J-WAFS Abdul Latif Jameel Water & Food Systems Lab
Securing humankind's vital resources

NEWS & ANNOUNCEMENTS

Gang Chen discovers "photomolecular effect"

The phenomenon shows light can make water evaporate without heat, which Chen is now exploring in a J-WAFS project for desalination applications.

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J-WAFS PI explains plants' role as a natural carbon sink

César Terrer says plants have been absorbing increasing amounts of carbon but it is not well understood how much carbon has actually been sequestered in soils.

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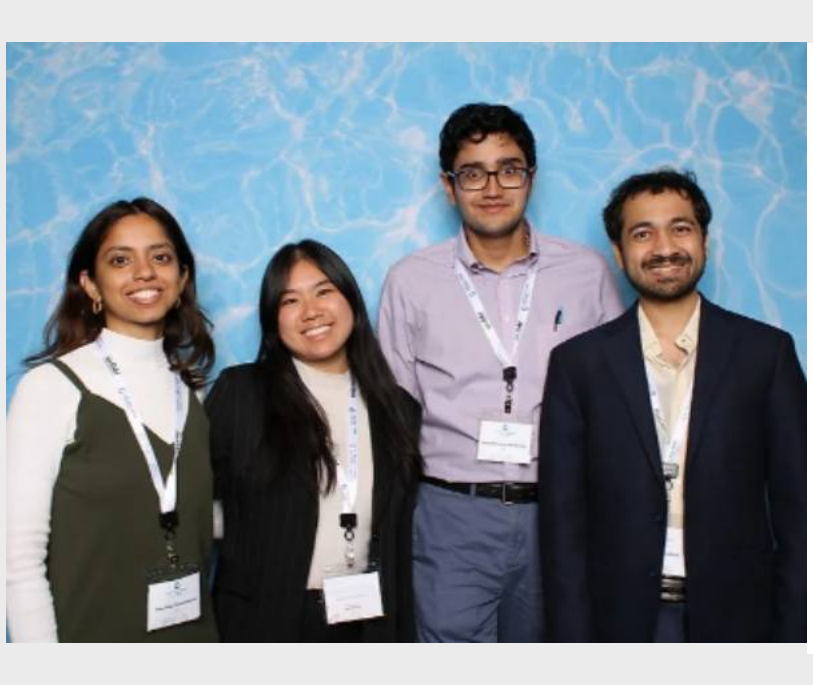
J-WAFS spinout collaborates on water treatment

SiTration, which spun out of a J-WAFS project with Jeffrey Grossman and PhD student Brendan Smith, is working with Rio Tinto to recover compounds from mining wastewater.

READ MORE



J-WAFS students travel to water conference

J-WAFS Travel Grantees Barath Baskaran, Devashish Gokhale, Cat Lu, and Anushka Shahdadpuri attended the UNC Water & Health Conference.

READ MORE

MCSC fellow studies emissions from agriculture

MIT Climate & Sustainability Consortium Impact Fellow Amanda Bischoff explores nature-based solutions to enhance crop resilience and yields while lowering carbon emissions.

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Desirée Plata tackles environmental contamination

An associate professor of civil and environmental engineering, Plata is developing tools to cut dairy farm methane emissions by 45% by 2030, potentially saving 0.5°C of warming by 2100.

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J-WAFS director featured on MIT podcast

John Lienhard spoke on MIT's TILclimate about converting saltwater into freshwater through desalination and its relationship with climate change.

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FUNDING
AND OTHER OPPORTUNITIES

J-WAFS Grand Challenge

Open to: MIT PIs
LOI Deadline: December 8, 2023

Up to $1.5M will be awarded to an interdisciplinary 2-3 year project that addresses a significant problem in water or food for human use, specifically in the context of climate change.

MORE INFO

J-WAFS Seed Grant LOIs

Open to: MIT PIs
Deadline: December 11, 2023

Grants for early-stage MIT research in areas related to secure, safe, and sustainable food and water for human need. Must submit a letter of interest. Full proposals will be welcome by invitation.

MORE INFO

MIT Water, Food & Agriculture Innovation Prize

Open to: U.S. university/colelge students
Deadline: 1st week of February 2024

Teams developing businesses or technologies to improve water, food, or agriculture systems should apply to this prize supported in part by J-WAFS.

MORE INFO

Product development engineer for NONA Technologies

Open to: mechanical engineers or those in a related field
Deadline: Ongoing

NONA, a J-WAFS Solutions spinout, seeks an engineer who loves hardware product development and who cares about solving the water crisis.

MORE INFO

Nominations for MIT's Martin Fellows

Open to: MIT PhD students
Deadline: February 2, 2024

MIT faculty members are invited to nominate an outstanding student working in an area of environment and sustainability, like water or food.

MORE INFO

MIT Climate and Energy Prize

Open to: Global university students
Deadline: Dec 7 for early consideration

Apply to this climatetech and energy startup competition, where teams, including those working in water or food, compete for cash prizes.

MORE INFO

NEWEA poster competition

Open to: Graduate and undergraduate students
Deadline: December 15, 2023

Submit abstracts on water pollution, water quality, or other environmental engineering topics for a poster competition and/or shark tank for the New England Water Environment Association's annual conference.

MORE INFO

Arizona State University faculty position

Open to: PhDs in environmental engineering or related fields
Deadline: Ongoing

Tenured or tenure-track faculty position in environmental engineering, with a focus including membrane-based water treatment, desalination, water sustainability, atmospheric water extraction, or similar.

MORE INFO

IN-DEPTH LOOK
MIT RESEARCHERS BUILD LOW-COST, SOLAR-POWERED IRRIGATION TOOLS

MIT mechanical engineers help understand and meet farmers' needs in three different countries

Researchers from MIT's GEAR Lab, led by J-WAFS PI Amos G. Winter, have developed low-cost, solar-powered irrigation tools that optimize energy use and water use. The tools bring water-efficiency benefits of precision irrigation to resource-constrained farmers. The researchers traveled to Kenya, Morocco, and Jordan, to gain a "boots on the ground" understanding of the specific needs of farmers. Their work was captured in a new short film called "No Drop to Spare" by John Freidah, senior producer and creative lead for the Department of Mechanical Engineering.

"It's about more than just delivering a lower-cost system, it's also about creating something [farmers are] going to want to use and want to trust," says Georgia Van de Zande '15, SM '18, PhD '23. Van de Zande and other students of Professor Winter, Carolyn Sheline and Julia Sokol received J-WAFS support for this research as first place winners in the 2020 J-WAFS World Food Day video competition.

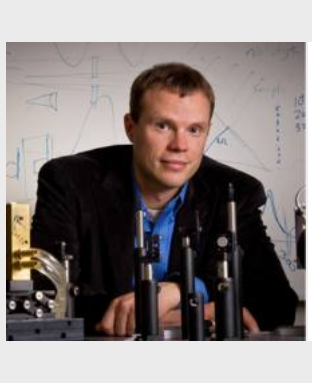
READ & WATCH

AWARDS & RECOGNITIONS

Gokul Sampath receives prestigious Fulbright-Hays Award
As a J-WAFS Fellow and J-WAFS Travel Grant recipient, Sampath helps secure clean, safe water for all through his research that explores behavioral health strategies to address dangerous drinking water contaminants in rural India, specifically arsenic in groundwater. MORE INFO

Ariel Furst receives National Institutes of Health award
Furst was selected as a recipient of the NIH Director's New Innovator Award, which has supported unusually innovative research since 2007. Furst is working on several J-WAFS projects to develop methods for degrading prevalent environmental pollutants in water like PFAS. MORE INFO

Greg Sixt, PhD appointed visiting lecturer at BOKU
J-WAFS researcher & director of the J-WAFS-led FACT Alliance, Sixt will co-teach environmental change and climate security at the Univ. of Natural Resources and Life Sciences, Vienna, with Michael Hauser. The duo are also working on a J-WAFS food systems project in Africa. MORE INFO



Bradley Olsen named American Physical Society Fellow
Bradley Olsen is one of three from MIT who were recognized for research, applications, teaching, and leadership. His J-WAFS project is uncovering biodegradable polyesters that can be used for more sustainable food packaging for a green economy. MORE INFO

J-WAFS fellow's co. featured at MIT Sustainability Conference
Peter Godart is the co-founder and CEO of Found Energy, which brings clean energy to heavy industries like the fertilizer industry. The company was one of 11 startups at this year's conference, along with Labby, another MIT spinout which is helping dairy farmers catch mastitis early. MORE INFO

Larry Susskind featured in Cipher News and Associated Press
Susskind leads a course training MIT students to resolve clean energy conflicts, dubbed the MIT Renewable Energy Clinic, where he hopes to create clean energy collaboration that may slow down projects initially but ultimately speed them up by incorporating input. MORE INFO

Greg Stephanopoulos receives the James E. Bailey Award
The Society for Biological Engineering's Bailey award recognizes outstanding contributions in the field of biological engineering. A past J-WAFS Solutions PI, Stephanopoulos is among faculty and researchers across MIT's School of Engineering to be awarded in the third quarter. MORE INFO

The MIT Morningside Academy for Design awards Fellows
MIT graduate student winners include Chen Chu who is studying floodplain agriculture through the lens of environmental humanities, and James Brice, who is researching coastal adaptation with oyster reefs. Brice is also co-president of the MIT Water Club, which is sponsored by J-WAFS. MORE INFO

MIT Climate & Sustainability Consortium welcomes scholars
The 2023-2024 cohort of scholars is made up of students from across MIT who are researching climate and sustainable solutions, including several who are working with J-WAFS PIs on water and food-related projects from aquaculture to water saving in industrial processes. MORE INFO

MIT Solve announces 2023 Indigenous Communities Fellows
The fellows are working on ways to strengthen their communities, including solutions for improved year-round crop production through the use of controlled environment agriculture. The fellows will work with MIT Solve to identify how best the organization can support their solutions. MORE INFO

EVENTS

Food systems webinar

The Univ. of Natural Resources and Life Sciences, Vienna, a member of the JWAFS-led FACT Alliance, will host this event on the risks of food operations in Africa's Lake Victoria Basin region.

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IN CASE YOU MISSED IT

J-WAFS researchers publish papers

Gregory Rutledge wrote about the removal of emulsified oils from water; Heather Kulik and Aristide Gumyusenge discuss novel polymer materials for possible water purification; and Rohit Karnik notes a faster way to detect bacteria in food.

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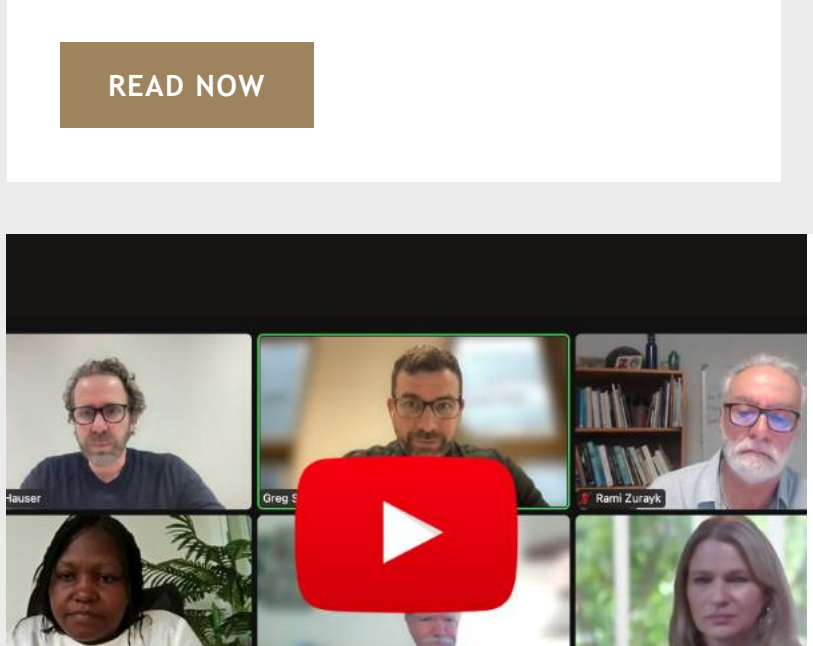
J-PAL co-hosts climate adaptation event

"Partnership Development for Climate Adaptation in Arab States" focused on leveraging insights from J-PAL's global research and discussed water quality and management, clean energy, agriculture and food security, and education and green skills.

WATCH NOW



J-WAFS participates in food systems webinar

Co-hosted by J-WAFS' Greg Sixt, the event discussed food system vulnerabilities and explored potential tipping points that may impact food.

WATCH NOW

J-WAFS facilitates water innovation panel

The MIT Sustainability Conference event featured J-WAFS' Renee Robins & Rohit Karnik, Carol Walczyk of Veolia, and Jeff Lopes of Xylem, a J-WAFS research affiliate.

WATCH NOW

INTERESTED IN SUPPORTING J-WAFS?

When you make a gift, you are making an investment in both the future of J-WAFS and our Institute-wide work to improve the productivity, accessibility, and sustainability of the world's water and food systems.

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J-WAFS is an Institute-wide effort that brings MIT's unique strengths to bear on the many challenges our food and water systems face.

Our program catalyzes MIT research, innovation, and technology for ensuring safe and resilient supplies of water and food while reducing environmental impact, to meet the local and global needs of a rapidly expanding and evolving population on a changing planet.

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