

Date: 23 Jul 2025

FYI - Fusion News/Alerts

Massive infrastructure to protect and preserve ITER's scientific legacy

<https://www.iter.org/node/20687/massive-infrastructure-protect-and-preserve-iters-scientific-legacy>

[Latest ITER Newslines: <https://www.iter.org/whatsnew/466>]

PPPL's Jack Berkery receives Fulbright Specialist award to share research on spherical tokamaks

<https://www.pppl.gov/news/2025/pppl%E2%80%99s-jack-berkery-receives-fulbright-specialist-award-share-research-spherical-tokamaks>

F4E, EUROfusion and stakeholders join forces to map fuel cycle technologies

<https://www.publicnow.com/view/FE2840AD4E6F0312D64FB89B26B92E8999E5A7CA?1752742069>

Nuclear fusion boost as government sets to unblock planning rules

<https://www.ukpol.co.uk/press-release-nuclear-fusion-boost-as-government-sets-to-unblock-planning-rules-july-2025/>

New National Policy Statement for fusion energy: government response

<https://www.gov.uk/government/consultations/fusion-energy-facilities-new-national-policy-statement-and-proposals-on-siting/outcome/new-national-policy-statement-for-fusion-energy-government-response-accessible-webpage>

First physics results from the sPHENIX particle detector

<https://phys.org/news/2025-07-physics-results-sphenix-particle-detector.html>

New AI advances boost safety and performance in fusion reactors

<https://phys.org/news/2025-07-ai-advances-boost-safety-fusion.html>

Podcast: Unlocking the fourth state of matter [plasma]

<https://www.nsf.gov/news/podcast-unlocking-fourth-state-matter-plasma>

Lee Packer: 'There's no fundamental physical reason why fusion energy won't work'

<https://physicsworld.com/a/lee-packer-theres-no-fundamental-physical-reason-why-fusion-energy-wont-work/>

Albuquerque is a Finalist for a \$1 Billion Fusion Energy Plant

<https://www.cabq.gov/mayor/news/albuquerque-is-a-finalist-for-a-1-billion-fusion-energy-plant>

Inside ATLAS: Sara Alderweireldt explains how the CERN experiment homes in on new physics

<https://physicsworld.com/a/inside-atlas-sara-alderweireldt-explains-how-the-cern-experiment-homes-in-on-new-physics/>

FYI – LIBRARY NEWS/ALERTS

Advanced scalable workflow of heat load assessment inside nuclear fusion reactors

<https://hpc-portal.eu/materials/publications/advanced-scalable-workflow-heat-load-assessment-inside-nuclear-fusion>

Low-cost sensors expand opportunities for practical plasma education

<https://www.aip.org/scilights/low-cost-sensors-expand-opportunities-for-practical-plasma-education>

Why additive manufacturing is going nuclear

<https://www.engineering.com/why-additive-manufacturing-is-going-nuclear/>

A natural nuclear reactor

<https://www.nature.com/articles/d41586-025-02138-0>

5 sustainable energy sources to power the AI boom

<https://spectra.mhi.com/5-sustainable-energy-sources-to-power-the-ai-boom>

[Refer to No. 5]

Westinghouse partners Google Cloud to enhance nuclear efficiency with AI

<https://www.power-technology.com/news/westinghouse-google-cloud-nuclear-power-efficiency-ai/>

Holographic correspondence confirms the properties of quark-gluon plasma

<https://agencia.fapesp.br/holographic-correspondence-confirms-the-properties-of-quark-gluon-plasma/55268>

This laser implosion just created a magnetic field like a neutron star

<https://www.sciencedaily.com/releases/2025/07/250716000839.htm>

Argonne and partners celebrate Aurora supercomputer's impact on science with AI and exascale power

<https://www.anl.gov/article/argonne-and-partners-celebrate-aurora-supercomputers-impact-on-science-with-ai-and-exascale-power>

Unveiling the mystery of electron dynamics in the 'quantum tunneling barrier' for the first time

<https://www.eurekalert.org/news-releases/1091511>

MXenes gain improved conductivity and flexibility through precise plasma etching process

<https://phys.org/news/2025-07-mxenes-gain-flexibility-precise-plasma.html>

Molecular simulations uncover how graphite emerges where diamond should form, challenging old assumptions

<https://phys.org/news/2025-07-molecular-simulations-uncover-graphite-emerges.html>

Parker Solar Probe uncovers direct evidence of the sun's 'helicity barrier'

<https://phys.org/news/2025-07-parker-solar-probe-uncovers-evidence.html>

Recent Peer-Reviewed Articles of Interest

Overview of EXL-50 research progress

<https://iopscience.iop.org/article/10.1088/1741-4326/adf239>

ITG turbulence in gyrokinetic simulations of high collisionality spherical tokamak plasmas

<https://iopscience.iop.org/article/10.1088/1741-4326/adeff2>

Design progress of an articulated robotic arm for low-payload maintenance tasks in KSTAR

<https://www.sciencedirect.com/science/article/pii/S0920379625005393>

Turnstile flux as a measure for chaotic transport in magnetic confinement fusion devices

<https://pubs.aip.org/aip/cha/article/35/7/073129/3353365/Turnstile-flux-as-a-measure-for-chaotic-transport>

Thermo-structural assessment of the limiter inboard first wall design of the Divertor Tokamak Test facility

<https://www.sciencedirect.com/science/article/pii/S0920379625004776>

A Computational Study of Magnetic Chaotic Field Lines in Nuclear Fusion Devices

<https://www.tandfonline.com/doi/full/10.1080/15361055.2025.2502288#abstract>

Observation of turbulence suppression under low magnetic shear in EAST plasma

<https://pubs.aip.org/aip/adv/article/15/7/075032/3353243/Observation-of-turbulence-suppression-under-low>

‘Immortal’ stars have an elixir of youth: dark matter

<https://www.nature.com/articles/d41586-025-02294-3>

Bayesian optimization of poloidal field coil positions in tokamaks

<https://pubs.aip.org/aip/pop/article/32/7/072507/3355562/Bayesian-optimization-of-poloidal-field-coil>

[Of Interest]

Science Illuminates the Past: How Accelerators Are Powering Cultural Heritage Preservation in Asia-Pacific and Beyond

<https://www.iaea.org/newscenter/news/science-illuminates-the-past-how-accelerators-are-powering-cultural-heritage-preservation-in-asia-pacific-and-beyond>

Retracting research is an important part of the scientific process

<https://phys.org/news/2025-07-retracting-important-scientific.html>