

SHAPING A NEW ENERGY FUTURE



HEADQUARTERS:

Purdue University
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West Lafayette, Indiana
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\$34,544,287.00

PARTNER INSTITUTIONS:

- Purdue University (Lead)
- University of New Mexico
- Northwestern University
- University of Notre Dame
- The University of Texas at Austin

LEADERSHIP:

Center Director: Fabio Ribeiro
(PU)

Center Deputy Co-Directors:
Linda Broadbelt (NU), Ruilan
Guo (UND)

The Center for Innovative and Strategic Transformation of Alkane Resources, CISTAR, is one of the flagship Engineering Research Centers (ERCs) funded by the National Science Foundation. ERCs bring together industry, academia, and government to cultivate engineering discovery and education in research areas critical to our nation's strength. CISTAR's infrastructure integrates four pillars: research, engineering workforce development, industry and innovation, and diversity & culture of inclusion.

CISTAR'S VISION

is to create transformative engineered systems to convert light hydrocarbons into lower carbon footprint chemicals and transportation fuels, by exploring decarbonization of manufacturing processes, modular design, and electrification based on renewable energy sources. CISTAR, is one of the flagship Engineering Research Centers (ERCs) funded by the National Science Foundation.

CISTAR'S MISSION

CISTAR's mission is to work in partnership with industry to develop technological innovations and build a diverse and innovative workforce to responsibly realize U.S. shale gas potential alongside a reduced carbon footprint through innovations in catalysis, separations, and process enhancements.

CISTAR'S IMPACT

CISTAR brings together world-class researchers from five partner universities, industrial companies from across the oil and gas value chain, innovation partners, and pre-college institutions to make a national impact on the economic landscape of energy and hydrocarbon utilization and shape the next generation of leaders and engineers in the global energy economy.

CISTAR'S FOUR PILLARS INFRASTRUCTURE



Hydrocarbon Research: Our vision is to create transformative engineered systems to convert light hydrocarbons into lower carbon footprint chemicals and transportation fuels, by exploring decarbonization of manufacturing processes, modular design, and electrification based on renewable energy sources.



Engineering Workforce Development: CISTAR prepares a technically excellent and inclusive community of hydrocarbon systems researchers, learners, and teachers through competency-based education, best-practice mentoring, and growth in key professional skills to implement the next industrial wave of energy solutions.



Diversity and Culture of Inclusion: CISTAR is dedicated to creating an inclusive environment where people of all backgrounds are welcomed, supported, and respected. CISTAR engages in recruiting efforts and training initiatives to foster a successful, global community of engineers that value cultural differences.

Industry & Innovation: CISTAR's objective is to develop relationships with companies engaged in processing, transporting and transforming alkane resources. CISTAR creates an ecosystem that brings together industrial and practitioner perspectives to accelerate and facilitate innovation.

CISTAR INDUSTRIAL MEMBERS



CISTAR INNOVATION PARTNERS

