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Date: 02 Jul 2025

FYI - **Fusion News/Alerts**

“Fusion is the solution that scales”
https://www.iter.org/node/20687/fusion-solution-scales

Machine assembly - Westinghouse wins major contract for vacuum vessel welding
https://www.iter.org/node/20687/westinghouse-wins-major-contract-vacuum-vessel-welding
[Latest ITER Newsline: https://www.iter.org/whatsnew/463]

Enhancing the creation of elements in laser-assisted heavy-ion fusion reactions
https://journals.aps.org/prc/abstract/10.1103/myjj-z2j7

The Accelerator Behind the Scenes of Essential Tech
https://newscenter.lbl.gov/2025/07/01/the-accelerator-behind-the-scenes-of-essential-tech/

Using Artificial Intelligence to face nuclear fusion challenges
https://www.tue.nl/en/news-and-events/news-overview/01-07-2025-using-artificial-intelligence-to-face-nuclear-fusion-challenges

LASER 2025: Fusion forum highlights supply-chain challenges
https://optics.org/news/16/6/36

Slovenian Fusion Association Celebrates 20 Years of Contribution to Fusion Science
https://euro-fusion.org/eurofusion-news/slovenian-fusion-association-celebrates-20-years-of-contribution-to-fusion-science/

Accelerating hardware development to improve national security and innovation
https://news.mit.edu/2025/nominal-accelerates-hardware-development-improve-national-security-innovation-0625

The Tandem Reconnection and Cusp Electrodynamics Reconnaissance Satellites (TRACERS) Mission
https://physics.uiowa.edu/news/2025/06/tandem-reconnection-and-cusp-electrodynamics-reconnaissance-satellites-tracers-mission

One shot, game changed: How RAVEN captured a petawatt laser and supercharged fusion research
https://www.sciencedaily.com/releases/2025/06/250626081535.htm

Metallurgy and Materials researcher awarded IOM3 Harvey Flower Titanium Prize
https://www.birmingham.ac.uk/news/2025/metallurgy-and-materials-researcher-awarded-iom3-harvey-flower-titanium-prize

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New Propulsion Systems Could Enable a Mission to Sedna
https://www.universetoday.com/articles/new-propulsion-systems-could-enable-a-mission-to-sedna

Quantum vacuum fluctuations illuminated by new computational technique
https://physicsworld.com/a/quantum-vacuum-fluctuations-illuminated-by-new-computational-technique/

IAP alumna Elisabeth Gruber receives prestigious FWF-ASTRA Prize
https://www.tuwien.at/en/all-news/news/iap-alumna-elisabeth-gruber-receives-prestigious-fwf-astra-prize

Scientists Just Froze the World's Most Powerful Laser Pulse – In a Single Shot
https://scitechdaily.com/scientists-just-froze-the-worlds-most-powerful-laser-pulse-in-a-single-shot/

Noah Hershkowitz: Experimental plasma physics pioneer
https://pubs.aip.org/aip/pop/article/32/7/070501/3351293/Noah-Hershkowitz-Experimental-plasma-physics

[Preprint] First experimental demonstration of plasma shape control in a tokamak through Model Predictive Control
https://arxiv.org/html/2506.20096v1

Recent Peer-Reviewed Articles of Interest

From electron cyclotron emission and reflectometry to microwave imaging diagnostics in fusion plasmas: Progress and perspectives
https://pubs.aip.org/aip/pop/article/32/6/060502/3350879/From-electron-cyclotron-emission-and-reflectometry

Hybrid plasma model for reactive deposition of CrN thin films by deep oscillation magnetron sputtering
https://pubs.aip.org/aip/jap/article/137/24/243304/3350950/Hybrid-plasma-model-for-reactive-deposition-of-CrN

Fast ion stabilization of tilt in large radius FRCs
https://pubs.aip.org/aip/pop/article/32/7/072503/3351297/Fast-ion-stabilization-of-tilt-in-large-radius

20-dimensional surrogate-assisted Bayesian optimization of laser-driven proton beams
https://pubs.aip.org/aip/apl/article/126/25/254104/3350901/20-dimensional-surrogate-assisted-Bayesian

A laser-based diagnostic for in situ monitoring of fuel retention in ITER
https://www.sciencedirect.com/science/article/pii/S0920379625004946

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Utilization of plasma as an ameliorator for forage productivity and in vitro traits of cowpea cultivated in salty soil
https://www.nature.com/articles/s41598-025-05498-9

[*Of Interest*]

Why we need mandatory safeguards for emotionally responsive AI
https://www.nature.com/articles/d41586-025-02031-w

Devices that pull water out of thin air poised to take off
https://www.science.org/content/article/devices-pull-water-out-thin-air-poised-take