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Research Focus

研究领域

1. 磁约束核聚变等离子体物理
2. 高能粒子驱动的不稳定性及输运
3. 大规模并行回旋动理学磁流体混合模拟
4. 仿星器的磁流体稳定性及设计

1. Physics of magnetically confined plasmas
2. Energetic particle-driven instabilities and transport
3. Large-scale kinetic-fluid hybrid simulation
4. Stability and optimization of stellarator plasmas

Representative Publications

代表出版物

1. Zhang, R. B.; Fu, G. Y.; White, R. B.; et al., "Local wave particle resonant interaction causing energetic particle prompt loss in DIII-D plasmas", Nucl. Fusion 55, 122002 (2015).
2. W. Shen, G. Y. Fu, B. Tobias et al., "Nonlinear hybrid simulation of internal kink with beam ion effects in DIII-D", Phys. Plasmas 22, 042510 (2015).
3. H. S. Cai, G. Y. Fu, "Influence of resistive internal kink on runaway current profile", Nucl. Fusion 55, 022001 (2015).
4. J. Zhu, Z. W. Ma and G. Y. Fu, "Nonlinear frequency chirping of toroidal Alfvén eigenmodes in tokamak plasmas", Nucl. Fusion 54, 123020 (2014).
5. F. Wang, G. Y. Fu, J. A. Breslau et al., "Linear stability and nonlinear dynamics of the fishbone mode in spherical tokamaks", Phys. Plasmas 20, 102506 (2013)
6. J. Y. Lang, G. Y. Fu, "Nonlinear simulation of toroidal Alfvén eigenmode with microturbulence-induced radial diffusion", Phys. Plasmas 18, 055902 (2011)
7. G. Y. Fu, "Energetic-Particle-Induced Geodesic Acoustic Mode", PHYSICAL REVIEW LETTERS 101, 185002 (2008)
8. G. Y. Fu, H. L. Berk, "Effects of pressure gradient on existence of Alfvén cascade modes in reversed shear tokamak plasmas", Phys. Plasmas 13, 052502 (2006)
9. G. Y. Fu, W. Park, H. R. Strauss et al., "Global hybrid simulations of energetic particle effects on the n=1 mode in tokamaks: Internal kink and fishbone instability", Phys. Plasmas 13, 052517 (2006)
10. G. Y. Fu, L. P. Cooper, W. A. Cooper et al., "Magnetohydrodynamics stability of compact stellarators", Phys. Plasmas 7, 1809 (2000)
11. G. Y. Fu, C. Z. Cheng, R. Budny et al., "Analysis of toroidicity-induced Alfvén eigenmodes in TFTR deuterium-tritium experiments", PHYSICAL REVIEW LETTERS 75, 2336 (1995)
12. G. Y. Fu, W. Park, "Nonlinear hybrid simulation of the toroidicity-induced Alfvén eigenmode", PHYSICAL REVIEW LETTERS 74, 1594 (1995).
13. G. Y. Fu, J. W. Van Dam, "Excitation of the toroidicity-induced shear Alfvén eigenmode by fusion alpha-particles in an ignited tokamak", PHYSICS OF FLUIDS B-PLASMA PHYSICS 1, 1949 (1989)