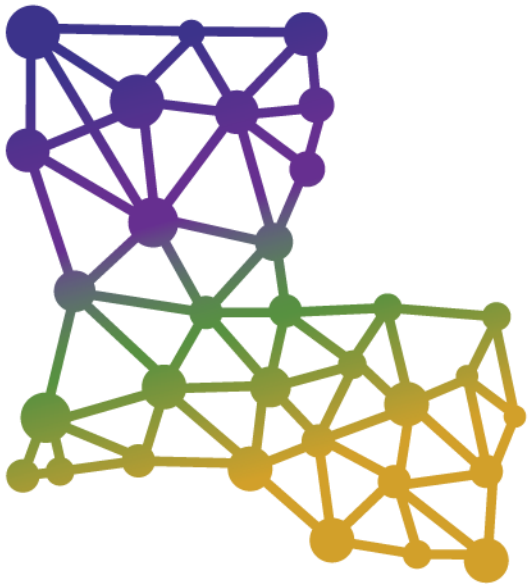


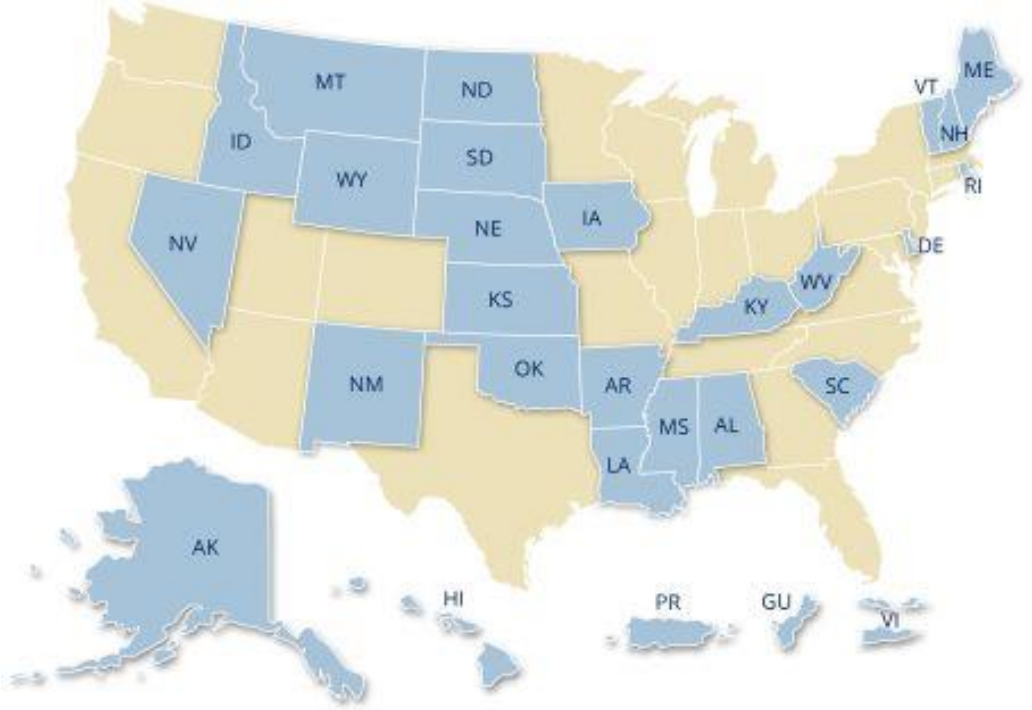
LOUISIANA NETWORKS OF EXCELLENCE FOR TOMORROW

NSF REGENTS LSU LT SU uno

What is LA-NEXT?

One of the projects funded by the National Science Foundation through the EPSCoR program "EPSCoR Collaborations for Optimizing Research Ecosystems (E-CORE)."

EPSCoR = **E**stablished **P**rogram for **S**timulating **Co**mpetitive **R**esearch.



AL	Alabama
AK	Alaska
AR	Arkansas
DE	Delaware
GU	Guam
HI	Hawaii
IA	Iowa
ID	Idaho
KS	Kansas
KY	Kentucky
LA	Louisiana
ME	Maine
MS	Mississippi
MT	Montana
NE	Nebraska
NH	New Hampshire
NM	New Mexico
ND	North Dakota
NV	Nevada
OK	Oklahoma
PR	Puerto Rico
RI	Rhode Island
SC	South Carolina
SD	South Dakota
VI	U.S. Virgin Islands
VT	Vermont
WV	West Virginia
WY	Wyoming

28 **jurisdictions** carry the NSF EPSCoR Designation

EPSCoR Collaborations for Optimizing Research Ecosystems (E-CORE)

The E-CORE RII Program aims to support EPSCoR-eligible jurisdictions to:

1. Address challenges and opportunities in research infrastructure specific to the current and evolving needs of a jurisdiction's science and technology research ecosystem;
2. Build capacity for jurisdiction-wide investigator expertise into critical masses for sustained, effective, research and education partnerships and funding; and
3. Develop pathways to broaden the participation of institutions and individuals in the jurisdiction's research ecosystem.

Projects should show alignment with the jurisdiction's **Science and Technology Plan**.

E-CORE: Louisiana Networks of Excellence for Tomorrow (LA-NEXT)

FIRST Louisiana 2030

Louisiana's S&T Roadmap

Target Industry Sectors

- Clean and Renewable Energy
- Advanced Manufacturing
- Healthcare
- Bioengineering
- Resilient Infrastructure

Innovation & Incubation

- Advanced Manufacturing
- Structural Integrity Assurance
- Clean Energy
- Coastal Restoration
- Resilience & Disaster Recovery
- Cyber-Physical Systems
- Biomedical & Healthcare Solutions
- Agriculture & Forestry Products

Networks of Excellence

- Materials and Manufacturing
- Bioscience and Biotechnology
- Energy Solutions
- Environmental Solutions
- Cross-cutting: Data, Computational Science, and Cybersecurity

Building Blocks

- Shared Experimental R&D Infrastructure
- Shared Computing and Data Infrastructure
- Shared Data and Research Libraries

Vision

The vision of the Louisiana Networks of Excellence for Tomorrow (LA-NEXT) is to build and sustain strong networks of collaboration, communication, and partnership among Louisiana's various institutions to transform the STEM R&D enterprise of the State.

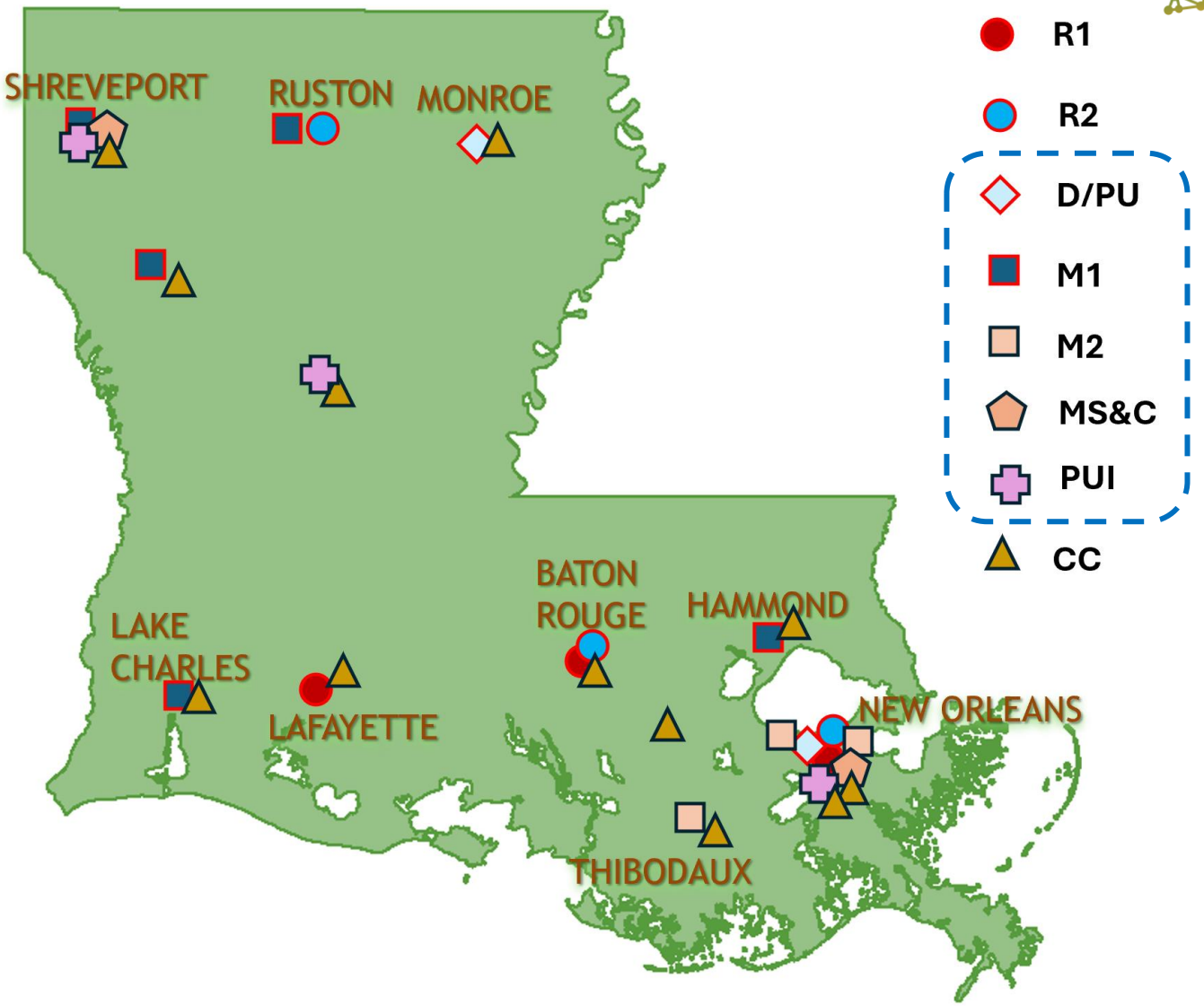
Mission

LA-NEXT will drive a transformation of the R&D ecosystem through coordination, facilitation, and capacity building in strategic areas identified by the FIRST Louisiana 2030 plan. The goals of LA-NEXT are designed to realize this vision and dramatically increase the involvement of constituencies currently under-represented in the research enterprise.

Overarching goal of LA-NEXT

Expand the research capacity of Louisiana by building collaboration networks that include Research Colleges and Universities (RCU)*.

*New Carnegie Classification



Leads: Lacy, Keith-Vincent

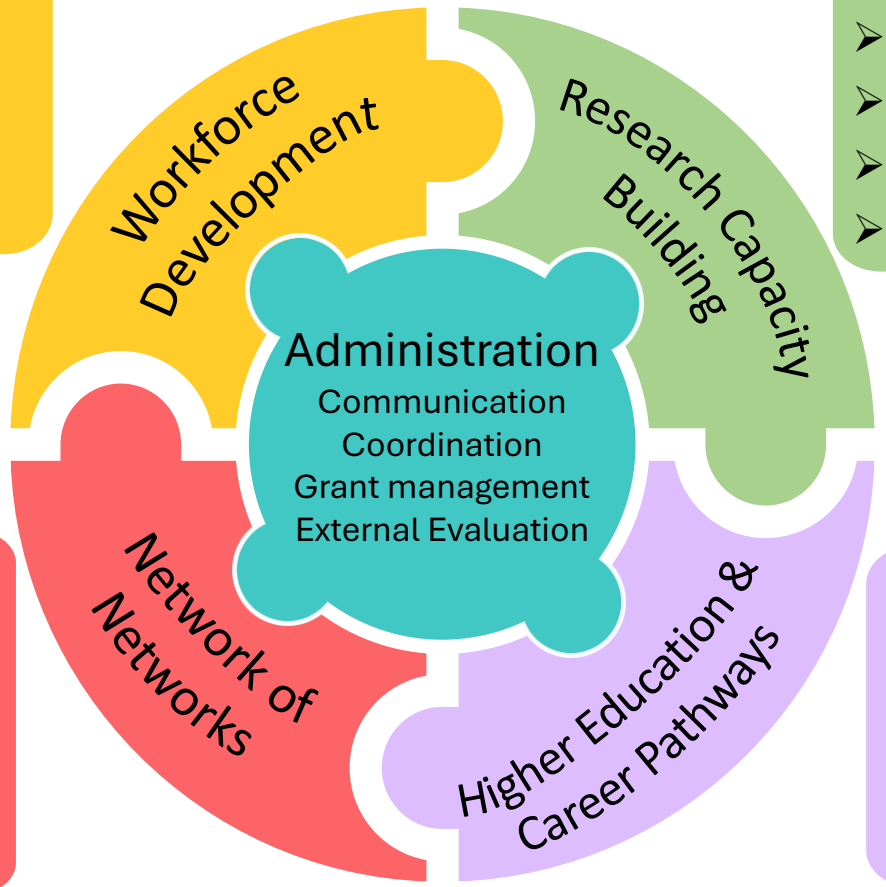
- **Curriculum enhancement**
- **Hands-on training at shared facilities**
- **Collaboration on equipment grants**

- **Expansion of AR/VR capabilities through equipment grants.**
- **Establish partnerships between four-year and two-year faculty with similar interests.**

Leads: Upton, Tarr, Robison

- **Academic and non-academic networks**
- **3MT competition**
- **Speaking of Science**

- BPCC Art Gallery for exhibiting work from digital painting.
- Networking meeting between four-year and two-year faculty



Leads: Ramachandran, Lacy

- **Mentoring academies**
- **Seed grants**
- **Grad scholarships**
- **Undergrad research**

- Scholarships for two-year college teachers to earn additional graduate credits

Leads: Tarr, Bustamante

- **Art for Science:**
- **Digital painting**
- **Virtual Reality**
- **Videos**

- STEM-related degree options

Louisiana EPSCoR Committee

LA EPSCoR
PD: *Khonsari*
PA: *Patton*

External Evaluator

LA-NEXT Executive Leadership Team

Administrative Core (AC): *Khonsari {BoR}, Robison {BoR}*

Research Capacity Building Core (RCBC): *Ramachandran {LATech}, Lacy {SUBR}*

Higher Education Pathways Core (HECPC): *Tarr {UNO}, Bustamante {LATech}*

Workforce Development Core (WDC): *Lacy {SUBR}, Keith-Vincent {LATech}*

Network of Networks (NNC): *Upton {LSU}, Tarr {UNO}*

AC Leadership
PI, Co-PIs, Robison

Advisory Group
EPSCoR Committee
ACARL

RCBC Leadership
Ramachandran
Lacy

Advisory Group
Palardy {LSU}
Raush {ULL}
Krishnamurthy {ULM}
Darwish {Dillard}
Chilvery {FUEL}

HECPC Leadership
Tarr
Bustamante

Advisory Group
Thompson {RPCC}
Brownlee {BPCC}
Duplessis {Delgado}

WDC Leadership
Lacy
Keith-Vincent

Advisory Group
Washington {LATech}
Amy Cable {LCTCS}
Kenie Moses {SUSLA}
LWC representative

NNC Leadership
Upton, Tarr,
Robison

Advisory Group
Raush {ULL}
Chilvery {FUEL}
Fava {LaSPACE}
Koban {LSU}

LA-NEXT Programs

Seed grants

https://rsi.laregents.edu/la-epscor-2/epscor-programs/la-next-funding-opportunties/

- SURE: Supervised Undergraduate Research Experiences – **September 5**
- LINK: Link with Industry and National Labs **– Open**
- CUF: Core User Facilities **– Open**
- IGNITE: Initiating Growth through Networks and Interdisciplinary Teamwork – **October 27**
- GRASS: Graduate Student Supplements – **October 27**
- LANCE: LA-NEXT Collaboration Enhancement – TBD (Year 2)

Art for Science

- Pilot program at Louisiana Tech Academic Success Center
- Primary audience: Bossier Parish Community College teachers
- Plan to expand to other locations.
- Plan to create micro-credentials in scientific communication through art.

3MT Competition

- Tentatively January 8 or 9 at the LSU Center for Energy Studies.
- Wish to host Winner and Runner-up from each institution. May include People's Choice.

Art for Science

Examples

VISTA CENTER

VISUAL INTEGRATION OF SCIENCE THROUGH ART

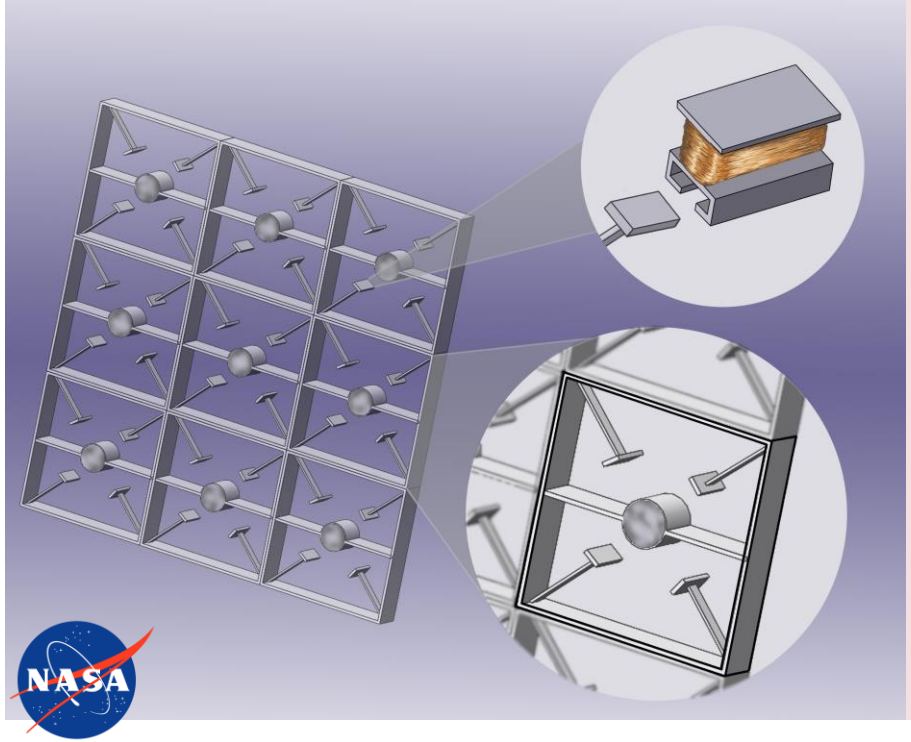
LOUISIANA TECH UNIVERSITY®

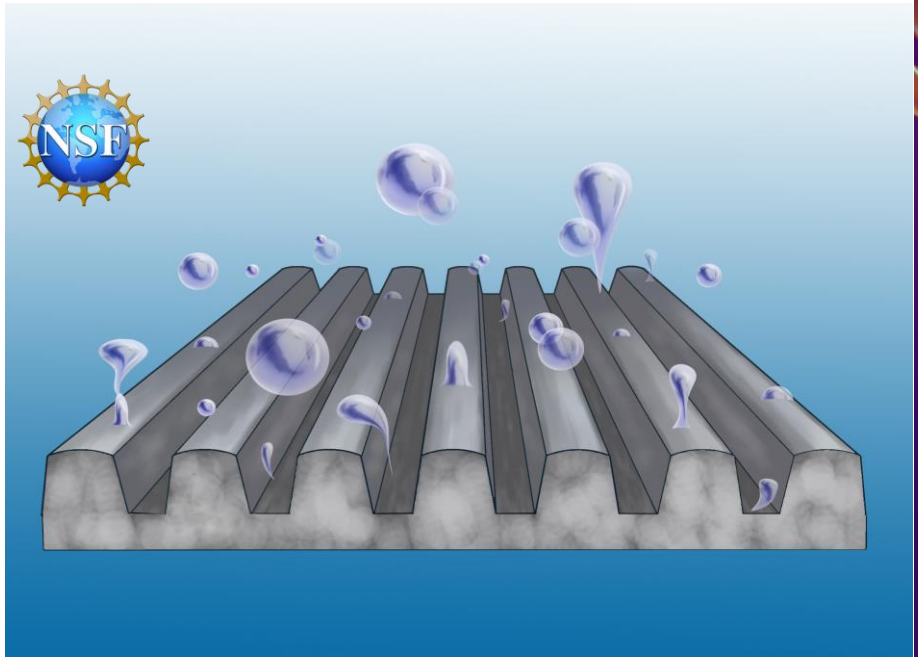
Minors:

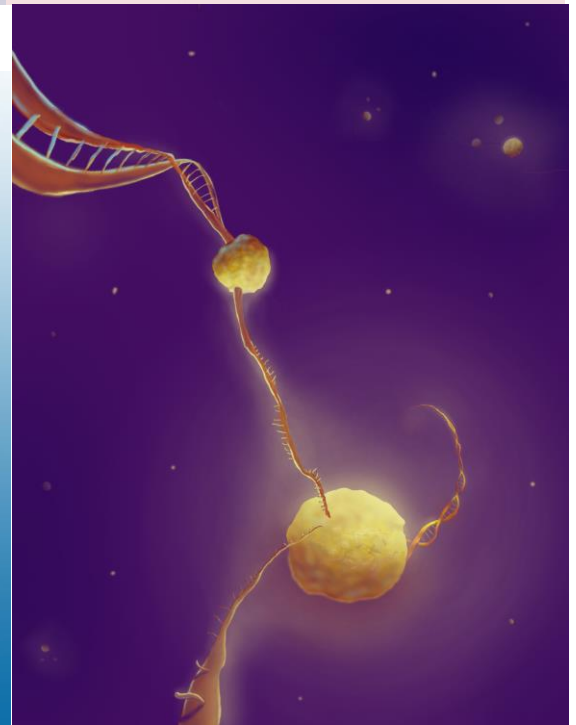
- Pre-Medical Illustration
- Scientific Visualization

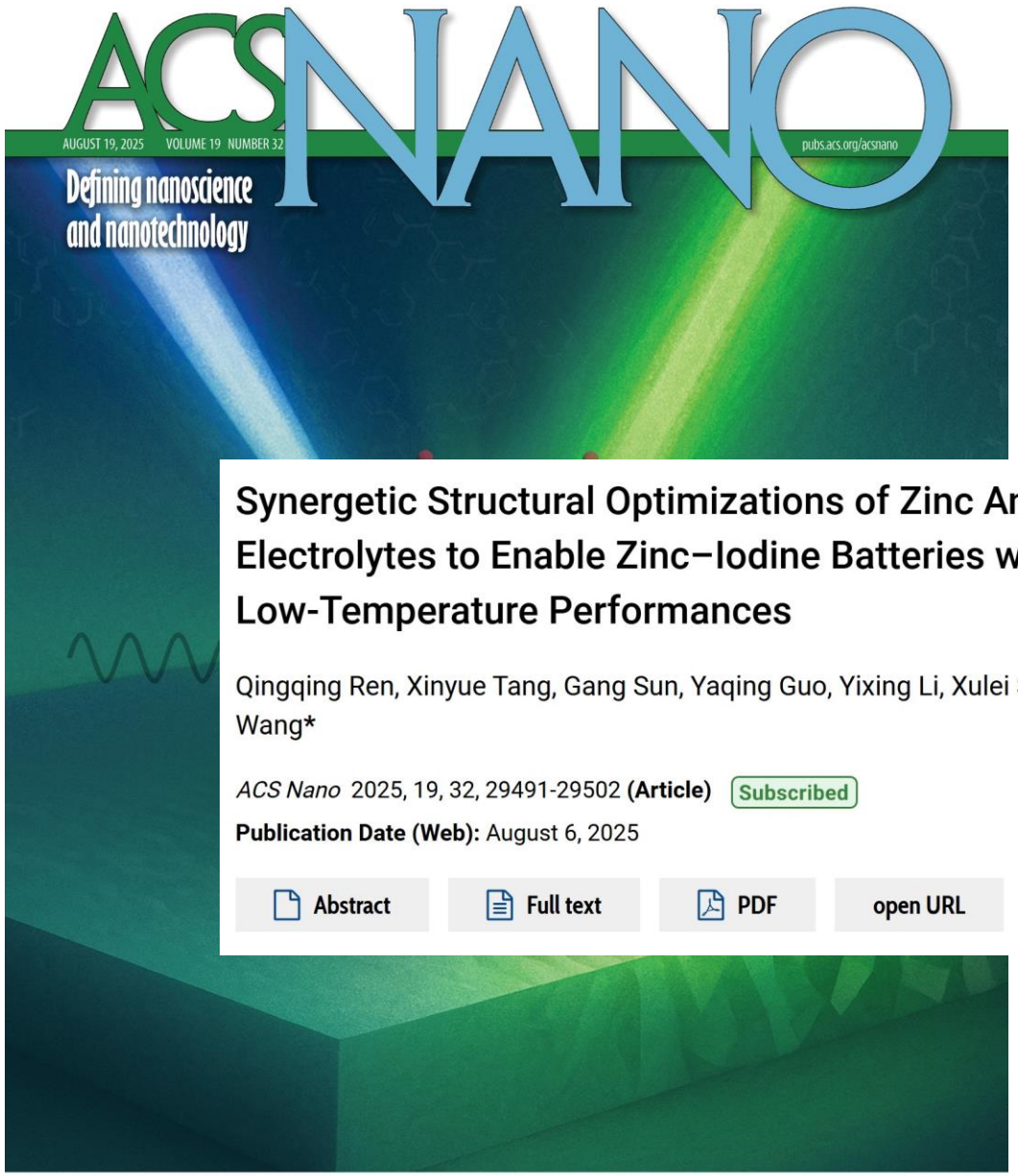
Degree:

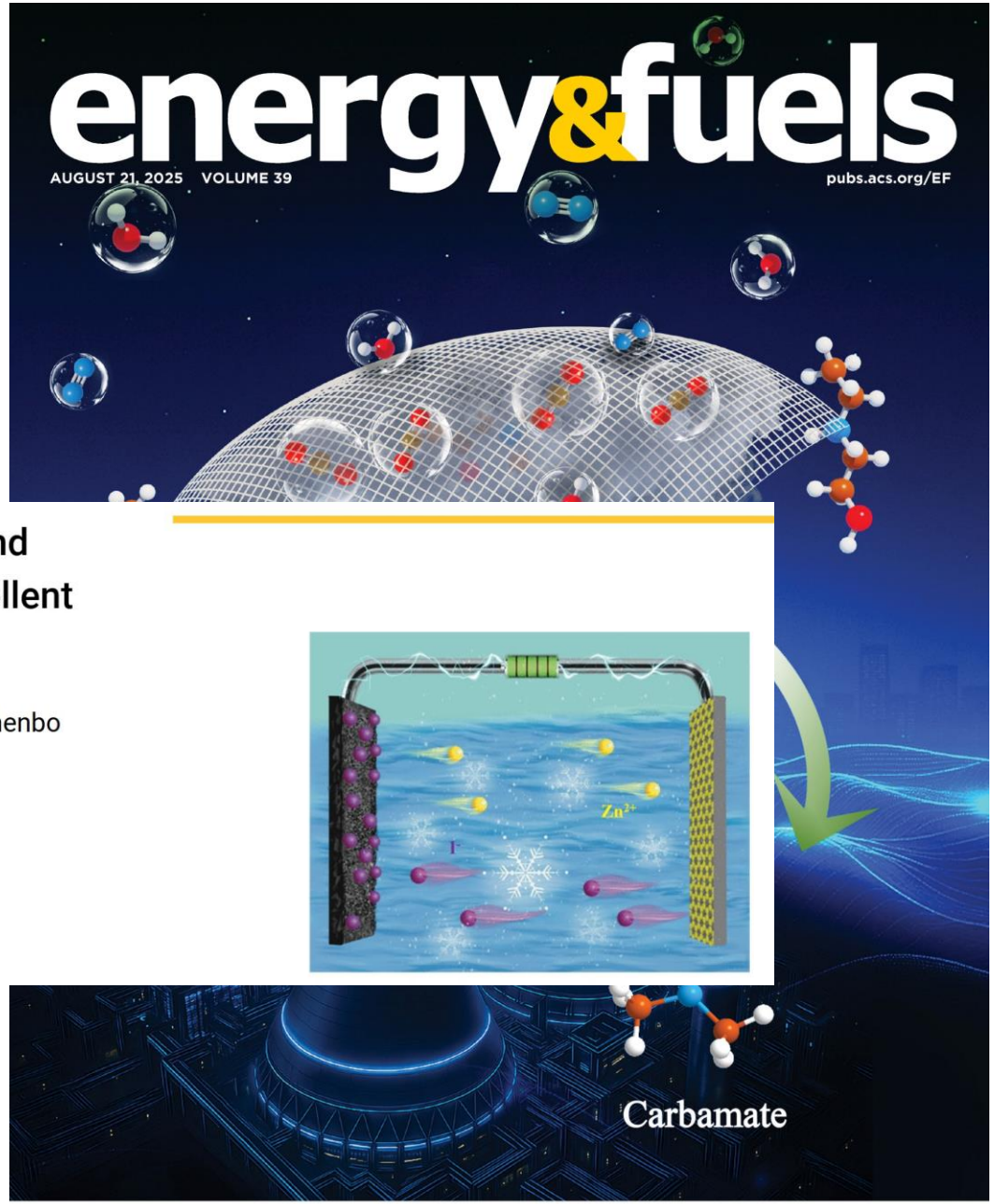
- BS in Scientific Visualization











Synergetic Structural Optimizations of Zinc Anodes and Electrolytes to Enable Zinc–Iodine Batteries with Excellent Low-Temperature Performances

Qingqing Ren, Xinyue Tang, Gang Sun, Yaqing Guo, Yixing Li, Xulei Sui*, and Zhenbo Wang*

ACS Nano 2025, 19, 32, 29491-29502 **(Article)** Subscribed

Publication Date (Web): August 6, 2025

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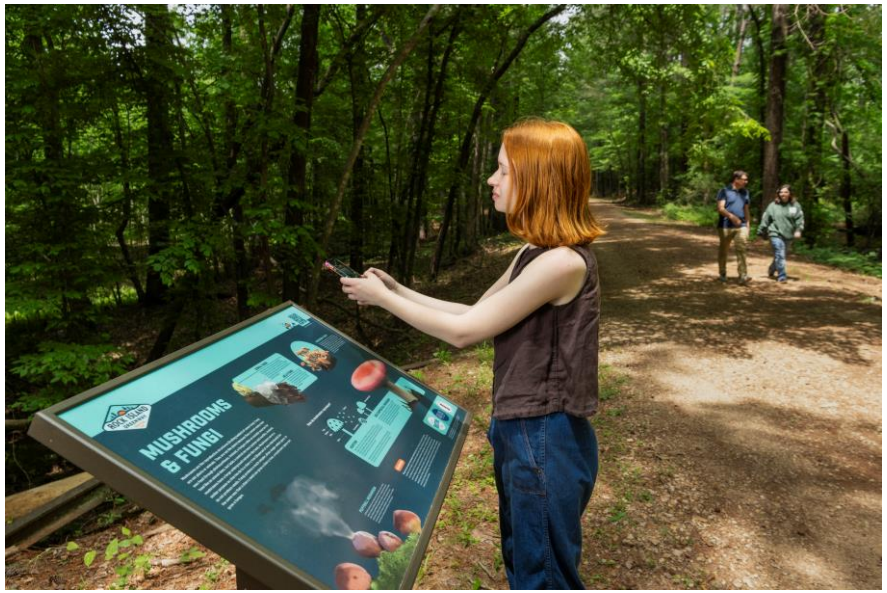


ROCK ISLAND GREENWAY
RUSTON LA

WATER ECOSYSTEMS

Water ecosystems provide habitats for many species and provide many important services to people. Water ecosystems store water to lessen or prevent flooding during heavy rainfall and clean the water for both people and fish. A watershed, which typically surrounds a water ecosystem, is the place where rain that falls in the area runs off or drains. Human activities that occur in the watershed can affect the amount of pollution entering the water, which may affect fish we want to eat or people who drink the water downstream.

» Scan for more information

VEGETATION

Vegetation around the edges of a water ecosystem protects the water from pollution. Roots hold the soil, preventing sediment from covering animals' habitats. Plants and soil filter nutrients and pollution out to keep water clean.

RIFFLES

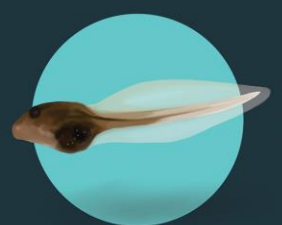
Riffles are parts of streams where the water is shallow and moves quickly over rocks. This water has a lot of oxygen, and many aquatic insects like to live in riffles.

POOLS

Pools are parts of a stream that are deeper, where the water slows down. The bottoms of pools tend to have soft sediments that have been carried by the water from upstream.

RED SWAMP CRAWFISH

Many people are familiar with crawfish as food, but they are important parts of water ecosystems. Crawfish are omnivores and will eat tadpoles, fish, and vegetation.



TADPOLE

Most tadpoles in Louisiana are found in ponds. Most go through metamorphosis in 2-4 months, but bullfrog tadpoles can remain as tadpoles for 1-2 years. Many tadpoles eat algae.

DRAGONFLY LARVAE

Dragonfly larvae look very different from the adult dragonflies that fly. The larvae are important predators of mosquitoes. They have folding mouth parts that can extend far beyond their head to catch prey.

NON-BITING MIDGE LARVAE

Midges are non-biting flies that are commonly mistaken for mosquitoes. Newly hatched from eggs, midge larvae burrow into mud. The larvae are often bright red and live in water or wet soil, where they feed upon organic matter, particularly algae.

KEEP IT CLEAN

Some types of aquatic animals can handle pollution better than others. Scientists use aquatic animals to check on the health and pollution levels of water ecosystems. Sampling insects, in which insects are monitored and/or collected to determine conditions, is much easier and cheaper than measuring a variety of pollution types in water samples. If there are many types of insects that typically cannot handle pollution in the water ecosystem, that's a good sign that the water is clean!

Experience RUSTON
EXCELLENCE MADE HERE — CITY of RUSTON —
VISUAL INTEGRATION OF SCIENCE, TECHNOLOGY, ART — LOUISIANA TECH UNIVERSITY

These signs were created with a grant from Experience Ruston and students from Louisiana Tech University's School of Design VISTA Center. Illustration by Erin Timm and Design by Ellie Pujak. Content by Dr. Julia Earl, School of Biological Sciences.

LA-NEXT 3MT Competition

Tentative date: Jan 8 or 9, 2026

Participants:

- Solicit nominations from Graduate School leaders?
- How many from each participating institution?
- Travel costs?

Prizes:

- Cash awards?
- Stipend supplements?