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Dear Editorial Board,

Journal of Nuclear Materials

On behalf of my co-authors and myself, I am hereby submitting our manuscript, entitled ``A molecular dynamics study of the behavior of Xe in U3Si2”, for publication in the *Journal of Nuclear Materials*. This work provides the first interatomic potential capable of describing the uranium-silicide-xenon (U-Si-Xe) system.

One prevalent area of investigation in U-Si fuels is the nature, and extent, of swelling during reactor operation. The procurement of accurate properties for U3Si2 is critical for the proper behavior of swelling models and the subsequent accurate prediction of fission gas swelling. However, there does not yet exist an interatomic potential capable of describing the U-Si-Xe ternary system. Such a ternary potential is required for the investigation of atomistic behavior of Xe segregation at interfaces, bubble formation, bubble growth and internal pressure, and irradiation enhanced diffusion.

There are no previous or concurrent submissions related to this work.

Sincerely,

Benjamin Beeler