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FYI - Fusion News/Alerts

Igniting India's fusion future

Current Science, Volume 128 - Issue 11: 10 Jun, 2025

<https://www.currentscience.ac.in/Volumes/128/11/1090.pdf>

Wendelstein 7-X sets new performance records in fusion research

<https://www.pppl.gov/news/2025/wendelstein-7-x-sets-new-performance-records-fusion-research>

New facility to accelerate materials solutions for fusion energy

<https://news.mit.edu/2025/new-facility-accelerate-materials-solutions-fusion-energy-0609>

The ITER Fast Discharge building is completed

<https://fusionforenergy.europa.eu/news/iter-construction-fast-discharge-building-busbar-bridges/>

Commission launches Call for Evidence to support first-ever EU-wide Fusion Strategy

https://energy.ec.europa.eu/news/commission-launches-call-evidence-support-first-ever-eu-wide-fusion-strategy-2025-06-06_en

Why is Google Investing in Nuclear Fusion With TAE?

<https://technologymagazine.com/articles/google-tae-could-nuclear-fusion-solve-energy-problems>

Michel Koenig receives the Alfvén 2025 award

<https://www.polytechnique.edu/en/news/michel-koenig-receives-alfven-2025-award>

Fusion power may never happen if we don't fix the lithium bottleneck

<https://www.newscientist.com/article/2483113-fusion-power-may-never-happen-if-we-dont-fix-the-lithium-bottleneck/>

INRS and ELI deepen strategic partnership to train the next generation in laser science

<https://www.eurekalert.org/news-releases/1086332>

Announcement: The 2024 James Clerk Maxwell Prize for Plasma Physics

<https://pubs.aip.org/aip/pop/article/32/6/060203/3349025/Announcement-The-2024-James-Clerk-Maxwell-Prize>

Foreword to special issue: Papers from the 66th Annual Meeting of the APS Division of Plasma Physics, October 7–October 11, 2024

<https://pubs.aip.org/aip/pop/article/32/6/060202/3348585/Foreword-to-special-issue-Papers-from-the-66th>

Preventing particle leaks in fusion reactors

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<https://pubs.aip.org/physicstoday/online/44350/Preventing-particle-leaks-in-fusion-reactors>

Scientists discover new, extremely neutron-deficient isotope protactinium-210
<https://www.eurekalert.org/news-releases/1086578>

Recent Peer-Reviewed Articles of Interest

Plasma technology for the electrification of chemical reactions
<https://www.nature.com/articles/s44286-025-00229-3>

The positron arm of a plasma-based linear collider
<https://www.nature.com/articles/s41567-025-02910-z>

Lithium enrichment threatens to curb fusion deployment
<https://www.sciencedirect.com/science/article/pii/S2542435125001783>

An implementation of a high-order generalized finite difference method for solving the time-harmonic cold plasma wave equation in toroidal geometry
<https://pubs.aip.org/aip/pop/article/32/6/063902/3348556/An-implementation-of-a-high-order-generalized>

Active ramp-down control and trajectory design for tokamaks with neural differential equations and reinforcement learning
<https://www.nature.com/articles/s42005-025-02146-6>

Localized structures and turbulent spectra through nonlinear interaction of kinetic Alfvén waves with magnetic null points in the solar wind plasma
<https://pubs.aip.org/aip/pop/article/32/6/062901/3348209/Localized-structures-and-turbulent-spectra-through>

Advanced analysis of spatiotemporal behaviors of modal structures and couplings for plasma tomography
<https://www.nature.com/articles/s41598-025-04755-1>

Effects of super-Gaussian electron velocity distribution functions on atomic kinetics and radiative emission of hot under-dense gold plasmas
<https://pubs.aip.org/aip/pop/article/32/6/062704/3348558/Effects-of-super-Gaussian-electron-velocity>

Nonlinear phenomena in the Josephson plasma vibrations and in the propagation of Josephson plasma waves in layered superconductors of cylindrical configuration
<https://pubs.aip.org/aip/ltp/article/51/6/671/3348248/Nonlinear-phenomena-in-the-Josephson-plasma>

Chirality-induced topological phase transitions in magnetized plasmas
<https://pubs.aip.org/aip/pop/article/32/6/062107/3349091/Chirality-induced-topological-phase-transitions-in>

Magnetic control strategies to reduce first wall heat loads in ITER

<https://www.sciencedirect.com/science/article/pii/S0920379625003990>

On the integral form of a three-component plasma fluid model

<https://pubs.aip.org/aip/pop/article/32/6/063903/3349092/On-the-integral-form-of-a-three-component-plasma>

Wakefield generation and electron acceleration driven by a spatiotemporal vortex in plasma

<https://pubs.aip.org/aip/pop/article/32/6/063105/3349131/Wakefield-generation-and-electron-acceleration>

Sub-micrometer spatial resolution Nomarski interferometer for time-resolved complex-amplitude imaging of femtosecond laser-induced air plasma

<https://pubs.aip.org/aip/pop/article/32/6/062106/3349115/Sub-micrometer-spatial-resolution-Nomarski>

Machine learning-based prediction of laser ablation impulse from plasma spectra

<https://pubs.aip.org/aip/pop/article/32/6/063301/3349024/Machine-learning-based-prediction-of-laser>

[Of Interest]

‘Integrity index’ flags universities with high retraction rates

<https://www.nature.com/articles/d41586-025-01727-3>