Demonstration of Power Exhaust Control by Impurity Seeding in the Island Divertor of Wendelstein 7-X

- stable high radiation scenarios with $f_{\text{rad}} = 70\%-80\%$ and mostly uniformly reduced $q_{\text{div}}$ and $\Gamma_{\text{div}}$
- Ne: effective radiator, high recycling
- $N_2$: low recycling, better neutral compression
- Island geometry: an additional actuator for power exhaust control

Impurity seeding combined with manipulation of island geometry promising for power exhaust control in high-performance divertor scenarios at W7-X

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