

Abstract Submitted  
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**Interface structure and radiation damage resistance in Cu-Nb multilayer nanocomposites**<sup>1</sup> MICHAEL DEMKOWICZ, RICHARD HOAGLAND, JOHN HIRTH, Los Alamos National Laboratory — We use atomistic simulations to show that misfit dislocations in Cu-Nb interfaces can shift location between two adjacent planes by forming pairs of extended jogs, a mechanism that involves removal or insertion of atoms. Different jog combinations give rise to interface structures with unlike densities but nearly degenerate energies, making Cu-Nb interfaces virtually inexhaustible sinks for irradiation-induced point defects and catalysts for efficient Frenkel pair recombination.

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