Abstract Submitted
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**Ab initio simulation of radiation damage in nuclear reactor pressure vessel materials** DANIEL WATTS, DANIEL FINKENSTADT, U.S. Naval Academy — Using Kinetic Monte Carlo we developed a code to study point defect hopping in BCC metallic alloys using energetics and attempt frequencies calculated using VASP, an electronic structure software package. Our code provides a way of simulating the effects of neutron radiation on potential reactor materials. Specifically we will compare the Molybdenum-Chromium alloy system to steel alloys for use in nuclear reactor pressure vessels.

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