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Date: 25 Oct 2024

### **For Heating Plasma in Fusion Devices, Researchers Unravel How Electrons Respond to Neutral Beam Injection**

<https://www.energy.gov/science/fes/articles/heating-plasma-fusion-devices-researchers-unravel-how-electrons-respond>

### **An Efficient Way to Optimize Laser-Driven Nuclear Fusion**

<https://physics.aps.org/articles/v17/s127>

### **Thales and the Max Planck Institute for Plasma Physics set a world record in the field of nuclear fusion**

[https://www.thalesgroup.com/en/worldwide/group/press\\_release/thales-and-max-planck-institute-plasma-physics-set-world-record-field](https://www.thalesgroup.com/en/worldwide/group/press_release/thales-and-max-planck-institute-plasma-physics-set-world-record-field)

### **New Plasma Switch Cleans the Pulses in High-Power Lasers**

<https://lasers.llnl.gov/news/new-plasma-switch-cleans-pulses-high-power-lasers>

### **Prof. Howard Wilson to lead science and technology for STEP**

<https://www.gov.uk/government/news/prof-howard-wilson-to-lead-science-and-technology-for-step>

### **Study: Fusion energy could play a major role in the global response to climate change**

<https://news.mit.edu/2024/fusion-energy-could-play-major-role-global-response-climate-change-1024>

### **What's the difference between fusion and fission? A nuclear physicist explains**

<https://theconversation.com/whats-the-difference-between-fusion-and-fission-a-nuclear-physicist-explains-240438>

### **Pulsed-power facility explores elusive warm dense matter regime**

<https://ww2.aip.org/scilights/pulsed-power-facility-explores-elusive-warm-dense-matter-regime>

### **Design of substation grounding grid in CFETR**

<https://www.nature.com/articles/s41598-024-76764-5>

### **Consider the ethical impacts of quantum technologies in defence — before it's too late**

<https://www.nature.com/articles/d41586-024-03376-4>

### **Dodgeball and energy density feature in nuclear comic book**

<https://www.world-nuclear-news.org/articles/dodgeball-and-energy-density-feature-in-nuclear-comic-book>

### **BRICS nations boost nuclear energy collaboration**

<https://www.neimagazine.com/news/brics-nations-boost-nuclear-energy-collaboration/>

### **US DOE opens application for SMR funding**

<https://www.neimagazine.com/news/us-doe-opens-application-for-smr-funding/>

### **How a next-generation particle collider could unravel the mysteries of the Higgs boson**

<https://physicsworld.com/a/how-a-next-generation-particle-collider-could-unravel-the-mysteries-of-the-higgs-boson/>

### **Highest-energy ever gamma rays observed from Milky Way center**

<https://discover.lanl.gov/news/1022-hawc-gamma-rays/>

### **Tracking the Chaos That Surrounds the Aurora**

<https://physics.aps.org/articles/v17/s128>

### **Ubitus plans nuclear-powered AI data centre**

<https://www.neimagazine.com/news/ubitus-plans-nuclear-powered-ai-data-centre/>

### **[Of Interest] The US is the world's science superpower — but for how long?**

<https://www.nature.com/articles/d41586-024-03403-4>

### **Recent Peer-Reviewed Articles of Interest**

#### **The effect of a constant electric field in an undisturbed plasma on the stability of the electron beam–gas discharge collisional plasma system**

<https://pubs.aip.org/aip/pop/article/31/10/102111/3317881/The-effect-of-a-constant-electric-field-in-an>

#### **Unleashing the Power of Cold Atmospheric Plasma: Inducing Mitochondria Damage-Mediated Mitotic Catastrophe**

<https://onlinelibrary.wiley.com/doi/full/10.1002/advs.202401842>

#### **Empirical error field control at JET in preparation of ITER start-up**

<https://www.sciencedirect.com/science/article/pii/S0920379624005441>

#### **Experimental observations of bifurcated power decay lengths in the near Scrape-Off Layer of ST40 High Field Spherical Tokamak**

<https://www.sciencedirect.com/science/article/pii/S2352179124001959>

#### **Quasi-monoenergetic ion acceleration and neutron generation from laser-driven transverse collisionless shocks**

<https://pubs.aip.org/aip/pop/article/31/10/103110/3317210/Quasi-monoenergetic-ion-acceleration-and-neutron>

#### **An examination of nonlinear collisionless magnetic reconnection through eigenmode decomposition**

<https://pubs.aip.org/aip/pop/article/31/10/100701/3317251/An-examination-of-nonlinear-collisionless-magnetic>