

# THE Core SAMPLE

Internal Newsletter of the School of Energy Resources

May | 2022

## ENHANCED OIL RECOVERY INSTITUTE HIRES NEW DIRECTOR

The Enhanced Oil Recovery Institute (EORI) is pleased to announce the appointment of **Mr. Lon Whitman** as the new Director effective May 1, 2022. Mr. Whitman has worked for over 10 years at the Enhanced Oil Recovery Institute and brings a wealth of experience to his new role. As EORI's Director, Lon will bring his collaborative leadership style, commitment to accountability, and Wyoming partnerships to his new role along with a unified vision for the Enhanced Oil Recovery Institute to help increase production through improved and enhanced oil recovery operations.



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## UW RESEARCHERS RECEIVE ADVANCED PHOTON SOURCE USE AWARD FROM ARGONNE NATIONAL LABORATORY

University of Wyoming researchers in the CCCC recently won an award to use the Advanced Photon Source (APS) — a high-energy X-ray light source facility — at the Argonne National Laboratory in Lemont, Ill.

The project is led by chemistry Professor **Jing Zhou** and chemical engineering adjunct Professor **Joseph Holles**. The research team is working to achieve in-situ X-ray diffraction (XRD) measurements on a novel catalyst which is able to convert carbon dioxide mixed with methane into a valuable synthesis gas using a dry-reforming process.

UW doctoral student and SER alumnus **Qian Yang**, of Laramie, has been working to develop an anchor solution for the catalyst as part of his dissertation research. He will travel to the APS facility in July to further advance the project.



*Pictured: Qian Yang*

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## HIGHLIGHTS

### Research Centers of Excellence

- **Dr. Erin Phillips** in the **Center for Economic Geology Research (CEGR)** gave a presentation on Rare Earth Elements and Critical Minerals to the *Thursday Roundtable*, a philanthropic group whose purpose is to promote meaningful connections between citizens and organizations in Teton County and the State of Wyoming on issues pertaining to women, family, education and business.
- **Charles Nye** in **CEGR** hosted a representative from Williams to collect water samples as part of the collaborative hydrogen project with their company.
- **ChooiKim Lau** will be joining the **Center for Carbon Capture and Conversion (CCCC)** as permanent staff in June! Profile coming soon!



### Academics

- Academics hosted an end-of-year BBQ with the students in Washington Park to celebrate the end of semester and the spring graduates.
- 6 students graduated in the spring with Energy Resource Management & Development degrees.\*\*\*



\*\*\*More details in features

To submit news and updates  
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## PEABODY VISITS UW SCHOOL OF ENERGY RESOURCES

Representatives from Peabody visited the University of Wyoming School of Energy Resources (SER). The visit comprised of members from the company's leadership



team, including Peabody President and Chief Executive Officer, **Jim Grech**; **Marc Hathhorn**, President of U.S. Operations; **Darren Yeates**, Executive Vice President and Chief Operating Officer, **Scott Jarboe**, Chief Administrative Officer and Corporate Secretary, among others.

The group toured the SER facilities and labs, learning about the novel coal processing technology developed within the school's Center for Carbon Capture and Conversion (CCCC), and took a field trip to the coal-derived char brick demonstration house located on the east side of campus.

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## UW SCHOOL OF ENERGY RESOURCES STUDENT PRESENTS AT AIR SENSORS INTERNATIONAL CONFERENCE

**Austin Moon**, a University of Wyoming School of Energy Resources (SER) student, presented a paper co-written with **Robert Field**, UW atmospheric science associate research professor, at the recent Air Sensors International Conference (ASIC) in Pasadena, Calif.

Hosted by the University of California-Davis, the conference featured various stakeholders to promote and advance air pollution sensors, and to foster community involvement in monitoring air quality.

Since 2018, SER's "Air Quality Management" course and 2B Technologies have collaborated with the AQTreks personal air monitor (PAM). The PAM includes multiple sensors that enable the rapid measurement of air pollutants, including carbon monoxide, particulates and carbon dioxide.

Moon, an SER senior from Cheyenne, is earning his bachelor's degree in energy resource management and development, with a concentration in energy and environmental systems. He was selected from among his peers in the course using the PAM equipment to support his work through further collaborative research with Field. [Continue Reading >>>](#)



## HIGHLIGHTS CONT.

- **Isaac Mantelli** and **Courtney Birdsall** presented their research to the Wold family in Casper along with **Dr. John Kaszuba**, the John and Jane Wold Centennial Chair in Energy.
- SER Professor of Law, **Tara Righetti**, published an article in the *Harvard Environmental Law Review* discussing issues of waste associated with carbon storage and wind energy. [Download Article >>>](#)
- **Tara Righetti** is leading an international colloquium on the circular economy of carbon on June 16 in Lille, France. [Event Details >>>](#)



### General Announcements

- SER Executive Director **Holly Krutka** graduated from Leadership Wyoming.
- **Scott Quillinan** and **Fred McLaughlin** represented the School of Energy Resources at the Two Fly Fishing Tournament
- **Scott Quillinan** was a guest on the POWER magazine podcast. Read all about how coal is still relevant in Wyoming and has a place in future, or listen by following the link: [Listen or Read >>>](#)
- **John Jiao** hosted **Dr. Mark White**, Staff Mechanical Engineer, from the Pacific Northwest National Laboratory for a short course on the STOMP simulator at the Energy Innovation Center, May 17-19, 2022. The focus of the short course was subsurface modeling for carbon utilization and storage. The course additionally covered topics involving coupled geochemistry, and geomechanics.



## SCHOOL OF ENERGY RESOURCES GRADUATES SIX STUDENTS IN SPRING COMMENCEMENT



The School of Energy Resources (SER) is pleased to usher into the professional world a new crew of graduates in the Energy Resource Management and Development (ERMD) degree.

Representing SER, **Isaac Boettcher**, **Emily Lantiegne**, **Juliana Santarelli**, **Caleb Bowen**, **Caleb Durgin**, **Hunter Lee** participated in the spring commencement ceremony early Saturday morning before embarking on exciting careers. All ERMD students in the class of 2022 have procured employment prior to graduation.

In addition to the ERMD degree, SER celebrated one student graduating with the new energy minor, and four graduate level students that have been funded through SER and worked in the Centers of Excellence.

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## SCHOOL OF ENERGY RESOURCES REPRESENTED AT 2022 ANNUAL PCOR MEETING IN ANCHORAGE

Members of the UW School of Energy Resources attended the 2022 Annual Plains CO<sub>2</sub> Reduction (PCOR) Partnership meeting in Anchorage, Alaska. SER research scientists **Erin Phillips** and **Selena Gerace**, who serve as the SER leads in the partnership, attended the meeting alongside Senior Director of Research, **Scott Quillinan**, Director of Outreach, **Christine Reed**, and SER's Executive Director, **Holly Krutka**.

The meeting opened with an interactive workshop where PCOR members participated in surveys and discussions about shared experiences, community perceptions, and challenges.

In addition to robust dialogue, the meeting featured a diverse program of panelists and speakers, including a presentation by Dr. Krutka. Addressing the record number of attendees, Krutka provided an overview of the carbon management vision for Wyoming.

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## HIGHLIGHTS CONT.

- **Scott Quillinan** was featured as a "Face of Carbon Valley" on the Carbon Valley blog.

[Read Here >>>](#)



- **Holly Krutka** provided the opening remarks at the 2022 Women in STEM conference hosted by the University of Wyoming. She then went on to host two small breakout groups on the Energy Innovation Center.
- SER is pleased to welcome **Jake Dippel** and **Frankie Vogt** to the accounting team! Profiles coming soon!
- The new absent notice calendar is available for use. If you have not done so already, be sure to delete the old calendar and add the new one, "SER Absent Notice." Access must be granted through IT. Please contact **Christine Reed** to submit an access request for yourself or a new employee.
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- SER will be hosting the first SER potluck on June 15, at noon! We hope that this will be the first of many opportunities for our faculty, staff, students and collaborators to connect and get to know each other better! If you'd like to attend, please sign up on the link below and let us know what you plan on bringing!

[Food Sign Up >>>](#)



## UW STUDENT WINNERS SELECTED IN 'DECARBONIZATION PRIZE' CONTEST

Winners of the Decarbonization Prize contest were selected from among diverse proposals submitted by University of Wyoming students.

Sponsored by the UW School of Energy Resources (SER), the Wyoming Energy Authority and Baker Hughes, the goal of the competition is to advance energy solutions through innovative applications for existing products and services, or to introduce new concepts that will drive decarbonization.

This year's competition focused on accelerating the pace of technological development within the domain of hydrogen.

UW Ph.D. candidates **Rami Alloush**, of Damanhour, Egypt, and **Moustafa Aly**, from Suez, Egypt, were selected as the first prize recipients for their proposal titled "A Self-Sustained Municipal Water Treatment Plant Utilizing the Baker Hughes NovaLTTM Hybrid Turbine and Semi-Artificial Photosynthesis."

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## 9H RESEARCH FOUNDATION ENERGY COMPETITION WINNERS ANNOUNCED AT UW

**Rami Alloush**, of Damanhour, Egypt, took top honors in the recent \$4,000 9H Research Foundation energy competition at the University of Wyoming School of Energy Resources.

The energy competition challenged UW students to present a technoeconomic analysis of different routes for hydrogen production in Wyoming and was launched in collaboration with UW's School of Energy Resources (SER).

Alloush, a doctoral student of petroleum engineering in UW's Center of Innovation for Flow through Porous Media (COIFPM), received \$2,000 for his detailed examination of the hydrogen production options available to Wyoming. He concluded that producing hydrogen in the Cowboy State through underground coal gasification via pyrolysis — with carbon capture and storage — is technologically feasible and economically superior while also meeting the nation's low-carbon target.

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## IMPORTANT DATES

- CarbonSAFE Showcase Days  
June 13-14, 2022
- Energy Resources Council Division Reports Due  
June 10, 2022
- SER Potluck  
June 15, 2022
- Energy Resources Council Presenting Director's Slides Due  
June 20, 2022
- Energy Resources Council Meeting  
June 23-24, 2022
- Administrative Holiday - Office Closed  
July 4, 2022

## ENERGY JOKE

