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Date: 22 May 2025

FYI - **Fusion News/Alerts**

The latest piece of the puzzle to arrive: Europe's sector #4
https://www.iter.org/node/20687/latest-piece-puzzle-arrive-europes-sector-4
[Latest ITER Newsline: https://www.iter.org/whatsnew/458]

LLNL Experts Foster National Fusion Energy Ecosystem at IFE-STAR Conference
https://lasers.llnl.gov/news/llnl-experts-foster-national-fusion-energy-ecosystem-ife-star-conference

F4E industrial partners give feedback on Fusion Expert Group report
https://fusionforenergy.europa.eu/news/fusion-expert-group-stakeholder-survey/

A faster, more reliable method for simulating the plasmas used to make computer chips
https://www.pppl.gov/news/2025/faster-more-reliable-method-simulating-plasmas-used-make-computer-chips

Thales inaugurates GenF, a first step towards nuclear fusion energy
https://www.thalesgroup.com/en/worldwide/group/press_release/thales-inaugurates-genf-first-step-towards-nuclear-fusion-energy

Now on factory floors: Ultra-precise chip etching technology enabled by NSF-funded plasma science
https://www.nsf.gov/science-matters/now-factory-floors-ultra-precise-chip-etching-technology

Metal fleece: material for the batteries of the future
https://www.mpg.de/24758041/material-for-the-batteries-of-the-future?c=2249

How fusion reaches new frontiers: Dutch Fusion Day 2025
https://www.differ.nl/news/lookingback-dutch-fusion-day-2025

The US has a new most powerful laser
https://www.eurekalert.org/news-releases/1084434

Small-scale laser systems enable high energy proton accelerator on a table-top
https://phys.org/news/2025-05-small-scale-laser-enable-high.html

Online Event: Measurements in Nuclear Fusion Reactors
Speaker: **Cedric K Tsui** Ph.D., MASc, B.ScE
Date: 18 Jun 2025 / Time: 6:30pm - 8:30pm EDT [**19 Jun 2025 / Time: 4:00 am - 6:00 am IST**]
https://events.theiet.org/events/measurements-in-nuclear-fusion-reactors/
Register: https://localevents.theiet.org/461208

Recent Peer-Reviewed Articles of Interest

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Summary report from the mini-conference on Digital Twins for Fusion Research
https://pubs.aip.org/aip/pop/article/32/5/050601/3347082/Summary-report-from-the-mini-conference-on-Digital
66th Annual Meeting of the APS Division of Plasma Physics
Monday–Friday, October 7–11, 2024; Atlanta, Georgia
https://meetings.aps.org/Meeting/DPP24/SessionIndex2

A metadata schema to standardize non-thermal plasma decontamination parameters in food-related applications
https://www.nature.com/articles/s41597-025-05203-5

High-frequency nonlinear electromagnetic waves propagating in an unmagnetized plasma
https://pubs.aip.org/aip/pop/article/32/5/052107/3347457/High-frequency-nonlinear-electromagnetic-waves

Phase space electron hole in the Venusian upper mantle boundary
https://www.nature.com/articles/s41598-025-98769-4

Atmospheric pressure plasma penetrating into multilayer fiber membrane
https://pubs.aip.org/aip/apl/article/126/20/204102/3347446/Atmospheric-pressure-plasma-penetrating-into

Effect of laser produced plasma bubbles and wall expansion on laser beams propagation inside gas filled halfraum cavity
https://pubs.aip.org/aip/pop/article/32/5/052706/3347124/Effect-of-laser-produced-plasma-bubbles-and-wall

Criteria for ion acceleration in laboratory magnetized quasi-perpendicular collisionless shocks: When are 2D simulations enough?
https://pubs.aip.org/aip/pop/article/32/5/052901/3347410/Criteria-for-ion-acceleration-in-laboratory

Numerical modeling of two magnetized counter-propagating weakly collisional plasma flows in arch configuration
https://pubs.aip.org/aip/pop/article/32/5/052305/3347195/Numerical-modeling-of-two-magnetized-counter

Quantitative modeling of inward particle transport in linear plasma device using machine learning techniques
https://pubs.aip.org/aip/pop/article/32/5/052303/3346993/Quantitative-modeling-of-inward-particle-transport

Overview of deuterium-tritium nuclear operations at JET
https://www.sciencedirect.com/science/article/pii/S0920379625003308

Challenges and opportunities in exascale fusion simulations
https://www.nature.com/articles/s42254-025-00830-8

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[*Of Interest*]

Research may be increasingly incremental—but studies making lasting paradigm shifts are on the rise
https://www.science.org/content/article/research-may-be-increasingly-incremental-studies-making-lasting-paradigm-shifts-are

Are groundbreaking science discoveries becoming harder to find?
https://www.nature.com/articles/d41586-025-01548-4