use the following statement in your publication acknowledgements:

"This research is based upon work supported by the National Science Foundation under award number **EEC-2330175** for the Engineering Research Center EARTH."

Did you know that an EARTH Convergent Research (CR) Meeting Calendar is maintained in the shared Google folder? View the [2026 calendar](#).

Upcoming Meetings

May 14: Thrust 3 (3 pm ET)
May 28: Convergent Research Leadership (*Testbed Integration*, 3 pm ET)
June 4: Thrust 1 (3 pm ET), Crosscut 2 (4:30 pm ET)
June 11: Thrust 2 (3 pm ET)
June 18: Thrust 3 (3 pm ET)
June 25: Convergent Research Leadership (3 pm ET)

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The Environmentally Applied Refrigerant Technology Hub (EARTH) is working to create sustainable, accessible refrigeration and air conditioning innovations that will improve the quality of life for all Americans and secure U.S. leadership in workforce development and manufacturing.

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